

The Coleopterist

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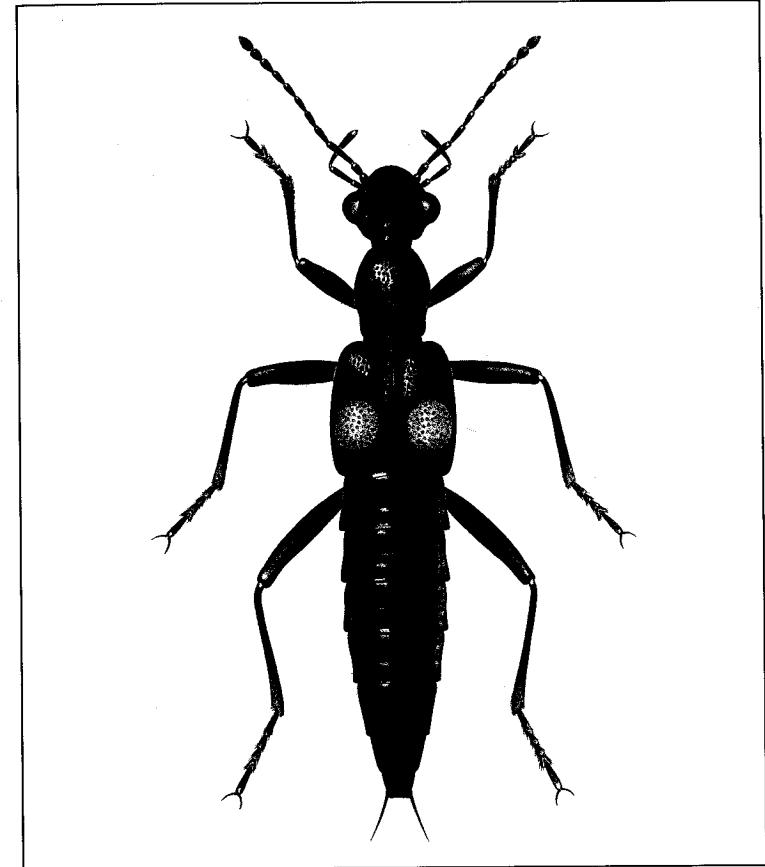
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The Coleopterist

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The *rufifemoratus* trait found in Irish *Pterostichus rhaeticus* Heer

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Pterostichus 'rufifemoratus' was described by Stephens in 1828 from Irish material supplied to him by A.H. Halliday. This is now regarded as a rufinistic variety of *Pterostichus nigrita* (Paykull) (Anderson, 1993).

It is rather curious, though, that expression of the trait has mainly or exclusively been recorded in Ireland. Koch (1986) in reviewing the *Pterostichus nigrita* complex used for her material *rufifemoratus* collected near Dublin, presumably because these were not available elsewhere. Recent investigation of carabid populations in Northern Ireland (Cameron *et al.*, 2000) has shown the trait to be widespread at least in the northern part of Ireland.

In a recent development a putative male of *Pterostichus rhaeticus* (Heer), a species not previously observed to express the trait, has been found with rufinistic femora. This was taken by pitfall trap in May 2000, in an interdrumlin fen at Fymore Lough (Irish grid H596519), Co Tyrone. A total of 65 *rhaeticus* and 10 *nigrita* were trapped at the site, so there appears to be a large, mixed population. The affected male of *rhaeticus* shows the characteristic colour pattern with red femora and some rufinism of the elytral apex that is a reddish-brown colour. In *nigrita* the expression of rufinism varies considerably and individuals may have partially or completely lighter elytra in addition to light femoral colour. The latter may vary from bright yellow to dark red. No rufifemorate *nigrita* were found in the Fymore collection.

The Fymore male was determined on small size and the form of the right paramere, which was unambiguously of the *rhaeticus* type. Angus *et al.* (2000) regard paramere morphology as an unreliable means to distinguish between *nigrita* and *rhaeticus*. Reliable characters are said to be the form of the inflated endophallus in males and the form of the eighth abdominal sternite in females. The Fymore Lough male was preserved in alcohol and it proved impossible to reflate the endophallus. However, the usual male characters, taken together with the high proportion of *rhaeticus* females found in the sample, suggest that the determination is correct.

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***Philhygra terminalis* (Gravenhorst) (Col. Staphylinidae) in Surrey and Leicestershire**

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Hyman (1994) included *Philhygra terminalis* (Gravenhorst), as *Atheta terminalis* in a list of candidate red data book species that are insufficiently known for evaluation. He reported that it had been recently recorded from just two vice-counties, South Hampshire and Worcestershire. Older records are scattered from southern England north to south-east Yorkshire. Muona (1995) has since raised the former *Atheta* subgenus *Philhygra* to generic rank and this approach is followed by Lott & Duff (2002).

I had never come across this species in the field until this year when I found it twice in three days at sites more than one hundred miles apart. On 30 March 2002 I found two specimens in a partly shaded flush on Chobham Common, Surrey (SU963657) and on 1 April I found three specimens by a seasonal pool in a traditionally managed hay meadow at Loughborough Big Meadow, Leicestershire (SK539215). At both sites it was accompanied by its congener, *P. gyllenhalii* (Thomson), which is characteristic of relatively undisturbed wetlands in an advanced stage of ecological succession.

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***Leistus rufomarginatus* (Duftschmid) (Carabidae) in central Scotland**

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Leistus rufomarginatus (Duftschmid) (Carabidae) was reported new to Britain in 1942 (Crowson, 1942) and has since expanded its range throughout England and Wales (Luff, 1998). A single Scottish specimen was taken in October 1994 in East Lothian (Luff, 1996) and on 20 July 2001 a further single specimen was taken in a pitfall trap in deciduous woodland at Mugdock, Dunbartonshire (NS5675, VC 99) (M.L. Luff, pers. comm.). The Scottish Insects Records Index held in the National Museum of Scotland includes no further published Scottish records.

In the autumn of 2001 J.I. McFarlane was surveying dead wood in the Falls of Clyde Scottish Wildlife Trust Reserve, Lanarkshire (NS8841 and NS8842, VC 77) for an Honours project in Countryside Management at the Scottish Agricultural College. As part of this survey, pitfall traps were set close to dead wood in six compartments, from 18 November 2001 to 19 December 2001. A total of nine specimens of *L. rufomarginatus*, seven male and two female, was taken in the traps in three of the compartments, all mainly coniferous. This species was not found in the traps set in two deciduous compartments. Luff (1996) observed that *L. rufomarginatus* was associated more often with deciduous woodland in the south but with coniferous woodland in the north of England. These records tend to support this. Luff (1998) states that this species is a summer breeder over-wintering as larvae but the activity of adults in November and/or December in Lanarkshire is more suggestive of adult over-wintering. Its abundance in pitfall traps in the Isle of Man in November 1997 (Luff *et al.*, 2001) is further evidence of activity in late autumn and early winter.

The number of specimens taken at the Falls of Clyde indicates an established population and considering the other two Scottish records of single specimens it seems likely that this species is already widespread in central Scotland. It might be recorded more frequently if it were looked for late in the year.

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Platynaspis luteorubra (Goeze) rediscovered in Cornwall

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Platynaspis luteorubra (Goeze) is a rare and little known ladybird and so the following observations are worth recording. A single female was found while searching loose sand for Heteroptera at Rock Dunes (SW9276), E. Cornwall on 1 May 2002. The area in question was a bank of stable, herb-rich, but open vegetation behind the main marram fore dunes. Loose sand occurred beneath a thin crust in the patches of bare ground amongst the vegetation. The female was inactive within the upper layers of loose sand but became very active on being disturbed and burrowed very readily through the loose sand, rapidly disappearing from sight, and quickly becoming inactive once again, making it difficult to re-find amongst the sand. The only other insects found amongst this particular area of loose sand were larvae of a tenebrionid beetle and therevid flies.

A subterranean habit was noted by Pontin (1960) who found a larva in the underground galleries of the ant *Lasius niger*, feeding on a root aphid. A burrowing habit may explain this species' short stout and flattened femora, contrasting with the elongate and slender femora of most other British Coccinellidae.

Hawkins (2000) gives the habitat as "dry places, living with ants". Small black *Lasius* sp. ants were present in the dune system but not kept for identification. *Tetramorium caespitum* L. (Hymenoptera: Formicidae) was also present. However, the ladybird was not found close to any ant activity.

Hyman (1992) gave the species Nationally Scarce Category A status and included Cornwall in its distribution before 1970. Clarke (1906) lists it for Cornwall but with no details. There have only been two subsequent reports from the county, both very old: Tintagel (SX08), gorse, E.A. Butler, August 1908 and Gwithian Dunes (SW5841), R.T. Bannister, May 1934. Majerus (1994) stresses the conservation importance of this rare and elusive ladybird.

Acknowledgements

Many thanks to Sarah Myles for information on records held by the Environmental Records Centre for Cornwall & the Isles of Scilly.

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Notes on British Elateridae: *Dicronychus equisetioides* Lohse, 1976 and *Negastrius arenicola* (Boheman, 1853) recorded from Britain

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Dicronychus equisetioides Lohse, 1976 / *D. equiseti* (Herbst, 1784)

Several years ago, Dr Peter Skidmore mentioned to me that when he used *Die Käfer Mitteleuropas* (Lohse, 1979) to key out British specimens of '*D. equiseti*', they ran to *D. equisetioides*. The two species were confounded under the name *D. equiseti*, until separated by Lohse (1976). Typical specimens are readily distinguished, not least because the true *D. equiseti* has tan-red legs, whereas *D. equisetioides* has near-black legs. However, specimens of both species with brown legs do occur.

All of the British '*D. equiseti*' that I have examined are in fact *D. equisetioides*, which appears to be widely distributed in Europe, and probably further afield. So far, this species has been recognised in countries as far apart as Italy (Platia, 1994), the Czech Republic and Slovakia (Laibner, 2000) and Denmark (Hansen, 1996). The genuine *D. equiseti* is likewise widely distributed in Europe, and also known from Asia Minor and the Caucasus (Platia, 1994). It could, possibly, occur in Britain; in Belgium, *D. equiseti* appears to be more widely distributed than *D. equisetioides* (Jeunieux, 1996).

The two species may be separated on the following characters.

Pronotum

In *D. equisetioides* there is a fine, shining, incised median furrow, within a more general depression on the basal half of the pronotum; in *D. equiseti*, only a depression is evident. The ventral surface at the base of the hind angles of the pronotum (hypomeron) is less densely punctured and more shining in *D. equisetioides*; more densely punctured, appearing matt in *D. equiseti*.

Shape and colour

The legs are usually near black to dark brown in *D. equisetioides*; mostly tan-brown in *D. equiseti*. The antennae are longer in *D. equiseti* (most noticeable in the male) and usually lighter in colour. In *D. equisetioides* the elytra are more rounded (less parallel sided) and less elongate, the pubescence finer and grey in colour (often pale-straw coloured in *D. equiseti*).

So far as the British fauna is concerned, *D. equisetioides* is most likely to be confused with the superficially similar *Cardiophorus asellus* Erichson. However, these two species are readily distinguished by the form of the tarsal claws; in

D. equisetioides they are distinctly toothed on the inside, in *C. asellus* they are simple - a character not mentioned by Joy (1932), although referred to by Fowler (1890).

In Britain, *D. equisetioides* has a rather restricted distribution (Mendel & Clarke, 1996; as *D. equiseti*), more or less confined to the Bristol Channel area, extending along the coasts of South Wales and North Devon. It is best known as a species of quality sand-dune habitat, for example Braunton Burrows, North Devon and Llangennith Burrows on the Gower Peninsula in Glamorgan. However, there are notable exceptions, such as a recent inland record from Mathon, Worcs. (pitfall trap, 1998; coll. E.B. Brown).

