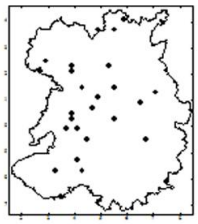


A bi-annual newsletter focussing upon the study of insects and other invertebrates in the county of Shropshire (V.C. 40)

October 2011 (Vol. 4)
Editor: Pete Boardman
pete@field-studies-councl.org

~ Welcome ~

Welcome to the 4th edition of the Shropshire Entomology newsletter. I think it is fair to say that we've had an exciting year of entomological discovery within Shropshire, with the Invertebrate Challenge training courses throwing up some fabulous finds, and it has been brilliant to be able to work with so many committed and interesting people.
I'm also pleased to include details of the Shropshire Entomology Weekend (in conjunction with Preston Montford Field Centre, The Shropshire Invertebrates Group, The Invertebrate Challenge, and the BENHS) with booking details. This is a great opportunity to get together with fellow entomologists in the late winter when there is little going on outside in the way of insect activity.
Many thanks once more to everyone who has contributed to this edition. The deadline for submission of content for Vol. 5 is **Friday 16th March 2012**. Please feel free to pass this newsletter on to anyone you feel might be interested in it.

Note – past newsletters are now available for download as PDF's from www.invertebrate-challenge.org.uk/newsletters-and-resources.aspx

~ Contents ~

The stag's lesser cousin

I recently participated in one of the five 'Beetle' days organised for the Invertebrate Challenge project. These days have taken us to various places throughout Shropshire and have been expertly run by Pete Boardman and Don Stenhouse.

The beetle group met on a cool day in July at the Craven Arms Discovery Centre. Although the focus of the day was to gather data on the abundance of soldier beetles (Cantharidae) on the site, the experience gained on the previous meetings enabled the group, with some confidence, to 'go it alone'. We therefore had the opportunity to search for beetles from a number of different families in a number of different habitats.

Under one of the many logs that were turned over I found this amazing beetle, which turned out to be the first record of this beetle at this site.

Dorcus parellelopipedus (Simon Yates)

Although fairly common and widespread in the southern half of the UK, the uniformly blackish lesser stag beetle (*Dorcus parellelopipedus*) is a small cousin of the better known stag beetle (*Lucanus cervus*). From the family **Lucanidae** and averaging between 18 and 32mm in length this species has a broad pronotum with a brown joint between the head and abdomen. The long black antennae are 'kinked' half way along and finish in a club. The larvae feed on rotting timber, especially ash, beech and apple.

It will be interesting to find out if any other sightings are made within Shropshire.

Simon Yates

(Ed. The current distribution of this species in Shropshire taken from the SEDN invertebrate database lists records from Chetwynd Park near Newport, Preston Montford, Attingham Park, Castlefields (Shrewsbury) and a recent record from the centre of Ludlow.)

If you have come across this beetle on your travels – please pass on the details to pete@field-studies-council.org.

The chocolate tipula isn't edible!

The chocolate tipula *Nigrotipula nigra* (Linnaeus, 1758) isn't edible. Well that is not strictly true as I suppose it is, but it probably doesn't taste very nice, unless you are a starling or have Pica syndrome. That aside, I was really chuffed to receive a specimen of this uncommon fly from Ian Cheeseborough who took it from wet grassland at Cole Mere Country Park on 26th June 2011. The fly is principally associated with wet fen and is much more common to the south and the east of the United Kingdom. In Shropshire, it has previously been recorded from Morton Pool in 1993, interestingly on 23rd June, suggesting that the flight period may be quite limited.

References;

Boardman, P (2007) *A provisional account and atlas of the craneflies of Shropshire.* Pete Boardman

Pete Boardman

Solitary Wasps Part 2 and Social Wasps

This article covers the two remaining Super-families in the British wasp world, namely the Chrysidoidea and Vespoidea.
The British wasps are classified from Superfamily (3) through Family (9) to Sub-family (22) then genera (78) and finally species. (Baldock, 2010). The above classification does not include the families Dryinidae, Embolemidae and Bethylidae.

Chrysidoidea – 1 family – 3 sub-families - 11 genus
Vespoidea – 6 families – 11 sub-families – 33 genus

The **60 species** of these two super-families found in Shropshire are represented by 27 genera. When added to the **63 species** in the super-family Apoidea one can see that the total is **123**. The previous article (see Shropshire Entomology Vol. 3) stated that Shropshire had 121 species, but I had over-looked one species and we have this season added a new Chrysid, *Pseudomalus violaceus* (see elsewhere in this newsletter – Ed.).

Species recorded in Shropshire of national importance are given below;

- **Chrysididae – ruby-tailed or jewel wasps**

  Rare; *Chrysura radians*
  Scarce; *Cleptes semiauratus, Omalus aeneus, O.puncticollis, Pseudomalus violaceus, Chrysis viridula,*

- **Sapygidae**

  Scarce; *Monosapyga clavicornis*

- **Pomilidae – spider-hunting wasps**

  Very Rare; *Anoplius caviventris*
  Scarce; *Priocnemis susterai, Auplopus carbonarius, Anoplius concinuus,* and *Arachnospila minutula*

Chrysis viridula (Nigel Jones)

Genus	Ground nesters	Aerial nesters	General information
Cleptes (1)			Parasitic on the larvae of the currant-sawfly (*Nematus ribesii*)
Omalus (2)		#	The 2 species are very difficult to tell apart. Parasitic on several genera of stem and dead wood

			nesting wasps – *Psenelus, Pemphredon* and *Passaloecus*
Pseudomalus (2)		#	Parasitic on several genera of stem and wood nesting species – including *Rhopalum, Trypoxylon, Pemphredon* and *Passaloecus*
Hedychridium (1)	#		A parasite of *Tachysphex pompiliformis*, a ground nesting wasp which collects grasshopper nymphs as prey.
Chrysis (6)	#	#	All of the recorded *Chrysis* are parasites of *Eumenid* wasp as shown later.
Chrysura (1)		#	Recorded as a parasite of the solitary bee, *Osmia leaiana*.
Trichrysis (1)		#	A parasite of stem and wood nesting wasps in the genera – *Pemphredon* and *Trypoxylon*. Possibly some small bees nesting in the same situations.
Tiphia (1)	#		Parasitic on scarabaeid beetle larvae. *T. minuta* is a small black wasp.
Myrmosa (1)	#		A parasite of ground nesting bees and wasps. Female is flightless.
Monosapyga (1)		#	A wasp feeding on pollen! A cleptoparasite on *Chelostoma* and *Osmia*
Sapyga (1)		#	A cleptoparasite of various *Osmia* species.
Priocnemis (7)	#		Red and black spider-hunting wasps. A particularly difficult genus to identify.
Dipogon (2)		#	Black spider-hunting wasps usually encountered on tree trunks and walls.
Auplopus (1)		#	Black wasp found around open woodland and areas where individual trees are present
Agenioideus (1)		#	Nests are found in cavities, jumping spiders (Salticidae) are the prey
Pompilus (1)	#		A grey looking species associated with sandy habitats. Hunts a variety of spider families
Episyron (1)	#		A readily identifiable spider-hunting wasp associated with sandy habitats. Mainly collects orb-web spiders (Araneidae)
Anoplius (4)	#	#	Black or black and red wasps. Nest in a variety of situations. Spiders from a variety of families are taken as prey
Arachnospila (4)	#		Black and red wasps found mainly in sandy habitats. A wide variety of spiders are taken.
Evagetes (1)	#		A cleptoparasite. Its hosts are only suggested but are

