



BIODIVERSITY INFORMATION SERVICE
 FOR POWYS AND BRECON BEACONS NATIONAL PARK
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RECORDERS NEWSLETTER ISSUE 7 – May 2009

Welcome to the seventh edition of the Powys and Brecon Beacons National Park recorders newsletter. Many thanks again to all those that have contributed articles for this issue which are many and varied, and something for everyone.

In her BIS update, Janet has mentioned important new agreements with the Environment Agency and Dwr Cymru Welsh Water for BIS to supply biodiversity data information, which is good news for the wildlife we all want to protect. Amphibian, mammal, dragonfly and moth recorders have all supplied news updates as well as one for the Wildlife Sites Project. Despite all our efforts in recording, we include in this issue a call for more butterfly records for Brecknockshire, and a request for a new Dragonfly Recorder for Montgomeryshire! If you can help with either of these, please get in touch. With summer nearly here, we are all hopefully starting to get out into the field and do more recording, so don't forget our three vice-county BIS Field Recorder's Days this June, July and August (see page 20). Good hunting!

Phil Ward – Editor



Purple Saxifrage

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BIS update

New partnership agreements

The four Welsh LRCs have been working together over the last year to negotiate additional Service level agreements with new partners, so securing more funding stability.

We were all very pleased to sign an agreement for 2008-9 with the Environment Agency. This was to provide an Alert GIS layer of priority and protected species records held by the 4 Welsh LRCs to be used as a constraint layer on the EA system. Further negotiations are now taking place for the LRCs to continue providing this service over the next 3 years. Thanks to Roy Tapping of Cofnod for taking the lead in this negotiation.

The four LRC's have also signed a 'Memorandum of Understanding' with Dwr Cymru – Welsh Water. It is hoped that now all Dwr Cymru contractors will seek biodiversity information from the LRCs before undertaking any operational works. Already BIS has seen an increase in the number of enquiries from these contractors. We are also ready to sign an agreement with the Countryside Council for Wales which will secure grant funding for the next three years for all the Welsh LRCs.

All the above is particularly good news for BIS as it has allowed us to advertise a new vacancy for a data officer for the next year and she will be in post during May. It also emphasises how important it is for BIS and the other LRCs to have access to up to date biological records as our partners are relying on the LRC network to collate and mobilise this information for them.

Data Exchange

Following on from the Recorders Forum and the Data flow questionnaire I sent out last year, I have been working with local recorders and national recording schemes and societies (S&S) to exchange records held by BIS.

BIS has exchanged all bryophyte data with Biological Record Centre (BRC)/ British Bryological Society (BBS) and all lichen data with the British Lichen Society (BLS). The BRC are using this data exchange with BIS as a trial to see typical data held by LRCs for use by BRC. The bryophyte data will be used for BBS Atlas (10km square) and academic research. The lichen data will be incorporated into BLS R6 database but held under separate surveys so it can be identified as coming from BIS. Already this exchange has flagged up the different requirements needed from data, e.g. Schemes and Societies may record by tetrads or site for distribution purposes, but an LRC needs grid references at 6 figures or above to be most useful for constraint checking

This data exchange is especially important for BIS as we hold so much lower plant data from the VC recorder and the CCW data mobilisation project. Approximately 20% of the 600,000 CCW records are lower plant data. The Societies are able to apply validation and verification tools to this data and help the LRC and VC recorder to verify the records quickly. When this process is finished and any errors or taxonomic problems are

rectified in the main BIS database, then the CCW data can be put onto NBN Gateway at full resolution.

We hope this release of BIS records will lead to Data Exchange Agreements with the Societies and an agreed data flow. For instance it has been suggested that the BLS may be the data manager for all lichen records in UK. In which case any records collated by an LRC will be passed to the BLS and they would exchange any records they hold with the LRC. However this may be a huge task for such a society, as the LRC will tend to hold a lot of common species records for sites or survey information at detailed resolution, which may not be appropriate for the society.

All the above records sent to the local recorders or S&S have been released under licence using a 'Data Release Form' (DRF), unless we already have a Data Exchange Agreement. The DRF outlines the conditions of data release and ensures information on sensitive species is not released into the public domain.

BIS is applying the following principles for data release and exchange as outlined at the Recorders Forum:-

- BIS will encourage all local regular recorders to send their records to the VC recorder (VCR) who is exchanging records with BIS. The VCR may be sending their data to a Scheme or Societies (S&S) and eventually the S&S may put onto NBN Gateway.
- BIS aims to set up new Data exchange agreements (DEA) with the VC recorders, which will set out clearly how BIS can use the data, any sensitive issues, the data flow to Societies and NBN Gateway, and how BIS will provide data collated by BIS back to the VC recorder for verification.
- We would encourage VCRs to ensure that the LRC gets a copy of the data they send to S&S and not only make it available to the LRC via NBN Gateway. This ensures the LRC has up to date information at full resolution, without having to apply for access to the data and perhaps only get low-resolution data.
- BIS may receive casual records through the year and they will be sent to the VC recorder for verification and to be included in the VC recorders database to be sent to S&S etc
- BIS may also collate and incorporate into its database other historical records from organisations eg CCW, FCW, consultants etc. This data belongs to the data provider (although this is further confused if it contains 3rd party data).
- Data collated by BIS will be passed back to VCR, under a Data Release Licence (which maybe incorporated into DEA), for verification. The DRF ensures that the VCR is aware of sensitive species, and they agree who has access to the data, especially sensitive spp details. The data can be incorporated into VCR database but we ask that they ensure it is clearly marked as coming from BIS and is not passed onto S&S unless that is agreed in the DEA.
- BIS would prefer that the BIS collated data is released by BIS under an Organisation DRF directly to the S&S so that issues of sensitive species are taken into account and it is agreed that S&S will not put the data onto NBN Gateway. This prevents duplicate data being put onto NBN, and allows BIS to

manage the release of the collated data on to Gateway on behalf of the data provider.