Negastris arenicola (Boheman, 1853) / *pulchellus* (Linnaeus, 1761)

Since its discovery in Britain 'on the banks of the Findhorn, Morayshire' (Hislop, 1868), *N. pulchellus* has been recorded only from a handful of sites in northern Scotland. The name *arenicola* (Boheman) was used to describe a variety of *N. pulchellus* with black elytra (e.g. Leseigneur, 1972, pp. 115-116). It was established as a distinct species by Lohse (1976), and since that time has been recognised in an increasing number of European countries. Lohse (1979) anticipated its discovery in the Baltic and North Sea coast areas. It is now known to occur in Denmark (Hansen, 1996) and, in Norway, Ødegaard (2001) found that *N. arenicola* was more widespread than *N. pulchellus*.

The two species will probably be found widely across Europe and Siberia but being so recently separated, their respective distributions are not yet well known. Both appear to be found in Britain where they are confined to Scotland. Specimens with data, as follows, have been examined by Dr. Frode Ødegaard who confirms that both species (as understood in Norway) are found in Britain: *pulchellus* - Nethy Bridge (NJ02), Elgin VC95, vii.1909 (D. Sharp; British Isles Coll., The Natural History Museum BMNH1932-116); *arenicola* - Dorback Burn (NJ01), Elgin VC95, 4.vi.1984 (H. Mendel). According to Lohse (1979), *N. pulchellus* is a species of sandy riverbanks and sand pits, often in quite dry habitats; *N. arenicola* is found on coastal sand dunes as well as inland. It is too early to comment on their relative status or habitat preferences in Britain.

Both species are variable and single examples may be difficult to identify with certainty. Typically, *N. pulchellus* is larger and more extensively marked with yellow, as *N. sabulicola* (Boheman). *N. arenicola* is usually smaller with the elytra mostly black, each elytron normally marked with one to three bright spots. However, size and colour pattern cannot be relied upon as small specimens of *N. pulchellus* and well-marked individuals of *N. arenicola* are not uncommon. Usually, the two species may be separated on the following characters.

Elytral puncturation

Interstices less strongly punctured in *pulchellus*, making it a brighter, more shining species than *arenicola*, which has more strongly and densely punctured interstices. On the anterior half of the elytra, the punctures on the 2nd and 3rd interstices are mainly adjacent to and alongside the striae in *pulchellus*, leaving the central area of

the interstices more or less unpunctured and smooth; in *arenicola* the denser puncturation is distributed across these interstices.

Colour

In *pulchellus*, the elytra are extensively marked with yellow (colour pattern typically as *sabulicola*); in *arenicola* the elytra are black, each elytron usually with 1 - 3 bright spots (exceptionally the patterning is extensive, as *pulchellus*). The antennal bases and legs are more or less yellow in *pulchellus*, usually darker in *arenicola*. The *pubescence* is short, fine, sparse and straw yellow in *pulchellus*. It is longer, denser and silver-grey in *arenicola*.

Size and shape

On average *pulchellus* is larger (length up to 5.5 mm), the pronotum more convex, its lateral margins more strongly rounded; *arenicola* is smaller on average (length up to 4.0 mm), the pronotum less convex, its lateral margins less strongly rounded. However, there is considerable overlap in size.

I confess that I still have slight reservations about the distinctness of the two taxa in Britain, and the possibility that they represent extremes of a single species needs further investigation. Ideally, the types should also be examined to confirm the correct application of the names; Lohse (1976) considered this unnecessary when he separated the species. I should be grateful for the opportunity to examine further British material of '*N. pulchellus*', especially individuals that have the elytra well marked with yellow, and specimens from localities where both species appear to be present.

Acknowledgements

Thanks to Dr. Peter Skidmore for alerting me to the possibility that our '*D. equiseti*' might be *D. equisetioides*, and to Dr. Giuseppe Platia for comparing British *D. equisetioides* with specimens from Germany (type locality) and Italy to confirm their identity. I am grateful to Mr. Eric Brown for allowing me to include his record of *Dicronychus equisetioides* from Mathon, Worcestershire. Dr. Frode Ødegaard kindly examined selected *Negastris pulchellus* and *arenicola* from Scotland.

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On some noteworthy Coleoptera from Packington Deer Park, Warwickshire (VC 38)

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During the annual field meeting of the *Warwickshire Rings* (Recording In Nature Groups) on 11 July 1998 at Packington Deer Park (SP2284), some 200 species of Coleoptera were recorded by the authors. Of these, four were new to Warwickshire and a number of others are regarded as regionally scarce in the county.

The site, which occupies approximately 500 acres, was originally part of the ancient Forest of Arden landscape. It was imparked during the reign of James 1st (1603-25) and was maintained for its herd of 300 fallow deer. Two large halls were built in the late 17th century and Capability Brown incorporated major design features in the park landscape in the 1750s. These included two lakes and wooded areas. The remaining pasture woodland is to all intents and purposes unimproved and contains a number of very old oaks, some of which are several hundred years in age.

The ancient park landscape is unfortunately not open to the public, a fact that has deterred coleopterists from recording here historically. However, parts of the site that have been developed for commercial interest are relatively easily accessed and include a series of gravel pits that are used for coarse fishing.

As with most other pasture woodland sites the saproxylic fauna has proved to be outstanding, even on the basis of a single day's recording. The capture of a single specimen of *Trinodes hirtus* (Fabricius) (Dermestidae), beaten from oak, was an unexpected highlight. This Red Data Book 3 species (Hyman, 1992) has recently only been recorded from just a handful of scattered localities in Britain. Historically it appears to have been widespread with records from the following vice-counties; Devon (03), Surrey (17), Berkshire (22), Oxfordshire (23), Suffolk (25), Cheshire (58) (Hyman, 1992) and as far north as Lancashire (59) (Nash, 1990). However, it has recently only been recorded from Surrey (17) (Jones, 1986; Hammond, 1983 *teste* Allen in Nash, 1990), Berkshire (22) (Copestake, 1992), Suffolk (25) (Nash, 1990, 2000), Gloucestershire (33) (Alexander, 1992) and Worcestershire (37) (Lott

et al., 1999; Alexander *et al.*, 1999). It is possible that this species is more widespread than records suggest because its habits do not aid capture.

Of the other saproxylic species, three were second county records, namely *Phloiotrya vaudoueri* Mulsant (Melandryidae): one swept from beneath oak; and *Cryptarcha undata* (Olivier) (Nitidulidae) and *Prionocyphon serricornis* (Müller, P.W.J.) (Scirtidae), both of which were beaten off oaks. Other species recorded, mostly from beating oak were: *Aderus oculatus* (Paykull) (Aderidae), *Anobium punctatum* (DeGeer), *Dorcatoma serra* Panzer, *Hemicoelus fulvicornis* (Sturm) (Anobiidae), *Agrilus laticornis* (Illiger) (Buprestidae), *Phymatodes testaceus* (Linnaeus) (Cerambycidae), *Cis alni* Gyllenhal, *Cis pygmaeus* (Marsham), *Octotemnus glabriculus* (Gyllenhal) (Ciidae), *Phloeophagus lignarius* (Marsham) (Curculionidae), *Thanasimus formicarius* (Linnaeus) (Cleridae), *Ctesias serra* (Fabricius) [many larvae under oak bark], *Megatoma undata* (Linnaeus) (Dermestidae), *Stenagostus rhombeus* (Olivier) (Elateridae) [taken by R.J. Wright], *Conopalpus testaceus* (Olivier) (Melandryidae), *Axinotarsus marginalis* (Leporte de Castlenau) (Melyridae) and *Prionychus ater* (Fabricius) (Tenebrionidae).

In the crown of one old oak, a large jackdaw (*Corvus monedula* Linnaeus) nest was discovered. This was removed and sieved at ground level (DJM). The nest, although not very productive, yielded a number of beetles of which two were first county records. The first of these, *Trox scaber* (Linnaeus) (Trogidae), is a very widespread species in Britain, but it is not often recorded due to the difficulty in finding suitable and accessible nests. This one produced five specimens. Two specimens of *Philonthus subuliformis* (Gravenhorst) (Staphylinidae) were also taken in the nest. This species is known to be a specialist in bird nests (Joy, 1932: 120, Owen, 1976: 34) and it is likely to be under recorded for the reasons cited for *T. scaber* above.

The dung fauna at Packington was also quite productive, with *Aphodius ater* (DeGeer), *A. borealis* Gyllenhal, *A. fossor* (Linnaeus), *A. pusillus* (Herbst), *A. rufipes* (Linnaeus), *A. rufus* (Moll) and *A. zenkeri* Germar (Scarabaeidae) recorded. Of these, *A. borealis* was the second county record and the first time the species has been seen in numbers in Warwickshire and *A. zenkeri* was a first county record. *Aphodius zenkeri* is often reported as being a specialist in deer dung. However, this apparent dung specialisation is based more on collecting bias, than actual species preference. *A. zenkeri* is a species that requires shady environments in which to breed, as both larvae and adults have a low thermal death point. Since the decline in the practice of grazing livestock within woodlands, the dung most commonly available to both beetle and entomologists alike in such habitats is deer dung. *A. zenkeri* is actually found in all manner of herbivore dung in shaded habitats. It has since been recorded at further sites in Warwickshire and at one of these localities in horse dung.

Another species found in deer dung at Packington Park was *Cercyon obsoletus* (Gyllenhal) [= *Cercyon lugubris* (Olivier)] (Hydrophilidae). Although this species is designated Notable in Hyman (1994: 45) its recorded presence at over twenty sites in Warwickshire suggests that this status should be revised. The remains of a single male *Typhaeus typhoeus* (Linnaeus) (Geotrupidae) were discovered in the hollow of a tree. This represented only the sixth county record, although this species was recorded as occurring at Coleshill (SP28) by W.G. Blatch (pre 1904, in Ellis, 1904), which is in the same region of Warwickshire as Packington Park.

Voucher specimens are deposited in the respective institutes of the authors.

Acknowledgements

We thank Pam Copson for arranging access to the site and Richard J. Wright for permission to quote his record of *Stenagostus*.

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A belated record of *Myrmecocephalus concinnus* (Erichson) (Staphylinidae) in West Lancashire

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Richard Jones' recent (2001) excellent summary of the history of *Myrmecocephalus concinnus* (Erichson) in Britain prompts me to place on record the capture of a single example of this rarely reported species which was taken by sieving saltmarsh debris whilst collecting with my friend Colin Johnson at Barnaby's Sands, West Lancashire (SD34) on 29 August 1989. As far as I am aware, all previously published out-of-doors captures have been from southern England and East Anglia.

Reference

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Orthochaetes insignis (Aubé) (Curculionidae: Eriirhininae) mining the leaves of cultivated *Cyclamen* spp. in the British Isles

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Abstract

Larvae of the weevils *Orthochaetes insignis* (Aubé) and *Orthochaetes setiger* (Beck) were found mining the leaves of a *Cyclamen* spp. taken from a private garden in Suffolk. This appears to be the first recorded instance of *O. insignis* mining the leaves of *Cyclamen* spp. and the first Suffolk record of *O. insignis*. The female genital sclerite was found to differ in size and shape between *O. setiger* and *O. insignis* and is figured. A correlation is noted between the underlying geology and the known distribution of *O. insignis* in the British Isles.

Introduction

On 13 April 2000 mined leaves of a *Cyclamen* spp. plant collected from a private garden in Bury St Edmunds in Suffolk were sent to the Central Science Laboratory (CSL) by a Plant Health and Seeds Inspector (PHSI). The extensive, irregular blotch mines contained nine pale yellow apodous weevil larvae that were approximately 5.0 mm in length, five of which were living. The leaves containing the live larvae were incubated at 20°C and by 22 May 2000 five adult weevils of the genus *Orthochaetes* had successfully emerged. Each adult was identified with reference to Joy (1932) and specimens deposited in the CSL collection. Two were identified as *O. setiger* and three as *O. insignis*. These are the only species of this genus known to occur in the British Isles (Kloet & Hincks, 1977). One example of each species was sent to Dr. M. Cox, at the International Institute of Entomology (IIE) who confirmed the identification.

