

Flitwick Moor Project

Redborne Biology Club 2014-2015



2014 - Summary

2014 was an extraordinarily successful year for the Redborne Biology Club and the Flitwick Moor Project, which resulted in the discovery of two new species of Great Diving Beetle for the county and led to a number of features in local and national publications.

Flitwick Moor invaded by scorpions, tigers and dragons!

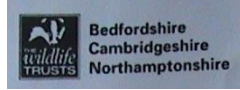
Pupils from the Biology Club at Redborne Upper School in Ampthill, led by Dr Kathryn Juty, have been studying wildlife at Flitwick Moor, and recently struck gold in one of the newly dug peat ponds. There are only six types of great diving beetle in Britain, and the pupils found three of them at Flitwick. Amazingly, this included Bedfordshire's first-ever 'black belly' (below right) and 'the wasp' diving beetles (see Flitwick's secrets below). Great diving beetle larvae are among the fiercest creatures in a pond, which is why they are also called water tigers. They also found a long water scorpion (also called a water stick-insect), and ruddy darter, emperor (below left) and migrant hawkler dragonflies. All these from a bare peat pool! It will be interesting how the species mix changes over time.

Biology club dives into the record books

A SCHOOL biology club has recorded a first for the county after students spotted a rare water beetle. Three out of the six British great diving beetles were discovered during a series of outings to investigate wildlife on Flitwick Moor by Redborne Upper School's biology club. The rarest of these was a pair of wasp-bellied Great diving beetles, *Dytiscus circumflexus*. Garth Foster, recording scheme organiser for the Bedfordshire, Cambridgeshire and Northamptonshire Wildlife Trust has confirmed they are a first for Bedfordshire.

Club organiser, Dr Kathryn Juty, said: "These and other recent arrivals make Bedfordshire an exciting place to record insects. The club provides a chance for the students to get out the classroom and do some real biology - that's what it's all about." Year 10 club member, Mariska Demmers, from Flitwick, said: "I love going to the biology club because it is not just sitting reading textbooks. Once we dissected a turkey foot to see what it looked like inside - it was amazing. "I'm really pleased we found the beetles; hopefully we'll find some more."

BETLES ABOUT: Mariska Demmers and inset, one of Redborne Biology Club's rare finds



Exciting beetle findings at Flitwick Moor

Wednesday 10th December 2014

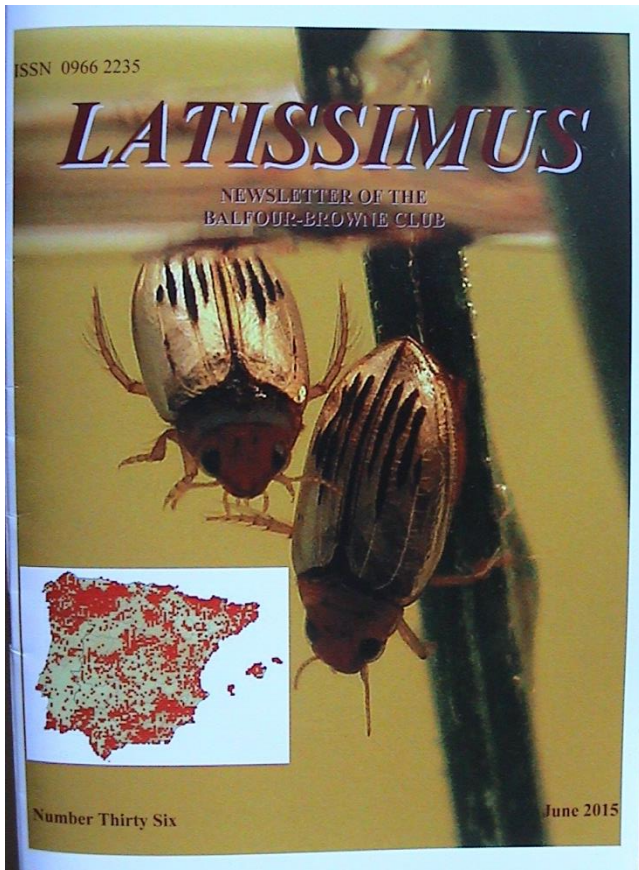
Water beetles found at Bedfordshire's Flitwick Moor are a first for the county

Following significant finds by local nature enthusiast and water beetle expert, Dr Peter Sutton (UK Recording Scheme Organiser, Orthoptera and Allied Species), a biology club from Redborne Upper School in Bedfordshire, led by Dr Kathryn Juty, have now undertaken an ambitious project to study the wildlife of Flitwick Moor.

