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Beetle News

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Editorial

Richard Wright

First of all, I must apologise for producing only two editions of Beetle News in 2010. This is partly because I have been very busy at times. However, the main reason is that I have received very little materialfew contributions during the year.

I hope to return to quarterly publication for 2011. I have several ideas for substantial articles which I can produce myself and I also plan to include an identification guide suitable for relative beginners in each issue. However, the continued existence of Beetle News does depend on people providing sutable content. In particular, I would encourage the less experienced readers to submit their records and observations of interesting species. Any photographs of species "in the wild" would also be appreciated and these need not necessarily be scarce species, just distinctive ones.

The major article in this issue is a guide to the British Geotrupidae by Conrad Gillett and Aleš Sedlácek. I must apologise to these and other authors for delaying the publication of their work since summer and also to anyone who submitted material which I have inadvertently left out of this issue.

Richard Wright

Free pdf downloads of beetle atlases

Mark Telfer provided this information on the beetles-britishisles Yahoo group, but it is worth repeating here for those who are not members of the group

Use the link:
http://www.ceh.ac.uk/products/publications/publicationsbrc.html

then follow the link for "NERC Open Research Archive (NORA)"

All of the Provisional Atlases for beetles are now available for free download . They are:

Alexander, K.N.A.. 2003 Cantharoidea and Buprestoidea
Twinn, P.F.G. & Harding, P.T.. 1999 Longhorn beetles (Cerambycidae)
Luff, Martin L.. 1998 Ground beetles (Carabidae)
Johnson, Colin. 1993 Cryptophagidae-Atomariinae
Mendel, Howard. 1988 Click beetles

Please note, that some of these are now rather out of date.

Richard Wright

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Some phytophagous beeetles recorded from garden plants

My house in Rugby has quite small gardens, but I grow a very wide range of herbaceous perennial plants. Over several years I have been regularly recording the beetles here and a small number of species appear to have established breeding populations associated with a few of these plants.

Cassida viridis now has a large population which was initially associated with Lemon Balm *Melissa officinalis*, a rather pernicious self-seeder which has spread widely in the garden in spite of my efforts to control it. More recently the beetle has become equally abundant on *Calamintha nepeta* a related species of Lamiaceae. On both plants, considerable evidence of adult and larval feeding can be seen.

I have recorded four species of Apionidae associated with Malvaceae. *Aspidapion radiolus* has been present for many years, associated with *Malva alcea* var. *fastigiata*, a short-lived perennial which self-seeds readily. In 2007 I first recorded *Aspidapion aeneum* on the same plant and it too now seems established. I have found singletons of *Malvapion malvae* regularly on this plant which suggests a small but established population. *A. radiolus* also now occurs quite commonly on *Malva moschata* var. *alba*, a white version of the native Musk Mallow, but I have never found the other species on this plant which is usually rather unproductive of Apionidae where it is found in the wild. The normal host plant for all these species locally is the Common Mallow *Malva sylvestris* from which a number of "improved" varieties have been bred for garden use. I have grown several of these plants in the garden over the years, but they have proved short-lived and not very decorative. However, I have recorded all the three species of Apionidae mentioned on this plant, together with occasional *Pseudapion rufirostre*, a species which I have never found on any other *Malva*.. On the rare occasions when I have tried Hollyhocks *Alcea rosea* in the garden, only *Aspidapion radiolus* has been found associated with them. Of the four Apionidae associated with Malvaceae, *A. radiolus* therefore appears to be the least selective species of the four and *P. rufirostre* the most host specific..