This is the first recorded instance of *O. insignis* mining the leaves of *Cyclamen* spp., the first record of this species from Suffolk (Dr. D. Nash, pers. comm. 2001) and the first record of a mixed population of *O. setiger* and *O. insignis* in a single host.

Description

In life the adults of both species are superficially the same i.e. between 2.2 and 2.5 mm in length, chestnut brown overall with the pronotum slightly darker. The 3rd and 5th intervals of the elytra are strongly ridged, a character most noticeable at the anterior edges of the elytra. Joy (1932) separates the species on the basis of two

characters, the shape of the elytra and the scale like setae these bear. Joy states for *O. setiger*, 'El. evenly rounded at the sides, and scales more erect, scarcely bent' and for *O. insignis*, 'El. parallel-sided for the front two thirds; scales less erect, strongly curved over so that the tip almost touches the el.'. Two other characters are mentioned by Fowler & Donisthorpe (1913). These are the antennae, which they state are 'darker' in *O. insignis* than *O. setiger*, and the presence of a central and two lateral (one either side) longitudinal grooves on the thorax or pronotum which are stronger in *O. insignis*, but neither character was apparent in the CSL reference specimens. A useful and consistent character highlighted by Dr. M. Cox is the distinctly tuberculate nature of the lateral margins of the pronotum in *O. insignis* as compared to *O. setiger*. It was noticed whilst examining specimens from the CSL collection, that each elytron of *O. insignis* had two diffuse pitchy spots whereas any dark colouration in the same region on specimens of *O. setiger* was spread over a single larger area. Further study to examine a range of specimens is needed to determine if this is a useful diagnostic character. It was unfortunate that the specimens reared from the larvae collected in Suffolk died whilst still in their teneral state and had not fully coloured.

All the reared specimens were found to be females. The absence of males in this sample further confirms the observations made by Gonzalez (1967) that both *O. insignis* and *O. setiger* only exist as parthenogenetic females in the northern part their geographic ranges, with males of both species being unknown in the British Isles. It is interesting to note that the identification key to adult *Orthochaetes* provided by Gonzalez (1967) (that has been adapted in Tempère & Péricart (1989) for species that occur in France) refers to both external morphological characters and the structure of the male genitalia, but not the structure of the female genitalia. Identification of specimens in the northern part of their geographic range therefore relies solely on external characters, which could be absent or difficult to determine in damaged specimens.

Genitalia were successfully dissected for one specimen of each species and compared. Distinct differences could be seen in both the size and shape of the 'Y'-shaped genital sclerites. In dorso-ventral orientation, the genital sclerite of *O. setiger* was 674µm long by 213 µm wide at the broadest point, with smoothly curved 'shoulders' and an acute apex, whereas for *O. insignis* these measurements were 474 µm long by 161µm wide at the broadest point, with angular 'shoulders' and a spatulate apex (Fig 1). The shape of the female genital sclerite is one of the characters routinely used to separate the closely related rice and maize weevils, *Sitophilus oryzae* (Linnaeus) and *Sitophilus zeamais* Motschulsky (Halstead, 1963). Clearly a much larger sample of *O. insignis* and *O. setiger* specimens need to be studied in order to determine how consistent this structure is as a character for the separation of these species.

The larvae of both species are apodous and pale yellow in colour, reaching 5.0 mm in length when fully developed (Halstead, 1977). There are no known keys to the immature stages of this genus.

Distribution

O. insignis was described from specimens collected in France (Aubé 1850). Joy (1912) was the first to record the species from the British Isles when four specimens in his collection, identified as *O. setiger* that he had collected in Cornwall, were discovered to be misidentified examples of *O. insignis*. Fowler & Donisthorpe (1913) suggested that misidentification of the two species may have been commonplace at this time, indicated by their statement that *O. insignis* 'is probably in many of our collections'. The ten *O. setiger* and four *O. insignis* specimens in the CSL collection are of a comparable vintage to this. When checked these were found to be correctly identified.

The genus *Orthochaetes* is Palearctic. Distribution maps given by Gonzalez (1967) for *O. setiger* and *O. insignis*, show that the two species overlap through much of their known range including the British Isles, where they have on occasion been collected from the same locality, Keys (1919 & 1922). It is therefore not so surprising that both species would at some time be found within the same host as recorded here. Gonzalez (1967) produced distribution maps from records held in a number of institutions, and also presumably from published records. It is interesting to note that the northern range of *O. setiger* as illustrated, does not include Scotland as recorded by Joy (1932), a record later confirmed by Crowson (1971).

Over much of its known geographic range, *O. insignis* is most often recorded from coastal locations. The range illustrated by Gonzalez extends along the southern coast of the Republic of Ireland, across south Wales and southwest England. The find of *O. insignis* in Suffolk extends this range further northeast in the British Isles. In continental Europe, *O. insignis* ranges southward along the western coast of France; west along the northern coast of Spain; south through Portugal; across the Pyrenees; eastwards along the southern coast of France; through most of Italy, including Corsica, Sardinia and Sicily and parts of the Moroccan coast. In addition to this Gillerfors (1988) records *O. insignis* from the Azores.

O. insignis is recorded less often in the British Isles than *O. setiger*. The British counties for which published records have been found are: Cornwall (Joy, 1912; Keys, 1919 & 1922), Devon (Champion, 1917 a & b), Dorset (Joy, 1912; Killington, 1927), Glamorgan (Tomlin, 1915; Hallet, 1915), Hampshire (Joy, 1912 ex Moncreaff; Donisthorpe, 1918), Scilly Isles (Tresco & St. Agnes) (Joy, 1912 ex Champion), Surrey (Joy, 1912 ex Champion) and Suffolk, recorded here. In Ireland *O. insignis* is recorded from County Dublin (O'Mahoney, 1928) and County Clare (Morris, 1975).

It is interesting to note a possible correlation between the known collection sites for this species and the underlying geology of the British Isles. With a few exceptions most records of *O. insignis* are from sites where the underlying rock is either chalk or limestone, the reason for this is not known and is apparently unrelated to the host plants. If this correlation is confirmed the theoretical range for this species is considerably greater in the British Isles than the current records indicate.

Hosts and Biology

Both *O. setiger* and *O. insignis* are polyphagous, recorded on a wide variety of host plants. The former species is reputedly the most polyphagous cuculionine known in Europe (Dr. M.G. Morris, pers. comm. 2001 and Scherf (1964)). Hering (1951) describes *O. insignis* as being a 'second degree polyphage' i.e. feeding on both monocotyledons and dicotyledons, but does not list the known hosts. In the British Isles many of the published records are of beetles collected as a result of sweeping vegetation, thus making it impossible positively to associate a host. The confirmed host records are *Cyclamen* spp. (recorded here); *Rumex acetosella* L. (Donisthorpe, 1918); *Viola tricolor* L. Subsp. *curtisii* (E. Forst) (Tomlin, 1915) and *Viola canina* var. *ericetorum* Reich (Hallett, 1915). Outside the British Isles hosts include *Aquilegia vulgaris* L. (Gonzalez, 1967), *Himantoglossum* sp. (Hering, 1951) and *Plantago macrorrhiza* Poir., but as indicated the host range is likely to be much greater than this.

The biology of *O. insignis* is currently unknown. Halstead (1977) investigated the development of *O. setiger* on *Cyclamen* spp. (*C. hederifolium* Ait. (syn. *C. neopolitanum* Ten.) and *C. persicum* Mill.). In summary Halstead found that the adult beetles overwinter in the soil at the base of the host plant. Larvae, presumably produced from eggs laid in the previous year can be found in the leaves in January but mining activity does not begin until March. The mines are initially linear but broaden as they develop to form irregularly shaped blotches. When fully developed the larvae drop out of the leaves and pupate in the soil and adults emerge from these about three weeks later in mid-May.

The larvae, the mines produced on *Cyclamen* spp., and the general appearance of the adults of *O. setiger* and *O. insignis* are all superficially similar. The beetles reared from the larvae collected in Suffolk all emerged during May and it is therefore assumed that the lifecycle of *O. insignis* is similar to that of *O. setiger*.

Halstead (1977) considered that the damage done to *Cyclamen* leaves by the larvae of *O. setiger* probably did little harm to the plant as it occurred towards the end of the plants growing season. The same is assumed for *O. insignis* on this host. The blotch mines do however affect the aesthetics of the plants, which for *C. hederifolium* at least, as pointed out by Halstead, are also grown for their foliage as well as their flowers.

Acknowledgements

Thanks to Mr. S. Haycock (PHSI) for submitting the original and subsequent samples from Bury St. Edmunds; Dr. M. Cox for confirming my identifications; Dr. D. Nash for his efforts in researching the status of *O. insignis* in Suffolk and Dr. M.G. Morris for his useful comments. All the specimens are retained at CSL.

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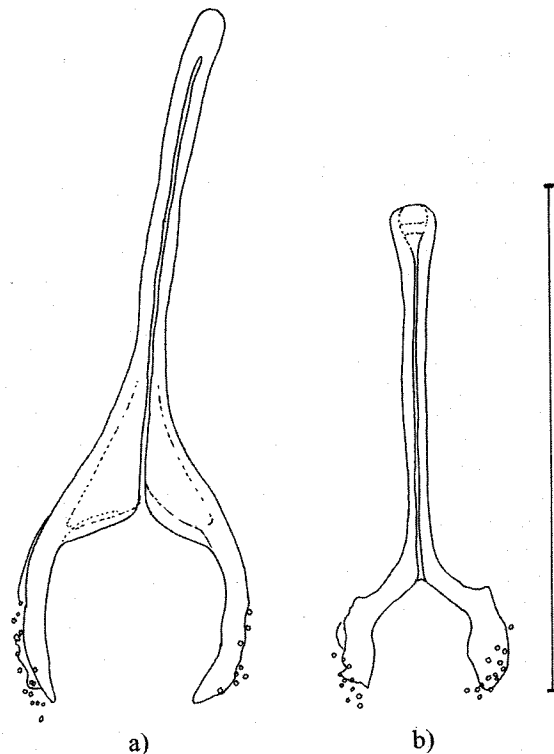


Fig 1. Showing the female genital sclerites of a) *O. setiger* Beck and b) *O. insignis* Aubé. Drawn to scale; scale bar = 500µm (0.5 mm).

Elaphropus parvulus (Dejean) (Carabidae) discovered in West Cumbria

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On 8 July 2002, while searching for riparian beetles along the River Keekle in West Cumbria, I came across a minute and unfamiliar looking carabid. The beetle was found under a small, flat stone lying on sandy mud on the edge of a low, gravel and shingle bank at a point on the river just above Keekle Bridge at (NY0011). The beetle was tubed and later on examined at home under the microscope. With the aid of Lindroth (1974) it was provisionally identified as *Tachys* (now *Elaphropus*) *parvulus* (Dejean). I returned to the site on the 10th July in the hope of finding more specimens, and in a very short space of time I managed to collect a further six individuals. They were all found amongst loose stones and gravel quite close to the water's edge. Two of these specimens were later sent to Mark Telfer at CEH Monks Wood, who kindly confirmed the identification. While at the same site I also found the diminutive click beetle, *Zoroachros minimus* (Boisduval & Lacordaire), which occurred in small numbers on the drier areas of sand and gravel along the riverbank.

During the early eighties the part of the River Keekle where I discovered *E. parvulus* was completely destroyed, along with all the surrounding land, by opencast mining operations. After coal extraction ceased on the site in 1989 the whole area was restored and landscaped, and later made into a nature reserve.

As far as I am aware *E. parvulus* has not been previously found in Cumbria, and this record now appears to be the first for the county and VC 70 Cumberland. There are no specimens of this carabid at all in the local collections of Coleoptera held in the Tullie House Museum at Carlisle.

According to Hyman (1992) *E. parvulus* is graded a Notable B species in Britain, while Shirt (1987) gives it RDB3 status. The distribution map provided by Luff (1998) shows *E. parvulus* to be restricted mainly to southern England, but it has been recorded from Wales and it is also known from south Lancashire. *E. parvulus* is a mainly hygrophilous species, but it has been found in quite dry situations such as cracked paths, brick walls and patios around human habitation (Welch, 1992).