			thought to consist of ground nesting species of spider-hunting wasp.
Ancistrocerus (7)		#	Yellow and black wasps usually nesting in stems and dead wood. Moth and beetle larvae are taken as prey
Gymnomerus (1)		#	Nests are filled with weevil larvae (*Hypera*) and found in plant stems
Odynerus (1)	#		Nests of the Shropshire species, *O. spinipes* are usually found in vertical banks. Prey consists of weevil larvae (*Hypera*)
Symmorphus (2)		#	Both Shropshire species are stem-nesters and hunt for specific beetle larvae around willow and poplars as well as figwort in the case of *S. gracilis*.
Vespa (1)		#	Hornet.
Dolichovespula (4)		#	Usually found nesting above ground in a variety of situations. Social wasps rearing their larvae on a diet of invertebrates
Vespula (4)	#		Social wasps usually nesting in the ground. Larvae fed as above. *V. austriaca* is a social parasite in the nests of *V. rufa*

Sapyga quinquepunctata (Nigel Jones)

(The figures in brackets correspond to the number of species present within each genus according to our records for Shropshire).

References:

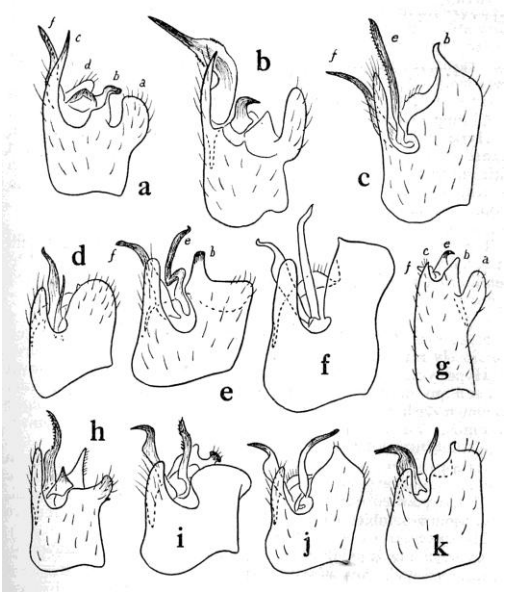
Baldock, D.W. (2010). The Wasps of Surrey, Surrey Wildlife Atlas Project.
BWARS Newsletter Autumn 2007
BWARS Bees, Wasps and Ants Recording Society. Members' Handbook

Ian Cheeseborough

The Nationally scarce cranefly *Molophilus niger* Goetghebuer, 1920 new to Shropshire

The *Molophilus* genus of craneflies is one of the smaller groups in (physical) size that are even more overlooked by entomologists than other cranefly species. They are though easy to identify to genus in the field with a hand lens as unlike nearly all other genera have incredibly hairy wings. Also under the microscope the males have large and clearly pronounced genitalia as illustrated below (particularly *Molophilus griseus* which looks like it has a small heron or egret emerging from its genitalia! (specimen 'b' within

the illustration)). Most females however lack these clearly defined features and are unidentifiable to species.



A selection of male *Molophilus* genitalia (from Edwards, 1938)

It was therefore pleasing to encounter a new species in *Molophilus niger* from the Borle Brook near Highley, whilst 'reccying' the site for an Invertebrate Challenge event. The fly was taken near the dingle (SO734823) on 27th April 2011, close to where a large amount of woody debris was situated.

The fly is regarded as nationally scarce and has been found at stream banks, cloughs and along other water bodies sparingly through England and up into Scotland. The geological lead appears to be calcareous clays or Boulder Clays. (Stubbs. *In prep*).

References;

Edwards, F.W. 1938. British Short-palped Craneflies. Taxonomy of Adults. *Transactions of the Society for British Entomology.* Vol. 5 Part 1.

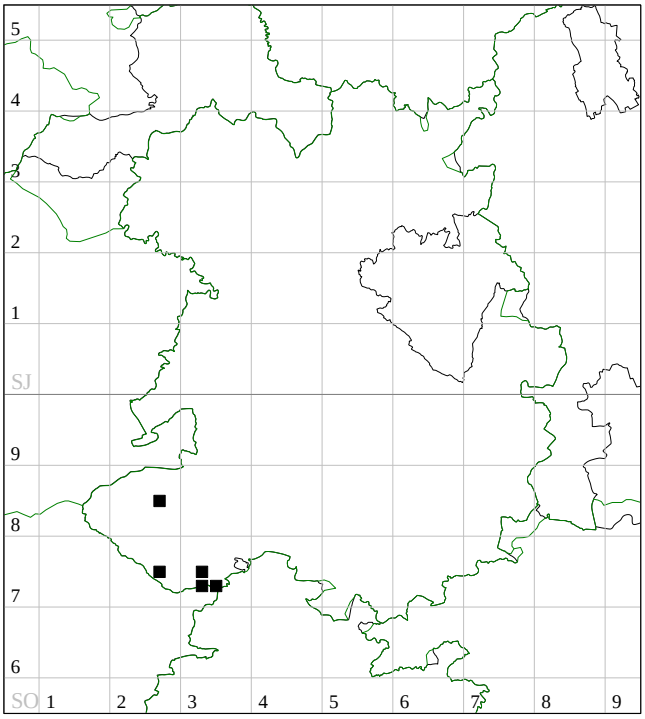
Stubbs, A.E (in prep) *British Craneflies.* BENHS

Pete Boardman

Some Coleoptera finds of note, Shropshire 2011

Pyrrhidium sanguineum (status: RDB vulnerable). In south west Shropshire we are close to one of the national hot spots of this very uncommon, blood red Longhorn Beetle. It is normally associated with dead branches and stumps of broadleaved trees, but strangely, this specimen was recorded as it flew east over Longmynd ….with no broadleaf in sight.