- BIS would also ask that the VCR or S&S pass back any changes and verification to BIS, so the BIS database can be updated and also it is passed back to the original data provider.
- BIS will negotiate putting datasets provide by VCRs and other data providers, on to NBN Gateway, providing they are not being made available to NBN in any other way. BIS will put data onto NBN Gateway at 1 km square resolution or as appropriate for sensitive species records.

All the above are subject to negotiation with individual recorders and Schemes and Societies and may change in line with Welsh Environmental Information Forum.

Janet Imlach (BIS Manager)

Montgomeryshire Mammal Group News

First, an update: there has been a slight change to the steering group, which now consists of Mike Green, Grace Crabb, Frances Gillett & Tammy Stretton. Please note that due to problems with aol, our email address has changed and is now monty.mammals@yahoo.com. You can also find us on Facebook; just search for 'Monty Mammal Group'.

Second, and more interestingly we have a programme of summer 2009 events, across Montgomeryshire (and sometimes beyond!). These are open to all, so join us if you can! As always, happy mammaling!!

June will be a batty month; we will be out on missions around Montgomeryshire, doing evening colony counts. These will be all around Montgomeryshire and the fine detail is currently being discussed, so if you are interested in getting involved, get in touch.

June 6th – Mammal Ramble around Lake Vyrnwy, details to be confirmed.

July 25th – Mammal Ramble; location & times to be confirmed, possibly near Machynlleth.

August 13th – Monty Mammal Social, 7.30pm start, location to be confirmed. If you can recommend a nice pub which serves good food and is near a good bat walk or badger watching location, then let us know.

August 27th – MMG's Big Day Out; we have decided every now and then to have an excursion to another vice-county and this season we will be taking off to Ceredigion. We'll meet at Aberystwyth and take a gentle evening stroll up the cliff for a spot of dolphin watching and maybe some bat action.

Tammy Stretton
Biodiversity Officer, Montgomeryshire Wildlife Trust
tammy@montwt.co.uk or phone 01938 555654.

Bid to save orchids in Wales

A survey to find and map 10 species of orchid in Wales has been launched. Powys Flora Conservation is asking the public to take part in an orchid survey to help find and map 10 species of orchids in Wales.

The latest Welsh Vascular Plant Red Data List by Dr. Trevor Dines, Plantlife has shown that many orchids can only be found at a few sites in Wales.

Dr. Elisabeth Harris from Powys Flora Conservation said “The last record of Musk Orchid in Wales was in 1968. Other species such as the Fly Orchid are classified as vulnerable and have only been recorded from 2 sites”.

The decline of orchids in Wales is largely down to the loss of suitable habitat and collection by collectors. Elisabeth said “There was a population of Bog Orchids at the Elan Valley in Radnorshire sadly they were dug up, presumably by collectors. This is a tragic loss and means that an endangered orchid can no longer be seen in the wild at this site”.

Orchids

These are the 10 orchids we want to find and map:

Least concern

Bee Orchid – *Ophrys apifera*

Bird’s-nest Orchid – *Neottia nidus-avis*

Early-purple Orchid – *Orchis mascula*

Vulnerable

Fly Orchid – *Ophrys insectifera*

Green-flowered Helleborine – *Epipactis phyllanthes*

Endangered

Bog Orchid – *Hammarbya paludosa*

Frog Orchid – *Coeloglossum viride*

Critically endangered

Fen Orchid – *Liparis loeselii*

Small White Orchid – *Pseudorchis albida*

Presumed Extinct

Musk Orchid – *Herminium monorchis*



Photo: Early purple-orchid/Dr. Elisabeth Harris/Powys Flora Photolibrary

Dr. Harris said “If we know where these orchids are we can protect them and save them for future generations to enjoy”.

Those wishing to take part in the survey are being asked to record the orchids by taking photographs and e-mailing them to Dr. Elisabeth Harris at plantsinpowys@yahoo.co.uk

Dr. Elisabeth Harris is the Project Manager of Powys Flora Conservation. She currently lives and works in Builth Wells, Powys. She can be contacted on plantsinpowys@yahoo.co.uk

Dragonfly Atlas in Powys – can you help?

There are about 45 species of dragonflies and damselflies in the UK and well over half of these have been recorded in Powys – so far! In common with the rest of the natural world, numbers and distributions of these impressive insects – collectively known as Odonata – are not static, but are subject to dynamic changes that we struggle to understand.

Odonata are particularly useful indicators of change, such as improvement or deterioration in water quality. They are also proving helpful in understanding climatic change. Recording by many individuals across the country over the years has highlighted increasingly earlier spring emergence of larvae and changes in the range of a number of our UK species.