Acknowledgements

I particularly wish to thank Mark Telfer for his help with the identification of my specimens and for useful discussions during the preparation of this note. I would also like to thank Stephen Hewitt, Keeper of Natural Sciences at the Tullie House Museum, Carlisle for granting me access to the collections of local Coleoptera.

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A first record of the Lily Beetle *Lilioceris lili* (Scopoli) in Ireland (Chrysomelidae: Criocerinae)

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Recently (5 June 2002) several live adult Lily Beetles *Lilioceris lili* (Scopoli) were referred to one of us (ACB) by a Royal Horticultural Society member, Knox Gass, of Kings Road, south Belfast (Irish grid J390734), Co Down. These had been causing damage to an Asiatic hybrid lily, *Lilium* 'Connecticut King', in a large town garden and were clearly established in the locality as the owner had seen red beetles on his plants in 2001 but had not reported the discovery until the current year.

The status of *Lilioceris lili* in Britain has been reviewed by Cox (2001). The species is native to Eurasia and occurs across the north Palaearctic land mass but not the British Isles, where it has become established in historical times only, perhaps as late as the nineteenth century (Cox 2001). Despite being erratically resident in southern Britain for many years, serious northwards expansion from the south-eastern counties of England appears to have occurred only very recently, within the last twenty years or so. In a comparatively short time its range has expanded to cover most of southern England and Wales with scattered outlier populations as far north as Lancashire (Cox 2001). This ties in with recent range expansions in a number of other insects that are thought to be a response to climate change, as Cox mentions. Within its centre of distribution the beetle has certainly become one of the more notorious garden pests, being surpassed in level of enquiries at RHS Wisley, only by slugs and by the vine weevil *Otiorhynchus sulcatus* (Fabricius) (RHS Wisley Staff, 2001). The appearance of *L. lili* in Northern Ireland, by far its most northerly and westerly site in the British Isles, is a further significant step in range expansion. The species appears to be established and breeding successfully in the Belfast garden but it would be very surprising if this was an isolated introduction. The main reason the record has come to light is that the gardener is an RHS member and was aware of the identity and significance of the beetle through an RHS campaign to highlight its importance.

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Rare and notable Coleoptera from post-industrial and urban sites in England

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Introduction

Urban, post-industrial and brownfield sites have been identified recently as having considerable invertebrate interest (Gibson, 1998). Spalding & Haes (1995) recorded species from a number of groups on mine spoil in Cornwall whilst Good (1999) reported on the staphylinid beetles of similar sites in Ireland. Rare and scarce beetle species were recorded from demolition sites in Sheffield and Leicester (Lazenby, 1983, 1988; Woodhead, 1987; Lott & Daws, 1995) whilst Eversham & Telfer (1994) studied ground beetles on road verges in southern England and Wahlbrink & Zucchi (1994) concentrated on the ground beetles of German railway embankments.

Since 1990 we have sampled a number of urban and post-industrial sites in England, covering a range of substrates and structure. A number of nationally rare and scarce species have been found and a number previously reported by Eyre & Luff (1995) and Luff, Eyre & Jessop (1996). These records are given below for amplification and completeness and to get an idea of the kinds of beetle found on brownfield sites.

Sites

The sites sampled differed in substrate and structure because of the nature of the industry or the location.

A fertiliser factory produced calcium carbonate (chalk) waste that was dumped along the southern edge of the River Tyne after the Second World War at Prudhoe, Northumberland VC 67, (national grid references NZ0963, NZ0964, NZ1064). There has been a development of vegetation on these large heaps but there remain well-drained areas with little soil and ruderal vegetation. These heaps were sampled in 1994 and 1995.

It used to be that the most obvious post-industrial landscape features in northern England were colliery spoil heaps but most have been removed or landscaped. However, we have sampled a number of these deposits, especially those of the old Marley Hill colliery, Co. Durham VC 66 (NZ1857, NZ1957, NZ2057) in 1993 and 1995. Other heaps sampled in Co. Durham were at Chilton Moor (NZ3248) in 1990, and Hedley Hill (NZ1542) and New Herrington (NZ3353), in 1991. The heap at New Sharlston, West Yorkshire VC 63 (SE3820) was sampled in 1999. In addition, an area of spoil at Allerton Bywater (SE4274), also in West Yorkshire, was converted to an area for educational use, including the provision of eight ponds, and sampling took place here in 1998, 1999 and 2001.

Sand extraction south of the River Tyne at Crawcrook, Co. Durham VC 66 (NZ1263), produced areas of spoil with varying amounts of vegetation, sampled in 1995 and 1996. An area of old sand workings at Stargate, Co. Durham VC 66 (NZ1763) was subject to opencast coal extraction in the early 1990s and the resulting sandy substrate, with very little vegetation, was sampled in 1996. Spoil on an old ironstone working at Ironville in Derbyshire VC 57 (SK4450) and the site of an old iron works at Darwen, Lancashire VC 59 (SD6924) were sampled in 1993 and 1999 respectively. An old factory site at New Brimington (SK4074), old canal workings at Hollingwood (SK4174) and old railways at Old Whittington (SK3974) and Barlborough (SK4676), all in Derbyshire VC 57, were sampled in 1994.

Old railway sidings at Cricklewood, Middlesex VC 21 (TQ2386, TQ2287) were sampled in 2000 and 2001. Some of the Cricklewood area was sandy with ruderal vegetation whilst the substrate in another part was composed of ash, producing a black, poorly drained habitat, again with ruderal vegetation. In 2001 two areas near Brent Cross, Middlesex VC 21 (TQ2387), one a small park and the other unmanaged grassland, were also investigated.

Sampling was carried out by pitfall traps at all sites, whilst sweeping was used at most sites as a secondary method. The aquatic sites at Allerton Bywater were sampled with a pond net. In the list below the terrestrial species were sampled by pitfall traps unless otherwise mentioned. Grid references are only given for records for Prudhoe, Marley Hill and Cricklewood sidings where the sites covered a number of 1km squares.

National rarity and statuses follow those given by Hyman, 1992, 1994.

Rare and notable species

APIONIDAE

Catapion pubescens (Kirby) Nb

A species mainly recorded from southern England, it was swept in a public park near Brent Cross in 2001 from an area of sown grassland with considerable amounts of clover *Trifolium*, given as a food plant by Hyman (1992).

Oxystoma cerdo (Gerstaecker) Nb

An open site species (Hyman, 1992) recorded by sweeping on the fertiliser waste at Prudhoe (NZ0964) in 1994 and at Darwen in 1999 and from a pitfall trap at Stargate in 1996.

CANTHARIDAE

Cantharis obscura Linnaeus Nb

Although apparently associated with woodland (Hyman, 1992), this species was swept on the chalk heaps at Prudhoe (NZ0964) in 1994.

CARABIDAE

Acupalpus consputus (Duftschmid) Nb

A wetland species, usually at the edge of standing water, found at Allerton Bywater in 1999 near the northern edge of its range (Luff, 1998).

Amara fulva (Müller) Nb

Found on sandy or gravelly sites (Luff, 1998), there was a 1985 record for Stargate (NZ1663) in Eyre & Luff (1995) and it was found in the same area in 1996 and at Crawcrook in both 1995 and 1996.

Amara praetermissa (Sahlberg) Nb

A species with a natural habitat of dunes and chalk grassland (Luff, 1998), it has been recorded from colliery spoil at Chilton Moor in 1990, New Herrington in 1991 and Marley Hill (NZ1957) in 1993 and 1995, from the chalk heaps at Prudhoe (NZ0964, NZ1064) in 1994 and from iron industry sites at Ironville in 1993 and Darwen in 1999. There is also a record from an old railway line at Close House (NZ1365) in Eyre & Luff (1995).

Asaphidion pallipes (Duftschmid) Nb

A coastal and riverside species on sand and shingle (Hyman, 1992), it was abundant on wet sand at Crawcrook in 1995 and 1996.

Bembidion clarki Dawson Nb

Found by standing water in lush vegetation, this species was found at Allerton Bywater in 1998, 1999 and 2001.

Bembidion monticola Sturm Nb

A species usually recorded from near running water on sediments (Hyman, 1992), it was found on colliery spoil at Hedley Hill in 1991 and Marley Hill (NZ1857, NZ1957) in 1993.

Blethisa multipunctata (Linnaeus) Nb

Recorded by a pond at Allerton Bywater in 2001, reflecting a preference for well vegetated wetlands (Luff, 1998).

Calathus ambiguus (Paykull) Nb

A species of open sandy sites (Luff, 1998), it was found on sand at an old factory site at New Brimington in 1994.

Lebia chlorocephala (Hoffmannsegg) Nb

There was a record for this species from grassland by the chalk heaps at Prudhoe (NZ0963) in 1994 (Luff, Eyre & Jessop, 1996) and it was also found on the heaps (NZ1064) in 1995.

Microlestes minutulus (Goeze)

This species was first reported in the UK in 1997 (Eversham & Collier, 1997) and was known from four 10km squares in Luff (1998), all on the East Anglian coast. It is a species of damp, open ground and was found on Cricklewood railway sidings (TQ2386) in 2001, a new record for London (Mabbott, 2000), but recorded from the Lee valley (TQ3799) in May 2000 (P. Harvey, pers. comm.).

Miscodera arctica (Paykull) Nb

This mainly moorland species was recorded from colliery spoil at Marley Hill (NZ1957) in 1995, together with another usually upland species *Pterostichus adstrictus* Eschscholtz.

Polistichus connexus (Fourcroy) **RDB2**

A rare species found on dry areas with wet patches (Luff, 1998), usually coastal or by rivers, it was recorded from Cricklewood sidings (TQ2386) in 2001. These sidings are wet in winter, drying in spring and the specimen found was teneral, indicating breeding on the site. It was recorded from Wimbledon Common (Henderson, 1991), with all other recent records from the coast of south-east England (Luff, 1998).

Pterostichus angustatus (Duftschmid) **Nb**

One of the centres of distribution of this species is south Yorkshire and it was recorded from a wet area of colliery spoil at New Sharlston near Wakefield in 1999.

Pterostichus cristatus (Dufour) **Nb**

This is a common species of mainly woodland and grasslands in north-east England and it has been found on colliery spoil at Hedley Hill in 1991 and Marley Hill (NZ1857, NZ1957) in 1993 and 1995 and on the sand workings at Crawcrook in 1995 and 1996.

Pterostichus gracilis (Dejean) **Nb**

Found in wet, well-vegetated sites, this was recorded at Allerton Bywater in 1999 and 2001. There are three 10km square records to the east and, just, the north of Allerton Bywater in Luff (1998) and it was at the northern edge of its range in Britain.

Stenolophus teutonius (Schränk) **Nb**

A species of damp, open ground near water, confined to southern England. The record from the poorly drained Cricklewood sidings ash area (TQ2386) in 2001 is near the northern limit of its range in Europe (Luff, 1998). There are only two previous London 10km squares for this species (Mabbott, 2000).

Tachys parvulus (Dejean) **Nb**

There are a number of records of this species from urban sites (Luff, 1998) and it was recorded from the ash area of Cricklewood sidings (TQ2386) in 2001. It is new for the London area (Mabbott, 2000).

Trechus discus (Fabricius) **Nb**

A species found near water on silt or mud (Luff, 1998), it was found on damp, bare ground by a canal at Hollingwood near Chesterfield in 1994.

CHRYSOMELIDAE*Longitarsus ochroleucus* (Marsham) **Nb**

Apparently associated with ragworts *Senecio* (Hyman, 1992), this species was swept on open spoil at Allerton Bywater in 2001.

Mantura rustica (Linnaeus) **Nb**

Found on open sandy sites (Hyman, 1992), it was recorded from Crawcrook in 1995 and 1996 and Stargate in 1996.