A series of outings this autumn yielded some fantastic observations of fungi, lizards, amphibians and interesting insects, as well as including some very significant discoveries in the aquatic life of a recently dug peat pond.

<http://www.wildlifeben.org/news/2014/12/01/exciting-beetle-findings-flitwick-moor> 08/01/2015

In addition to finding some fantastic species on Flitwick Moor, from frogs and lizards to bush-crickets and water scorpions, the sandy grass banks of the school were also found to harbour a rich and diverse hymenopteran fauna (bees, wasps and ants), and again, pictures of rare species, including a spectacular ruby tailed wasp, appeared in specialist scientific publications.



DYTISCUS SEMISULCATUS. A FIRST RECORD FOR BEDFORDSHIRE
Alex Cummins

On 15 October 2014, a visit by the Redborne Upper School Biology Club to monitor the aquatic fauna of a recently dug peat pool on Flitwick Moor in Bedfordshire (TQ050353) revealed the exoskeleton of a Great Diving Beetle, which was immediately recognized as a specimen of *Dytiscus semisulcatus* O.F. Müller by Dr P. Sutton. The peat pool has been here for more than two years so we believe that the specimen was a recent colonist. Several other species of aquatic Coleoptera were found in the pool including two other species of Great Diving Beetle, *Dytiscus circumflexus* and *Dytiscus marginalis* (see article by P. Sutton above).

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DYTISCUS CIRCUMFLEXUS NEWLY RECORDED IN BEDFORDSHIRE, ENGLAND
Peter Sutton

On 18 August 2013, a male of *Dytiscus circumflexus* was found in a recently created pond on Flitwick Moor in Bedfordshire (TQ050353), England. The pond was excavated in peat at the end of 2011 and was designed to mimic the older commercial peat extractions that allowed early successional habitats and their associated species to develop. In August 2013, the pond was still devoid of vegetation. It had a significant population of chironomid midge larvae and larvae of *Sympetrum*, *Aeshna* and other odonatan species. It supported a large population of water beetles, notably *Colymbetes fuscus*, and water bugs. A female of *D. circumflexus* was subsequently located on 31 August at the same site. The pond was repeatedly visited in 2014 to search for other specimens of *D. circumflexus* without success although several specimens of *D. marginalis* were recorded over the course of the year. On 15 October 2014, a pair of *D. circumflexus* was discovered in the peat pond, indicating the possible continuity of this species at its only known site in Bedfordshire. A list of the aquatic Coleoptera recorded from this recently created habitat includes:

- | | |
|-------------------------------------|--|
| <i>Gyrinus substriatus</i> Stephens | <i>Rhantus suturalis</i> (Macleay) |
| <i>Hygrobia hermanni</i> (Fab.) | <i>Acilius sulcatus</i> (L.) |
| <i>Agabus sturmi</i> (Gyllenhal) | <i>Dytiscus circumflexus</i> Fab. |
| <i>Agabus bipustulatus</i> (L.) | <i>Dytiscus marginalis</i> L. |
| <i>Agabus nebulosus</i> (Forster) | <i>Dytiscus semisulcatus</i> O.F. Müller |
| <i>Ilybius fuliginosus</i> (Fab.) | <i>Hydrobius fuscipes</i> (L.) |
| <i>Colymbetes fuscus</i> (L.) | |
- Acknowledgements**
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- Received November 2014

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Spring 2015

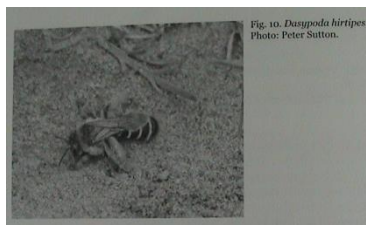
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Bees Wasps and Ants Recording Society

***Hedychrum nobile* (Scopoli, 1763), and *Dasypoda hirtipes* (Fabricius, 1793), new to Bedfordshire**

Abstract
Two species of the aculeate Hymenoptera new to Bedfordshire, *Hedychrum nobile* (Scopoli, 1763), and *Dasypoda hirtipes* (Fabricius, 1793), are reported, reflecting the current dynamic nature of hymenopteran populations in the county. Recent observations highlight the need to collate records from a variety of sources to produce a revised county list for Bedfordshire, in order to ascertain current and longer term trends with regard to the perceived gains and losses of aculeates in the county.