There are also instances of mainland European species moving into the UK and spreading northwards and westwards across the country over a period of decades. An early example was the Black-tailed Skimmer which was first recorded in south east England in the early 1900's. It is now found across Wales (including the 3 Vice Counties of Powys) and is now starting to appear as far north as the Scottish borders.

A more recent case is the Small Red Eyed Damselfly which was first seen in the UK in 1999 at Kent's Bluewater Shopping Centre! It has spread spectacularly outwards from southeast England and has now been recorded as breeding in the West Midlands and the southern end of the Welsh borders. Surely it can be only a matter of time before we find it in Powys!

The UK National Dragonfly Atlas Project was launched in April 2008. Its aim is to update the known distribution of British dragonfly and damselfly species over a period of 5 years, culminating in the publication of a new national atlas in 2013. To succeed in this ambitious project, good national coverage is needed. The more volunteers that get involved – especially in traditionally under-recorded areas like mid Wales – the more information on the status of our Odonata species can be gathered.

As far as Odonata in Powys are concerned, there are currently 2 Vice County Recorders – namely, myself Bob Dennison (VC 43 Radnorshire) and Gareth Ellis (VC 42 Breconshire) with a third post currently vacant (VC 47 Montgomeryshire). Contact details are at the end of this article. We are all very keen for anyone and everyone to make a contribution, however small, to the Dragonfly Atlas Project, by sending us details of any Odonata sightings made over the next few years. It doesn't matter how infrequently you do it, or how common and unimportant you think the species might be. Believe me, ALL information is important and will not only allow the production of a high quality national atlas but also provide a good baseline of information to be used for the future benefit of dragonfly conservation.

And you never know what you may see! One of the most remarkable dragonfly stories of recent years is that of the 'Green Darner'. This large hawk, similar to the Emperor Dragonfly which emerges from mid Wales' larger ponds every June and July is one of the commonest in North America. In 1998, after hurricane conditions in

the USA, it was recorded in the Scilly Isles and Cornwall! So keep your eyes peeled for the unusual as well!

How to submit records:

A basic dragonfly record has 5 parts to it:

- 📁👉 Your name and contact details
- 📅👉 The date of your sighting
- 📍👉 The site or location name
- 📄👉 The OS Grid reference
- 👁️👉 What you saw



Other desirable but optional information includes:- a photograph; habitat description; the weather; the altitude of the site; and any breeding behaviour [Recording evidence of breeding greatly adds to the usefulness of the record].

You can submit any dragonfly or damselfly records to the relevant VC Recorder via the contact details below. If you want to find out more about the National Dragonfly Atlas Project and other ways of submitting information, a good starting point is at <http://www.dragonflysoc.org.uk/dragonfliesinfocus.html>

VC 43 [Radnorshire] Bob Dennison
Maes y Geidfa, Crossgates, Llandrindod Wells, Powys, LD1 6RP
Tel: 01597 851 702. E-mail : bob.dennison@care4free.net

VC 42 [Brecknockshire] Gareth Ellis
Brecon Beacons National Park Authority,
Plas Y Ffynnon, Cambrian Way, Brecon, Powys LD3 7HP
Tel: 01874 620470 E-mail: gareth.ellis@breconbeacons.org

VC 47 [Montgomeryshire] Post currently vacant.

*Bob Dennison
Radnorshire Dragonfly Recorder*

New Dragonfly vice county recorder needed for Montgomeryshire

This post is currently vacant. If anyone is interested in taking on the vice-county recording roll for dragonflies in Montgomeryshire, we would be very pleased to hear from you.

The freshwater pearl mussel: the world's most endangered aquatic animal

Introduction

The freshwater pearl mussel (*Margaritifera margaritifera* L. 1758) ranks amongst the most endangered aquatic organism in the world. It is one of the slowest growing and longest living known invertebrates, capable of living in excess of 120 years. It lives in nutrient poor upland rivers and streams, although it can sometimes be found in the main channel of larger upland rivers. Historically, it was distributed from the Iberian Peninsula 40N to Arctic Russia 70N and the eastern seaboard of the continental USA, closely matching the distribution of the Atlantic salmon (*Salmo salar*). *M. margaritifera* has suffered a steep decline in both abundance and distribution in recent decades. *M. margaritifera* is a strictly protected species in most countries, including the UK, which holds (in Scotland) more than half of the world's remaining population (Young *et al* 2001). Welsh populations have declined at an alarming rate, mirroring the general decline in its distribution and abundance. In east Wales and the Marches the only documented remaining population occurs in the river Wye, although further surveys are necessary to determine their present distribution.