Podagrica fuscicornis (Linnaeus) **Nb**

This species was swept from an area of grassland surrounded by roads at Brent Cross in 2001.

COCCINELLIDAE*Hippodamia variegata* (Goeze) **Nb**

This ladybird was found on colliery spoil sites at Allerton Bywater in 1999 and 2001 and at New Sharlston in 1999 and was common on Cricklewood sidings (TQ2386, TQ2287) and at Brent Cross in 2001. It was near its northern limit at the West Yorkshire sites. Majerus *et al* (1997) doubted the designated conservation status given to this species because it was recorded from over 70 10km squares in a ten year survey, which would rapidly have gone over 100 10km squares had the survey been longer.

Platynaspis luteorubra (Goeze) **Na**

Found at Cricklewood sidings (TQ2386, TQ2287), this species is thought to live in association with ants such as *Lasius niger* (Linnaeus), which was abundant at Cricklewood. This ladybird is found very locally in southern England (Hyman, 1992).

CURCULIONIDAE*Barynotus squamosus* Germar **Nb**

Apparently usually an upland species (Hyman, 1992), this species was found at lowland sites on an old railway at Old Whittington near Chesterfield in 1994 and at the sand workings at Crawcrook in 1995 and 1996.

Brachysomus echinatus (Bonsdorff) **Nb**

A species of calcareous grasslands (Hyman, 1992), it was found on the chalk heaps at Prudhoe (NZ0964, NZ1064) in 1994 and 1995.

Cneorhinus plumbeus (Marsham) **Nb**

Found in sandpits (Hyman, 1992), it was recorded from Crawcrook in 1996.

Glocianus punctiger (Sahlberg) **Nb**

Although associated with dandelions *Taraxacum* on sandy sites, this weevil was found on the chalk heaps at Prudhoe (NZ0964) in 1994 and 1995, as well as from the sand workings at Crawcrook in 1996 and on Cricklewood sidings (TQ2386) in 2001.

Grypus equiseti (Fabricius) **Nb**

A species of a variety of habitats with horsetails *Equisetum*, it was found on an old railway at Barlborough in 1994, on the fertiliser spoil at Prudhoe (NZ0964) in 1994 and on the sand sites at Crawcrook in 1995 and 1996 and at Stargate in 1996.

Notaris scirpi (Fabricius) **Nb**

A weevil associated with *Typha*, it was found at Allerton Bywater in 1998, at the edge of a pond.

Omiamima mollina (Boheman) **Na**

Previously recorded from chalk quarries (Hyman, 1992), it was found on the Prudhoe chalk heaps (NZ0964, NZ1064) in 1994 and 1995.

Orthochaetes insignis (Aubé) **Nb**

A species of well drained soil, especially in sandy or chalky areas, and also found on disturbed ground (Hyman, 1992), it was found on Cricklewood railway sidings (TQ2386) in 2000.

***Orthochaetes setiger* (Beck) Nb**

Another species recorded from disturbed land (Hyman, 1992), it was found on the chalk waste at Prudhoe (NZ0964, NZ1064) in 1994 and 1995, the colliery spoil at Marley Hill (NZ1957) in 1995, the old sand workings at Crawcrook in 1996, the old ironworks at Darwen in 1999 and on the railway sidings at Cricklewood (TQ2386) in 2000 and 2001.

***Otiorhynchus desertus* Rosenhauer Nb**

Apparently a moorland and sandy area species, it was found on the Prudhoe waste heaps (NZ0964, NZ1064) in 1994 and 1995.

***Sibinia primitus* (Herbst) Nb**

A weevil of disturbed ground, usually with sandy soils (Hyman, 1992), it was found on the sidings at Cricklewood (TQ2386) in 2001.

***Stenocarus umbrinus* (Gyllenhal) Nb**

Found on disturbed ground on sandy soils (Hyman, 1992), it was recorded from Crawcrook in 1995 and 1996.

***Strophosoma faber* (Herbst) Nb**

There is a 1985 record from Stargate (NZ1663) in Luff, Eyre & Jessop (1996) and it was found in the same area in 1995 as well as from the other sandy site at Crawcrook in 1996. Although apparently associated with sandy soils (Hyman, 1992), it was also recorded from the chalk waste at Prudhoe (NZ0964) in 1994 and 1995.

***Tropiphorus obtusus* (Bonsdorff) Na**

Found on a number of sandy riverine sediments (Eyre, Luff & Lott, 2000), this species was also recorded from the sand workings at Crawcrook in 1996.

***Tropiphorus terricola* (Newman) Nb**

On open sites (Hyman, 1992), this species was recorded from the old factory site at New Brimington near Chesterfield in 1994, from the chalk heaps at Prudhoe (NZ1064) in 1995 and from the sandy sites at Crawcrook and Stargate in 1996.

DYTISCIDAE***Agabus biguttatus* (Olivier) Nb**

A stream water beetle with at least some of its life cycle in subterranean water, this species was found in a pitfall by a pond at Stargate in 1996.

***Dytiscus circumcinctus* Ahrens Na**

This species was also found in a pitfall trap next to a pond, at Allerton Bywater in 1999. The distribution of this species is centred on Cheshire (Ball, 1997) and this record is near its northern limit in Britain.

***Dytiscus circumflexus* Fabricius Nb**

This species was recorded from the grassy edge of a well-vegetated pond at Allerton Bywater in 1998.

***Hygrotus nigrolineatus* (von Steven) Na**

A pioneer species, it was found in a pond with little vegetation at Allerton Bywater in 1998 but it was not found in 1999 or 2001.

***Rhantus grapii* (Gyllenhal) Nb**

A species of sites with dense vegetation, this species was found in two such ponds at Allerton Bywater in 1999 and 2001 and is near the northern edge of its distribution in Britain.

***Scarodytes halensis* (Fabricius) Nb**

Another pioneer species preferring open water sites with little vegetation, it was found in the same pond at Allerton Bywater in 1998 as *Hygrotus nigrolineatus* and was not found in 1999 or 2001. It has been expanding northwards recently and this is a record for the species at the north of its range in Britain.

ELATERIDAE***Athous campyloides* Newman Nb**

A click beetle of grasslands, most records are from south-east England (Mendel & Clarke, 1996), and it was found at Brent Cross in north London in 2001.

HELOCHARIDAE***Helochares lividus* (Forster) Nb**

This water beetle was found in four of the more vegetated ponds at Allerton Bywater in 1998 and 2001.

***Helochares punctatus* Sharp Nb**

This is a species usually found in ponds with base-poor water (Ball, 1997); it was also recorded from four ponds at Allerton Bywater in 2001.

HYDROPHILIDAE***Cercyon tristis* (Illiger) Nb**

A wetland species, it was found in a marshy area at Allerton Bywater in 1999 and 2001.

***Enochrus melanocephalus* (Olivier) Nb**

This is a species of weedy, dense vegetation and was found in the mossy edge of a pond at Allerton Bywater in 1998.

***Laccobius sinuatus* Motschulsky Nb**

In northern England this species has previously been associated with coal mines (Foster & Eyre, 1992) and it was found in two ponds at Allerton Bywater in 1998. It was also taken in pitfall traps at Stargate in 1996, near a previous record of 1985 (NZ1663).

LEIODIDAE***Choleva glauca* Britten Notable**

Thought to be associated with nests of the mole (Hyman, 1994), it was found on the chalk heaps at Prudhoe (NZ1064) in 1995.

***Colon latum* Kraatz Notable**

Apparently a mainly woodland species (Hyman, 1994), it was found on colliery spoil at Marley Hill (NZ1957) in 1993.

***Hydnobius punctatus* (Sturm) Notable**

Recorded from a variety of habitats (Hyman, 1994), it was found on the Prudhoe fertiliser spoil (NZ0964) in 1994.

NITIDULIDAE

Meligethes rotundicollis Brisout **Notable**

A species of open sites (Hyman, 1994), it was recorded from Brent Cross in 2001.

STAPHYLINIDAE

Aleochara ruficornis Gravenhorst **Notable**

Found in a variety of habitats (Eyre, Luff & Lott, 1998, 2000), it also occurred on colliery spoil at Marley Hill (NZ1857, NZ1957, NZ2056) in 1993 and on the sandy sites at Crawcrook and Stargate in 1996.

Bryoporus crassicornis (Mäklin) **RDBK**

Only recorded recently in Britain from near Riding Mill in 1976 and in a conifer wood at Allerwash (NY8666) in 1991 (Luff, Eyre & Jessop, 1996), both in south Northumberland, a single specimen was also found on the Prudhoe chalk heaps (NZ1064) in 1995.

Chiloporata rubicunda (Erichson) **Notable**

A species usually recorded from the banks of streams and rivers (Hyman, 1994), it was found on the old sand workings at Crawcrook in 1995.

Ocypus fuscatus (Gravenhorst) **Nb**

Recorded from a variety of habitats (Hyman, 1994), it was found on the sandy Stargate site in 1996 and on the old colliery site at Allerton Bywater in 2001.

Ocypus nero (Faldermann) **Na**

Although recorded from woodland (Hyman, 1994), other records from coastal shingle and a quarry, together with riverine shingle (Eyre, Luff & Lott, 2000) indicate that it may prefer open, disturbed sites. The records from the Prudhoe chalk heaps (NZ1064) in 1994 and 1995 and from the sand workings at Crawcrook in 1995 support such a preference.

Oxyptoda spectabilis Märkel **Notable**

Another species recorded from a variety of habitats (Hyman, 1994), it was found on the colliery spoil at Marley Hill (NZ1857) in 1993.

Quedius fulvicollis (Stephens) **Nb**

Although apparently preferring relatively stable habitats such as woodland, grassland, moors and marsh (Hyman, 1994), it was found on the sand at Crawcrook in 1995.

Quedius longicornis Kraatz **Nb**

Associated with mole nests (Hyman, 1994), there was a record from rough grassland at Prudhoe (NZ1064) in Luff, Eyre & Jessop (1996), but not from the chalk heaps. It was found on the old sand site at Crawcrook in 1995 and 1996.

Quedius puncticollis (Thomson) **Nb**

Another species found in mole nests, it was recorded from the colliery spoil at Marley Hill (NZ1957) in 1995.

Stenus fuscicornis Erichson **Nb**

Recorded from woodland and a garden (Hyman, 1994) and apparently a species of damp places (Ball, 1997), it was found on the sand at Crawcrook in 1995.

Discussion

A number of the post-industrial and urban sites sampled provided records of some rare and scarce species whose habitat preferences are not fully understood. They also show that some of these areas have beetle assemblages containing a considerable number of rare and scarce species. Whilst the old sand extraction sites at Crawcrook and Stargate, with 19 and 10 nationally scarce species respectively, provided habitats that were generally similar to other sandy grassland and heath sites, they also provided habitat for species more often found on riverine or coastal sand (e.g. *Amara fulva*, *Asaphidion pallipes*, *Chiloporata rubicunda*). Eversham & Telfer (1994) and Eversham, Roy & Telfer (1996) investigated the ground beetles of roadside and urban sites and found that they provided habitat for species usually associated with sandy heaths. However, the records presented above appear to show that most of the sites sampled provided habitat for species usually associated with a number of habitat types. The colliery spoil at Marley Hill produced records of species usually found on riverine sediment (*Bembidion monticola*), on open, sandy sites (*Amara praetermissa*, *Orthochaetes setiger*), as well as some (e.g. *Miscodera arctica*, *Pterostichus adstrictus*) usually found on upland moors. Whilst a number of species on the chalk heaps at Prudhoe were known to be found on chalky sites (e.g. *Brachysomus echinatus*, *Omiomima mollina*), others were sand site species (e.g. *Otiorhynchus desertus*, *Strophosoma faber*). The 18 nationally scarce species recorded from Allerton Bywater were dominated by aquatic and wetland species, showing that ponds and damp areas on base-poor colliery spoil provide important habitat. The recording of a number of rare and scarce beetle species from old railway sidings at Cricklewood, north London indicated that unused areas by mainline routes may provide high quality invertebrate habitats, as well as corridors for dispersal. A number of species of bare, damp habitats (e.g. *Microlestes minutulus*, *Stenolophus teutomus*) were found on an area of sidings with an ash substrate but the recording from the same area of six common species of *Amara*, *Calathus fuscipes* and *Harpalus rubripes* shows that dry site species also utilise this black substrate with ruderal vegetation.

