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www.amentsoc.org

Email: contact@amentsoc.org • bug-club@amentsoc.org

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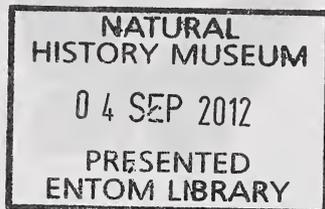
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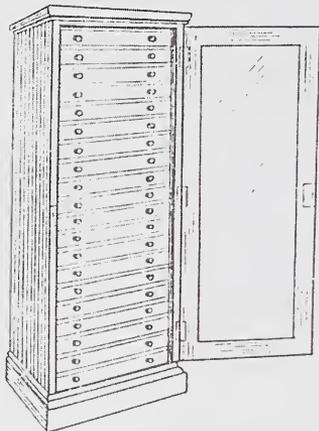
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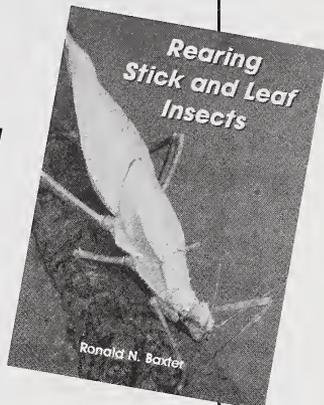
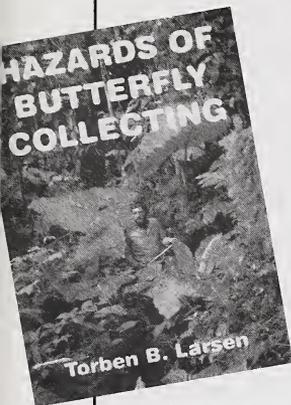
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Bulletin Cover



The photograph on this month's cover is the beetle *Oedemera nobilis*, an insect that has several English names including the Thick-legged Flower Beetle, the Swollen-thighed Beetle and the Thick-kneed beetle amongst others.

The names are not entirely appropriate as only the male has the swollen metafemora. The female has no such swellings but is about the same size of the male. In both sexes the elytra don't quite meet at the base so that the membranous wings are visible, distinguishing it from the two other species in this genus, *O. lurida* and *O. virescens*. The beetle is commonly seen on flower heads where it grazes on pollen and nectar.

The larva lives in the dead stems of various plants, preferring those with spongy, damp wood. The beetle occurs throughout western Europe and the southern half of the UK, and appears to be extending its range.

Photographed in Kent by Paul Sokoloff



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Editorial

The Editor has occasionally complained in these pages about the current state of the weather only to find that when the *Bulletin* is delivered to members, the weather is the exact opposite! I therefore have no qualms in complaining about this dreadful wet summer in the hope that the editorial viewpoint will work its magic on the weather systems. The serious side of the effects of the weather will unfold over the coming seasons, but in the Editor's garden moth numbers in the trap have plummeted, few bees or butterflies have been seen since the early spring, and succulent leaves are strangely un-nibbled by larvae. Even the saw-flies that strip my *Berberis* every year have stayed away.

Last year we reported on the government's plan to sell off much of England's forest resource, the public outcry, and subsequent establishment of an independent panel to review the proposals. The panel has now reported and has clearly documented the enormous potential of forests, woods and trees. It has presented a series of ambitious and positive recommendations to drive England's woodland policy forward, including a challenging target for tree planting to ensure new woods are created for people and wildlife. Although the Secretary of State has now confirmed that the public forest estate is "safe", the press release from DEFRA was characteristically mealy-mouthed with exciting phrases such as "evolve to meet the challenges ahead", "need time to properly consider", they have at least suspended plans for further sell-offs of the forest estate.

In the last issue I noted that we were rather short of volunteers for the editorial team. I am pleased to announce that each of the next three issues will have a Guest Editor in charge of producing the *Bulletin*. The October issue will be edited by Dafydd Lewis, the December issue by Wayne Jarvis (who has edited the *Bulletin* before) and February 2013 will be edited by Colin Hart. The best way in which you can support these editors is by putting your thoughts, notes and observations on paper for publication. Details and guidance on how to do this are on our website.

Finally, a reminder that this is the last issue of the *Bulletin* before the AES Annual Exhibition which will be held at Kempton Park on Saturday 6th October from 1100 until 1630. A leaflet enclosed with this issue has all the details. Hope to see you there, maybe with an exhibit?

Paul Sokoloff



Parasitoids (Hymenoptera) of *Coleophora serratella* L. (Lepidoptera: Coleophoridae) in South Northumberland

by Hewett A. Ellis (1994)

16, Southlands, North Shields, Tyne & Wear, NE30 2QS

Introduction

Larvae of the genus *Coleophora* are leaf miners which carry a protective case formed from a food plant leaf (*coleos*, sheath; *phorus*, carrying). In North-east England *Coleophora serratella* L. is one of the commonest species of the genus, typically feeding on the leaves of birches and alders (Dunn & Parrack, 1992). The newly-hatched larva in its first instar is a simple leaf miner, feeding between the upper and lower epidermal layers giving rise to a translucent mine. In subsequent instars the larva forms a cylindrical case from cut leaf tissue, which is lined by silk and attached to the leaf surface at one end by a ring of silk. The free (distal) end is loosely closed by the silk lining to form a valvular mechanism which permits extrusion of frass as the larva feeds and the subsequent emergence of the adult moth. The immature larva hibernates overwinter from late October and recommences feeding the following spring, towards the end of April (Coshan, 1974).

During feeding the larva is positioned "head-down" in the case but reverses its orientation prior to pupation so that the pupa is correctly aligned for the moth to emerge via the free end of the case. The final case is characteristically cut from the leaf margin. Depending upon the presence or not of marginal leaf serrations, the mid-dorsal line of fusion of the leaf fragment forming the cylindrical case may be serrated or smooth. It was the presence of this serrated mid-dorsal line of fusion that prompted Linnaeus to call this species *serratella*.

In 2010 and 2011 between June and July I encountered these case-bearing larvae of *C. serratella* feeding on birch leaves (*Betula pendula* Roth) at several locations in South Northumberland (VC67). The purpose of the present paper is to describe the fate of case-bearing larvae collected at these sites and, in particular, to document the various parasitoids reared.

Materials and Methods

Each case-bearing larva collected was attached to the upper surface of a birch leaf. The larvae were never frequent and I collected a total of 33



from five different locations in the South-east corner of the county. The number collected at each site together with the corresponding grid references and dates are given in Table 1. The larvae were kept in transparent plastic containers in an unheated room and provided with fresh birch leaves. Observations were made daily and the dates of any emerging insects recorded. Each larval case was measured at X10 magnification using a Peake Scale Lupe.

Results

The larvae were within their final leaf case and most appeared mature (4th instar) and had ceased feeding. A few continued to feed, shifting their position on the leaf or to a fresh leaf. As these larvae changed position the legs, head (shiny black with a mid-dorsal suture) and the first thoracic segment became visible.

Overall, 16 insects were obtained from the 33 case-bearing larvae (Table 1) as follows:

(1) The host *C.serratella*.

Seven *C.serratella* adult moths emerged between the 20th June and the 4th July from cases collected at two of the locations (Rising Sun Country Park and Killingworth Sidings).

(2) Hymenopteran parasitoids.

Nine parasitoids were obtained, two species of chalcids and three species of ichneumonids. The chalcids were identified by Dr R.R.Askew and the ichneumonids by Dr M.R.Shaw.

Chalcidoidea

Pteromalus semotus (Walker). One female emerged on the 2nd July 2011 from one of the 11 cases collected at the Rising Sun Country Park on the 20th June 2011. The emerging parasitoid cut a circular hole measuring 0.7mm in diameter, close to the distal end of the case.

Miotropis unipuncta (Nees). One female emerged on the 11th July 2011 from one of the two larval cases collected at the Havannah Reserve, Hazlerigg on the 27th June 2011 having cut a circular hole measuring 0.6mm in diameter towards the base of the case.

Ichneumonidae

Gelis areator (Panzer). Three female *G.areator*, with a conspicuous wing "cloud" pattern, were obtained from the Rising Sun and Silverlink Country Parks between the 2nd and 29th August. This was the last parasitoid species to emerge. The circular exit holes measured from



Location	Collection date	Number of larvae	<i>C.serratella</i>		Parasitoid	
			No.	Date	Species	Date
Rising Sun Country Park Wallsend NZ298 684	17.vii.2010	4	0		<i>G.areator</i> (1F)	2.viii.2010
	20.vi.2011	11	4	2-4.vii.2011	<i>Psemotus</i> (1F) <i>S.inanis</i> (1F) <i>C.albipictus</i> (1M)	2.vii.2011 2.vii.2011 7.vii.2011
Killingworth Sidings NZ 263 722	3.vi.2011	7	3	20-28.vi.2011	<i>C.albipictus</i> (1F)	10.vii.2011
Bigwaters Brunswick Village NZ 231 733	4.vi.2011	2	0	-	0	
Havannah Reserve Hazlerigg NZ 215 716	27.vi.2011	2	0	-	<i>M.unipuncta</i> (1F)	11.vii.2011
					<i>C.albipictus</i> (1F)	12.vii.2011
Silverlink Country Park North Shields NZ 314 700	29.vii.2011	7	0	-	<i>G.areator</i> (2F)	16.viii.2011 29.viii.2011

Table 1. Details of five sites at which a total of thirty-three case-bearing larvae of *Coleophora serratella* were collected, together with the dates of emergence of the host moth and of five parasitoid species.