Biology

Adult mussels are either male or female, although there is some evidence of hermaphroditism in certain populations. Males release sperm into the water in April/May, which the females inhale through their inhalant siphon. This is used to fertilize the eggs, which are kept in modified pouches (marsupial) in the gills of the female. In late summer (August/September) the females release the fertilized eggs ("glochidia") into the water. The lifecycle of *M. margaritifera* (hereafter MM) is unique in that its juvenile stage is an obligate parasite of salmonid fishes. Released glochidia have a short lifespan, and must attach to the gills of a suitable host fish within 24-48 hours. MM is highly specific to its host, almost exclusively infecting Atlantic salmon (*Salmo salar*) and brown trout (*S. trutta*); although in some areas they may be able to successfully complete development on Arctic charr (*Salvelinus alpinus*) and brook trout (*S. fontinalis*). The juvenile mussel will stay on its host for the next 8-9 months, feeding exclusively on its host. The host fish mounts an immune response against the glochidia, and some 50-90% of attached mussels will be sloughed off by this immune response. Once development on the fish is complete in April/May of the following year, the parasitic stage of the mussel exists from the host and falls to the river bed. The effect of attached mussels on its host fish is poorly understood, and is the focus of my PhD at Swansea University. Post-parasitic mussels require well oxygenated gravel in which to live, and for the next 4-5 years they will feed on bacteria and algae in the gravel beds, using their extendable foot to collect material from their surroundings. At around 5 years of age, the mussels begin to use their gills to filter particles from the water column. Their diet is poorly understood, although captive adult mussels have been demonstrated to respond to the supplementary addition of algae to their tanks (Thomas *et al* 2008). MM is considered to be a flagship species as they require pristine conditions to survive. Adult mussels filter large quantities of water, which can significantly reduce suspended sediment loads and improve water clarity. Clean river water is an essential requirement for many aquatic organisms, and the conservation of freshwater mussels can therefore have a positive effect on entire freshwater ecosystems (Skinner *et al* 2003).



Figure1: Glochida attached to the gill of a brown trout

Habitat

The adult mussels are not uniformly distributed throughout the river; instead they are found in clumped “beds” or groups of individuals. In certain Scottish rivers with undisturbed mussel populations, there can be several thousand mussels grouped together like this. In most Welsh and English rivers mussels tend to be in scattered, low density groups. Adult mussels live burrowed amongst gravel and sandy areas in the river bed, usually along the edge of the main channel in the shaded areas provided by overhanging vegetation. Most mussels live in around 0.5m to 1m of water, although there are records from Scotland of mussels living quite happily at depths in excess of 3m and in burns shallower than 10cm. The post-parasitic juvenile stage is the most sensitive in terms of habitat requirement. Whilst the adults are more tolerant of slight pollution and water chemistry changes, the juveniles require well oxygenated, silt free gravel beds where even slight changes in dissolved oxygen or water chemistry can have a detrimental effect on their survival.



Figure2: An adult mussel burrowed in the substrate

Spates and moderate flooding in autumn and winter can be beneficial to mussels, by removing silt and algal mats from gravel beds. Very high spates can change the structure of the river bed, redistributing the gravel beds habitat of both adult and juvenile mussels. Mussels can also be physically moved by flood waters and in one particular 1:100 year flood in 1998 on the River Kerry (NW Scotland) it is estimated that around 50,000 mussels (comprising between 4% and 8% of the population) were killed (Hastie *et al* 2001).

Threats

The causes for decline are numerous, and are compounded by the fact that many of these factors still occur. These factors include industrial pollution and agricultural run off, which leads to nutrient enrichment in river waters. This leads to a surge in the growth of algae, which reduce the amount of available oxygen in the water. Silt and fine sediment being released into tributaries (often from clear felling of conifer plantations) buries and suffocates juvenile mussels; weir and dam construction have a similar effect. The declining, and in some cases, collapsed populations of native salmon and brown trout means that there aren't enough fish hosts in the river to allow successful mussel reproduction. Most of these threats take effect on the parasitic and juvenile stages, yet the adult mussels face a wholly different, human, threat. As their English name suggests, the freshwater pearl mussel can produce pearls, and for several decades there was a thriving cottage pearl fishing industry in Scotland and the west of Ireland. In the 1930's, several Scottish pearl fishermen travelled to North Wales to exploit the pearl mussel populations. There are many pictures from this period which show people sitting on river banks next to tall piles of empty mussel shells, often containing several thousand individual mussels. However, only a very few mussels contain pearls, and fewer still are of any value due to natural imperfections. This means that an entire population of adult mussels can be killed without any pearls being found. Pearl fishing is totally un-sustainable and has been considered to be the most damaging way to exploit a river; several populations of freshwater mussels have already been driven to extinction purely because of pearl fishing (see website links at the end of the article). *M. margaritifera* is strictly protected throughout Europe, and the trade in freshwater pearls is prohibited by the same legislation that covers the trade in elephant ivory and tiger pelts. However, whilst there are still unscrupulous buyers willing to exploit an endangered species, the threat of illegal pearl fishing will remain. Fishermen, canoeists and all people who use our rivers can take an active part in the conservation of this species by keeping an eye open for piles of shells discarded along river banks, and reporting them to the local police.

In Wales, this species has declined steeply, and is now found in only a few rivers, with only one population still reproducing (in northwest Gwynedd). In south Wales most remaining populations are in western rivers, although there is a remnant population in the Wye. Details of the exact locations of these populations are not given here for the threat of illegal pearl fishing, although those interested in further details about MM are welcome to contact the author.