Pyrrhidium sanguineum



Distribution of *Pyrrhidium sanguineum* prior to Longmynd record (SEDN database)

Unconfirmed: ***Amara famelica*** – Early Sunshiner (status: RDB rare; BAP priority). An extremely uncommon ground beetle associated with sandy heaths and not previously recorded in the county. A specimen was taken from heathland this spring that has the features of *A. famelica*. However, given its rarity, it is being thoroughly investigated by Don Stenhouse of Bolton

Museum before the ID can hopefully be verified….. Watch this space!!

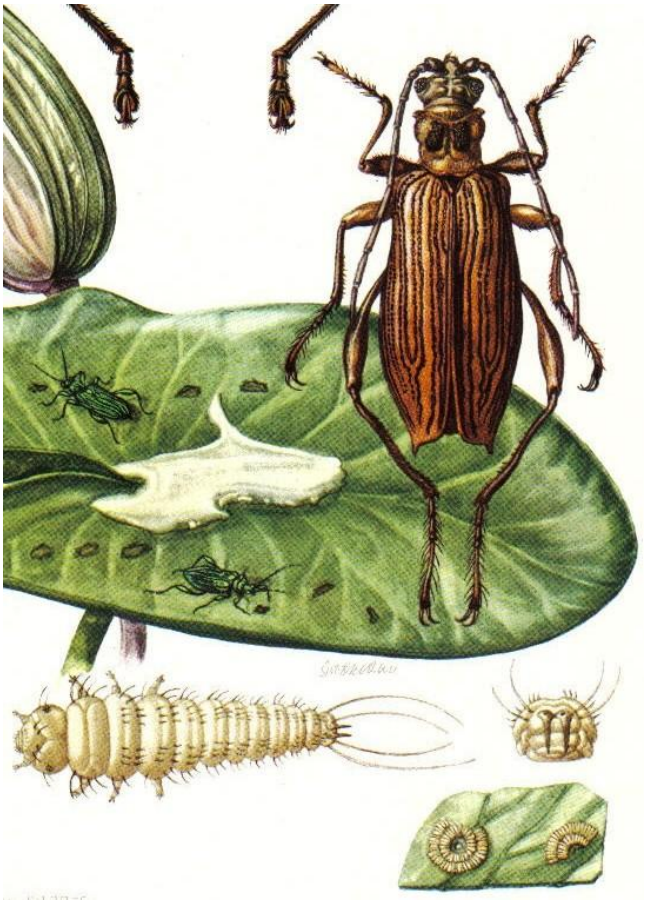
Caroline Uff

A duo of reed beetles new to Shropshire, and a second record of another

During 2011 records of two new species of reed beetle (Chrysomelidae) have come to light from Shropshire, and a third with only one previous sighting. Two of the records were generated by funding awarded by the SEDN to target previously under recorded areas of the county, which is obviously pleasing for all involved. The species are;

***Donacia cinerea* Herbst, 1784 –** (Pete Boardman). Whilst visiting Bomere Pool on the 11th July 2011 I collected a reed beetle that was wandering about on *Typha* plants fringing the water body. Later, during one of Don Stenhouse's beetle events for Invertebrate Challenge, I was able to spend some time keying out some of the beetles that I had collected this year and was pleased to discover that the specimen was the nationally notable b *Donacia cinerea* at its first Shropshire location. As a nationally notable species this insect will be added to the Shropshire axiozoan list in due course. Many thanks to Alex Lockton for arranging access to the site.

***Donacia crassipes* Fabricius, 1775** – Water-Lily Reed Beetle – (Caroline Uff). This distinct and striking large reed beetle was recorded from Cole Mere Country Park in June. It is associated with water lilies (which are present at the site) and is a new county record, as well as being noted as nationally scarce b. (As a notable / nationally scarce species this will also be added to the Shropshire axiozoan list. Ed).



Donacia crassipes illustration from a 1956 lithograph (www.etsy.com/listings)

***Donacia semicuprea* Panzer, 1796 –** (Nigel Jones). This metallic bronze beetle has green overtones and apparently occurs wherever the foodplant, sweetgrass (*Glyceria maxinia*), grows. Individuals were found at Wildmoor Pool (Longmynd) and Attingham Park at their 2nd and 3rd county sites, following an initial record from Fenn's, Whixall & Bettisfield Mosses NNR in 1969.

Pete Boardman / Caroline Uff / Nigel Jones

"Websites I have loved!" (*titter ye not!.Ed)

For future Shropshire Entomology newsletters, why not have a "websites I have loved" section where readers can share websites they have

found particularly useful for entomological recording? I'd like to start the ball rolling by drawing attention to the Botanical Society of the British Isles' *herbaria@home* web page which allows you to locate any grid reference to a Watsonian vice-county. Check out http://herbariaunited.org/gridrefVC/

I'm finding this particularly useful for working at the county boundary and for checking out records which I suspect have the wrong grid reference. And although I've not yet needed it for this function, I can also see it will be very helpful in tracking down the right vice-county for those casual observations I make when I'm outside Shropshire. And you don't need to be a botanist to use it!

Godfrey Blunt

(So following Godfrey's lead, if you have any websites that highlight an aspect of entomology or biological recording please let me have the details for future editions please. Ed.)

A bug paradise back at the ranch

After a succession of articles in the past three newsletters highlighting shieldbug and other bug species I had intended not to write anymore for a while on the hemiptera, however this afternoon (7th September 2011) Ian Cheeseborough popped by and enticed me out of my office to look at a wooden fence rail by the front of Preston Montford which was covered in bugs. Within a 30 metre stretch of fencing we counted 4 x forest bug *Pentatoma rufipes* (including a mating pair), 3 adult birch shieldbug *Elasmostethus interstinctus* and over 100 x 2nd and 3rd instar nymphs. There were 2 x parent shieldbug *Elasmucha grisea* adults, 1 x final instar nymph of bronze shieldbug *Troilus luridus*, 2 x final instar nymph of the hazel bug *Pantilius tunicatus* and 100's of birch catkin bug *Kleidocerys resedae*, mostly final instars. The fence was close to a row of semi-mature birch trees and the weather conditions were very blustery.