0.8mm to 1.0mm in diameter and were situated between 0.8mm and 2.0mm from the distal ends of the cases.

Campoplex albipictus (Pfankuch), Synonym: *C.punctipleuris* Horstmann.

Three *C.albipictus* were obtained. A male from the Rising Sun Country Park emerged first on the 7th July 2011, followed by a female from the Killingworth Sidings site on the 10th July and a second female from the Havannah Reserve on the 12th July 2011. Each circular exit hole measured 1.0mm in diameter and was situated near the distal end of the larval case.

Scambus ? inanis (Schrank). One female emerged on the 2nd July 2011 from one of 11 cases collected on the 20th June at the Rising Sun Country Park. The exit hole, measuring 1.1mm in diameter, was located only 0.6mm from the distal end of the case. Dr Shaw allocated



this parasitoid to the genus *Scambus* and considered the species was probably *inanis*.

The combined number of moths (7) and parasitoids (9), accounts for only 16 (48.5%) of the 33 case-bearing larvae collected. In December 2011 the cases were opened and any contents examined. This revealed 9 emerged empty pupal cases (2 moths were presumed to have emerged prior to collection), 9 dead larvae and 4 dead pupae, 9 with an exit hole for the parasitoid. Of the 2 remaining, one case contained an unidentified white hymenopteran parasitoid larva (presumed to be in diapause), and in the other the contents were mouldy. Overall, the survival rate for *C.serratella* was 27.3% and the parasitisation rate 30.3%.

Measurements of the cases after the insects had emerged revealed an overall mean length of 6.3 ± 0.09 mm and there was no significant difference between the mean lengths of parasitised (mean, 6.4 ± 0.15 mm) and non-parasitised larval cases (mean, 6.3 ± 0.11 mm).

Discussion

The case-bearing larvae of *C.serratella* were never frequent at any of the sites visited and I was able to collect only a few from each location. This was somewhat surprising since Dunn & Parrack (1992), state that the species is very common and widely distributed in County Durham (VC66) and South Northumberland (VC67). However their distribution map shows records from only 9 tetrads (2km X 2km grid squares) in VC67. In addition, the current Northumberland Moth Database includes only 21 county records comprising 33 individuals at 19 sites. The present case-bearing larvae were collected from former industrial sites such as old collieries, waste heaps and dismantled railways, where birch trees had been planted as part of the reclamation work. *C.serratella* might be more frequent in larger and well established stands of birch elsewhere in the county. Some additional larvae were probably overlooked since only birch leaves were examined and it is known (Coshan, 1974; Kula,1994) that some mature larvae settle on branches, and even on the vegetation, including grasses, beneath the birch trees.

The dates of emergence of the moths (20th June to 4th July), are in keeping with those reported by others. Coshan(1974), who made a valuable and detailed study of the biology of *C.serratella*, noted that adults began emerging in the wild at Lindow Common in Cheshire, on the 24th June and the latest capture was made on the 1st August.

The observed parasitisation rate (30.3%), is lower than that reported elsewhere. In Britain Coshan(1974) found that 64 (54.5%) of 122 post-



hibernation larva collected from Lindow Common produced parasitoids in the fourth instar. In the Czech Republic Kula (1994) studied the parasitisation of mature case-bearing larvae during outbreaks of *C.serratella* infestation of birch and found that parasitisation reached 56.1% and 38.1% in outbreaks in 1992 and 1993, respectively.

The range of parasitoid species is different depending upon the location. Only two of the five species (*M.unipuncta* and *G.areator*) found in the present study, were recorded by Coshan (1974), who obtained eight parasitoid species (four Chalcidoidea, four Braconidae and two Ichneumonidae). In Europe greater numbers of parasitoid species which attack *C.serratella* are known. Up to the time of Coshan's 1974 paper 35 hymenopteran parasitoids had been recorded in Europe (nine Chalcidoidea, 14 Braconidae and 12 Ichneumonidae) and in one area in the Czech Republic Kula (1994) reared 16 species including three (*M.unipuncta*, *G.areator* and *C.albipictus*) found in South Northumberland.

Although I reared only one *P.semotus* (Pteromalidae), this species is common and widespread. Whilst often a secondary parasitoid of Micro-Lepidoptera, it can also be a primary solitary parasitoid of a wide range of hosts including Coleoptera, Hymenoptera and Lepidoptera. It is known to attack several species of *Coleophora*. The Natural History Museum Universal Chalcidoidea Database names nine species of *Coleophora* which have been recorded as having been attacked by *P.semotus*, including *C.fuscedinella*, which is an earlier name for *C.serratella*.

M.unipuncta (Eulophidae) is an attractive tiny insect coloured pale yellow with contrasting dark markings. It does not appear to be particularly common in association with *C.serratella* in Britain. Coshan (1974) obtained two individuals, one from Buckinghamshire another from Lancashire but none from the main area of study in Lindow Common, Cheshire. Only one individual was found in the present study and there are but seven such records for Britain in the NHM Universal Chalcidoidea Database.

The ichneumonid *G.areator* (Cryptinae) is widespread and common throughout Britain and Europe (Kula, 1994; Schwarz & Shaw, 1999). It is polyphagous and previously has been obtained from several species of *Coleophora* including *C.serratella* behaving as a solitary ectoparasitoid. In Britain, Coshan (1974) reared 14 individuals from *C.serratella* larval cases between the first week in July and the last week in August, in keeping with the emergence dates (2nd, 16th & 29th August) found for the three individuals reared in the present study. *G.areator* has also been recorded as a pseudohyperparasitoid of Hymenoptera, Coleoptera as well



as other Lepidoptera (Schwarz & Shaw, 1999). In a previous paper (Ellis, 1999), an account was given of *G. areator* attacking cocoons of the braconid *Aleiodes alternator* Nees which had been a primary parasitoid of the larvae of the Vapourer moth *Orgyia antiqua* L. Most species of parasitoids restrict their search for the host species in only one type of environment (Shaw & Askew, 1976) and *G. areator* favours hosts dwelling in trees and bushes and typically parasitises cocoons of various Lepidoptera, Ichneumonidae and Braconidae or, larvae within similar structures such as the leaf cases of case-bearing moth larvae like *C. serratella*.

C. albipictus (Campopleginae) was the most widespread of the three species reared, occurring at three of the five locations studied. Unlike the polyphagous *G. areator*, it appears to be a specialised solitary parasitoid of *C. serratella*. My limited experience suggests it might be a common parasitoid of *C. serratella* although Coshan (1974) did not record the species during his more extensive studies in Cheshire.

S. inanis (Pimplinae) is not mentioned by Coshan (1974) or by Kula (1994) and appears to be an infrequent parasitoid of *Coleophora* species, including *C. serratella*. Dr Shaw (pers. comm., 2011), has informed me that it is common on many small semi-concealed hosts such as leaf-rollers and leaf-miners.

The sizes and positions of the parasitoid exit holes were variable. The ichneumonids *G. areator*, *C. albipictus* and *S. inanis*, emerged via a hole measuring about 1.0mm in diameter located towards the distal end of the larval case. Corresponding to their smaller size, the chalcids *P. semotus* and *M. unipuncta* made smaller exit holes (0.6mm and 0.7mm diameter) and that of the latter was near the base of the case. Kula (1994) observed that the cases of larvae attacked by certain parasitoids were marginally smaller than those of non-parasitised larvae. The difference was most marked in the presence of a braconid *Agathis pumila* Ratzeburg, but in some instances, for example, the chalcid *M. unipuncta*, the size was unaffected. Measurements of the present cases failed to reveal any significant difference between parasitised and non-parasitised larval cases.

In the present study collections were made within a limited area in the South-east corner of South Northumberland, the most distant locations being about 10 km apart in a West-East direction and about 5 km in a North-South direction. In future it is hoped that the rearing of greater numbers of case-bearing larvae collected from a wider area in the county will provide a more comprehensive list of the parasitoids associated with *C. serratella* and further information concerning their biology.



Acknowledgements

I wish to thank Dr.R.R.Askew and Dr M.R.Shaw for their help with the identification of the parasitoids and for providing me with details of their biology. The Natural History Museum Universal Chalcidoidea Database can be accessed from www.nhm.ac.uk/chalcidoids.