Zacladus geranii is well-established on species of *Geranium* in the garden, particularly on *G. x oxonianum* but also on *G. sanguineum*. However, so far I have failed to find the weevil on the dozen or so other *Geranium* species and hybrids which I grow. I have a number of varieties of *G. pratensis*, the Meadow Cranesbill, which I am growing on in my allotment for planting in the garden for next year and I anticipate *Z. geranii* establishing itself on this plant, which is its natural host locally

Richard Wright

New Somerset Recorders

Following Andrew Duff's retirement and move to Norfolk, Dave Boyce and
James McGill are the new beetles recorders for Somerset. Please send
your Somerset (VCs 5 & 6) beetle records to either:

Dave Boyce (dave@dboyce.co.uk), Hazelcombe,
12 Battleton, Dulverton,
Somerset TA22 9HT

or

James McGill (j.a.mcgill@btinternet.com),
13 Cresswell Avenue,
Staplegrove, Taunton, Somerset TA2 6LS

Andrew Duff

***Hydrochara caraboides* in Cheshire**

I have located another two breeding pools for *Hydrochara caraboides* (Lesser Silver Water Beetle) in Cheshire this year. This takes the known breeding pools in the north west cluster (Wrexham Borough and Cheshire) to 58. A current pond count being undertaken (Harmer et al) suggests that there are around 25,000 ponds in VC58 Cheshire.

Andy Harmer

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***Endomychus coccineus* (Linnaeus) (Endomychidae)- the bloody kneed beetle??**

Whilst photographing this adult *E.coccineus* from Redhill in Surrey, it proceeded to ooze a pink fluid from its knees (femora-tibial joint). This fluid had no obvious smell, but as can be seen from figure 1, was produced in copious amounts from all six legs. To my eye, and presumably to Carl Linnaeus's *E.coccineus* is a ladybird mimic, but if it produces its own chemical defence, Batesian mimicry can hardly apply, and Müllerian mimicry maybe be at work.

– Dr.JONTY DENTON, Old Hall Place, Hussell Lane, Medstead, Hants, GU34 5PF.

"Heathland" species in Warwickshire (VC38)

There are no areas of natural heathland remaining in modern Warwickshire. This was certainly not the case in the past as there are numerous "Heath" place names in many parts of the county. Within the vice county (VC38), though now included in Birmingham, we do have the remarkable Sutton Park, a 866 Hectare (2,140 acre) relict from the past, including substantial areas of heathland from which a good number of heathland specialist Coleoptera have been recorded. Other "heathland" areas in VC38 are either secondary, particularly on abandoned coal mines e.g. at Grendon and Baddesley Commons in the north of the county, or cleared areas in woodland on acid soil e.g. at Clowes Wood SSSI and Rough Hill Wood SSSI in the west. These areas have also been quite well surveyed for beetles.

Some heathland specialists have been recorded quite widely on these secondary sites, while others have been found, sometimes in abundance, at Sutton Park but from nowhere else in the county in recent years. Their presence at Sutton Park indicates that there is no zoogeographical reason for their absence from other sites.

Species recorded **only** from Sutton Park in VC38:
Barynotus squamosus (one record)
Bembidion nigricorne (one record)
Chilocorus bipustulatus
Coccinella hieroglyphica
Neliocarus faber (one record)
Neliocarus sus
Trichocellus cognatus
The three weevils are all flightless which is the most likely explanation for their lack of dispersal. Perhaps most surprising is the failure of the two species of ladybird to reach the areas of secondary heathland, possibly indicating relatively limited flight activity.

Species also recorded from secondary heathland, each recorded from five sites:
Bradycellus ruficollis
Lochmaea suturalis
Micrelus ericae

The latter two species are perhaps better considered simply as heather feeders rather than having a requirement for true heathland conditions.

So-called "heathland" creation is a popular activity among conservationists. There would seem, however, to be little point in this if it simply involves establishing heather in an area where the typical heathland species, particularly invertebrates, are largely absent.