Final instar nymph of *Troilus luridus* at Preston Montford (Pete Boardman)

Pete Boardman & Ian Cheeseborough

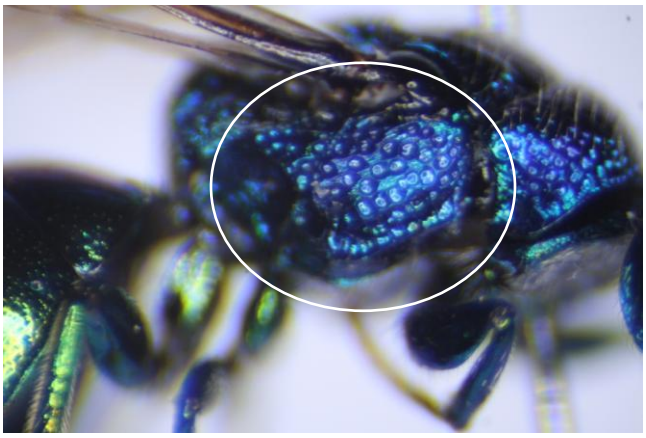
Shropshire's new jewel

Pseudomalus violaceus (Scopoli, 1763) is a species of Chrysid more commonly called jewel or ruby-tailed wasps. This wasp is quite small and as a result, easily overlooked. It can be found in a variety of habitats where suitable amounts of dead wood, old fence posts and cut stems provide suitable nesting sites for its host. The hosts are reported to be *Pemphredon lugubris* (Fabricius, 1793) and *Passaloecus corniger* Shuckard, 1837, both of which are recorded from Shropshire.

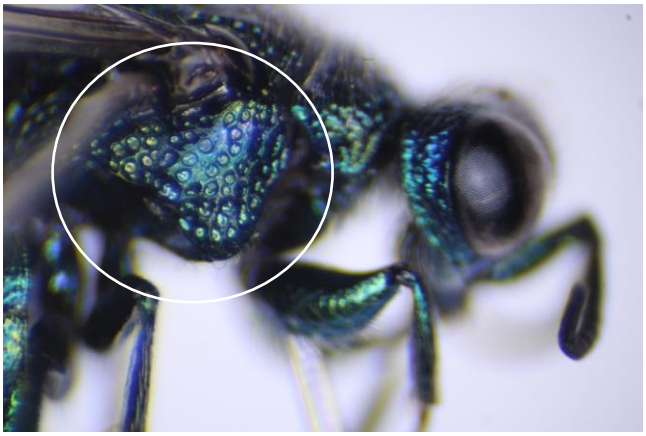
Looking on the NBN Gateway only 3 other sites have been recorded in the Midlands area.

This species can easily be confused with the two species of *Omalus*. All 3 appear violet in colour in the field and the identification features can only be seen under the microscope! The difference between the shape of the thorax of *Pseudomalus* and *Omalus aenus* (Fabricius, 1758) is illustrated

below. Note how the thorax of *Omalus* is less sharply triangular than that of *Pseudomalus.* Colour differences between the two species are not always obvious or reliable identification features.



Omalus aenus – thorax detail (Pete Boardman)



Pseudomalus violaceus – thorax detail (Pete Boardman)

Ian Cheeseborough

Insects from a Shrewsbury window sill (including the wasp's nest beetle *Metoecus paradoxus* (Linnaeus, 1761) at its first Shropshire location)

In mid-August I was handed a pot containing a variety of entomological booty by Invertebrate Challenge participant Kat Parkes. The insects collected had come from her home in Meole Brace, Shrewsbury and so I took the opportunity of having a gander at what she had taken the trouble to collect, rather than bin, as probably most people would have done. There were five insects in total in the pot of treasure; three muscid-type flies that on the face of it appeared to be two common species of house-fly, a micro-moth and something else. This "something else", on first examination, looked like the oddest insect I had encountered since the Polynesian weevil that was donated to the FSC in 2009!

I tackled the muscid flies first and as suspected they were soon identified as the common house fly *Musca domestica* Linnaeus, 1758 and *Polieties lardarius* (Fabricius, 1781). I wondered how such a common fly as *Musca domestica*, one that we all know and hate, fared in terms of its recorded distribution against its clearly ubiquitous real distribution, so consulted the fount of all knowledge on such matters, the SEDN invertebrate database. I was appalled to find (rather ridiculously) that it hadn't actually made it on to the database at all. This meant, rather embarrassingly, that the two small house flies in front of me were new Shropshire records! Clearly, no one has loved house-flies enough to record them.

I then moved on to the micro-moth. Thankfully the moth fauna of human habitation is readily identifiable and I quickly came to the brown house moth *Hofmannophila pseudospretella* (Stainton, 1849), a widespread species in Shropshire recorded from 17 tetrads (2 km x 2 km squares) but new to the tetrad including Meole Brace.

Finally I moved on to the mystery insect and it had me stumped for some time. It is not an exaggeration to say I lost sleep over it! It had long legs with spines on it, reminiscent of a parasitic wasp, feathery antennae and was humped in character, like a fungus gnat. It did however have hard wing cases (elytra) which suggested it was a beetle, but was so un-beetle like, with the elytra abbreviated in both planes,

more like a hemipteran bug. It caused me to do something I haven't done for a long time – consult Steve Tilling's key (Tilling, 1987) to make sure I was even in the right insect order! Once satisfied that it was indeed a beetle I started searching amongst families and came across the wasp's nest beetle *Metoecus paradoxus* belonging to the family Ripiphoridae, one I'd not come across before. It turns out to be the only family member in the UK of a family known as 'the wedge-shaped beetles', with around 450 species worldwide. Most are parasitoids of bees and vespid wasps.

An internet search quickly turned up an interesting article written by Harry Green detailing his introduction to the insect and its distribution in Worcestershire. (http://wbrc.org.uk/worcrecd/Issue13/metoecus.htm)

Metoecus paradoxus (www.kerbtier.de)

Perhaps even more intriguing than its appearance is the life history of the insect. The adult beetle emerges from a wasp's nest and the females lay their eggs on rotting timber during the autumn. It is then hoped that when wasps search for soft wood in the spring / summer to chew for nest making material, they chose timber where eggs have been deposited. The eggs hatch and produce small larvae with long legs and suckers who wait around for wasps to visit. The larvae then climb unseen aboard the chewing wasp and hitch a ride back to the nest where they search for cells containing half-grown wasp larvae to parasitize. Initially they are internal parasites then external ones before consuming the larva totally.

I was thrilled to tell Kat the following day that her window sill is amongst Shropshire's most important wildlife habitats and must surely be a candidate for SSSI status (ok – I didn't say that but I wish I had done).