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Insects of a Small Suburban Garden No 3

by Stuart Cole (10159)

21 Wensleydale Gardens, Hampton, Middlesex, TW12 2LU (cole.stuart9@googlemail.com)

This is a third article on insects recorded in my garden in Hampton in suburban south-west London. Having always lived in flats before moving here in 2000, I have been surprised by the variety of insects (and other animals) that can turn up in even the smallest suburban garden. However, the insects occurring must be determined to some degree by our proximity to Bushy Park, a notable site for insects, the River Thames, which is here fairly shallow and non-tidal, and, above all, the surrounding gardens most of which are much larger than ours.

Because of the modest size of our garden, a mere 18 feet deep and 28 feet wide, there is limited scope for creating insect friendly habitats, particularly as I have to balance this against my wife's preference for a more ornamental garden. However, even small scale features such as a clump of figwort (*Scrophularia* spp.) and one or two umbellifers such as carrot (*Daucus* spp.) brings in a good selection of Diptera and Hymenoptera. As a further inducement to the latter I keep a large pot of dry earth free of plants which attracts burrowing bees and wasps. There is also a small log pile and my home-made 'bee hotel', a bundle of short bamboo canes of various widths, which, so far, has not been a success.

Light trapping

In 2008 I set out a low power actinic light trap two or three times a week from May onwards. Moths and other insects came to the light from a very few to dozens on any one night.

In May and June, the Treble Lines (*Charanyca trigrammica*) was one of the most frequent moths at the trap and Shuttle-shaped Dart (*Agrotis puta*) and Small Quaker (*Orthosia cruda*) were other common visitors. On the last night of May the first Willow Beauty (*Peribatodes rhomboidaria*) of the year turned up and from then on the species was one of the most numerous moths through late spring and summer. The following night brought the largest moth of the year, a Lime Hawk-moth (*Mimas tiliae*), the only sphingid to visit the trap, and so far the only adult moth of this family seen in the garden (two caterpillars of Death's-head Hawk-moth (*Acherontia atropos*) were present in August 2004).

Every night brought in several micro moths, few of which were identified. Among those few were the Codling Moth (*Cydia pomonella*) of which a number were found in the trap over the summer, probably



originating from the apple trees in an adjacent garden, some of the trees being rather neglected and the fruit sometimes unharvested. The pyralid *Endotricha flammealis* flew to light in the house (Fig. 1) This species characteristically rests in an odd posture, standing high on two pairs of legs with the abdomen curved upwards and the antennae folded over its back.



Figure 1. Pyralid moth *Endotricha flammealis*.

From late July through August Large Yellow Underwing (*Noctua pronuba*) was the predominant catch in the light trap often accompanied by Copper Underwings, mostly Svenson's (*Amphipyra berebera svenssoni*), Riband Wave (*Idaea aversata*) and sometimes Old Lady (*Mormo maura*) with a maximum of three of this species in one night. Clouded Border (*Lomaspiha marginata*) was one of the more attractive moths to turn up. A single Ruby Tiger (*Phragmatobia fuliginosa*) in August was the sole individual of the species seen so far.

From early June caddis flies became regular constituents of the catch, with up to six species on a single night. One of the larger and more distinctive of them was *Mystacides longicornis*, recognisable by its banded wings and whitish antennae. Mayflies were more occasional visitors and these were mostly the big *Ephemera* spp.

There were other orders in the light trap over the summer. A few beetles: Orange Ladybird (*Halyzia 16-guttata*), Harlequin Ladybird



(*Harmonia axyridis*) and the ground beetles *Harpalus rufipes*, *Ophonus puncticeps* and *Bradycellus harpalinus*, which was frequent. Of the Hemiptera, the aquatic bug *Sigara falleni* was the most numerous in late summer and the Forest Bug (*Pentatoma rufipes*) the most familiar.

I note below, by order, other significant insects recorded since my last article (June 2008).

Hymenoptera

July 2009. The yellow and black crabronid wasp *Gorytes laticinctus* sometimes burrows in the soil in the big flower pot, stocking them with the large froghopper *Aphrophora alni*. Several froghoppers were placed in each burrow and the wasp covered the entrance with debris each time she left to seek more prey. The species is rare (RDB3) but since 2003 its range has expanded (Baldock, 2010). In the same month a related wasp, *Nysson trimaculatus*, was found near the burrow of a *Gorytes* and I later discovered that this scarce species is a kleptoparasite (nest parasite) of *Gorytes* although *G. laticinctus* is not recorded as a host (Baldock, 2010). The same flower pot is also used each year by several of the tiny bees *Halictus tumulorum* for their nest burrows.

June 2010. I was working on the flat roof of the back room of the house when I noticed a bee of a species that I had not seen before flying around the gutter. From the distinctive tapered and pointed abdomen I recognised this as a female *Coelioxys* which is a kleptoparasite of the leaf cutter bees of the genus *Megachile*. Back at work on the roof the next day I discovered that one of the bigger kinds of *Megachile* was indeed nesting in the roof when one went into a hole under the bitumen sheeting. Three weeks later two or more leaf cutters were entering the same hole with one or other of them carrying sections of leaf. It would seem that female leaf-cutter bees may sometimes share a nest site, using a common entrance but presumably constructing separate cells. On the same day another, smaller, species of *Megachile* was spotted coming in and out from behind a wood slat beneath the window of the back room. This too was delivering pieces of leaf.

Both *Magachile* species continued to provision their nest cells for up to five weeks after the first bee was seen. In late July the smaller species was still coming to the nest, not now with bits of leaf, but presumably with pollen. This length of time must give any nest parasite such as *Coelioxys* ample opportunity to find an open *Megachile* nest and lay her eggs in it.

March 2011. A couple of European bees that have become established in Britain since 2000 turned up in our garden for the first time during 2011. The first was the large carpenter bee *Xylocopa violacea*, a male of



which visited flowers of a *Mahonia* for several consecutive days in March (Fig. 2) The species has sometimes strayed across the Channel but was recorded breeding for the first time in Britain, in Leicestershire, in 2006. I assumed that the individual in our garden must have overwintered nearby. The bumble bee *Bombus hypnorum*, first recorded in Britain in 2001, has now become quite common in the London area. It is a rather handsome bee with ginger fur on the pronotum, black abdomen with white tail. Several worker bees came to figwort flowers in early summer (June) but made no further appearances.



Figure 2. Carpenter bee *Xylocopa violacea*.

August 2009. The social wasp *Dolichovespula media* is another European social hymenopteran that has become established in Britain since 2000. One visited the garden several times one afternoon and the nectar of figwort flowers was the sole attraction. This species is noticeably bigger than native British *Vespidae* other than the Hornet. No other *D. media* have been seen in the garden since then but the species is present in nearby Bushy Park.

July 2011. Black spider-hunting wasps of the species *Auplopus carbonarius* continue to show up in the garden each summer where they seek their favoured prey, spiders of the genus *Clubiona* (Fig. 3) This species is another scarce wasp that has expanded its range in the last decade (Baldock, 2010). Unlike other British pompilids, *Auplopus* stores her prey

in clusters of cells made of earth rather than burrows in the ground. I have found these cell clusters twice in the garden, on both occasions they were secreted in the folds of an empty compost bag. Another spider hunting wasp, the elongate *Trypoxylon figulus*, was found just once in July 2011. Like *Auplopus* this female amputated the legs of her prey before taking it to her nest.

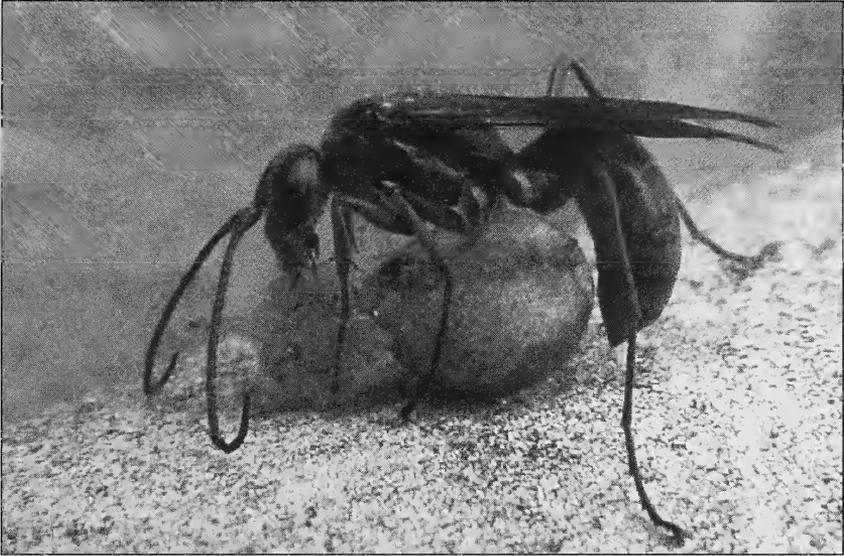


Figure 3. Spider-hunting wasp *Auplopus carbonarias*.