There has been some interest in the importance and conservation value of post-industrial and urban (brownfield) sites for invertebrates (e.g. Gibson, 1998) but it is highly unlikely that any brownfield site would be preserved for the conservation of invertebrate assemblages. The importance of brownfield sites is due to the provision of base-poor, usually soil-less, areas within highly productive lowland agricultural and urban landscapes. These areas produce a mosaic of ruderal habitats with a number of rare and scarce species. However, they are generally an eyesore with considerable economic potential and, with the exception of the rail network, are likely to be redeveloped.

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Quedius ventralis (Aragona) (Staphylinidae) new to Scotland

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A single example of this distinctive staphylinid was collected on 9 April 2002 in woodland on the east side of the Water of Leith near Merchiston Castle School, Colinton, Edinburgh (NT2169). The specimen was in rotten wood mould at the heart of a large, recently cut mature beech stump. According to the Scottish Insect Records Index (SIRI) there are no previous records from the country; Hyman (1994) and Joy (1932) simply give its distribution as 'England'. Coldwell (1997) mentions that *Quedius ventralis* (Aragona) was found near Barnsley, south Yorkshire in 1996, but I have been unable to find any records north of this.

The only other species of note in the same wood mould was a single example of *Trichophya pilicornis* (Gyllenhal) (Staphylinidae). Although widespread in England and occurring as far north as Loch Garten, Inverness-shire (Ashe, 1952), in my experience it is very seldom found, as also commented on by Allen (1965) and J.A. Owen (pers. comm.). Both these beetles are graded Notable B (Hyman, 1994) and *Q. ventralis* is listed as a saproxylic quality indicator species by Fowles *et al.* (1999). This suggests that the woodland along the Water of Leith may well pay further more detailed investigation, even well into the environs of Edinburgh.

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Epitrix pubescens (Koch, J.D.W.) (Chrysomelidae) and other species spreading westwards across Gloucestershire

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The mobility of species is an important subject to document, especially in the context of modern climate change. Gloucestershire is a relatively well-studied county for beetles and so can provide a good basis for assessing change. The flea beetle *Epitrix pubescens* (Koch) feeds on black nightshade *Solanum nigrum* L. (and probably other *Solanum* spp) and is associated particularly with disturbed ground. The habitat preference is one that requires high mobility - an ability to find quickly early successional vegetation as it develops in response to soil disturbance and before it changes into something else. Atty (1983) includes no records of the species in Gloucestershire and it was not until 1995 that I encountered the species, in the far east of the county at the Edward Richardson & Phyllis Amey Reserve, Lechlade (SP20) - an area of abandoned gravel pits. The following year John Bratton found it at Long Pool, Coombe Hill (SO82) - an area of *Glyceria maxima* (Hartm.) and willow surrounded by arable farmland under set-aside in the Severn Vale - and it is now abundant in this area. Dave Gibbs turned it up at Avonmouth Sewage Farm (ST57), in the far south of the county in 2001, and this year I have found it on farmland at Blaisdon (SO71) in the far north-west of the county. So it has now been confirmed as present in all of the main natural areas of Gloucestershire and within a space of just eight years!

It has been around in neighbouring Somerset longer, the first record being in 1965 from the Levels and this remains its focus in that county. Recently worked peat is a key habitat. Duff (1993) comments that it is probably increasing there. The Chrysomelidae Recording Scheme confirms that it is now widespread south of a line between the Humber and the Avon (M. Cox, pers. comm.).

Other species are also appearing on the eastern borders of Gloucestershire and spreading westwards. The cerambycid *Agapanthia villosviridescens* (Degeer) was first noted in 1992 at Cutsdean Quarry (SP13) by C. Twissell, and has spread more slowly: Coln St Aldwyns (SP10), R. Homan in 1996; Cold Aston, D.J.R. Haigh in 1996; Brassey Reserve, J. Meiklejohn in 1997, and M. Button in 1998, all in SP12; Hazleton (SP01) in 2000, C. Twissell.

Another flea beetle, *Aphthona lutescens* Gyllenhal, was discovered new to the county list only last year, again in the far east, at Rack Isle, Bibury (SP10) - its spread will be interesting to follow. Its national distribution does not, however, fit the trend and so the species may behave differently. It is apparently as locally widespread in the west as in the east and occurs throughout Wales (M. Cox, pers. comm.).

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Zyras collaris (Märkel) (Col. Staphylinidae) in Wales and Somerset

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Zyras collaris (Märkel) is an orange and blue aleocharine rove beetle that mimics the warning coloration of rove beetles in the genus *Paederus*. I have also noticed similar mimicry in spiders and a species of Anthicidae in Spain. *Paederus* species host micro-organisms that produce the toxin pederin (Kellner, 1999), which is an effective defense against spiders and is also capable of blistering human skin.

In common with other species in the genus, *Z. collaris* is a specialist predator of ants, and Donisthorpe (1900) reported finding adults and larvae in a nest of *Myrmica rubra* (Linnaeus) in a heap of cut sedge at Wicken Fen. Horion (1967) described its habitat as wet and swampy ground in wet meadows and ditches. British records known to me come from wetland sites.

Although not listed as nationally scarce by Hyman (1994), published modern records are very rare and it may have declined since Donisthorpe (1927) described it as widely distributed, ranging northward into the south of Scotland. It is therefore worth noting the occurrences of two specimens in flood refuse in a marsh by a tidal stretch of the Afon Dwyrdd in Merioneth (SH641398) on 20 June 2002 and of one specimen by a ditch in the West Sedgemoor RSPB reserve in Somerset (ST361254) on 29 June 2002. Its distribution in Wales is very localised in fens and dune slacks with post-1980 records coming from just four sites (A. Fowles, pers. comm.). The most recent Somerset record quoted by Duff (1993) dates from 1935.

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Some uncommon beetle records, Kent, 2001

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Uleiota planata (Latreille) Cucujidae

Found in small numbers at Chilstone Park TQ8950 beneath the bark of cut oak *Quercus* logs from a tree some two hundred years old that had been left lying for two years or more. Adults were found in small numbers on 15 January, 14 February and also on 7 January 2002 congregating in the crooks of the branches, perhaps for the moisture. The bark was in a state to be removed by hand but still attached and unbroken by fungal attack. There are four other records for West Kent VC 16, 1987 to 1992, but this is the first for VC 15 East Kent.

Platypus cylindrus (Fabricius) Platypodidae was found in the same logs on the same dates in some numbers as adults. These were emerging straight from sound wood out through the bark (from where they can be dislodged with a grass stalk); there are no visible galleries, just the exit holes. *P. cylindrus* is recorded sporadically in Kent from 1971 to 1981 but this is the furthest East to date. Chilstone Park is an old deer park on sandy soil with some very old trees. Until recent work on the Channel rail link it was grazed. It is now divided into small pieces and sadly neglected.

Odontaeus armiger Scopoli Geotrupidae

Taken at light, a single male on 15 August on a very warm night in my garden at Detling TQ7957, sixty metres from farmland with sheep. Further light trapping did not produce any more. Fowler in the Victoria County History (1908) states it to be "very rare". There are two recent records for Kent in 1977 and 1980, with sparse much older records mostly taken at light.

Metoecus paradoxus (Linnaeus) Rhipiphoridae

Two females were extracted from a badly destroyed wasps nest in the ground beneath a conifer tree at Marden TQ7342. This is perhaps an under-recorded species due to the difficulty of its habitat.

Bruchela rufipes (Olivier) Urodontidae

Swept from chalk downland herbage, one from each location, TQ7362 and TQ7462 on 2 July. It feeds on wild mignonette *Reseda lutea* (L.). Morris (1990) states it is a recent discovery "known from only one site in S. Essex in the London Conurbation" but a number of recent records including Surrey (Jones, 2001) and Cambridgeshire (Hodge & Hance, 2000) show its expanding range.

Eledona agricola (Herbst) Tenebrionidae

Adults were found infesting an old bracket fungus on a dead oak *Quercus* in Knole Park TQ5553 on 23 November in quite large numbers. Hyman lists it as Notable B, and widespread but local.

Trachys scrobiculatus (Kiesenwetter, 1857) Buprestidae

Two specimens were taken at Harrietsham TQ8560 on 1 June 1999 on ground ivy *Glechoma hederacea* L. I could not find it in 2000, but on 13 May 2001 I found several on an area of *G. hederacea* growing on a motorway bank on sandy soil at Leeds (Kent) TQ8453 on 13 May 2001 and again at Aylesford TQ7161 on 15 May 2001. It was again present at Leeds on 20 June 2002. This is a very small beetle feeding on a low growing plant and is difficult to collect. Its defence is to lay still in the sweep net with legs retracted for a long time, resembling a seed and is easily overlooked. Vacuum collection techniques may lead to a wider distribution and more records for this species. Fowler and Donisthorpe (1913) record it from

Charing and Doddington (Kent) and there are two Kent records for 1986 and sparse records for the last three years.

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Badister meridionalis Puel (Carabidae) in Somerset

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On 29 June 2002, I collected a male and a female *Badister meridionalis* Puel from litter on sparsely vegetated peat in fen-meadow at West Sedgemoor RSPB reserve in Somerset (ST360255). The most abundant beetle species in this part of the meadow were the staphylinid, *Philonthus micans* (Gravenhorst) and the carabid, *Dyschirius globosus* (Herbst). Other carabid records included *Dyschirius luedersi* Wagner, *Loricera pilicornis* (Fabricius), *Bembidion assimile* Gyllenhal, *Pterostichus diligens* (Sturm), *P. gracilis* (Dejean), *P. nigrita* (Paykull), *P. minor* (Gyllenhal), *Agonum piceum* (Linnaeus), *Stenolophus mixtus* (Herbst), *Acupalpus dubius* Schilsky and *A. parvulus* (Sturm).

B. meridionalis has previously been recorded from Britain at wetland sites in Gloucestershire (Whitehead, 1991), Oxfordshire (Hyman, 1992) and Sussex (Hodge, 2001).

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Review

Xylophagous Insects. by Gy. Csóka & T. Kovács. Budapest: Forest Research Institute. 1999. 189pp, numerous colour photos. Hbk. ISBN 963 502 693 5. Text in English/Hungarian. Available from Ian Johnson Natural History Books, 18 Bathurst Walk, Iver SL0 9AZ at £14 + p&p.

Readers may be unaware of this photographic guide to wood-borers and their effects on wood. The photographs are of a high quality and cover adults, larvae and pupae as well as feeding signs in the wood, although unfortunately not for each species. Lucanidae, Scarabaeidae, Buprestidae, Anobiidae, Lymexylonidae, Cerambycidae, Anthribidae and Curculionidae are covered as well as a few Hymenoptera, Lepidoptera and Diptera.

The book nicely illustrates how the habitat requirements of species vary across their range. An excellent example is *Gnorimus nobilis* that, in Hungary, "lives in closed forests on mountains" and "prefers cold and humid valleys and gorges". In Britain it is associated with old open-grown trees in orchards and wood pastures across the warmer south of England. *Platyrhinus resinosus* feeds "on the fungus *Peniophora cinerea*" in Hungary, whereas in Britain it feeds on *Daldinia concentrica* and *Hypoxylon fragrifforme*.

It also nicely illustrates larval feeding signs which have not been generally recognised in Britain, e.g. the larvae of *Agrilus angustulus* feed under the bark of live young stems of various broadleaved trees and shrubs causing unevenly raised marks on the outer surface caused by the underlying larval tunnels.

