

## North Wales Dragonfly Newsletter No. 58. 8<sup>th</sup> November 2011.

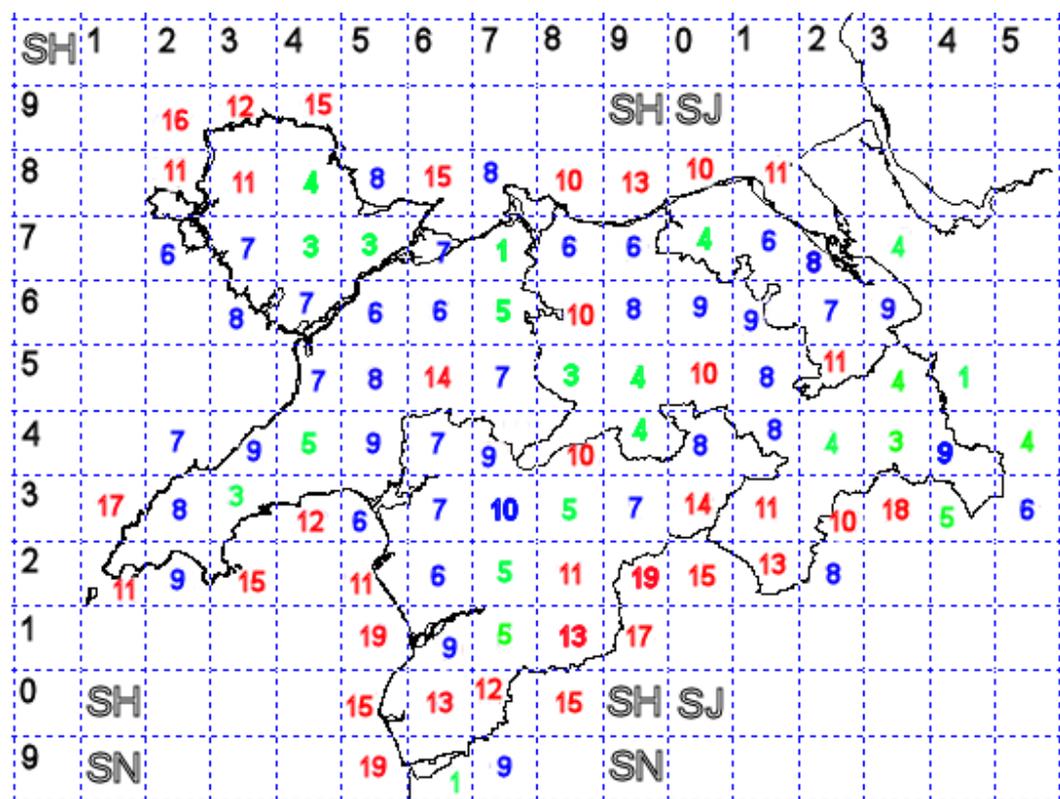
Hi all,



### New records

One more flight season is now over but there have been few records coming in for September onwards. My own observations show that Migrant Hawker was abundant at sites across North Wales though it is still not recorded from many 10 km squares and we have only one more flight season to fill in these gaps in recording for the proposed British atlas.

Stephen and Anne Coker of Pembrokeshire spent a fortnight doing focussed recording in VC Montgomeryshire in particularly poorly recorded areas. They sent me a fine set of records and, although none are for North Wales, some records are from shared 10 km squares and therefore affect the 'missing species' map shown below.



Ian Brodie visited the southern Mawddach Estuary area on the 25<sup>th</sup> September and found *Cordulegaster boltonii* (Common Goldenring) at two places which are new for SH61.

John Bratton sent in an excellent batch of records for 2010 and 2011 on the 5<sup>th</sup> November. It includes 11<sup>th</sup> June 2011 sightings of *Ishnura pumilio* (Small Bluetail) at Cors Hirdre SSSI along the northern Lley, including copulating pairs. The only previous record for the species from there was in June 1994 by Mike Howe. John also

reported *Pyrrhosoma nymphula* (Large Red Damselfly) at the SSSI which is a new record for 10km square SH23 this millennium. He also saw a female *Lestes sponsa* (Common Spreadwing) at Llyn Owen-y-ddol, Gwaen Gynfi which is a new species record for SH66.

### **Migrants on Bardsey**

We have good news in that the *Anax ephippiger* (Vagrant Emperor) seen on Bardsey Island by S. Holmes and M. Barlow on the 21<sup>st</sup> April (and reported in the newsletter No. 51) has now been officially accepted by the National Records Committee as *bona fide* (Adrian Parr, *J. Br. Dragonfly Soc.*, vol. 27, no. 2, pp. 82-83).

*Aeshna mixta* (Migrant Hawker) records for Bardsey during the latter part of the flight season may be migrants from the mainland (as assumed by Adrian Parr for August 2010 sightings there - *J. Br. Dragonfly Soc.* V. 27, no. 2, p. 74 ) but I don't see why we should rule out local breeding in the pond there. The species was very common around our coastal areas from August onwards.