The wasp's nest beetle specimen is now in the insect collection at Preston Montford should anyone wish to have a look at it.

Many thanks to Kat for having the foresight to collect the specimens, and for providing me with a really enjoyable identification challenge. The records will be submitted to the SEDN database in due course.

Pete Boardman

References;

Tilling, S.M. 1987. A Key to the Major Groups of British Terrestrial Invertebrates. *Field Studies* **6** (1987), 695-766. Field Studies Council Publications. Shrewsbury.

Micro-moths update

By the end of 2010 Shropshire's list of microlepidoptera amounted to 750 species: a total not to be sniffed at, but one which we knew

we could increase with a little effort. And so it has proved this year. At time of writing the dedicated lookers at micros have added eight new species to the county list, and re-found a clutch of others which have not been seen in Shropshire for many years. The new county finds have some interesting stories, so I give a short account for each.

First was a very pretty insect, *Mompha locupletella*, netted by Pete Boardman around marshland willowherbs at Brown Moss on 26th July. Although widespread across the UK it seems to be very local in some vice-counties, so perhaps its previous absence from the Shropshire list is not as remarkable as might first seem.

The next group of newcomers was recorded in gardens. Paul Watts' garden at Shifnal has become rather a focus for new county micros, and this year has added *Bedellia somnulentella* on 15th July, followed by *Caloptilia azaleella* on 18th August (adult at light) which Paul confirmed as breeding in his garden a month later by finding its mine on azalea. My own garden at Alveley produced leaf mines of *Phyllonorycter lantanella* on Guelder Rose, at least ten on 2nd August. I had suspected this moth's presence the previous year but could not confirm my suspicions until now.

Some dramatic changes in personal circumstances this year produced a new micro-recording team: the Blunts Senior and Junior (alias the Old Crocks). With a combined age of 144, my father and I have evolved a fieldwork technique suitable for the less mobile: working roadside habitats near lay-byes and pull-offs, especially for leaf mines and feeding signs. Each of our three outings so far has led to a "first for Shropshire" – the much-missed *Stigmella ulmivora* at Hilton on 16th August, the elusive *Ectoedemia louisella* at Hartsgreen, Romsley, on 26th August, and *Emmetia angusticolella* at Broad Oak Wood near Dudmaston on 23rd September. *E. louisella* was located by means of its mine in the samara of a Field Maple, not an easy one to find.

Our round-up of successes so far this year is completed by Keith Fowler's discovery of *Zelleria hepariella* at Dothill on 25th August, a moth with a very distinctive appearance and stance which drew Keith's attention as something new.

Together these new species, a batch of second and third county records, and the updating of several old records, have made 2011 a bumper year for micro-recording. I intend bringing out an updated county species list over the winter to help, I hope, stimulate more excellent work in 2012.

Godfrey Blunt

Unusual Mite Behaviour Observed on Sexton Beetle Host

During weekly moth trapping/recording as a member of the Garden Moth Scheme, attempts are also made to try and identify other insect species found in the trap (Skinner 125watt MV). These have included numbers of ladybirds, craneflies, ichneumon flies, wasps, shield bugs and various beetles. Wherever possible, photographs are taken for recording purposes, before the insects are released the following day. During this process the opportunity is offered to Newport Photographic Club members to join in and learn/improve their macro camera skills.
It was during one of these release/photo sessions that some really unusual behaviour was observed between a Sexton beetle *Nicrophorus investigator* Zetterstedt, 1824 and its associated mites. This species of beetle is a regular attendee

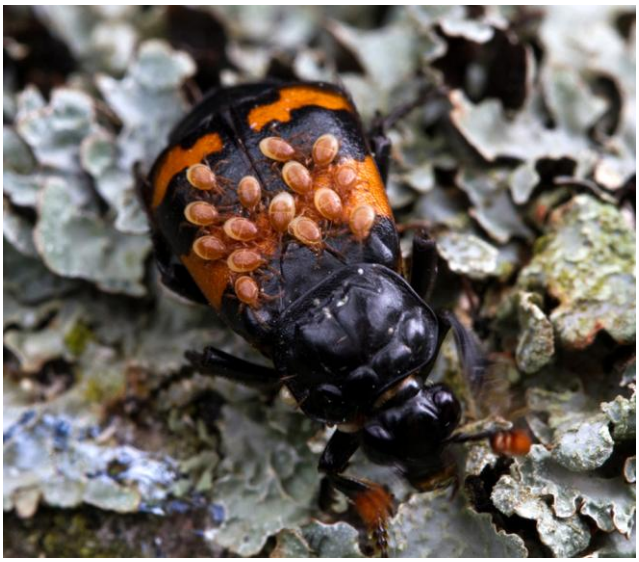
in the trap and it has been noted they are always appear to be host to a number of small round orange coloured mites which move around among the legs beneath their abdomen and thorax. Despite giving off pungent odours, the size of this black beetle (*15-20mm)* with its orange bands across the elytra, plus the presence of the mites, makes it very photogenic, especially as the mites occasionally appear on the outside of the legs or on the edge of the elytra.

Nicrophorus investigator with accompanying mites (Jim Shaw & Richard Greswell NPC)

Some research on this mite revealed a special symbiotic relationship with its host, providing useful information with respect to the observed unusual behaviour in this article.

(Background info: - "Sexton beetles are famous for the way they provide for their offspring. They bury the bodies of small birds / mammals and either lay their eggs on the carrion or on pieces of the corpse which they cache nearby. The adults and their larvae feed on the decaying flesh. The mites found on burying beetles belong to the family Parasitidae, Genus Poecilochirus, and have a special relationship termed "phoretic", that is they use the beetle as transportation to reach their food source which is also carrion. Once the beetle arrives at a carcass the mites disembark (de-beetle) to feed on the carrion; they are beneficial to the beetle as they also feed on blow fly eggs – the beetle's major competition for the corpse. (Source – *internet site www.whatsthatbug.com*)

The mites' unusual behaviour was observed whilst photographing one beetle that had been released onto a log as a backdrop. The beetle crawled along the log and having decided enough was enough of flashguns prepared for take-off; the elytra opened a fraction, the ends of the wings appeared at the rear end – at this point all the mites scurried out from beneath the legs and up onto the back of the elytra.



Nicrophorus investigator with mites assembling (Richard Greswell NPC)

The most unusual aspect of this activity is that they lined up forming an orderly, overlapping *formation* (similar to a skein of geese flying). There was also one mite at the head of the formation or V.