While it is the photographs that will be the main appeal to British readers there are some interesting short introductory sections covering forest ecology and conservation, natural habitats and integrated pest management. One interesting snippet is that in 1997 a National Biodiversity Monitoring System was established as part of Hungary's commitment following the Earth Summit in Rio de Janeiro in 1992. 37 beetle species are part of this monitoring scheme including *Lucanus cervus* – rare in Hungary and already extinct in many places, *Cerambyx cerdo*, and *Rosalia alpina*. Species described as common include *Lymexylon navale*, *Pyrrhidium sanguineum*, and *Oberea oculata*.

Books like this help us to build up a picture of the status of species across Europe and so better focus conservation efforts.

Keith N. A. Alexander

A fossil specimen of *Pterostichus angustatus* (Duftschmid) (Carabidae): implications for the importance of pine and fire habitats

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Abstract

The recovery of a fossil specimen of *Pterostichus angustatus* (Duftschmid) in 4000 year-old deposits from Hatfield Moors SSSI, Humberhead Levels shows the early presence of this species in Britain. Before this discovery the species has been considered only as an established immigrant since about 1900. This paper discusses the biology and biogeography of this species and the implications of its recovery in the fossil record.

Introduction

The Humberhead Levels (Figure 1) comprise an extensive area of former wetlands in south Yorkshire and Lincolnshire and include Thorne (SE7316) and Hatfield Moors (SE7006), two adjacent, but distinct raised mires. They are the two largest surviving examples of ombrotrophic lowland raised mire in eastern England (Rogers & Bellamy, 1972) and remnants of the once large mosaic of wetlands and raised mires that formed in the region c. 6000 years ago. The peatlands are nationally and internationally important for their wildlife, being notified as Sites of Special Scientific Interest (SSSIs). They are proposed as both Special Protection Areas (SPAs), and Special Areas of Conservation (SACs), and qualify as Wetlands of International Importance under the terms of the Ramsar Convention. The mires are considered to be the only truly Continental raised mires in Britain, having stronger affinities with the Baltic lowlands than with the "Atlantic" mires of western and upland Britain (Eversham *et al.*, 1995).

The peatlands have formed important *foci* for palaeoenvironmental research, with much previous work largely concentrating on Thorne Moors (*cf.* Erdtman, 1928; Smith, 1958; Buckland & Kenward, 1973; Buckland, 1979; Smith, 1985, 2002; Roper, 1996; Whitehouse, 1993, 1997a; Dinnin, 1997; Boswijk, 1998). Sub-fossil insect analysis of material from the basal deposits of Thorne Moors has identified twenty beetles (Coleoptera) that are now extinct in Great Britain (Buckland & Kenward, 1973; Buckland, 1979; Roper, 1996; Whitehouse, 1997a,b, 1999). More recently, a research project investigated the palaeoentomological record of Hatfield Moors, the main results of which are published or in the process of being published (Whitehouse, 1999, 2000, submitted; Boswijk & Whitehouse, 2002).

P. angustatus is typically found on burnt ground, in particular sandy heaths (Lindroth, 1974; Wikars, 1992; Luff, 1998). Lundberg (1984) suggests it is almost exclusively associated with burnt wood, and places it in the same category as the pyrophilous *Melanophila acuminata* (Degeer) (Buprestidae). It also appears to favour *Pinus*-woodlands (Koch, 1989; Bilton, 1991), although these too may be at least partially fire-dependant (see below). The frequency of *P. angustatus*' association with burnt habitats would thus appear to strongly suggest that it is a pyrophilous species. Much of the available information would suggest that the beetle is mainly associated with lowland situations and the lack of lowland plantations may explain its limited range in Scotland (Skidmore, pers. comm., 1998).

Its biology may explain why this species was present on Hatfield Moors. The associated palaeoecological work indicates the occurrence of pine-heath habitats on the site and that it was subject to periodic burning (Smith, 1985, 2002; Whitehouse, 1999, 2000; Boswijk & Whitehouse, 2002). Indeed, the species is today reasonably common on Hatfield Moors (Skidmore, 2001), presumably attracted by the frequent peat fires as well as stands of *Pinus sylvestris* L.

Discussion and conclusions

The occurrence of *P. angustatus* as a fossil is important firstly in biogeographic terms as it shows the presence of this species in Britain about 4000 years ago. The size of this carabid suggests that it is unlikely to have been overlooked by collectors. It is impossible to know whether the present population of this species on Hatfield Moors is a re-introduction or an overlooked population.

Secondly, it raises some interesting questions with regard to its habitat and what factors may have contributed towards its decline and re-expansion. There does not appear be any apparent reason for this species' contraction in range since burnt heath is not likely to have been a particularly scarce resource in the past, although today it is a habitat much reduced. In Sweden this species is considered to have declined because of forest fire control, and that this may be an important factor in its decline (Ehnström *et al.*, 1993).

In Britain and Ireland there has also been a decline of pine woodland since the mid-Holocene, another of its associated habitats. The current natural range of *Pinus sylvestris* is largely restricted to the Scottish Highlands, although isolated patches occur in some areas of lowland heath. Pine was abundant during the early Holocene, being present widely but locally in southern England 9000 years ago, spreading northwards between 9000 and 8500 years ago (Birks, 1989) and reaching its most extensive distribution between 7500 - 4400 years ago (Bennett, 1995). Around *c.* 3000 cal BC (4400 BP) pine appears to have undergone a sudden and widespread decline, the "Pine decline" (Bennett, 1984, 1995). The most widespread view is that this decline was caused by a shift to cooler and wetter climatic conditions, promoting the expansion of peat to the detriment of pine (Bennett, 1984; Gear & Huntley, 1991; Anderson, *et al.*, 1998). Bradshaw (1993) notes that a decreased occurrence of wildfire, in response to possible climate change, may have been a contributory factor

in the decline of populations. The pine decline appears to at least partially explain the extinction of a number of pinicolous elements within the British fauna (Whitehouse, 1997b).

Macrofossil remains, particularly of pine, preserved within basal peats of mires are often charred or associated with macrofossil charcoal (e.g., Bradshaw, 1993; Chambers *et al.*, 1997). Abundant charcoal and surface-charred trees have been recovered from both Thorne and Hatfield Moors, indicating the importance of fire in the early mire landscape (Whitehouse, 2000). Fire has, of course, long been recognised as an important natural agent within boreal forest ecosystems (e.g. Zackrisson, 1977; Engelmark *et al.*, 1994) and it seems that *Pinus sylvestris* is at least partially fire-dependent under natural conditions.

Other fossil insect research on Thorne and Hatfield Moors indicates that several possibly pyrophilous species have become extinct from the British Isles due to the decline of fire habitats, raising interesting questions regarding the former role of natural fire within British forests, particularly within temperate coniferous woodlands (*cf.* Whitehouse, 2000). For instance, the non-British anobiid, *Stagetus borealis* Israelsson was recovered from Thorne Moors (Whitehouse, 1997a, 1999) dated to sometime after 3350-3100 cal BC (4515 ± 70 BP, [Smith, 1985]). This very rare European species is associated with primeval woodland, where it lives in fungoid dead wood (Koch, 1989). Lundberg (1984), Wikars (1992) and Ahnlund & Lindhe (1992) regard it as a fire species, occurring in 5 to 25 year-old successions after fire. Muona & Rutanen (1994) record its increase following fire. Elsewhere on Thorne Moors, two specimens of the non-British *Mycetina cruciata* (Schaller) (Endomychidae) were recovered from samples containing charcoal (Whitehouse, 1999), dendrochronologically dated to between 3444-2445 BC (Boswijk, 1998). This very rare 'Urwaldrelikt' (species associated with undisturbed woodland) prefers very moist wood in a very advanced state of rot. Although found in all types of wood, it appears to prefer conifers (Palm, 1951). Lundberg (1984) recovered it associated with fire-damaged wood. Finally, Buckland recovered the non-British ostomid *Zimioma grossum* (L.), dated to 1390-1060 cal BC (2980 ± 10 B.P) (Buckland, 1979). It is described as being associated with 'Urwald' and particularly with *Betula* damaged by forest fires (Palm, 1951), although it is also found on coniferous trees (Horion, 1960). Wikars (1992) recorded it invading sites 5-25 years after fire.

Whitehouse (2000) provides a fuller discussion of the impacts and role of fire on insect populations and the fossil insect evidence. The suppression and associated decline of forest fires in Fennoscandia, for instance, has meant that many pyrophilous species have become severely restricted or have disappeared altogether (Heliövaara and Väisänen, 1984; Wikars, 1992; Muona & Rutanen, 1994; Midtgaard, 1996). Muona and Rutanen (1994) point out that the importance of fire to many threatened species is probably relevant to much of western and central Europe. The palaeontological record suggests that the decline in fire-produced habitats may

have had a hitherto unrecognised role in the extinction and contraction in range of some former and current British invertebrates.

It seems that the most plausible explanation for the decline of *P. angustatus* is that its preferred habitat is fire-damaged pine-heath woodland, which has been subject to major decline. Its apparent re-expansion since the beginning of this century may have been due to frequent prescribed management burning of heath, peatlands and heather moorlands (cf. Gimingham, 1977), and possibly the re-expansion of pine and other coniferous taxa with the planting of 20th century conifer plantations.

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Review

An Atlas of Warwickshire Beetles by S.A. Lane, R.J. Wright and T.G. Forsythe. Warwickshire Biological Records Centre (Coventry City Council and Warwickshire County Council) 2002. price £12.50. Obtainable from The Herbert Art Gallery & Museum, Jordan Well, Coventry CV1 5QP (tel: 02476 832565) or from Warwickshire Museum, Market Place, Warwick CV34 4SA (tel: 01926 412481) (£12.50 plus £3 p&p).

When I lived in Yorkshire, I sometimes travelled south through Warwickshire, and now I live in Surrey, I sometimes travel north through Warwickshire, but have never stopped to record. Flicking quickly through the pages of this Atlas suggests that the loss is mine as there are many worthwhile species to be seen here. Also, I am not the only Coleopterist to do this as there are other well-known names missing from the list of recorders.

The authors have done a great job to assemble this work that is in A4, spiral-bound format. The first 33 pages are introductory, giving a brief account of the topography of vice-county 38, its habitat areas, maps of land use, a brief history of Coleoptera recording in the county, a list of contributing recorders, a map of the better recorded wildlife sites together with lists of Nationally Notable species recorded from 20 selected good sites, and a checklist of species for Warwickshire (as VC 38, not the modern administrative county) for the recording period 1904-2000, i.e. since the publication of the Victoria County History (V.C.H.) list. The bulk of the Atlas (pp. 34-193) contains the species accounts, which for all but the most poorly recorded groups include the data presented in the form of distribution maps using dots at a 5 km square resolution. Finally, the loose ends, species not recorded since the V.C.H. list of 1904 together with species for which there are recent unconfirmed, doubtful or erroneous records, followed by a species index and a "stop-press" page of 2001-2002 additions. There is also an accompanying one-page list of addenda and errata.

Although the authors point out that Warwickshire (i.e. VC 38) is one of the most central counties in England, they do not attempt to put the size of their county or its beetle list into a local or national context. Eye-balling my vice-counties map suggests that Warwickshire is a medium-sized vice-county, although of course, a smaller than average county. The checklist of effectively 20th century species includes, as far as I counted, 1811 species, which must compare favourably with other Midlands' counties.

To me, the interest of the Warwickshire list, in a national context, is as a barometer for highlighting the changing status of various species, especially those predominantly southern England species at the northern limit of their UK range in the Midlands. The news is not all bad; some species are increasing in range in the UK, for example *Bitoma crenata* and *Agapanthia villosiviridescens* to name but two, and this is reflected in their increased abundance within Warwickshire as well. The losses are generally better documented, as for example the demise of *Chrysomela tremula*, although others such as the serious decline or apparent extinction in Warwickshire of the two *Timarcha* species is perhaps a portent of things to come for these two species nationally. The virtually complete disappearance of *Anotylus nitidulus* from the UK seems to have occurred without notice by the conservation agencies. This apparently once common species was recorded from 'all localities' in the V.C.H., yet the authors comment "Unaccountably, there are no records of this species since the V.C.H."