Diptera

June 2008. During the course of decorating the house this summer I left a tin can with a mixture of white gloss paint and white spirit outside for two or three weeks. The paint rose to the top of this concoction and eventually formed a crust on the surface. One day I noticed a couple of little tephritid flies *Phagocarpus permundus* (formerly *Anomoia permunda*) walking about on the surface. From then on for the next month until I disposed of the mixture there were some of these flies almost permanently present in daytime on and around the tin with up to eight or nine present at one time. The flies often had their proboscis pressed against the surface so they appeared to be feeding on the paint and white spirit mixture. The larvae of *P. permundus* feed in the berries of hawthorn.

31 July 2008. A spider had thoroughly swathed some insect victim in silk and had left it suspended in the lilac bush but I couldn't see the owner. A number of little black flies, all of one kind, were gathered on the package



and appeared to be taking nutrient from it. From their general appearance I am pretty sure the flies were of the family *Milichiidae*, and the activity they were engaged in would be consistent. Some species of this family worldwide are known for their habit of lingering around spiders and predatory insects (eg. mantids, assassin bugs, and dragonflies) and feeding on liquid exuding from the hunters' victims. Often, the flies ride on the spider or insect. In July 2009 I found another of these flies was wandering about on the web of a lynphiid spider. The insect walked with ease, it was not sticking to the silk strands, and seemed to be searching for insects trapped in the web for it stopped to feed at some insect fragments suspended in the silk strands.

June 2009. There is a thriving population of mosquito and midge larvae in the little pool. Both swim in mid water where the midge larvae of the genus *Chironomus* are particularly noticeable. These thin red worm-like creatures loop back and forth when moving through the water but they spend most of their time on the stones or partially embedded in the mud and detritus where they appear to feed on minute organic matter picked from the surface on which they lie. The *Chironomus* hatch from eggs protected within transparent cylindrical strips of jelly-like substance attached to the stones. The adult midges, some black, others green, resemble little mosquitoes and come to lights in the house in large numbers.

Lepidoptera

Several micros are among moths in the garden that have not been recorded through light trapping. One of these is *Tachystola acroxantha* of the Oecophoridae found resting on a fence in June 2009. This species originates from Australia and was first recorded in Britain about 100 years ago; the larva feeds on leaf litter. Another is *Blastobasis adustella* (Blastobasidae) which is also an introduction, in this case a native of Madeira. The larvae of this feed on decaying plant material. *Esperia sulphurella*, another oecophorid, is more commonly seen than the previous two micros and its larvae probably feed in the small stack of dead wood as they are saproxylic.

Coleoptera

July 2009 and June 2010. A couple of uncommon beetles fell prey to spiders in the garden, both was a species that I have not so far encountered anywhere else. One was the rare saprosylic tenebrionid *Pseudocystella ceramboides*, found dead in a web very close to the light trap and the beetle had probably been attracted to the light. The other beetle was a female of the tiny longhorn *Nathrius brevipennis* captured by a Candystripe Spider (*Enoplognatha ovata*). *Nathrius* is an introduced species native to the



Mediterranean and although now widely dispersed around the world it is, I think, still quite scarce in Britain. It was just 4 mm long but an even smaller longhorn beetle, a male *Nathrius*, was flying about within an inch or so. It must have been attracted by female's scent for even after I retrieved her from her captor the male continued flying close to the spider and eventually landed within its grasp, falling victim in place of the female. Candystripe Spiders also lurk in the flower umbels of a carrot plant where they lie in wait for insects just beneath the flowers, each spider under a separate umbel. Their prey has included the social wasp *Vespula vulgaris*, the parasitic hymenopteran *Gasteruption jaculator* and flesh fly *Sarcophaga sp.*

Hemiptera

June 2008. Females of the cottony scale insect *Pulvinaria innumerabilis* (*Coccidae*), were established on the bole of a Japanese Maple (*Acer palmatum*). The species is native to Asia, now naturalised in Britain. The oval brown adult females exuding white waxy substance were closely packed on the trunk. Some appeared to be dead but were surrounded by minute aphid-like immatures. These would be first instars, the only stage in which the female *Pulvinaria* enjoy mobility as in the second instar they lose their legs and become fixed in one spot.

October 2010. Substantial numbers of two species of bug fell into my beating tray when I tapped the foliage of a cypress tree that overhangs our fence. One was the slender brown lygaeid bug *Orsillus depressus* which is a native of southern Europe that has been present in England since the 1980s. Most of the *Orsillus* were nymphs of various ages from first instar on and with just a few adults. The other species was the Juniper Bug (*Cyphostethus tristriatus*), a shield bug of the Acanthosomatidae that is a native species once very local and confined in Britain to wild juniper in southern England. It has now taken to garden cypress trees that belong to the same family Cupressaceae as juniper and consequently has spread rapidly and become common. This species was present as adults and lesser numbers of nymphs from second instar on. Also shaken from the foliage were a fair number of small spiders including several of the little green *Nigma walkenaeri* (*Dyctynidae*) which is of local distribution and confined to south-east England, especially the London area.

Orthoptera

Members of this order are rarely found in the garden; on average just one individual a year with a tally of four species so far. The species most often seen is the Speckled Bush-cricket (*Leptophyes punctatissima*) (Fig. 4), the



other species are Oak Bush-cricket (*Meconema thalassina*), Field Grasshopper (*Chorthippus brunneus*) and the groundhopper *Tetrix subulata*.



Figure 4. Speckled bush cricket *Leptophyes punctatissima*.

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Letter from Spain – 15th in a series – more information about the insects seen during my trip to Portugal in May 2011

by David Keen (3309L)

Calle Casto Bancalero 11, 41650 El Saucejo, Sevilla, Spain

Following the publication of my “Letter from Spain 14 – Return to Benafim, May 2011” in the December issue of the *Bulletin*, I am now able to provide more information about some of the insects that were mentioned in that article.

The first species to be discussed here is the Monarch Butterfly, *Danaus plexippus*. I had seen one flying around lantana flowers at Silves in the Algarve during the evening of 18th May 2011. In the following summer months I was in correspondence with David Baldock, the Hymenoptera specialist, about some bees and wasps that I had collected in the Algarve in previous years. I happened to mention the sighting of the Monarch and David responded by saying that he had spent a few days based at a B & B in a citrus growing area three kilometres to the east of Silves in early June. He went on to say that “Monarchs were abundant in the garden of his base and over a large area around – literally hundreds everywhere. They were mating but I never saw egg laying.” He also mentioned that he had seen two or three examples in the same area in October 2010 and had assumed that they were wind-blown accidentals.

Thus, it would seem reasonable to assume that “my” specimen had come from this local colony rather than from further afield as I had originally thought. David raised the question as to what the larvae might be feeding on in the citrus groves and wondered if they may have changed their food source and if they hibernate in the orange trees. I searched through the various butterfly books I have, in English and Spanish, to see if I could find any information to answer these questions. Most offered little relevant information but Manuel Diaz (1998) sheds light on the food plants chosen by the Monarch in Andalucia, southern Spain. He states that the Monarch is established on the coasts of Andalucia in commercial cotton fields. He adds that the larvae eat the leaves of cotton, *Gossypium*, and also of various species of spurge, *Euphorbia*. Now I do remember seeing fields of cotton during my visit to the Algarve in 1994 but I did not see any in 2011. David was able to confirm that spurges were present in the citrus groves.

David also provided further information that he had obtained from a friend who had said that the Plain Tiger, *D. chrysippus*, has been found



feeding on *Cynanchum acutum* in at least one area in central Spain. F Javier Olivares (2011) confirms that the larvae of both the Monarch and the Plain Tiger feed on this plant in Spain. I understand that the English names of this plant are Stranglevine or Bloodflower Milkweed and it is in the same plant family as the Milkweeds, *Asclepias*, and can grow up to two metres in height. David has confirmed that this plant was present in the area of the B & B, as was *Gomphocarpus fruticosus* – there are several English names for this plant, including the Cotton Plant and the Narrow-leaved Cotton Plant. His Monarchs were very attracted to it and he feels it reasonable to assume that this is the main food-plant of the species in this colony. I have been unable to establish how the Monarch spends the winter but, on the face of it, David's suggestions would seem to be pretty reasonable.

Having dealt with the Monarch, I can now add further information regarding the beetles. The Tenebrionid mentioned before is, indeed a species of *Pimelia*, and is a fine example of *P. incerta* Solier. It was found on 20th May 2011 running across a path through sand dunes behind the beach at Praia do Alvor near Portimao. This species has well defined "teeth" along the ridges of the elytra. In Iberia it is found only in the south of Portugal and in the costal margins of the Spanish provinces of Huelva, Sevilla and Cadiz. I have not found this species in Spain but as I live well inland this is to be expected. However, I do have a pair of *P. bipunctata* Fabricius from a garden in our nearby village of La Mezquitilla.

When I found the previous beetle, in the sand dunes, I also took two other members of the same family at the same place. These have now been identified as a male and a female of *Erodius goryi* Solier. This is another beetle that, in Iberia, has only been recorded from the south of Portugal and the Spanish provinces of Huelva, Sevilla, Cadiz and Malaga but in all these areas they are found on the coast and also well inland - but I have not yet found it, or other members of the genus, locally.