Conservation

The conservation of this species faces several challenges, not least being the low rates of recruitment in natural populations. This is offset by a long reproductive lifespan and high fecundity, but it still takes 10-15 years for adult freshwater mussels to become sexually mature. There has been little or no juvenile recruitment in most

populations for the last 20-40 years, resulting in an overrepresentation of older adults and a skewed population structure. As these populations age, natural mortality reduces the number of reproductive individuals. Adult mussels are found in aggregated groups, and it's possible that lack of juvenile recruitment may be exacerbated by what is known as an Allee effect. This effect is caused by insufficient numbers of sexually mature mussels in a particular area, meaning that although there are mussels still present, they are spread too far apart to be able to reproduce. Mussels can only move short distances, so long distance relationships don't work.

In an attempt to counter this decline, there are two strategies to conserve *M. margaritifera*: *in situ* and *ex situ* conservation. *In situ* conservation involves restoring critical habitats, restoring water quality (particularly reducing silt loads), removing pollutants, and restoring river connectivity to allow migratory salmonids access to isolated mussel populations. In this respect the efforts of NGO's and charities such as the Wye and Usk Foundation in constructing fish ladders and removing weirs and dams can have a beneficial knock on effect on *M. margaritifera*. The captive breeding and re-stocking of salmon and trout by the Environment Agency will hopefully re-establish populations of host fish in rivers. However, it must be remembered that in order for both fish and mussels to survive, the reasons for their original decline have to be ameliorated or removed.

However, for some mussel populations *in situ* conservation alone will not reverse the decline in numbers, due to the Allee effect. In these situations, an *ex situ* approach is the only option whilst habitat restoration happens. *Ex situ* conservation is focused on the captive breeding of mussels, with the aim of eventually releasing captive reared juveniles back into their native rivers. Adult mussels are collected under license from wild populations and transferred to existing salmon hatcheries where they are maintained alongside salmon and trout. Mussels from different rivers are kept separately to maintain the genetic integrity of each population.



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BIS Wildlife Recording Training Day April 2009

Identification of Amphibians & Pond Insects

A total of nine people met in the car park of the BBNP Mountain Centre near Libanus on 25th April for our first training day of the year on the identification of amphibians and pond insects. Wellies on everyone, and make sure you don't forget the most essential piece of equipment...yes, your packed lunch! After a short introduction and safety talk by our own veritable amphibian hunter in the form of Gareth Ellis, who was out the previous evening setting out 30 bottle traps (well done that man!), we headed off for a short but brisk walk across Mynydd Illtyd Common, which warmed us up nicely. Although the wind picked up to quite a strong breeze in the afternoon, the morning was filled with sunshine and loads of skylarks and meadow pipits greeted us with their uplifting songs. After a bit of bog jumping and snipe flushing, the first of the two pools was reached. This pool was easily located within the common because it had Gareth standing in the middle of it! Gareth commented that the water table was very low for this time of the year but this did not deter the number of amphibians which were caught. He explained the workings of the home made plastic bottle traps (perhaps a good enough reason to drink more lemonade or Iron Bru?) before handing the microphone over to Steph who was donning her trendy white rubber operating gloves, ready to set to work. She explained the gloves were to protect any possible infections from amphibians or watery bacteria and also to protect the amphibians from any human contamination, as they have delicate skin (the amphibians I mean!). Phew, everyone felt relieved! Steph then gently manipulated the first of many newts found in the traps, showing and describing the identification features to look out for. This included throats, paws, tails and tums, colours and spots. Many specimens of both Palmate and Smooth (confusingly also called Common) Newts were found and their numbers taken down. However, none were arrested on this occasion, but released back into their natal pool to regain their dignity. It was extremely useful to be able to see both these species side by side to compare features. Unfortunately, no 'Cresties' were found on the day even though they have been seen previously. Many frog/toad tadpoles were also encountered but a closer look at how to identify these was kept till we got to the second pool.

These bottle traps are also extremely good at catching water beetles, and it was pleasing to get one of the biggies, namely *Dytiscus marginatus*, both an adult and its ferocious larvae. This commonest species of the genus will probably be familiar to most people as they are illustrated in books quite a lot. The adult has extensive yellow edges all around the thorax and down the sides of the elytra. These beetles can devour



Photo: Ianet Imlach

many tadpoles during their lives and the occasional finger if they get the chance!

A brief stop was made at a small stream, where everyone had a go at water netting and kick sampling. The stream was particularly rich in mayfly nymphs and stonefly nymphs including a rather large fully grown specimen, probably a *Nemoura* spp., which was good for people to see. Stoneflies rarely occur in stagnant water except large lakes etc, preferring the rather colder upland streams. Not surprising then, in Wales we do quite well for the total numbers of British stonefly species which occur here. These often form important food sources for birds such as dipper.

At the second pool we were further greeted by the calling of curlews nearby and several linnets were seen flying around the gorse areas. After checking the contents of further successful bottle traps, everyone had a chance to pull on a pair of white gloves and handle a newt or two. A short break for lunch was timed perfectly as the first heavy shower came overhead! Sheltering in the lee of some nearby gorse bushes, the hardy troop nibbled over their coffee and sipped slowly over their sandwiches while Phil did an introduction to our little friends the invertebrates, and handed out lots of paraphernalia and identification keys, or as they say in the trade... bump! White trays and water nets were brought out again with renewed vigour. Several people took the plunge and waded out into the centre of the pool, which was only welly depth, lucky for them. Not surprisingly, a wide variety of species were



Photo: *Argyroneta aquatica* -Steph Coates

encountered, including the only truly aquatic British spider, very appropriately named *Argyroneta aquatica*, commonly called the Water Spider. Dozens of specimens were found including a large adult female, and they all provided fascinating viewing with their large attached air bubbles as they submerged below the surface. Nymphs of several species of dragonflies and damselflies were found including darters

Sympetrum, hawkers *Aeshna* and large red damsel *Pyrhosoma*. Course participants were particularly fascinated and amused when Phil described the hawker dragonfly nymphs jet propulsion method through the water! They bring their legs flat alongside the body whilst expelling a jet of water through their anus, and vroom..... off they speed! Well, it works for them!

