

North Wales Dragonfly Newsletter No 36. 17th July 2009

Hi all,



I'm receiving a steady flow of records now and thanks for sending them in, it is much appreciated; they will be put on the NBN Gateway and added to the Cofnod data in due course. I still have had no records from the poorly recorded areas of south Denbighshire and very few from Merionethshire though. You may have noticed that it is mainly news of the less common species that is noted in this newsletter but records of all species are important in updating the distribution maps so keep sending them in.

Small Bluetail or Scarce Blue-tailed Damselfly (*Ischnura pumilio*) at Fenn's Moss NNR and Anglesey

Joan Daniels reports that Estelle Hughes recorded a female on Fenn's Moss [at c. SJ 487 362]. She notes that this is the first in the Fenn's/Whixall/Bettisfield mosses NNR since 1969 and their first Welsh record.

The species has been seen at Cors Bodeilio in 2008 and 2009. John Bratton got one on the 4th July 2008 at tufa seepages [SH 5001 7768] and on the 16th June this year Les Colley saw five in shallow, open, spring-flushed fen [SH 498 776], along with two male Keeled Skimmer.

I was out with James Robertson yesterday, 16th July, on his well-managed fields near Llanddaniel, east Anglesey. We discovered a completely new locality for the species at a shallow scrape surrounded by cattle-trampled bog that is presumably seepage-fed. We saw six males alongside males of the common species (*Ischnura elegans*).

The rate of recent discoveries reinforces my belief that the species is far more common in the west of North Wales than records of this listed species would imply. There must be numerous livestock-trampled, poorly vegetated, shallow, spring-fed seepage pools and flushes in the area.

Breeding status of Black-tailed Skimmer in North Wales

Since the species moved into North Wales around 2002 the males are increasingly being seen in ones and twos at lakes, especially in eastern areas. The species favours lakes with bare marginal areas where males wait patiently on warm stone, gravel or soil etc. for visiting females. There are, however, few records of breeding taking place and still the only locality where it is known to have successfully bred for sure is Lleyn Helyg [SJ 116 773] above Prestatyn. Numerous adults have been known from this lake since 2004 and I found several exuviae there in June 2006. At Maes y Grug lake, Flintshire [SJ 261 664] in 14 July 2006 I came across three males and one displayed dark mating scars (see photo), showing that it had already mated. This feature, where the waxy blue pruinescence of the male is worn off by the legs of the female during mating, is well known in the Scarce Chaser (*Libellula fulva*) but I have not heard of it being described for the Black-tailed Skimmer before.



Male *Orthetrum cancellatum* with mating scars, Maes y Grug lake, 14th July 2006

I visited the BHC gas terminal ponds at Talacre on the 13th July 2009 and saw several males and breeding activity, in the form of copulation and guarded oviposition, but I failed to find any exuviae.



Male *Orthetrum cancellatum* untypically perched above the ground, Talacre, 13th July 2009.



Male *Orthetrum cancellatum*, Talacre, 13th July 2009.

Odes of the season



Male *Libellula quadrimaculata*, Coedty Reservoir, 15th July 2009



Male *Cordulegaster boltonii*, Afon Porth-llwyd, 15th July 2009

A few foreign species



Female *Sympecma paedisca* (Siberian Winter Damsel) in NE Poland, June 2009. Like the southern European species *S. fusca*, which has visited England, it takes its name from an ability to survive the winter as an adult, but why it should choose Siberia of all places to do this is beyond me.



Yellow-spotted Whiteface *Leucorrhinia pectoralis* in NE Poland, June 2009. The extensive forest bogs of NE Poland are home to five species of *Leucorrhinia*.



A swarm of Globe Skimmers *Pantala flavescens* in Kerala, India



Male *Neurobasis chinensis* trying to attract females, Coorg, Karnataka. This close relative of our demoiselles frequents clear streams in the Western Ghats, SW India.

Longest insect migration revealed

Matt Walker, Editor, Earth News. From BBC article:
http://news.bbc.co.uk/earth/hi/earth_news/newsid_8149000/8149714.stm

Every year, millions of dragonflies fly thousands of kilometres across the sea from southern India to Africa. So says a biologist in the Maldives, who claims to have discovered the longest migration of any insect. If confirmed, the mass exodus would be the first known insect migration across open ocean water. It would also dwarf the famous trip taken each year by Monarch butterflies, which fly just half the distance across the Americas. Biologist Charles Anderson has published details of the mass migration in the *Journal of Tropical Ecology*. Each year, millions of dragonflies arrive on the Maldivian Islands, an event which is well known to people living there. "But no-one I have spoken to knew where they came from," says Anderson, an independent biologist who usually works with organisations such as the Maldivian Marine Research Centre to survey marine life around the islands.