The vast majority of records in this Atlas are relatively recent, dating from 1970 judging from the predominance of large over small dots on the maps, and understandably, a lot of the recording effort has centred on the good or better wildlife sites. However, there is virtually no mention of records from agricultural areas, reflecting most people's assumption that these are of no entomological interest. While I agree that most species in fields and improved

grasslands are common and widespread and one could fill every square of a map for certain carabids and staphylinids in particular from agricultural areas, these areas are not always devoid of interest, and some pleasant surprises may occasionally gladden the heart.

I can recommend this work to all coleopterists. If and when I visit Warwickshire rather than just pass through, I shall use my sieve, and concentrate especially on the aleocharine staphylinids for reasons that will become obvious to all readers of this work.

R.G. Booth

Review

English Nature Research Reports (Number 467): The Invertebrates of living and decaying timber in Britain and Ireland. A provisional annotated checklist compiled by Keith Alexander. Published by English Nature.

This is a list of the 1800 UK invertebrate species (600 of which are on the Irish check list) known to be dependent on decaying wood. Each species entry is accompanied by a concise summary of known habitat requirements, known range or location in Britain and Ireland, together with the designated status (for British but not Irish species). These species accounts contain a wealth of interesting detail not readily found elsewhere.

The list covers Annelids, Molluscs, Crustacea, Diplopoda, Chilopoda, Pseudoscorpiones, Araneae and Insecta. The Coleoptera together with the Diptera constitutes the lion's share of the species listed. As the short introduction explains, this is intended to be a working document, which once it is available on line, can readily be modified and updated as more information accrues; it is emphasised that this list is not to be considered the final word on the saproxylic fauna.

However, it is a convenient reference manual for the saproxylic fauna. It will be most useful to ecologists and conservationists who may not have a detailed knowledge of all the groups covered, but who need easy access to the status and ecological requirements of a very diverse group of organisms which survey work might turn up. This document also serves to emphasise the importance of dead wood as a habitat and microhabitat resource for numerous species, many of which are vulnerable and/or restricted to the rather specialised niche provided by wood decay succession.

T.D. Harrison

An unusual pabulum for *Leptura scutellata* (Fabricius) (Cerambycidae)

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On 31 July 2002 two dead adults and one larva of the uncommon cerambycid *Leptura scutellata* (Fabricius) were received by the RHS members' advisory service, from a house in Weybridge, Surrey (TQ076631). The plant hosts of this insect in the UK are listed as sun exposed dead and decaying stumps and branches of beech, oak, birch, hornbeam, sycamore and lime, with additional hosts of alder and hazel listed on the continent (Hyman, 1992). However further information provided by the RHS member indicates that the beetles had been

breeding in the housing for a kitchen extractor fan (approximately 30 cm square) made of veneered block board which had become wet.

Acknowledgements

Thanks are due to Mr J.R. Burges for bringing to my attention the host of the beetle.

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Mordellistena acuticollis Schilsky (Mordellidae), a species spreading in south-east England

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This species is evidently a recent arrival in Britain (Levey, 2002) and was first found at Shooter's Hill, W. Kent in July 1984 (Allen, 1986). The species has subsequently spread and is now widespread in south-east England and parts of East Anglia. I am able to record *Mordellistena acuticollis* Schilsky from 20 ten-km grid squares (SU51, SU73, SU92, SU97, TL66, TL78, TL 88, TQ06, TQ07, TQ15, TQ38, TQ41, TQ47, TQ48, TQ57, TQ65, TQ75, TQ76, TQ91 and TR13) in 12 vice counties, grouped alphabetically by vice counties, in chronological order.

Berkshire (VC 22)

Windsor Great Park, SU9472, 22 July 1985, J.A. Parry

Buckinghamshire (VC 24)

Hythe End, near Staines, TQ022723, 22 July 1993, P.J. Hodge

Hythe End near Staines, TQ021721, 25 July 1995, P.J. Hodge

Cambridgeshire (VC 29)

Kennett Sandpit, TL687686, 8 August 2000, P.J. Hodge

East Kent (VC 15)

Aylesford, TQ732589, 12 July 1996, P.J. Hodge

The Roughs, West Hythe, TR1334, July 1997, D. Hance

East Sussex (VC 14)

Rye Harbour, TQ944186, 23 July 1997, P.J. Hodge

Lewes, TQ420100, 25 July 1997 and 5 August 2002, P.J. Hodge

Ringmer, TQ433114, 20 August 1997, P.J. Hodge

Middlesex (VC 21)

Staines Moor, TQ027732, 17/22 July 1993, P.J. Hodge (Allen, 1995)

Wraybury Road, Staines, TQ023723, 22 July 1993, P.J. Hodge

Staines Moor, TQ027732, 1 August 1993, J.A. Owen

Staines Moor, TQ027732 and TQ030743, 1 August 1995, P.J. Hodge

- Staines, TQ023728, 25 July 1996, P.J. Hodge
North Hampshire (VC 12)
Oakhanger, SU769360, 15 August 1996, P.J. Hodge
The Warren, Oakhanger, SU774355, 15 August 1996, J.S. Denton
- South Essex (VC 18)
Low Hall Wood, Walthamstow, TQ359881, 15 July 1999, D.S. Hackett (Levey, 2002)
Marsh Lane Fields, Leyton, TQ370868, 23 July 1999, D.S. Hackett (Levey, 2002)
- South Hampshire (VC 11)
West Wood, Netley, SU451094, 19 June 1998, P.J. Hodge
Bishop's Waltham, SU547180, 24 July 1998, P.J. Hodge
- South Wiltshire (VC 8)
Salisbury Plain, SU211486, 29 July 2002, P.J. Hodge
- Surrey (VC 17)
Thorpe, TQ016691, 4 September 1993, P.J. Hodge
Epsom Downs, TQ222578, July 1996 (bred), J.A. Owen
Thamesmead, TQ4580, 18 July – 6 August 1997, in pan traps, C.W. Plant (Levey, 2002)
- West Kent (VC 16)
Shooter's Hill, TQ4376, 20 July 1984, A.A. Allen (Allen, 1986; Batten, 1986)
Shooter's Hill, TQ4376, 7 July 1985, A.A. Allen (Allen, 1986)
Shooter's Hill, TQ4376, 15 July 1992, 20 June 1993, 4 July 1993, A.A. Allen (Allen, 1995)
Shooter's Hill, TQ4376, 23 June 1993, J.A. Owen (Allen, 1995)
Darenth, TQ565721, 27 July 1994, J.A. Owen (Allen, 1995) and 1 August 1994, P.J. Hodge
Addington sandpit, TQ651592 and TQ652592, 8 August 1994, P.J. Hodge (Allen, 1995)
Halling, TQ706631, 5 July 1996, P.J. Hodge
Leybourne, TQ690590, 12 July 1996, P.J. Hodge
Dartford Hospital, TQ549763, 21 July 2000, P.J. Hodge
- West Suffolk (VC 26)
Lakenheath airfield, TL749829, 8 August 1995, P.J. Hodge
Wangford Warren, TL756835, 21 July 1996, P.J. Hodge
Wangford Glebe, TL7583, 18 June 1999, on *Artemisia*, B. Levey
- West Sussex (VC 13)
West Lavington, SU 902208, 18 August 1996, D. Hance and P.J. Hodge
West Lavington, SU 902208, 15 July 1997, P.J. Hodge

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The cocoon type of *Hypera pastinacae* (Rossi) (Curculionidae)

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Tempère (1972) showed that the cocoons formed by the larvae of Hyperinae are of two types, 'latticed' and 'closed', the difference lying in whether the mesh of the cocoon is lined or unlined with cocoon material. Morris (2002) states that the type of cocoon formed by *Hypera pastinacae* (Rossi) is unknown.

On 25 July 2002 the well-known site for this RDB1 species at Capel-le-Ferne, East Kent (TR2538) was visited. Abundant *Daucus carota* Linnaeus, the foodplant of the species, was growing on the precipitous cliff but access was thought to be inadvisable. However, one umbel of the foodplant was collected on the level cliff-top and proved to contain a cocoon of *H. pastinacae*. Later it was discovered that a fully-grown larva also inhabited the umbel. This larva spun its cocoon on 29 July 2002. Both cocoons proved to be 'latticed', without a lining of cocoon material. The larva in the original cocoon had been attacked by an ectophagous hymenopterous parasitoid larva, but although the parasitoid larva pupated successfully the pupa unfortunately died. The second *H. pastinacae* larva pupated successfully, the adult weevil emerging from its cocoon on 13 August; it had remained in the cocoon for about four days, having eclosed on about 9 August. Morris (loc. cit.) suggests that the pupal stage in all species of Hyperinae is very short.

The ecological significance of the difference between cocoon types is unknown, though trade-off between maintenance of microclimate and defence against predators and parasites is a possible hypothesis.

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This section is for subscribers to advertise requests for information, specimens wanted for loan, or entomological items wanted or for sale. Notices will be repeated with each issue while space is available (or until withdrawn), newer ones appearing first, and may be edited for brevity.

Wanted: A monograph of the beetles associated with stored products by Hinton 1945. Please contact Andreas Herrmann, Bremervoerder Strasse 123, D – 21682 Stade, Germany. Fax: ++49 (0) 4146 / 930083, Email: herrmann@coleopterologie.de

Wanted: Coleoptera of the British Islands by Fowler (small paper), Practical Handbook of British Beetles by Joy, Beetles of the British Isles by Linssen. Please reply to Stuart Campbell, 4 The Laurels, Moreton, Wirral, Merseyside CH46 3SU. Tel 0151 6777047 (home), 0151 4736151 (office).

Montgomeryshire beetle records wanted: I am setting out as new recorder for this vice-county and would be grateful for any records, past and present. Any information on museum or private collections containing Montgomeryshire species would also be gratefully received. Dr W. Schaefer, Cwm-Weeg, Dolfor Newtown POWYS SY164AT. E-mail: wolfgang@dial 1.co.uk.

New British Beetles (revised edition) by Peter Hodge & Richard Jones: Work on a new and improved version of this book is progressing well, but it would enhance its usefulness still further if the sections entitled 'Errors in Joy' were more comprehensively covered. Therefore, if you know of any previously unrecorded errors in Joy, or can supply other useful information that would make his keys work more effectively, the authors would be pleased to receive details. Reply to Peter J. Hodge 8 Harvard Road, Ringmer, Lewes, East Sussex BN8 SHJ. Tel.: 01273 812047.

New Stenus recording scheme: Please send all records of *Stenus* (Staphylinidae) species to Jonty Denton, 2 Sandown Close, Alton, Hampshire GU34 2TG. E-mail: jontydenton@aol.com.

Stag Beetle *Lucanus cervus* records wanted: Further to a paper in this journal that intimately linked the Stag Beetle's Sussex range with temperature and its local distribution with rainfall, I am performing more research into the species for a proposed follow-up paper on the beetle's national status. I would be pleased to receive any records from any era from any British locality. All due acknowledgement will be given. Colin Pratt 5 View Road, Peacehaven, East Sussex BN10 8DE. E-mail: colin.pratt@talk21.com.

Wanted: "The Biology of the Coleoptera" by R.A. Crowson (1981). Can anyone help? If so, please contact Michael O'Sullivan, 20 St. James Gardens, Killorglin, Co. Kerry, Ireland.

Chrysolina graminis (tansy beetle) records wanted: I would like to receive both old and recent records to assess this species' current status and the extent of range contraction. It would also be useful to know whether *C. menthastri* has been reported from the same area as the *C. graminis* records submitted, as these two species have been confused in the past. Duncan Sivell, Dept of Biology, University of York, PO Box 373, York YO1 5YW. E-mail: dms103@york.ac.uk.

Announcement

The subscription for The Coleopterist will be increased to £8 for 2003. The extra income will enable us to continue to produce three issues per year as well as increasing the number of pages.