Several other water beetles were found including *Agabus* spp., many tiny and tricky to identify *Hydroporus*, several *Dryops*- one of the so called crawling water beetles, and a single *Gyrinus* or whirligig beetle. It was explained that *Gyrinidae* (who spend most of their time feeding on the water surface but dive down occasionally if

disturbed or in search of other food) are unique in having the eyes split into two parts, one for looking down into the water and one for looking across the water surface. Rather surprisingly, apart from abundant lesser water boatmen or *Corixidae*, the true water bugs (*Heteroptera*) were in short supply. However, a single very tiny *Hebrus* or sphagnum bug showed that it was an expert at walking on water. These extremely small bugs are quite common but under-recorded as they are easily overlooked. Other species found during the day included many midge larvae and pupa, water hog louse, freshwater shrimps, aquatic snails, leeches and flat-worms.



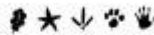
Photo: Janet Imlach

Another brisk walk back to the Mountain Centre was rewarded with this observers first sedge warbler of the year singing at the edge between bracken and wet heath, albeit not quite its niche habitat! These training days of course also produce some interesting records and sightings, not just for the species we are concentrating on but on this occasion also some useful bird records as well.

We hope everyone enjoyed the day and found it useful. I would like to thank my fellow leaders Steph Coates and Gareth Ellis for their time, efforts and enthusiasm, before and during the day.

Phil Ward
BIS Biodiversity Recording Officer

Bioamrywiaeth Cymru
Biodiversity Wales



PARTNERIAETH BIOAMRYWIAETH CYMRU

WALES BIODIVERSITY PARTNERSHIP

BIS would like to thank the Welsh Biodiversity Partnership for their kind sponsorship of these wildlife recording training days.

Radnorshire Moth Group News Old and New

Old records dating from 1935 to 1970, and Rothampstead Insect Survey records for 1973 and 1974 recently came our way. The latter via Butterfly Conservation and the National Moth Recording Scheme project, and the former from Dr. Mike Harper – Moth Recorder for Hereford. The Older records had previously been transcribed onto 1967 Biological Records Centre Butterfly and Moth recording sheets. Since then, many of the moth names have changed, so we have a little work to do here. The Radnor Database shows no records for these old recorders, mainly J. P. Baker and Prof. E.N. Wilmer. We have many entries without date, site and recorder, so maybe these record sheets will plug the gaps. Time will tell.

As for the new, well Radnor is still turning up new moth species, 30 micro and 2 macro species for 2008. Most of these were fairly common, but two micros stand out. Several *Stigmella prunetorum* leaf mines were found at Llanstephan, near Erwood, on Blackthorn. For such a tiny moth it makes quite a heavy mine snaking backwards and forwards in a semi circle. The identity was confirmed by Dr John Langmaid via Norman Lowe.

Another small moth was clapped into a box while walking a woodland edge above Cwm Bach, Glasbury. Our diagnosis of *Phyllocnistis saligna* was suspect as that moth needs Purple Willow and there is none in the area. So genitalia dissection was done. We passed it to Norman for his opinion. He thought it of sufficient importance to pass to John, who examined both the moth and the genitalia slide. He confirmed our identification of *P. saligna*, and gave us the good news that this was not only new for Radnor but also new for Wales.

*Pete and Ginny Clarke
Moth Recorders for VC 43 Radnor*

The Wildlife Sites Project



In 2008 we found on 26 different holdings 53 fields, woods and other pieces of ground which qualify as Wildlife Sites. These surveys have also created lots of flora records for BIS.

I will continue to target sites with some 'previous' (such as CCW second tier grassland sites), and will continue to go and see the enthusiastic owners who contact us and/or put them in touch with others such as PONT (Pori Natur a Threftadaeth) and Flora Locale.

Due to funding the project is to be on half time this year, the other half of my time will be on Ponds and People. This is a project aimed at raising awareness and knowledge of ponds and training volunteers to help with surveying ponds particularly in the Brecknock part of the Wye Valley area. The hope is to generate interest in pond creation and some help local groups who are interested in pond-life or looking after local ponds.

For more information contact Brecknock Wildlife Trust 01874625708, scoates@brecknockwildlifetrust.org.uk

Steph Coates, Brecknock Wildlife Trust

Brecknock and Radnorshire Amphibian and Reptile Group News

Briefly the group is involved in the following activities:

1. Val Bradley reports a great new record of adder and slow worms at Llanfihangel Nant Bran churchyard - please keep a look out for adder and grass snake as we have few records of these. Bev saw a little juvenile grass snake at Afon chapel yard near Tal y bont reservoir on 10/05/09 – we were looking for adders! There are some good tips on reptile searching in the HCT and NARRS web pages. It is thought that the decline in muck heaps has affected grass snakes and HCT recommends covering hay piles with black plastic to provide egg laying places.