Globe skimmers rest up

Their appearance is especially peculiar because the 1200 islands that make up the Maldives lie 500 to 1000km from the mainland of southern India, and all are coral cays with almost no surface freshwater, which dragonflies need to complete their lifecycle. Anderson noticed the dragonflies after he first arrived in the Maldives in 1983. He started keeping detailed records each year from 1996 and now collates data collected by local observers at other localities in the Maldives, in India and on vessels at sea. When Anderson compared these observations with those made of dragonflies appearing in southern India, he found a clear progression of arrival dates from north to south, with dragonflies arriving first in southern India, then in the Republic of Maldives' capital Male, and then on more southern atolls. Each year, dragonflies first appear in Male between 4 and 23 October, with a mean arrival date of 21 October. Dragonfly numbers peak in November and December, before the insects then disappear once more. The insects arrive in waves, with each staying for no more than a few days. Over 98% of the dragonflies recorded on the islands are Globe skimmers (*Pantala flavescens*), but Pale-spotted emperors (*Anax guttatus*), Vagrant emperors (*A. ephippiger*), Twisters (*Tholymis tillarga*) and Blue perchers (*Diplacodes trivialis*) also appear in some numbers. The dragonflies then reappear between April and June.

The dragonflies are clearly migrating from India across the open sea to the Maldives, says Anderson. "That by itself is fairly amazing, as it involves a journey of 600 to 800km across the ocean," he says. Quite how they do it was a bit of a mystery, as in October at least they appear to be flying against the prevailing winds. However, in October, and continuing into November and December, a weather system called the Inter-tropical Convergence Zone moves southwards over the Maldives.

Ahead of the ITCZ the wind blows towards India, but above and behind it the winds blow from India. So it seems that the dragonflies are able to reach Maldives by flying on these winds at altitude above 1000m.

HARDCORE FLYING
Globe skimmers are renowned for their ability to fly long-distances
They can fly up to 6300m high,

But that is not the end of the animals' epic adventure. "As there is no freshwater in Maldives for dragonflies, what are they doing here?" asks Anderson. "I have also deduced that they are flying all the way across the western Indian Ocean to East Africa." Anderson has gathered a wealth of circumstantial evidence to back his claim. Large numbers of dragonflies also start appearing in the northern Seychelles, some 2700km from India, in November, and then in Aldabra in the Seychelles, 3800km from India, in December. That matches the slow southerly movement of the Inter-tropical Convergence Zone weather system, behind which winds blow steadily from India to East Africa. It is also known that Globe skimmers appear in large numbers through eastern and southern Africa. In Uganda, they appear twice each year in March or April and again in September, while further south in Tanzania and Mozambique they appear in December and January.

the highest of any dragonfly species
With a tailwind of 10m per second, a dragonfly could cross from India to Male in 24 hours
Maldivians consider the dragonflies' arrival to be a harbinger of the north-east monsoon

That strongly suggest that the dragonflies take advantage of the moving weather systems and monsoon rains to complete an epic migration from southern India to east and southern Africa, and then likely back again, a round trip of 14,000 to 18,000km. "The species involved breeds in temporary rainwater pools. So it is following the rains, taking sequential advantage of the monsoon rains of India, the short rains of East Africa, the summer rains of southern Africa, the long rains of East Africa, and then back to India for the next monsoon," says Anderson. "It may seem remarkable that such a massive migration has gone unnoticed until now. But this just illustrates how little we still know about the natural world." The monarch butterfly is often cited as having the longest migration of any insect, covering around 7000km in an annual round trip from Mexico to southern Canada. On average, it takes four generations of butterflies to complete the journey. Anderson believes that the dragonflies survive the ocean flights by gliding on the winds, feeding on other small insects. They too, take four generations to make the full round trip each year. He says the migratory paths of a number of insect-eating bird species, including cuckoos, nightjars, falcons and bee-eaters, follow that of the dragonfly migration, from southern India to their wintering grounds in Africa. That suggests the birds feed on the dragonflies as they travel. "They [fly] at the same time and altitudes as the dragonflies. And what has not been realised before is that all are medium-sized birds that eat insects, insects the size of dragonflies," he says. "There are earlier records of swarms of Globe skimmers flying out to sea, and at sea," Anderson continues. "But it was always assumed that those dragonflies were doomed. Which says rather more about our earth-bound lack of imagination than it does about the globe skimmers' extraordinary flying abilities."



Allan

Dr Allan Brandon
North Wales Dragonfly Recorder
Bryn Heilyn, Rowen, Conwy LL32 8YT.
01492 651066.

Allan@rowenconwy.wanadoo.co.uk