In conclusion I would like to thank David Baldock for his assistance with the preparation of this article.

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Longevity and late dates for British and German Orthoptera, plus a predation record

by John F. Burton (13428)

In der Etwiese 2, D-69181 Leimen-St. Ilgen, Germany (johnfburton@gmx.de)

Like E.C.M. Haes (1974, 1980), John Paul (1995) and Rob Partridge (2011), I have tended to record examples of Orthoptera in my natural history diaries. Recently, I went through them and extracted the following:

Longevity

All the examples mentioned under this heading were collected for observation in unheated aquarium tanks provided with grass turf and the necessary food plants, and were taken indoors in cold weather.

Tettigoniidae

Speckled Bush-cricket *Leptophyes punctatissima* (Bosc.)

England: fifth instar male nymph collected on 17 July 1962, Pill, North Somerset, was still alive on 16 August 1962 after 33 days in captivity. I released it that evening as I was due to go away from home until 23 August 1962.

Germany: adult male collected on 26 July 1993, Neckarsteinach, near Heidelberg, died 28 October 1993 after 97 days in captivity.

Southern Oak Bush-cricket *M. meridionale* (Costa)

Germany: adult female collected on 11 August 2001, Leimen-St. Ilgen, north Baden, died 18 September 2001 after 39 days in captivity.

Gryllidae

Wood-cricket *Nemobius sylvestris* (Bosc.)

Germany: two adults collected on 30 July 1989 at Donebach in the Odenwald, north Baden. Both died on 6 September 1989 and therefore lived for 41 days.

Acrididae

Leek Grasshopper *Parapleurus (Mecostethus) alliaceus* (Germar)

Germany: of four adults (one male and three females) collected on 17 July 1993, at Der Taubergiessen, near Lahr, Baden, one female died on 7 October 1993 after 85 days in captivity; the second female on 28 October after 106 days; the male on 28 December after 167 days, and the third



female on 9 January 1994, after 179 days. All of them darkened in colour towards the end of September and the last two became very dark and sluggish by the end of November. Detzel (1998) states that some individuals may be found in the wild as late as November in Baden-Württemberg.

Rufous Grasshopper *Gomphocerippus rufus* (L.)

Germany: adult male collected on 10 October 1993, the Bergstrasse, near Heidelberg, Baden, died on 14 November 1993, after 36 days in captivity.

Bow-winged Grasshopper *Chorthippus biguttulus* (L.)

Germany: adult male collected on 10 October 1993, died on 19 November 1993, after 41 days in captivity; adult female collected on 25 July 1993, Neckarsteinach, near Heidelberg, died on 27 August 1993 after 36 days in captivity.

Field Grasshopper *C. brunneus* (Thunberg)

England: of five adults (one male and four females – four of them 'melanics') which I collected from sheltered sites amongst Gorse *Ulex europaeus* at Blackheath, south-east London, on 9 November 1958, one female survived in captivity until 16 November (8 days later) and two other females (one of them light-coloured) until 18 November (10 days), the last to expire doing so at about 2pm.

Of two adult females I collected at Walton Castle Hill, near Clevedon, North Somerset, on 1 October 1988, one died on 2 December and the other on 5 December that year, having lived for at least 63 and 66 days respectively

Research by Richards & Waloff (1954) revealed an average development period for nymphs of this species from egg to adult of 49.6 days in the field (wild) and 57 days in an unheated greenhouse. They also found that the average lifespan of adults in the field was 36.46 days.

Steppe Grasshopper *C. dorsatus* (Zetterstedt)

Germany: two adult females I collected on 9 August 1997 from Schwanheim, Kraichgau, Baden, were released in good health on 24 September 1997, after 47 days in captivity, in a locality for this species close to my home as I was leaving for a two months-stay in the U.K.

Lesser Marsh Grasshopper *C. albomarginatus* (De Geer)

Germany: adult female collected on 25 July 1993 at Neckarsteinach, near Heidelberg, died on 1 December 1993, after 132 days in captivity.



Meadow Grasshopper *C. parallelus* (Zetterstedt)

Germany: an adult female collected on 12 August 1989 at Waldhilsbach, near Neckargemünd, north Baden, died on 6 September that year, having lived 26 days in captivity.

Research by Richards & Waloff (1954) revealed an average development period for nymphs of this species of 49.9 days in the field and 53.5 days in an unheated greenhouse.

Note: The periods of longevity cited above do not, of course, include the time that the adult was alive before capture. It is unlikely that individuals would live as long in the wild as those kept in captivity, as the data for the Field and Meadow Grasshoppers from Richards & Waloff (1954) showed, although the potential is clearly there. I am not aware of any precise data for the development spans of bush-cricket nymphs in the field but, depending upon species and temperature, it appears to lie between 45 and 75 days (Duijm & Kruseman, 1983).

Late dates

Tettigoniidae

Sickle-bearing Bush-cricket *Phaneroptera falcata* (Poda)

Germany: adult female, 4 November 2008, Leimen-St. Ilgen, north Baden. Latest date given in Detzel (1998) for Baden-Württemberg is 5 November 1987.

Oak Bush-cricket *Meconema thalassinum* (De Geer)

Germany: last instar nymph, 8 November 1991, Eppelheim, north Baden; adult female, 4 November 1996, Eppelheim, north Baden. Detzel (1998) states that this species may be found in Baden-Württemberg up to the middle of November.

England: adult female beaten from Pedunculate Oak *Quercus robur*, 3 November 1988, Common Hill Wood, Walton Down, near Clevedon, North Somerset; adult female, 24 October 1992, Leigh Woods, Bristol.

Acrididae

Meadow Grasshopper *C. parallelus* (Zetterstedt)

England a few adults noted still active in sunshine on 27 October, 1973 on Church Hill and Wain's Hill, Clevedon, North Somerset.

Some of the above may not be particularly late dates but are the latest I have recorded.



Predation

Woodland Grasshopper *Omocestus rufipes* (Zetterstedt)

England: on 23 August 1977 at Farnham Woods, Cranborne Chase, Dorset, I saw a male being carried as prey by the large robber fly *Asilus crabroniformis* L. (Diptera: Asilidae).

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Sailor Beetles *Cantharis rustica* (Col.: Cantharidae), leks, and Müllerian mimicry-rings

by Martin Probert (14071)

55 Higher Compton Road, Hartley, Plymouth PL3 5JA.

Abstract

Observations of *Cantharis rustica* suggest the possibility of lek formation, and of participation in a Müllerian mimicry-ring.

Keywords: Coleoptera, Cantharidae, *Cantharis rustica*, lek, mimicry-ring, *Bombus*

Introduction

It had been a week of rising temperatures, 15°C a few days previously, 23°C on 23 May 2012, and 27°C a few days later. The leaf canopy was still fairly sparse. The time was 16:15 BST. Coming out from a wood onto a bright meadow, I encountered, at the wood's edge, a little-used five-bar gate in dappled sunshine. Eleven Sailor Beetles *Cantharis rustica* were walking in leisurely fashion over the wooden horizontals, uprights and gateposts.

The possibility of a lek

I watched the beetles for some time. There was nothing on the gate to interest a predatory beetle. None of the beetles were pairing. I suspect that all may have been male. On a couple of occasions two beetles came in contact and rapidly separated: presumably an abortive attempt at pairing between two males.

It is said that male and female beetles automatically come together at a feeding site (Harde 1984). And indeed, I have photographs of mating pairs of *C. rustica* on Hawthorn (*Crataegus monogyna*). But perhaps the story is more complex, more interesting.

The beetles on the gate appeared to be in no hurry to go anywhere. They continued to wander slowly back and forth, or stand around in small groups. No beetle, when approached, dropped to the ground, or flew away. Several hurried away, but none left the gate. There appears to have been an overriding instinct to remain where they were. If all were male, this may have been a lek. That is, they may have congregated in order to entice females to approach. I have not heard of leks among the Coleoptera, but leks do occur among the Lepidoptera, Diptera and Hymenoptera: I have observed examples of all three, and all were



characterised by the same sense of idleness (or perhaps of 'waiting') and the same lack of any resource of interest to the insect (other than the opportunity, for a female, to be mated).

It is interesting to compare the behaviour of these beetles with that of the ground-nesting bees *Lasioglossum calceatum*. These bees are known to form leks on old heads of knapweed (O'Toole & Raw 1991); I have discovered them lekking on an unopened head. The bees were standing around, or moving slowly over the limited space available, awaiting the arrival of a female.

Returning to the gate. If this was a lek of *C. rustica*, then I would imagine that, once the emergent females had found mates, the lek would break up, after which the males might mate with females encountered while feeding.