Richard Wright

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***Rhagium bifasciatum* - an orgy on a Scottish mountain**

On 22 May 2010, a warm sunny day, my wife and I climbed Ben Venue the twin summit of which is about 730 metres above sea level, although most of the *Rhagium* action was on the first summit reached by the climber at GR NN 47730615. Ben Venue is in the Trossachs overlooking Loch Katrine.On the walk up our path was crossed by several *Staphylinus erythropterus*,which is very common in Scottish hill country, a few *Poecilus cupreus* and/or *versicolor* (I am not confident at distinguishing these), and one splendid 26mm *Carabus glabratus*. In the previous few days I had seen a couple of *Rhagium bifasciatum* in woodland on the lower slopes of mountains, but nothing had prepared me for the *Rhagium* orgy on the top of Ben Venue. The summit was swarming with them, many of them in cop, they were landing on boulders, cairns, angle irons sticking out of cairns (see photograph), people, rucksacks, sandwiches and alarming many walkers. I had to reassure several that they were harmless and should not be stamped on. My agitated wife asked me to confirm that she had none on her, but I felt it would be unwise to mention those on the back of her hat.I am assuming that I had witnessed an unusual event which could perhaps be explained by the beetles emerging from their pupae en masse in the coniferous woodlands on the lower slopes of Ben Venue which go up to about 400 metres, embarking on an aerial quest for mates and being swept up to the summit on an up-draught of wind. It was not a windy day, but my hypothesi-sis perhaps supported by the observation that in one of the many photographs I took, I had unwittingly included a specimen of the weevil *Hylobius abietis* which I had also observed in local woodlands. I will welcome comments.

(By the way, I was delighted when a *Carabus nitens* crossed my path yesterday- 22 June - on the moor-land above Howden Reservoir in the Peak District -iridescent in the sunshine.)

Ralph S Atherton

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Beginner's Guide :
Geotrupidae

By Conrad P.D.T. Gillett* and Aleš Sedláček

*Department of Entomology, The Natural History Museum, Cromwell Road, London, SW7 5BD

This brief photographic guide should allow for the eight British species of the families Geotrupidae and Bolboceratidae, many commonly known as 'Dor beetles' to be identified. Opinions are divided as to the systematic status of the Bolboceratidae. Previously it was considered a subfamily of the Geotrupidae, but primarily because the latest British checklist recognises the taxon as a family, we have also done so here.

The Geotrupidae are a family of fairly large (12-26mm), bulky scarab beetles, well known for their droning flights on summer evenings and the metallic undersides of most species. All the seven British members can be called dung beetles and are found both directly in various types of dung, notably that of horses and cattle, and in burrows in the earth beneath. The beetles construct brood chambers in ramifications leading off the main burrow shaft. They plug each chamber with dung and lay a single egg in it. The larvae develop in these subterranean brood masses. The adults of most species of dor beetle are active from spring to autumn, but the Minotaur beetle avoids the summer months and is most often found from October to early May.

Our single bolboceratid, *Odonteus armiger* (Scopoli) is a rare beetle, which despite its diminutive size, possesses an impressive array of horns in the male. It is associated with subterranean fungi and is most often found attracted to lights in areas of chalk soils in the south.

These two families together can be distinguished from our other scarab beetles by their exposed mandibles which are clearly visible from above, protruding to the sides of the head. Another important feature is that the eyes are completely divided into upper and lower halves by a rim or canthus. Their antennae are not elbowed, which immediately separates them from the stag beetles. The beetles are robust and convex, usually black or dark but often with metallic reflections underneath. They can be found in open pastures, on heathland, on downs, in woodland and on sand dunes, where a suitable supply of dung is available.

Length less than 12mm, not metallic underneath, male with a horn on the head

Family BOLBOCERATIDAE
Odonteus armiger 8-10mm
The female lacks the horns of the male. Rarely collected in southern England, usually in areas of chalk soil. Attracted to artificial light at night. This species is associated with subterranean fungi. June-October.

male

female

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Length greater than 12mm, usually metallic underneath (except in *Typhaeus*), male never with a horn on the head

Family GEOTRUPIDAE

Entirely shining black or dark brown, not with metallic reflections underneath, male with three forward pointing horns on pronotum, female with a transverse ridge in their place

Typhaeus typhoeus 12-20mm The Minotaur beetle
Found locally in England and Wales but very rarely recorded in Scotland. Found in sandy areas such as heathland but also in woodland and open areas, often associated with deer dung or rabbit droppings. The adults are usually found in burrows which may be very deep. An autumn and spring species, only rarely found in the summer.