Further research has unearthed one more photograph from a "what's this bug enquiry" – a beetle had flown into someone who had quickly managed to photograph the culprit, & posted the photo off to be identified. The reply from "*What's that bug*" was that the insect was a Sexton beetle covered with phoretic mites.

Nicrophorus investigator with mite assembling and a squadron leader (Richard Greswell NPC)

Nicrophorus investigator readies for flight (Richard Greswell NPC)

Although the image on the web page was small, close scrutiny of the photograph, which had been taken just after the collision, revealed the mites were in a similar overlapping V formation, even with one stationed at the head of the V – as in the observations above.

Some questions arising from the behaviour?

 # What triggers the mites' movement onto the top?

Is it perhaps the muscle contraction/movement of the elytra or wings that triggers the event, which "signals" the beetle is preparing to fly causing the mites to quickly move on top elytra / scutum being the more static positions in flight?

 # Is the overlapping V formation common; or a coincidence / learnt or inbred?

How long did this behaviour take to evolve?

 # Why is one mite isolated at the head? Is he the leader, the strongest or simply the pilot?

Can anyone add further explanation to these observations?

Jim Shaw

References;

What's that bug: www.whatsthatbug.com

Shield Bugs in the Wyre Forest; a few recent records

Areas of the Wyre Forest have been opened up during the last few years as part of the 'Grow With Wyre Project', and it's likely that this will benefit a large variety of insects including two very local shield-bugs which thrive in sunnier spots. During the last couple of seasons I and other members of the Wyre Forest Study Group (WFSG) have been looking out for the cow-wheat bug *Sehirus biguttatus* (Linnaeus, 1758) which is local in the United Kingdom and possibly declining as the habitats for its host-plant, common cow-wheat become shaded and unsuitable. Adult bugs are attractive insects, black with a white spot in the corium and a white "go-faster" stripe around the corium and pronotum.

Sehirus biguttatus (Rosemary Winnall)

Searching for the bugs in various places hadn't yielded any success, until April 16th 2011, when a jubilant group of us located a single adult in leaf-litter on a sunny bank next to a pool on the Worcestershire side of Wyre at Uncllys. Over summer we looked elsewhere to no avail, until on July 31st, Matthew Oates and I decided to scrabble around in dead leaves under a patch of sunlit cow-wheat by the main path east of Cooper's Mill (Grid ref SO758768). On sloping ground at the junction of two paths, we found two adults in leaf-litter under healthy plants of cow-wheat. This turns out to be, by a couple of hundred metres, the only known extant site in Shropshire. Subsequently Pete Boardman told me that Bernard Nau had recorded *S. biguttatus* from the Shropshire Wyre at Bell Coppice in August 1988, about 5km from the Cooper's Mill site, which gives us hope that it will be found in other areas of Wyre.

There's an ominous postscript to this find in that on September 17, Jane Scott and I searched the site again and found a single live adult, but also one dead adult and two dead nymphs under drought-blackened stems of cow-wheat. The exceptionally dry summer may have taken its toll of this very attractive shield-bug in the more exposed places which it seems to prefer.

There don't seem to be any previous records of the heather bug *Rhacognathus punctatus* (Linnaeus, 1758) for Wyre, so when I found one on top of a heather spray in an open heathy spot in Withybed Wood (Grid ref SO759769) on July 24th 2010, I didn't realise what I was looking at until I took it home to check it over. The small size, like a diminutive forest bug, and the orange bands across its legs were distinctive enough to identify it. The next day it was repatriated in its sunlit patch of heather and photographed (see below).

Although we've looked we haven't seen one since. Previous Shropshire records are from The Stiperstones NNR and Fenn's, Whixall & Bettisfield Mosses NNR, though the bug apparently hasn't been re-found at either location during the last 20 years.

Rhacognathus punctatus (Brett Westwood)

Finally a Wyre shield-bug which seems to have arrived very recently. In August 2011 at three different locations, all in Shropshire, members of the WFSG have found tortoise bugs *Eyrygaster testudinaria* (Geoffroy, 1785). The sites have all been in damp flushes with low vegetation and given the conspicuous basking behaviour of these large bugs, it's hard to imagine they've been missed before. Perhaps like several other bugs, *Corizus hyoscyami* (Linnaeus, 1758) for example, they are spreading north and west as a response to changing climate. The mirid bug

Rhyparochromus pini (Linnaeus, 1758), has been common in Wyre in 2011 too, under patches of heather growing along widened rides and cleared areas. Bug-wise, we live in interesting times!

Brett Westwood

(Thanks to Rosemary Winnall for supplying a photo of *Sehirus biguttatus*)

The absence of the rusty red click beetle *Elater ferrugineus* Linnaeus, 1758 from Shropshire

It is perhaps unusual to run with an article concerning the absence of a species in Shropshire but on this occasion I feel that perhaps it may be of interest to readers.

During June 2011 an email was circulated on behalf of Dr. Deborah Harvey of Royal Holloway University who is carrying out a study into the distribution of the rusty red click beetle *Elater ferrugineus* Linnaeus, 1758 using pheromone traps. She had previously found this a sound methodology for attracting the beetles in Surrey and was looking to expand her search for the insect elsewhere. She was looking for volunteers to host traps during early to mid July and so a few of us in Shropshire, with Robin Mager of the Shropshire Wildlife Trust acting as intermediary, offered our help. The traps, made from plastic sheeting, small canes and string duly arrived with a vial of pheromone and instructions for construction. Those of us, who volunteered to set them up, did so, in Telford, Shrewsbury and here at Preston Montford but unfortunately no rusty red click beetles were lured into the traps. The idea, had we caught any, would have been to mark and release them, but unfortunately none were forthcoming.

Rusty red beetle trap in situ (Pete Boardman)

Whilst obviously disappointing not to have found any we all took comfort from taking part in Dr. Harvey's research and recognising that negative data is of value in such projects.