The environment was composed of acres of sheep-and-deer grazed meadow, acres of woodland, and, dividing these, a long post-and-wire-mesh fence. As a result, the locality lacked a prominent feeding site. There were no large umbellifers (such as Cow Parsley *Anthriscus sylvestris*) with their wide umbrella-like flowers and attendant small invertebrates on which to feed. In the wood there were a few Pignuts (*Conopodium majus*) which have insignificant umbrellas, together with Rhododendron (*R. ponticum*) and Bluebell (*Hyacinth non-scripta*). Outside, among the meadow grasses, were a few small-flowered plants such as Sheep's Sorrel (*Rumex acetosella*), White Clover (*Trifolium repens*), Germander Speedwell (*Veronica chamaedrys*), Heath Bedstraw (*Galium saxatile*), Lesser Stitchwort (*Stellaria graminea*) and Common Mouse-ear (*Cerastium fontanum*). None of these meadow flowers are ones on which I would expect to find a cantharid beetle. The beetles must, presumably, have been finding their food (living or dead soft-bodied invertebrates) either high up on the trees, or among the undergrowth, or among the acres of grasses.

But, with so much canopy and undergrowth and grass, much energy might be expended seeking a partner. For an insect restricted to the locality, the gate would provide an unambiguous focus for a lek. The gate was the only unique feature. In addition, it interrupted the ride – or flight path – from the wood into the meadow, and interrupted the otherwise-unbroken periphery of the wood. By assembling on the gate, and promenading along the bars, the males might have been quickly found by the (presumably) later-emerging females.

The beetles might even have alternative strategies. If prominent feeding sites offer themselves, they might find their mates there, but in the absence of any such site they might then form a lek.



The gate

Perhaps, in the absence of a gate, the beetles might gather on a fallen branch, especially one that survives for several years in a prominent position well off the ground (at the height of the gate). If old and rotten, the branch might be a source of invertebrate food, but then the beetles would be coming together at a feeding site rather than at a lek (which is characterised by a lack of any resource of interest). However, although the gate may have been used as a substitute for a fallen branch, I am not inclined to think that such a branch ought to have been rotten, for the beetles made no attempt to search for invertebrate food. They merely potted about. If the gate was a substitute for a fallen branch, then it might be worthwhile placing, and monitoring, fallen branches in conspicuous places at the edges of woods, and at the exits to woodland rides. The introduction of such a feature, in localities where *C. rustica* is known to exist, or where it is desired to introduce the species, might have conservation value.

The possibility of a Müllerian mimicry-ring

As I took a photograph, a beetle raised a leg (Figure 1), presumably to ward off the photographer. Bumble Bees (*Bombus* spp.) assume a similar defensive attitude when approached with a camera (Figure 2). This suggests that *C. rustica* and Bumble Bees may be participating in a Müllerian mimicry-ring. Cantharid beetles (which emit a mix of blood and defensive chemicals from their 'knees') can taste unpleasant. Bees can sting. A predator that ignores the warning signal – the raised leg – may be less inclined to ignore the same signal on a future occasion. The beetles and the bees both benefit: fewer individuals are lost to predators. As pointed out in an earlier *AES Bulletin*, 'the concept of "common ancestor" is not necessary to account for mimetic resemblance' (Winokur 1992).

Sailor Beetles and Bumble Bees have dark bodies upon which are superimposed one or more transverse stripes: the coloured collars and tails and other stripes of the bees; the red pronotum of the beetles. This similarity, in addition to the raised leg, might aid in reinforcing the signal. 'Predator, beware!'

To test this theory, I have tried to get other insects to react to my approach in the same manner, and, so far, none has raised a leg. To date, only *Bombus* sp. and *C. rustica* belong to the suspected Müllerian mimicry-ring.



Figure 1. Sailor Beetle raising hind leg.

Photo: Martin Probert



Figure 2. Bumble Bee raising middle leg.

Photo: Martin Probert

Why not fly?

Under what circumstances will these insects – the Bumble Bees and the Sailor Beetles – raise a leg rather than fly off, or drop off? Thinking back over the various instances when this has occurred, I find that, in each case, there is some advantage to the insect in remaining stationary. The



one in Figure 2 was busily feeding at Bell Heather (*Erica cinerea*). Another bee, approached by my wife in the garden, was warming up on a white surface, catching the early morning sunshine. The beetle in Figure 1, assuming this was a lek, was waiting for a female to appear. I suspect that the speed and angle of approach of the potential predator may also have something to do with triggering the raised-leg signal.

There is considerable scope here for further investigation. I opened the gate, passed through, and closed the gate behind me. The beetles were still in position.

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An Unusual Note Concerning *Rhyssa persuasoria* Hym., Ichneumonidae

by Jamie C. Weir (13855)

32 Paul Drive, Airth, Falkirk, Stirlingshire, FK2 8LA (Email – jweir007@btinternet.com)

There is no doubt in my mind that a major factor in encouraging the early entomologists to make collections was that it served as a most heart-warming means of escapism. When the weather turns dull and grey, when the cold winds blow in, when the frost and snow, or indeed the rain, begin to spread across the land, what better thing in the world is there to do than to open up a store box or cabinet drawer, take a seat near a roaring fire and peruse our collections. Certain specimens catch our eye and we are reminded, with wry pleasure, of the particular difficulty we had in capturing it, or what a glorious, sunny day it was when it was taken. Perhaps the memories of a particularly pleasant field trip drift back to us, the smells and sounds of summer return, and we are thus *warmed* by the experience. It serves to blot out, for however brief a moment, the dreariness of winter and remind us, when we itch to grab our nets and scramble for the country, that spring is not that far off after all.

Well, last winter was one of those where one needs to resort to this sort of entomologist's form of escapism. Once I had finished cataloguing my records and labelling my specimens from the summer I found myself with very little work to do and so decided to sit down with my field journal and leaf through it. After a while my attention was caught by an interesting entry from the 30th June, 2009. The small note detailed a fishing trip I went on with my father to Loch Earn; a rather large loch in the Loch Lomond and the Trossachs National Park. At the very end of the entry was a curious little collection of sentences. It said that my father had collected some sort of ichneumon wasp when fly fishing about ten metres from the shore. What is more it said that the wasp was sitting on the water's surface, as if it had landed there, though it seemed unable to move from its present position or take flight. It seems that my father then captured it somehow and brought it back to the shore for examination. From the rest of the note it appears that it was very much alive when brought to the shore.

Intrigued by this I then saw a small pencil note at the end of the entry which read:

Wasp = *Rhyssa persuasoria* COLLECTED. Quickly I looked for the store box which would contain the family Ichneumonidae and opened it. After a little searching there it was; the grand and impressive *Rhyssa persuasoria* and on its label was written: stuck in water of loch, 10m out.



With the insect in front of me I now began to think the whole event through:

Why would the wasp be on the water of the loch? Could it have fallen from the extensive area of birch trees which surrounds and overhangs the loch's shore? No, because it was far too far out. And it couldn't have fallen from the canopy and drifted out because on referring to my journal I found that the wind was blowing *into* the shore that day.

It appeared as if it had landed, but why would it land on water? Surely landing on the water meant certain death; unless of course it mistook the water, by some trick of the light, for land. It could have always fallen, somehow, and struggled so it *appeared* as if it had landed. It couldn't have died in flight and fell to the water because it was alive when brought in to shore.

I was forced, now puzzled, to admit to myself, I didn't have a clue what to make of it. Perhaps, after all, the whole thing was simply a fluke.

Nonetheless, it seemed to me to be an unusual observation which was surely worthy of a note to bring it to the attention of others.

Not bad, I thought to myself, for a day of escapism?



Some recollections on the hazards of moth collecting

By the late A.J. Wightman and edited by Paul Sokoloff

A brief note on this article

Just as a rare moth, spotted by an avid enthusiast, can sometimes disappear into the smallest tuft of grass so an article submitted for publication can occasionally go astray. The article reproduced below was submitted for publication in February 1970, duly accepted and immediately lost! In fact it had become "trapped" by a paper-clip holding together some other documents, and filed away. Earlier this year, whilst sorting through some old papers, the article was re-discovered and, as an obligation to publish had been given, we now discharge our responsibility. Possibly this sets an inadvertent record, as even the most prestigious journals rarely have a forty-two year wait for publication. The author's personal observations stretch back over 100 years from the date of publication and seem at times to describe an alien world to those of us entomologising in the 21st century!

Who was A. J. Wightman?

Archibald John Crewe Wightman, who was born in 1884, submitted the article below a few months before his death in 1971. For the majority of his adult life he was an active entomologist with a particular interest in the



British Noctuidae and their varieties. Working long before the invention of mercury-vapour moth traps he did much of his collecting using sugar, various kinds of lamp and searching for larvae. He bred prodigious numbers of moths – running into the tens of thousands – and became an expert on the life histories and variation of many noctuid species. Some 1300 of his finest specimens were bequeathed to the Rothschild-Cockayne-Kettlewell collection originally at Tring and now at the Natural History Museum, London. For more information on his fascinating life and collecting experiences, see Hagget 1971 and 1972.