2. We will be busy in May surveying for Great Crested newts in Brecknock and Radnorshire, and are pleased to welcome some new members this year.

3. We're putting together a stand at BWT's 45th Anniversary event at the Prom in Brecon on 20th June - please come and see us there.



6. The group has a number of honorary species including white-clawed crayfish and fairy shrimp but not leeches - yet:



I really can't stand leeches but have a morbid fascination with the giant ones found at Llyn Cwm Lluch SN002220 (pictured). I'm told it is

probably a horse leech *Haemopsis sanguiuga* which does not suck blood because its teeth are too blunt - this is good because it is a nice place to swim. It is a carnivore though and carrion eater feeding on earthworms, molluscs, insects and tadpoles and reportedly the carcass of a toad sucked dry by a medicinal leech *Hirudo medicinalis*. I have seen hundreds of palmate newts and toads there and suppose the leech feeds well on the eggs and

tad/newtpoles but not the adults maybe?

Steph Coates

BRARG Secretary: Bev Lewis blewis@brecknockwildlifetrust.org.uk 01874 625708

News from Amphibian and Reptile Group UK

Alert for *Cybister lateralimarginalis*

Cybister lateralimarginalis (the peardrop) is a large dytiscid water beetle found in continental Europe and historically from a handful of sites in Essex early in the 19th Century. Speculation that this species may recolonise Britain has been proven correct with the recent discovery of *Cybister* in Lancashire. It would be interesting to find out whether it occurs elsewhere in Britain, so newt surveyors and trappers, please take a closer look at any large dytiscids you may find. *Cybister* is a little larger than the familiar great diving beetle, *Dytiscus marginalis*. However, it doesn't have the pale border all the way around the pronotum - just around the lateral margins, and it is a smoother shape, and often with a beautiful green sheen. The back legs are very muscular and the beetle can move more rapidly than *Dytiscus*. Some useful photographs can be seen at www.microcosmos.nl/beet1gal.htm.

Please send any records or photos to Professor Garth Foster, Balfour-Browne Club, latissimus@btinternet.com. Even records of "ordinary" *Dytiscus* would be appreciated so your efforts will be valued whatever the species. If you are just sending photographs, please send some of both the dorsal and the ventral sides as it is the upper part of the rear leg that provides the best characters.

Now and again people send in living beetles expecting them to be sent back. This is possible, but Garth cannot guarantee a good outcome if he is away for a week when the post arrives!

Chytrid

The full results of the chytrid screening project that ARGs and other volunteers took part in last year are still being prepared. For now, please note that chytrid has been found at several new sites. It has probably not been here for long and no one knows the full implications for our amphibians. So, as a precaution, it is important to maintain biosecurity measures, as recommended last year and available as an Advice Note from the ARG UK website.

Advisory notes from Natural England

Jim Foster (Natural England) wishes to draw attention to two advisory notes that are downloadable from NE's website:



Photo: Common Toad - Fiona Luckhurst

Great crested newts: Educational pond dipping and invertebrate surveys
http://www.naturalengland.org.uk/Images/ponddipping_tcm6-10858.pdf

Pond Management Works and Great Crested Newts

<http://naturalengland.etraderstores.com/NaturalEnglandShop/product.aspx?ProductID=d1f0562f-dd9f-400f-991d-59cbee6c8a3c>

John Baker

Widespread Amphibian and Reptile Project, ARG UK/The HCT, The Herpetological Conservation Trust, 01986 872016, 07884 441521 www.arguk.org
www.herpconstrust.org.uk

Recorder's Forum 2008

Forty recorders attended the 2008 Forum held at Rhayader Leisure Centre on 22nd November. After arrival and the essential cups of coffee, everyone was officially welcomed by BIS Chairman Norman Lowe who then introduced the days sessions. First to kick off was BIS Manager Janet Imlach who outlined recent data exchanges, discussed how the four record centres in Wales are working together, and described the situation with records on the National Biodiversity Network. A discussion then followed which brought up many questions regarding NBN, including topics such as data resolution, data flow & record duplication.

BIS Recording Officer Phil Ward (yours truly) then presented the current support given to recorders including newsletters, website, recording and training days and invited a feedback discussion on these topics from recorders. Comments were favourable and supportive with some useful ideas for further development of recorders support and training courses.

First guest speaker Richard Knight then described the forming of the Rhayader by Nature local natural history group; the initial idea, setting up and running, and described the projects of this successful group.

During the lunch break which consisted of a rather good buffet, Phil's powerpoint Wildlife Quiz went down equally well (at least that's what everyone told me!). The prize of a large box of shortbread biscuits went to Radnor dragonfly recorder Bob Dennison, well done Bob, who is now banned from entering any future quizzes. Only joking!