Pete Boardman

An astonishing hoverfly find in Shropshire

One of the hopes behind the Invertebrate Challenge project is that it will generate records for previously unrecorded species, including rarities of interest to naturalists and conservation communities. In this respect all expectations were surpassed in mid-May when Keith Fowler, one of the new cohort of invertebrate enthusiasts the project is helping to train up, stopped on a walk to photograph a "bee" resting on a dead tree trunk atop Little Hill, below the Wrekin. When Keith gazed upon the photo at home he

realised that he had photographed a hoverfly in the rare genus *Callicera*. Unfortunately for Keith it was not possible to be sure of its identity from the image. I suggested that Keith return to the site to capture a specimen, not knowing that reaching the site required a fairly gruelling steep climb to the top of Little Hill (to anyone climbing it, Little Hill is not at all an apt name). Gamely, Keith assaulted the peak again and returned with treasure; not the expected *C. aurata* (prize enough), but staggeringly a *C. rufa.* This is a species, previously only known in the UK from ancient Caledonian pinewoods in the north of Scotland! Fired up by this spectacular find Keith took me to the site a few days later and we were amazed to find at least three *C. rufa* using pine trees as "lekking posts", from whence males sallied out to investigate passing flies that might be females willing to mate. This was classic hill-topping behaviour, characteristic of many fly species, whereby males and females congregate at hilltops to find each other for mating. I alerted Bob Kemp to this exciting event and he visited Little Hill the next day, managing to obtain some first class photographs of the fly.

Callicera rufa (Bob Kemp)

Bob also witnessed a male and female copulating – extremely strong evidence that the fly is a breeding resident in the vicinity of Little Hill.

Gobsmacked by this discovery I wondered if *C. rufa* might be present in other Shropshire locations, so I set out to visit the top of Haughmond Hill, where there are similar hilltop pines to those seen at Little Hill. Imagine my utter amazement at quickly seeing at least three individuals of *C. rufa* engaged in lekking activity. *Callicera rufa* could be well established in Shropshire and without Keith's alertness to the possibilities it is very doubtful that we would ever have discovered it, as most of us (well certainly not me) do not scale hills to find hoverflies.

Keith was able to observe *C. rufa* still active on Little Hill in late June so the challenge for next May and June is to visit hilltop pines surrounded by woodland, and look out for honeybee sized, orange haired flies sitting on and flying back and forth to dead tree trunks or pines. It will be very interesting to discover how widespread *C. rufa* is in Shropshire and to ponder on how long it may have been established in the area before we chanced upon it.

Nigel Jones

The plant hopper *Issus coleoptratus* (Fabricius, 1781) in Shropshire

During September 2011 I set about searching for planthoppers / froghoppers, and leafhoppers following an enlightening and inspiring training day held at Liverpool Museum by Alan Stewart and Tristan Bantock. Using a small white plastic tray, and the handle from a butterfly net I set out to smack the living daylights out of hedgerows around the county.

The Auchenorrhyncha (planthoppers and leafhoppers) are very under-recorded in Shropshire and so it wasn't too long before I was encountered species that didn't appear on the SEDN database. One of these was the rather wonderful hopper *Issus coleoptratus* (Fabricius, 1781) which was beaten out of fairly tall mixed species hedgerows near Claverley in the very south-east of Shropshire, and Preeshenlle in the

very north-west of the county, as well as from understory vegetation in Sutton Wood, near Ironbridge. This suggests that the bug is really widespread in the county.

Issus coleoptratus (Pete Boardman)

Further investigations led me to the article by Whitehead and Key (2010) from Worcestershire Record which shows a distribution map of *I. coleoptratus* including Shropshire as a recorded county.

There are several places this (or these) prior records could exist including the Shropshire Wyre data (which has been promised to the SEDN), or the The Auchenorrhyncha Recording Scheme database, but it isn't shown on the NBN Gateway. It is hoped that as time progresses we can gather more historical data on such species to give context to our current biological recording activities. In the meantime, if you come across the bug, please pass on the details to me.

Reference;

Whitehead, P.F. & Key, R.S. (2010) Observations on British *Issus* (Hemiptera, Issidae) with reference to development, periodicity and ecology. Worcestershire Record 29 (November 2010) page 23-27.

Pete Boardman

Sixth International Symposium on the Syrphidae (Hoverflies) – Glasgow, August 2011.

In August Invertebrate Challenge generously supported my attendance at the International Hoverfly Symposium, held at the Hunterian Museum, Glasgow. For the hoverfly enthusiast this was a great opportunity to catch up on developments in the world of Syrphidology, as this was the first time the event had taken place in the UK. Around eighty researchers and naturalists attended with representation from Europe, South America, North America and Russia. Around sixty presentations were made over three days ranging across a huge range of topics.

One of the most frequent topics presented was centered around the phylogeny and classification of various genera and tribes of Syrphids across the world or across biogeographical regions. Much of this research involved morphological analysis of various characters such as wing length, antennal shape/length and abdomen shape. Often this was combined with DNA data to build a picture of how various species groups relate to each other and how species within these groups relate to each other. Invariably such extensive work threw up as many new mysteries as those that were solved. For the non-trained biologists, such as me, the plethora of cladograms and biological-science speak was a bit daunting! None-the-less these sessions were a real eye-opener and it is clear that the results of this ongoing research will inevitably manifest itself in many more changes to the organisation of Syrphid subfamilies, tribes and genera.

Away from the hardcore research into hoverfly classification there were many presentations covering the biology and conservation of hoverflies. One of the most enthralling talks outlined the spectacular results of rot-hole emergence trapping in Spain. The rare and

uncommon species recorded were numerous and I made a firm mental note to try and undertake some similar trapping in Shropshire woodlands. I just need some friendly woodland owners to let me fix up emergence traps on their trees.

Other interesting factoids arising from the talks included:

The hoverfly season in the world's most northerly forest in Siberia can be as short as just seven days! But even so, Anatolij Barkalov has recorded some thirty two species there.

There are downloadable keys to European Syrphid genera and species, together with accounts of many species, available from the web site "Syrph the Net" (useful for identifying those tricky specimens one brings back from holidays in France and Spain).

There is a very ambitious online project, Encyclopaedia of Life, to catalogue all life forms on the planet. Part of this project includes taxon related pages called *Life Desk*. Do an internet search for "life desk flowerflies" and a veritable treasure trove of hoverfly references and images is provided. This is work in progress and it will be interesting to see just how far it can be taken, as the project relies mainly on hard pressed specialists to keep things updated.

Paraguay is a desperately poor hunting ground for the syrphidologist (apologies to any Paraguayan readers)!

Away from the presentations, the event was a wonderful opportunity to corner Dipterist luminaries and I got our Shropshire *Callicera rufa* checked over by Ellen Rotheray who was intrigued by the English specimens which are much hairier than Scottish *C. rufa*. Martin Speight gave me a specimen of the continental species *C. fagesii* – a species he felt could easily turn up in the UK. I cornered the North American Dipterist Jeff Skevington, whose real passion is Pipunculids (a family of small parasites of homoptera with exquisite hovering abilities). Jeff gave me lots of hints for finding Pipunculidae, mainly requiring getting onto hilltops where many species congregate on sunny days. So another mental note was made, one that will require me to get a lot more exercise!