The recollections

Over the years, many collectors have published their experiences of working in the field, and re-reading these reminds me of some of my own experiences when out with a portable light, searching for larvae, a method of collecting that has always appealed to me far more than getting perfect insects at sugar or light, partly because I wanted to know their habits in nature and partly because I hardly ever get a really perfect moth other than by breeding.

Over a period of sixty and more years, I have had little interference from humans, just an occasional argument with a keeper or farmer, but I have had plenty of trouble from free-ranging bulls, angry swans, savage stray dogs, guard dogs, barbed wire, smashed lanterns and such accidents. Working alone one can get into trouble where the presence of a companion could quickly put matters right, but again I have had trouble just because, as one of a party, I was involved in trouble someone else got into.

In 1907, I went with two friends, Taylor and Sharp, to the cliffs at Beachy Head to sugar flower heads for the Northern Rustic, *Standfussiana lucerneae*, a species only to be obtained in Sussex at the extreme southern point of those cliffs. Taylor and I were new to the spot, but Sharp knew it well and although we knew the spot was considered dangerous, we felt safe under his guidance and arriving there in good daylight, we called at the lighthouse and told the Keeper of our intention to use light there: he raised no objections, but did warn us of the dangers of the unstable cliffs. Having sugared the hardheads (*Centaurea* spp.) that were in those days plentiful all along this bit of cliff, we retired away from what it seemed to me was a very risky spot, and sat down to await the coming of darkness. It was then that Taylor displayed a leather harness that he had obtained and upon which a cycle lamp bracket had been fastened so that he could, from time to time, put his lamp on it and so have both hands free for boxing moths.

At that time, collecting lamps were illuminated by a naked acetylene flame. Acetylene was produced by dripping water on calcium carbide, and the gas ignited in a reflecting chamber. The lamp was very heavy and clumsy, but gave a grand light and although the burners were liable to get choked up, replacement in the field was simple. Both Sharp and I admired the idea of using the lighter cycle version of this lamp, although it was still heavy and dropped markedly when hung from his stomach. As events were to show, we had overlooked an even greater fault in the design. The fastenings for the lamp, a simple pin and buckle, were just below the bracket upon which the lamp was mounted.



It was a grand evening as regards the conditions – good cloud cover but no threat of rain and as warm as a late July evening should be, so as soon as the light had faded enough, we got up and Sharp led us back to the cliff towards our sugared flowers. We lit our lamps on the way – just the water to turn on and then a match to the burner. Taylor put his lamp on his belt before he did this, and when he put a match to the burner the whole lamp burst into flame, he having failed to tighten up the gas chamber. So intense was the flame that it was not possible to touch the lamp with our hands, nor could we knock the lamp off the bracket. The flame was touching his stomach, his clothes were being ignited and in panic, fearing that he might be cremated far too young, Sharp cut the harness by pulling the back so as to get his knife inside. Success – the lamp and the harness fell away but, as a result of the jerk, Taylor fell backwards and disappeared over the cliff.

After a moment of silence and horror, we heard Taylor calling for help as he was on the very edge of the cliff, and we then found that in the commotion we had got to the cliff face at a point where a big fall was in progress and the sagging cliff top had formed a sunken under-cliff, and in this very dangerous place Taylor was lying. Rescue was not too difficult, if only the cliff kept up under the considerable weight of the three of us. This shock upset our moth hunting plan, so we decided to get away from the danger area, have a rest and then go home, but when our nerves had steadied we changed our minds and found that our flower heads were acrawl with moths including a number of fresh *lucernea* in fine condition, both sexes being present in almost equal numbers – so what threatened to be a very black day appeared in my diary as a red-letter day!

A good many night trips to similar areas during the next fifty-odd years were, on the whole, free from trouble, and I had come to think that solo work in such places was really much safer than in company, as when alone one has only to take acceptable risks and there is no danger on becoming involved in what someone else might be disposed to risk, but I was to learn that this is not always so, and being alone can be a danger.

Perhaps the worst fright of my collecting life came only a few years ago, when I had gone to the Isle of Wight in mid-April to search for the larvae of the Feathered Brindle, *Aporophyla australis* on the cliffs just below the Tennyson Memorial. The cliffs in that area are especially dangerous, by reason of the extensive falls over the years, which have left a very wandering cliff-top with gaps in between protruding portions, so that every step must be carefully surveyed before any trust is placed in the ground underneath. Knowing how plentiful the species was at that



spot, I had made my trip a one-night affair and so when the weather turned foul I had no option but to get all dressed up in greatcoat, mackintosh, sowester, rubber boots – in fact so wrapped up against the wind and rain I feared I might be blown over the cliff if the wind treated my voluminous clothing as a sail, and as a result I ended up crawling around on hands and knees, using an old ‘mack as a kneeling platform, when in the early hours of the morning a huge black dog turned up, and at once came in to the attack with lips well back, teeth at the ready and growling. I shouted for his supposed owner to call him off, but got no response, and so still calling out I crawled at the dog putting the lantern to his head, and so by degrees moved away from the cliff edge and struggled to my feet. Even then the case was desperate for the dog was quite a large black Dane, not as huge as he first appeared, but still large enough to be frightening even in broad daylight and away from a cliff edge.

He continued to come at me, ready to bite, and from the persistent way he worked around me I felt sure that he was a trained guard dog, off his beat, but determined to do his stuff. The animal moved steadily round me, trying to avoid the glare of the light, and get at me from the rear, which compelled me to back away and keep turning at the same time – a difficult feat with my heavy layers of clothes. After a few minutes, which dragged as years, I became aware that a second dog, probably a bitch was present, but keeping just outside the circle of light, and it was quite half an hour before my attacker gave up his rushes, widening his distance, finally joining his presumed mate. Even then he kept appearing at the edge of my lantern range compelling me to walk backwards until I was nearing my small car, which was parked by the old fort. I shall not say I was frightened by this episode, I was downright terrified.

But this was not to be my final dog trouble. In the mid 1960s, quite near my home I had dog trouble again, this time in a local wood. I had gone to Chiddingfold in Surrey to search for spring-feeding larvae, and having parked my car in an open space in the wood, just off the road, I lit the lantern and went on a trip through the rides; the ground was very wet so I returned to the car to collect some rubber boots from the rear seat and hurried resumed my searching. Collecting was not too good and by midnight I had had enough, and returned to the car intending to drive home. As I approached the car, I fancied I could see a pair of eyes peering at me from the rear seat, and on reaching the car I realised that I had failed to close the door properly and I had gained a passenger, a really huge Dane-type mongrel sitting bolt upright and keeping perfectly still. I opened both doors and talked to him as one does to a dog, telling him



he was in the wrong car, and that I was not going his way home and he had better get out, but he seemed not to hear me. Seeing he had a collar, I put out my hand to read the name, but my docile dog at once let me hear his voice and see his teeth and my hand beat a hasty retreat. I thought of several good ideas to get him out, such as getting into the rear seat with him, coat over my arm, and easing him out by stages, but let me say that it was I who got out, not the dog. So here I was, in the middle of the night, with another black dog problem.

What a position to be in! Should I get in and try to drive home with the dog breathing down the back of my neck and risk him thinking he was being kidnapped, and striking back, or would it be best to hang about where we were all night in the hope that he would at least get home-sick. No safe and speedy solution to the problem seemed likely. After a while I decided to drive to Chiddingfold village on the main road, and see if I could find a policeman there, and so I got into the driver's seat, leaving the back door open, and started the engine but having his rather large head so close to the back of my neck caused me to sit while to give him a chance to get out, but in the end decided to drive slowly, with all the doors open, to the nearest house which I hoped would be my passengers abode, but he made no move and after a couple of minutes a light came on in one of the upper windows, a head appeared and asked me what the trouble was. I tried to explain this peculiar circumstance, and in this conversation learned that the dog was from a nearby gipsy encampment. He thought it most unlikely that I would find anybody there, and cautioned that the dog might become aggressive if he found himself in home territory. We were both nonplussed when the dog decided to investigate what we were hatching up, came out slowly and wandered over to us, like a well-trained dog might be expected to do. Now, said my kind helper, you go to your car and I will go into the house, so into the car I got, closed all the doors, and soon as I had seen the front door close, drove off, leaving the dog in the exact spot he had walked to. He did not move, and I almost felt guilty driving off and leaving him.

The only occasion when I was seriously hurt occurred in the daylight, and this was due to me ill-advisedly using a single strand of barbed wire to cross a trout stream. I slipped, and the barbed wire ensnared my trousers; I was powerless to free myself and salvation only occurred when my weight pulled out the posts to which the wire was attached, and dropped me into the stream where, with one foot I was at last able to make contact with the hard bed of the stream, I thought I could free myself from the wire – but no, I was still help in a firm grip, with the



barbs cutting into the inside of my, by now, well lacerated leg. I was wearing a pair of riding pants, tough Melton material, buttoned below the knee and they would not tear away from the wire, until I extracted from my pocket a rather blunt knife and split them from the thigh to below the knee.