Introduction
The hymenopteran fauna of the sandy banks of a site on the grounds of Redborne Upper School in Flitwick [grid ref: TLO3173677] was studied by PS in July 2014 and two species that were believed to be new to Bedfordshire, *Hedychrum nobile* and *Dasypoda hirtipes*, in accordance with discussions with David Baldoock and Mike Edwards (*pers. com.* July 2014), were recorded. However, it was later revealed that a specimen originally identified as *Hedychrum niemelai* by RE from The Lodge RSPB reserve in Sandy, Bedfordshire [grid ref: TL193477] on 3rd August 2012 had been re-examined by David at the BWARS AGM in September 2014 and was found to be *H. nobile*.



This year the study of Flitwick Moor and its inhabitants resumed in September, with visits on the 9th and 23rd.

Wednesday 9th September 2015

Species list:

Common Lizard *Zootoca vivipara* (2 juveniles from this year's generation)

Common Frog *Rana temporaria* (several)

Grasshoppers and allied species (Orthoptera):

Long-winged Cone-head *Conocephalus discolor*

Roesel's Bush-cricket *Metrioptera roeselii*

Dark Bush-cricket *Pholidoptera griseoptera*

Meadow Grasshopper *Chorthippus parallelus*

Lesser Marsh Grasshopper *Chorthippus albomarginatus*

Slender Groundhopper *Tetrix subulata*

Peat pool

Dragonflies (Odonata):

Southern Aeshna *Aeshna cyanea*

Common Sympetrum *Sympetrum striolatum*

Common Blue Damselfly *Enallagma cyathigerum*

Blue-tailed Damselfly *Ischnura elegans*

Emerald Damselfly *Lestes sponsa* (deceased, found in pool)

Water Beetles (Coleoptera):

Great Diving Beetle *Dytiscus marginalis*

Lesser Diving Beetle *Acilius sulcatus*

Colymbetes fuscus



Agabus bipustulatus

Agabus sturmii

Ilybius fuliginosus

Screech Beetle *Hygrobia hermanni*

Water bugs (Hymenoptera):

Water Boatman *Notonecta glauca*

Lesser Water Boatman *Corixa punctatus*



Wednesday 23rd September 2015



Species list:

Common Lizard *Zootoca vivipara* (1 female sub-adult, 3 juveniles from this year's generation)

Common Frog *Rana temporaria* (several)

Common Toad *Bufo Bufo* (1 under wood)



Harlequin Ladybird pupae *Harmonia axyridis*

Grasshoppers and allied species (Orthoptera):

Roesel's Bush-cricket *Metrioptera roeselii*

Dark Bush-cricket *Pholidoptera griseoptera*

Meadow Grasshopper *Chorthippus parallelus*



Peat pool

Dragonflies (Odonata):

Southern Aeshna *Aeshna cyanea* (adult and larvae)

Common Sympetrum *Sympetrum striolatum*

Common Blue Damselfly *Enallagma cyathigerum*

Water Beetles (Coleoptera):

Colymbetes fuscus

Agabus bipustulatus

Agabus sturmii

Ilybius fuliginosus

Screech Beetle *Hygrobia hermanni*



Water bugs (Hymenoptera):

Water Boatman *Notonecta glauca*

Lesser Water Boatman *Corixa punctatus*

(Note: Great Diving Beetle *Dytiscus marginalis* and Lesser Diving Beetle *Acilius sulcatus*, in spite of intensive searching, were not found on this visit.)

A heron was seen flying off from the peat pool on both visits. Many deer footprints were seen around the pool.