### **The Bolsover Dragonfly**

The remains of an ancient giant dragonfly-like insect wing found by coal miner Malcolm Spencer in the Coal Measures in 1976 became nationally renowned as the 'Bolsover Dragonfly' from the Derbyshire town where the mine was situated. 'Queues tailed round the block in Cromwell Road, where guards stood over the specimen, and there was a public outcry whenever it came off display.'<sup>4</sup> Its scientific name is *Erasipteron bolsoveri*, meaning 'gracefully winged of Bolsover'. It belongs to the Order Protodonata and lived around 305 million years ago. True dragonflies of the Order Odonata didn't appear until Lower Permian times some 15 or more million years later. Bolsover Dragonfly's estimated wingspan was 200 mm, larger than any extant true dragonfly, but far smaller than some of the Carboniferous dragonfly-like Protodonata found elsewhere such as the French one reaching a wingspan of 0.75 m.



Derbyshire Dragonflies reconstructed image of *Erasipteron bolsoveri*<sup>4</sup>.

Two years after the commotion caused by Malcolm's discovery of the Bolsover Dragonfly, on the 10<sup>th</sup> August 1978 his mate Graham Bell found the remains of yet another protodonate. This had an estimated wingspan of 500 mm and was named *Typus diluculum* ('giant dragonfly of the dawn'). Sadly, the 'Dawn Dragonfly' never achieved the fame of its predecessor<sup>4</sup>.

What has all this got to do with North Wales I hear you say! Well, it's not just that there isn't much news at the moment. Paul Whalley is a well known Anglesey naturalist/scientist who retired to Anglesey and was formerly a palaeontologist at the Natural History Museum, London. During his time there he studied the remains of these dragonfly-like insects and gave them their scientific names<sup>1,2</sup>. Although no Protodonata specimens have yet turned up from the Westphalian Coal Measures of North Wales it is not inconceivable that their fragmentary remains are languishing on some tip in Flintshire, Denbighshire, Wrexham or Anglesey. An attempt to find them was made on the recommendation of Paul Whalley at the Malltraeth Colliery spoil<sup>3</sup>. Such plant-rich mudstones that are found on the spoil tips were laid down at near sea level in freshwater, swampy lakes in proximity to Westphalian tropical coal forests. With an atmosphere supposedly richer in oxygen than today<sup>5</sup> these large flying creatures flourished, along with other insects, bivalves, fish and amphibians.



The broken wing of *Erasipteron bolsoveri* from Paul Williams photos at:

<http://www.flickr.com/photos/ironammonite/4945486701/>

These Protodonata wings lacked the node and pterostigmata of modern odonates.

### ***Further reading on the Bolsover dragonflies:***

1. Whalley, Paul. 1978. Derbyshire's darning needle. *New Scientist*, vol 78, no 1107: [http://books.google.co.uk/books?id=9FVTKRgSSLwC&pg=PA740&lpg=PA740&dq=Bolsover+dragonfly&source=bl&ots=xJQ36l9F0F&sig=nzkUat5mi8\\_VkKuRB7U5r42Iwg4&hl=en&ei=7Wx3TsT6Hoi7hAfQ1c23DA&sa=X&oi=book\\_result&ct=result&resnum=9&ved=0CFYQ6AEwCA#v=onepage&q=Bolsover%20dragonfly&f=false](http://books.google.co.uk/books?id=9FVTKRgSSLwC&pg=PA740&lpg=PA740&dq=Bolsover+dragonfly&source=bl&ots=xJQ36l9F0F&sig=nzkUat5mi8_VkKuRB7U5r42Iwg4&hl=en&ei=7Wx3TsT6Hoi7hAfQ1c23DA&sa=X&oi=book_result&ct=result&resnum=9&ved=0CFYQ6AEwCA#v=onepage&q=Bolsover%20dragonfly&f=false)
2. Whalley, Paul. 1979. New species of Protorthoptera and Protodonata (Insecta) from the Upper Carboniferous of Britain, with a comment on the origin of wings. *Bulletin of the British Museum of Natural History*, 32, 85-90.
3. Whalley, Paul. 1997. A share of the spoils. p. 9 in *Earth heritage*, issue January 1997: <http://www.earthheritage.org.uk/ehpdf/EH7-1997.PDF>
4. History of dragonflies and damselflies. Derbyshire dragonflies. Derbyshire's dragonfly links with the past: <http://www.derbyshire-dragonflies.org.uk/history.php>
5. Oxygen extracts. Extract from Chapter 5: The Bolsover Dragonfly: <http://www.nick-lane.net/Extract%20chapter%205.html>

### **Mathematics and the geometry of nature**

This may be recycled, but it's worth watching again. You should enjoy the ending. <http://vimeo.com/9953368>

### **Ode to an ode**

#### **The Dragon-fly** By Alfred Lord Tennyson

Today I saw the dragon-fly  
Come from the wells where he did lie.  
An inner impulse rent the veil  
Of his old husk: from head to tail  
Came out clear plates of sapphire mail.  
He dried his wings: like gauze they grew;  
Thro' crofts and pastures wet with dew  
A living flash of light he flew.

### **Allan**

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