Upperside black with metallic reflections, underside distinctly metallic blue, violet or green. Pronotum of male and female lacking horns or a ridge. All the following species are commonly called dor beetles

Elytra with only very faint striae, appearing very smooth and shining. Base of pronotum with an entire marginal ridge across its whole length, not interrupted on each side

GENUS *Trypocopris*

Abdominal sternites evenly covered with distinct punctures and hairs even along the midline

Trypocopris vernalis 12-20mm
Usually quite distinctively metallic blue or bluish-green above. Predominantly found locally in the North and West of Britain, rarer or absent in the South and East. Summer and autumn.

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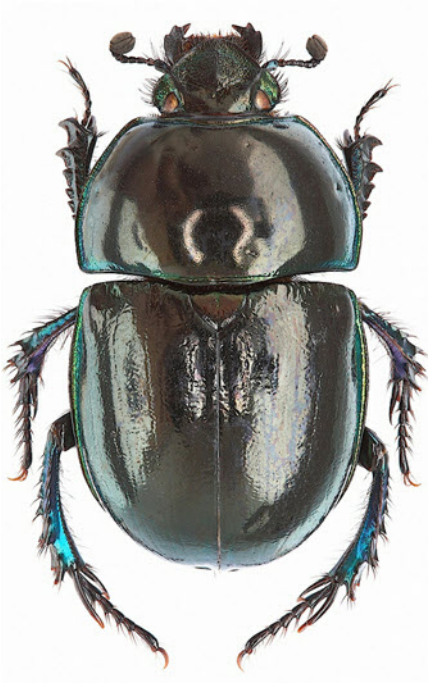
Abdominal sternites lacking punctures and hairs along the midline

Trypocopris pyrenaeus 12-20mm
Not so distinctively blue or green above, sometimes with a reddish lustre and with elytral epypleura a contrasting green. Prefers sandy heathland and only found locally in the south of England. Spring and early summer.

Trypocopris vernalis



Trypocopris pyrenaeus

Elytra with distinct striae. Base of pronotum with an entire marginal ridge across its whole length, not interrupted on each side

Posterior tibiae with a single entire transverse ridge exteriorly. Generally shorter, smaller species

Anoplotrupes stercorosus **12-19mm**
The elytral striae are not so deeply furrowed as in the *Geotrupes* species. A widespread species across Britain, usually found in woodland, hillsides and moorlands. It is commoner in the north and west and uncommon though present in the southeast. March to October.

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Posterior tibiae with two entire transverse ridges exteriorly. Generally longer, larger species.
GENUS *Geotrupes*

Elytra with nine striae between the suture and the shoulder

***Geotrupes mutator* 15-25mm**
This species is often distinctly metallic green (sometimes with reddish sheen) above and below. Very local in Wales and southern England on old pastures in horse and cow dung.

Elytra with seven striae between the suture and the shoulder

Abdominal sternites evenly covered with distinct punctures and hairs, including the midline. Mandibles evenly rounded along their outer edge

***Geotrupes stercorarius* 16-26mm**
Widespread and quite common in horse and cow dung on pastures throughout Britain. Flies on warm evenings and is sometimes attracted to lights. March to October

Abdominal sternites lacking punctures and hairs along the midline. Mandibles distinctly lobed along their outer edge

***Geotrupes spiniger* 16-26mm**
Widespread and quite common in Britain, especially in the south. Found mostly in pastures in cow and horse dung. July to October

mutator *stercorarius* *spiniger*