I have sometimes thought that I must be a sort of Jonah, and that it always must happen to me, but on considering the number of trips I have made, perhaps I have been lucky, as I know others who have had quite serious mishaps, such as being threatened with a gun by a man who not only shouted his intention of shooting, and from his look seemed quite capable of doing so. Another friend of mine fell through a reed-bed which at one time was part of the main stream of the Sussex Ouse. He had great difficulty in getting out, and when he did make a landing found he had lost his glasses, and had two hours to wait until he was to be picked up by his driver whom he had sent on another errand to Lewes. Feeling chilled, he set out on the Lewes road in order to meet the returning car, when at a sharp bend his car shot past him quite a time before it was expected. Now the trouble deepened, because the driver seeing that his employer had been in the water might return not the Lewes, but the nearer Newhaven to seek assistance. But he did in fact return quite shortly, and this time recognised the bedraggled pedestrian, picked him up and got him home in double quick time where a day in bed soon got him back to normal, but his missing glasses were a big problem.

I had hardly got away from the telephone, over which I had heard of the accident, when another collector came to my door and asked if I had lost my glasses in this reed-bed, as he had been to the spot earlier in the day and seeing that someone had been in the water, looked round and found a pair of glasses in the reeds, knowing that this was a favourite spot of mine, concluded that I had taken the plunge and kindly brought the glasses to me. When I phoned up the owner of those glasses, I had quite a job to convince him that I really had his lost glasses and he could send his driver for them.

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Book Review

Las mariposas diurnas de Sierra Nevada

by F Javier Olivares, Jose Miguel Barea-Azcon, F Javier Perez-Lopez, Alberto Tinaut e Ignacio Henares. 512pp. 2011. Consejeria de Medio Ambiente, Junta de Andalucía. ISBN 978-8492807-72-7. Hard back, hundreds of colour photos.



The text of this book is in Spanish so at least a basic understanding of this language is necessary to fully appreciate this book. “Mariposas” is normally the Spanish word for Lepidoptera in general but this book relates only to the 120 species of butterfly that regularly breed in the area known as the Sierra Nevada and a further eight occasional or doubtful species. It is the work of five specialists and is the result of the many years of field work carried out by each of them.

After a short Prologue there is an Index and Introduction. The latter includes an explanation of the format used to describe each species later in the book. The information given for each species is split into ten distinct parts:

First there is at least one large colour photo and at least two smaller ones of specimens at rest. All were taken in the wild, mostly within the area of the Sierra Nevada. The photos have been selected to show those features required for the identification of the species. This is followed by the current scientific name, with author and date, based on recent works, including the revisions of Karsholt & van Niekerken in 2010. We then have reference to the original description and a note of the type locality. After that each species is described and diagnostic comparisons and points of confusion with other species are given, together with any local variations. In the fifth part the authors set out their own taxonomic observations and here they include references to local subspecies and the history of their occurrence. The biology of each species is discussed and includes comparison with differences encountered in other areas where the species is found.

Under the heading “Habitat” the authors describe the type of locality where the species is found within the area under review, including the range in altitude. This is followed by Distribution covering the Sierra



Nevada, Iberian Peninsula and worldwide distribution. Specific needs for conservation, including local and European legislation are discussed. Finally we find a diagram, in the form of concentric circles, showing very clearly in which month(s) of the year each phase of the butterfly is found.

Next comes “Block I” which is split into two Chapters. Chapter 1 is an introduction to the Rhopalocera and its systematics. This is beautifully illustrated with colour photos of butterflies and moths to explain the differences between these two groups. Then more photographs illustrate the adult, larval and pupal differences between the butterfly families.

Chapter 2 covers the Zoogeography of the area over the period of the last eight million years and how it was colonised by butterflies. This Chapter is profusely illustrated with colour maps, diagrams and more wonderful colour photos of the area, including views of the mountains and other types of countryside, wild flowers and, of course, butterflies. In this part of the book we learn that the “Sierra Nevada” is situated in Andalucia and covers an area from just south east of the city of Granada eastwards towards the town of Almeria. The majority is within the Province of Granada but the far south east corner falls within the Province of Almeria. It includes many diverse biotypes from high mountains to river valleys.

“Block II” is the real meat of the book and, in 282 pages, deals with the identification of the butterflies found in this area, with a list and overall distribution of the species. From this we learn that three species are endemic to the area and around thirty others are restricted to Iberia or Iberia and North Africa. Nomenclature changes result in some of the names differing from those previously used. For members in the UK, these include, for example the generic names *Lysandra* and *Artogeia* which appear as *Polyommatus* and *Pieris* respectively. As all the photographs of butterflies within this part of the book were taken of resting specimens in the wild some species are only illustrated as undersides – e.g. *Colias* and *Gonepteryx* and several of the satyrids. However, these photos together with the accompanying descriptions and the Field Note Book are sufficient to separate each species from its close relatives. Photos of both males and females of most species are included and often a larva is shown on its foodplant.

“Block III” comprises some un-numbered Appendices, the first of which is an extensive Bibliography. The second consists of a list of photo credits; the vast majority of the photos were taken by the authors. The third is a four page Glossary of Terms and this is followed by the Alphabetical Index. Although subspecific names have their own entries, full specific names are only shown after the current generic name. Thus, if, for



example, you want to locate the species description for “our” Adonis Blue you would look under “*Lysandra bellargus*” but find no entry and, perhaps, assume that it is not found in the area. It does, however, appear as *Polyommatus bellargus*. This is a pity and is, in fact, the only criticism I have with this book.

“Block IV” is a Field Note Book which completes the book and consists of a further 76 pages. This is all handwritten but, I have to say, it is in very clear writing and easy to read and understand. It illustrates by way of coloured photos, of set specimens, closely related species which are difficult to identify. Superimposed on each photo are hand drawn “arrows” and/or “circles” pointing to or surrounding the determining markings needed to identify the species. Adjacent to the specimen are explanatory notes – e.g. “very fine white markings” and “very bold white markings”. The size of each illustration is shown (e.g. “scale x2” etc). Combined with the photos and descriptions included within Block II, this is a very useful part of the book.

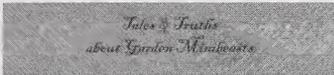
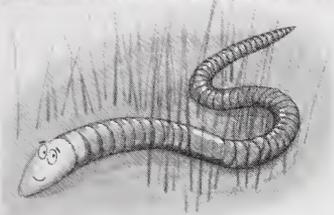
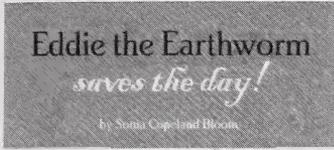
In a work of this complexity it is almost inevitable that errors will not have been picked up during the proof reading. There appears to be one such “error” on page 158. In the species description on this page of the Skipper, *Pyrgus cirsii*, an important diagnostic difference with closely related species concerns the postdiscal white spot which, in this species, is joined to the next one. Unfortunately, in the colour photo the two spots are clearly not joined – yet the footnote to the photo reaffirms their joining! The Field Note Book entry for this species illustrates and re-states the conjoined spots on page 8.

Despite these minor criticisms I would thoroughly recommend this book to any member who has an interest in Spanish Butterflies, or the area of Spain to which this book relates.

David Keen

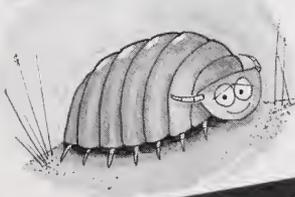
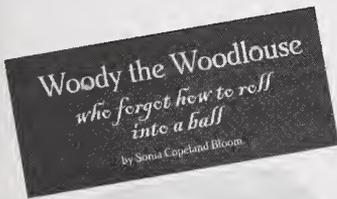


A new book by Sonia Copeland Bloom



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Specifically intended for beginners, although it is also suitable for experienced Phasmid enthusiasts, it is one of the few guides to rearing that features the majority of the culture stocks available, 22 species in detail. The informative text is complimented by 8 colour plates, 14 black and white plates and 29 figures. (New edition, 2003) **£ 8.73**

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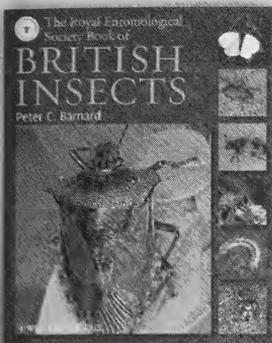
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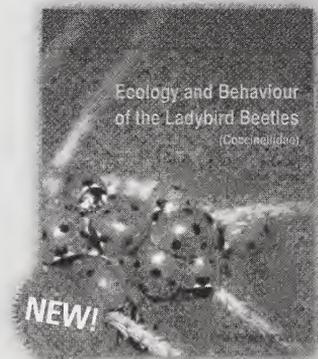
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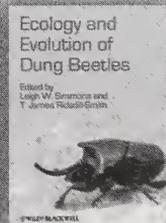
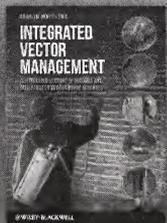


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The
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Volume 71 • Number 503

August/September 2012

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