Mammals were high on the agenda for the afternoon session, and a special note must also be made that all three Powys vice-county mammal recorders were presenting talks! Surely a record in itself! Firstly Sorcha Lewis explained plans to set up and run a new Radnor Mammal Group and illustrated in her talk the under-recording of many mammal species for the vice-county. Her talk was followed by an additional meeting to set up this group. Montgomeryshire mammal recorder Tammy Stretton broadened our horizons by looking at modern day recording, using GPS, and what ideal recording technology we could all do with. And last but by no means least, Brecknock mammal recorder Phil Morgan talked to us all about bat recording in the vice-county under the humorous title of *'25 Years of Searching, and this is all you've got!'*

To round off the talks, I thought we couldn't let the mammal recorders steamroller the whole afternoon, ha ha! So the audience were subjected to a further short talk by yours truly summarising the current Water Bug records for Powys.

Norman then summed up the Forum day and finished the afternoon by thanking all the speakers and recorders for attending.

Everyone seemed to enjoy the day, which had a very friendly and informal atmosphere. We hope it was an enjoyable day and useful for recorders to come together for this annual event. We look forward to seeing you at the 2009 Forum. Lastly we would like to say a big thank you to the Brecon Beacons National Park Authority for again sponsoring this event.

Phil Ward, BIS Biodiversity Recording Officer

BIS Field Recorder's Days 2009

Saturday June 6th (10am-4pm) - Radnorshire Recording Day

Llanbwchlyn Lake RWT Reserve. (SO116466). The reserve is designated as SSSI as an example of an uncommon mesotrophic lake. The fen vegetation developed around the edge of the lake is one of the best examples in Radnorshire and includes reedbed and greater spearwort. Other habitats include alder and willow carr, oak woodland. *If weather permits, we may extend the session into the evening, with moth trapping and bat recording if suitable recorders are present.*

Saturday 4th July (10am-4pm) - Brecknockshire Recording Day

Dyffryn Crawnon (SO 100 160) – a 200ha site owned by the Forestry Commission that Brecknock Wildlife Trust are working with them on. Approx 80% is conifer but there are some nice old areas of ash woodland, rock outcrops, limestone grassland, broadleaved stream corridors etc. There is reasonable botanical records but it would be good to get a better picture of all the taxa. Situated at the head of the Crawnon valley running up from Llangynidr.

Saturday early Aug? (10am-4pm) - Montgomeryshire Recording Day

Details TBA.



We hope that many of the recorders will be interested in attending and providing the landowners and the Wildlife Trusts with records that will help with future management of these sites.

**Please contact Phil Ward at BIS to book and get further details for the day.
Tel 01874 610881 or email phil@b-i-s.org**

Please note: We ask that all recorders attending the recorders day will contribute any records gathered to BIS, to increase our knowledge of the biodiversity of the area. This data may be disseminated manually or electronically, including the Internet, for environmental decision-making, education, research and other public benefit uses. Your name will form part of the record that is collated and disseminated but any contact details will be held on a computerised database at BIS but will not be passed to a third party without your consent.

Recording help needed!

Call for more butterfly records in Brecknockshire

Do you see butterflies in your garden? Do you make a note of them while out recording? We need help to increase the butterfly records for Brecknockshire. Please send all your records for Brecknock to the vice-county recorder: Andrew King, Heddfan, Pennarth, Brecon, Powys LD3 7EX. Andrew.king53@virgin.net



Marsh Fritillary

Mammal Workshops

BIS Wildlife Recording Training Days 2009

Our training days this year have been well received, with most courses now fully booked. However, there are still a couple of places left on the two Mammal Workshops, so you better book quick!

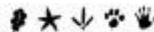
Sat 13th June 10-3pm **Mammal Recording Workshop** VC47. Severn Farm Pond, Welshpool. Leader: Tammy Stretton.

Sat 5th July 10-3pm **Introduction to Mammal Recording** VC43. Llysdinam Field Centre, Newbridge-on-Wye. Leader: Sorchu Lewis.

Both courses will cover small mammal trapping, handling, identification, tracks & signs, ecology and species recording.

Booking is essential. Contact Phil phil@b-i-s.org or phone **01874 610881**
A £5 fee is payable (returnable only if a cancellation place is filled)

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Biodiversity Wales



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Biodiversity Information Service

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Tel:01874 610881 Fax:01874 624812 Email: info@b-i-s.org Website: www.b-i-s.org

Working in Partnership with:-

Countryside Council for Wales
Powys County Council
Brecon Beacons National Park Authority
Brecknockshire Wildlife Trust
Radnorshire Wildlife Trust
Montgomeryshire Wildlife Trust
Forestry Commission for Wales
Mid-Wales Trunk Road Agency
Environment Agency

Directors

Norman Lowe (Brecknockshire Wildlife Trust representative) – *Chairman*
Steve Packer (Powys County Council) - *Secretary*
Colin Young – *Treasurer*
Estelle Bailey – (Montgomeryshire Wildlife Trust representative)
Bronwen Jenkins (Radnorshire Wildlife Trust representative)
Peter Seaman (Brecon Beacons National Park Authority)
David Mitchell (CCW representative)

Steering Group

Paul Sinnadurai (BBNPA) - *Chairman*
Gareth Ellis (BBNP LBAP)
Bev Lewis (BWT)
Tammy Stretton (MWT)
Julian Jones (RWT)
Michelle Delafield (Mid-Wales Trunk Road Agency)
Emma Durward (PCC LBAP)
Jonathan Gilpin (CCW)