Finally, Ante Vujic displayed a poster that included a new key to West-Palaearctic Pipiza species. In the hope that this might help disentangle some of the, so far, intractable problems around Pipiza identification, both Aland Stubbs and me photographed the poster and Alan has now circulated a version of the key for testing by UK workers.

Nigel Jones

Announcement: The Shropshire Entomology Weekend – February 18th & 19th 2012

Notice is hereby given of the forthcoming Shropshire Entomology weekend to be held at Preston Montford on Saturday February 18th and Sunday February 19th 2012. We had already planned to repeat the annual Shropshire Entomology Day, however following contact from the British Entomological & Natural History Society (BENHS); we were asked whether we could host a meeting in partnership with them during the winter, so it seemed sensible to extend our planned event into a full weekend. Therefore the Entomology Day will run as it normally does on the Saturday with a series of illustrated talks, plus a chance to catch up with entomological friends over a free buffet lunch as usual. In addition to this a series of insect identification workshops will run on the Sunday. These are aimed at all comers, be they BENHS members, beginners or Invertebrate Challenge participants and will hopefully dovetail into the Invertebrate Challenge 2012 programme. It is therefore likely that content will focus on flies, bees, spiders and beetles; though if

there is sufficient interest we could expand the programme to include orders such as odonata or perhaps a session on micro-lepidoptera?

I would therefore welcome bookings for the Saturday programme (outlined below), and expressions of interest for Sunday workshops to the usual email address (pete@field-studies-council.org). **This is important as places are limited and we need to know details for our caterers. Please book as soon as you can to secure your place.**

If you are booking your place at the Saturday Entomological Day please state your dietary requirements. If you are able to bring along something of interest for the lunchtime "show and tell" room (interesting specimens, books, photographs of insects, displays etc) please do. Any large displays please let us know beforehand to ensure space is available.

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Shropshire Entomological Day

Saturday 18th February 2012
Preston Montford Field Centre

Please arrive for a 10.30 am start – coffee served from 10.00am

Morning talks

Rosemary Winnall (Wyre Forest Study Group);
"Life in the Wild Wood"
*
Pete Boardman (Invertebrate Challenge Project Officer)
"Progress with the Invertebrate Challenge"
*
Ian Thompson (Shropshire Invertebrates Group);
"A brief introduction to the ephemeroptera"
*
Lunchtime – buffet lunch provided and time to mingle and examine the exhibits in the show and tell room

Afternoon talks

Godfrey Blunt (Shropshire Invertebrates Group);
"Recording Shropshire's mites – the easy way"
*
Nigel Jones (Shropshire Invertebrates Group);
"What was new in 2011? A review of insects finds in Shropshire"
*
Pete Boardman (Invertebrate Challenge Project Officer)
"Insects in popular music, the good, the bad and the ugly"
***
Coffee and cake
Depart

****

Please note: For participants wishing to stay overnight at Preston Montford on the Saturday evening there may be some rooms available (including breakfast) for a nominal fee. Please contact me for details.

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Obituary – 'Beetleman'

Beetleman: a.k.a. *Morimus asper*, (a longhorn beetle) died this year having lived as an adult for a remarkable 3yr 5m. Beetleman, thought to be an accidental Mediterranean import, was found at a stockyard near Bishop's Castle, but came to live with us at Brokenstones. He has awed and inspired school children on educational visits, but made his last public appearance at the Shropshire entomology day last spring. He will

be missed – not least by the stick insects he shared several happy years with.

'Beetleman' laying in state in the coffin made for him by Caitlin Davies (Caroline Uff)

In happier times, Beetleman at home at Brokenstones (Caroline Uff)

The County Recorder Network

This information is accurate at the time of press. All these people carry out their roles as volunteers and we are indebted to their hard work.

Spiders – The Shropshire Spider Recording Group –
Email: john.partridge@blueyonder.co.uk

Mayflies (Ephemeroptera) - Ian Thompson –
Email: salopladybirds@f2s.com

Dragonflies and damselflies (Odonata) Sue McLamb –
Email: mclamb1@btinternet.com

Terrestrial and Aquatic Bugs (Hemiptera) – Pete Boardman –
Email: pete@field-studies-council.org

Beetles (Coleoptera);

Longhorn beetles – Nigel Jones
Email: nigelj@insectpix.net

Ladybirds – Ian Thompson –
Email: salopladybirds@f2s.com

Other beetle groups – Pete Boardman
Email: pete@field-studies-council.org

True Flies (Diptera);

Hoverflies – Nigel Jones –
Email: nigelj@insectpix.net

Larger Brachycera (robber flies, horse flies, soldier flies etc), tachinid flies, conopid flies and picture-winged flies – Nigel Jones
Email: nigelj@insectpix.net

Craneflies – Pete Boardman –
Email: pete@field-studies-council.org

Other fly groups – Pete Boardman –
Email: pete@field-studies-council.org

Butterflies and moths (Lepidoptera);

Butterflies – **NOTE – new instructions;** – Tony Jacques
Email: b-mcvc40@talktalk.net

Macro-moths – Tony Jacques
Email: b-mcvc40@talktalk.net

Micro-moths – Godfrey Blunt
Email: A.G.Blunt@wlv.ac.uk

Hymenoptera,

Aculeates (bees, wasps and ants) and sawflies – Ian Cheeseborough –
Email: ian.cheeseborough@yahoo.co.uk

Others

Plant Galls (of whichever taxonomic order) – Godfrey Blunt
Email: A.G.Blunt@wlv.ac.uk

Orders not mentioned above: Pete Boardman –
Email: pete@field-studies-council.org

PLEASE NOTE: The next batch of invertebrate records will go onto the SEDN database at the end of February 2012. If you wish your VC 40 invertebrate records to be part of the database your records for 2011 will need to be sent to the recorders above before then to be verified and validated so that they can reach me in time for inclusion. Your help is appreciated in this matter.

Dates for your diary

Here is a selection of entomological goings on in Shropshire and elsewhere that I am aware of.

19/11/11 **Worcester Entomology Day**
Wyre Forest Community Discovery Centre, Callow Hill, near Bewdley.

Theme: "Insects and plants"

Cost £8. To book contact Prof. Susan Limbrey, The Newalls, Station Road, Far Forest, Nr. Kidderminster, Worcs. DY14 9UQ

18/02/12-19/02/12 **Shropshire Entomology Weekend**

Preston Montford Field Centre, Montford Bridge, Shrewsbury.

For further details see above