

Moths, butterflies and dragonflies

Wicken Fen National Nature Reserve, Cambridgeshire

This article first appeared in Atropos – Number 7, April 1999

“For the entomologist who is not afraid of work, and who is no mere dilettante, The Fens probably afford the richest of all localities for Lepidoptera in this country. Amongst the fen-lands Wicken still retains its virgin soil and flora, unspoilt by drainage or cultivation” Carrington 1880

Wicken Fen is Britain's oldest nature reserve and this year it celebrates its 100th anniversary. On May 1st 1899 the National Trust purchased its first two acre strip for £10 - 55 conveyances later the reserve is over 800 acres. The Fen has been managed traditionally for centuries by sedge cutting and peat digging which has produced a unique fenland habitat rich in wildlife particularly invertebrates. Over 1000 species of moth and butterfly (including over 550 micros) have been recorded from the Fen, along with 1000 species of beetle, approaching 2000 species of fly and 25 species of dragonfly and although a number of important species have been lost of the years Wicken is still a very special and important place.

Wicken, which is situated 12 miles north-east of Cambridge, became known to entomologists in the early decades of the 19th century but no records survive from these early collectors and it was not until 1850 that Frederick Bond began to compile the first lists of moths and butterflies. From then on Wicken became known as a mecca for lepidopterists. Eddystone lighthouses were a common sight on the Fen and some accounts describe them as lighting up the place at night like a small city.

In the 1890s the sedge (*used for roofing and animal bedding*) and peat (*a fuel*) economies collapsed being replaced by more efficient alternatives and there were major concerns that the Fen would be drained as had happened elsewhere in the Great Fen Basin. A number of these early entomologists (particularly G.H. Verrall and The Hon. N.C. Rothschild) played a vital rôle in ensuring Wicken's survival by acquiring major parts of the Fen and donating them to the National Trust.

Moths and butterflies

The moth fauna of **Common Reed** (*Phragmites australis*) is particularly rich at Wicken Fen. **Common Reed** is found throughout the site in the reed beds, the sedge beds, the fen meadows and along the water courses. The nationally rare, RDB2, **Reed Leopard** (*Phragmataecia castaneae*) is quite common on the Fen; other reed species recently recorded include the **Flame Wainscot**, Na, (*Senta flammea*), **Silky Wainscot**, Nb, (*Chilodes maritimus*), **Reed Dagger**, Nb, (*Simyra albovenosa*), and the pyralids *Schoenobius gigantella*, Nb and *Chilo phragmitella*, Local. In order to accommodate these reed living moths and other invertebrates the majority of the reed communities are cut on a long (up to 4 year) rotation - the **Reed Leopard** for example has been reported as having a 3-4 life cycle.

The ancient fen also has large stands of **Saw Sedge** (*Cladium mariscus*) which are home to scarce pyralid Na, *Nascia ciliaris*.

The fen meadows are very flower rich and are home to a variety of rare and unusual species. The day-flying moth the **Silver Barred**, RDB3, (*Deltote bankiana*) is common in the **Purple Moor Grass** (*Molinia caerulea*) meadows, **Marsh Carpet** Na (*Perizoma sagittata*) **Dentated Pug**, Na, (*Anticollix sparsata*), **Lesser Cream Wave**, Local, (*Scopula immutata*) and **Grass Rivulet**, Local (*Perizoma albulata*) have all been recorded in recent years.

The carr encroachment of the Fen this century has also benefitted a number of species. The **Goat Moth**, Nb (*Cossus cossus*), **Cream-bordered Green Pea**, Nb, (*Earias clorana*), **Hornet Moth**, Nb, (*Sesia apiformis*), **Yellow-legged Clearwing**, Nb, (*Synanthedon vespiformis*) and the **Emperor**, (*Pavonia*

pavonia)- feeding on Buckthorn (*Rhamnus cathartica*) were all recorded in 1998. The **Goat Moth** appears now to be a common species on the Fen and has even been attracted to light, its feeding habitats are rather a mystery though as no willows have been found with the characteristic damage.

Wicken Fen also has many kilometres of high water Lodes and ditches and as a result the **China Mark** moths (**Small China Mark**, *Cataclysta lemnata*; **Beautiful China-mark**, *Nymphula stagnata*; **Brown-China-mark**, *Nymphula nymphaeata* and **Ringed China-mark**, *Parapoynx stratiotata*) whose larva are aquatic are well represented.

There are a number of moths which have not been seen in recent years and are priorities for re-discovery, in particular the apparent disappearance of **The Concolorous**, RDB3, (*Photodes extrema*) is most odd. Its food plants the **Small Reeds** (*Calamagrostis epigejos* and *C. canescens*) are both very common and the species appears to be doing very well in its 'second' home in the woodlands of Rockingham Forest (John Ward pers. comm.). It is also hoped, perhaps over-optimistically, that the enigmatic **Marsh Moth** (*Athetis pallustris*), the great prize of the early collectors such as Baron de Worms, will be re-discovered.

There have been some important losses this century and the last, probably as a result of the wider drainage of the Great Fen Basin, these include **Reed Tussock** (*Laelia coenosa*) - last recorded in 1879; **Marsh Dagger** (*Acronicta strigosa*) the **Many-lined** (*Costaconvexa polygrammata*) and the **Gypsy Moth** (*Lymantria dispar*) - last recorded in 1907.

Perhaps the highest profile loss has been that of the **Swallowtail** (*Papilio machaon britannicus*). A victim of carr encroachment and falling water tables which has led to a paucity of vigorous growing **Milk Parsley** (*Peucedanum palustre*). The **Swallowtail** has been re-introduced three times and unfortunately each time it has died out B the last specimen being definitely recorded in 1996. Plans by the National Trust are underway to clear extensive areas of carr to re-create open fen conditions and negotiations are beginning to improve the summer water deficits. It is hoped that in a decade or so the Fen will have been sufficiently restored to again try to re-introduce this iconic species.

The other true fenland butterfly, the **Large Copper** (*Lycaena dispar dispar*) went extinct in the 1840s but *Lycaena dispar batavus* was re-introduced to the Fen in 1927. It survived until Adventurers' Fen was drained during the last war by the Ministry of Agriculture as part of the 'Dig for Victory' campaign. The National Trust have now restored this area back to wetlands but it appears unsuitable for the **Large Copper** and there are currently no plans to re-introduce this species.

The **Marsh Fritillary** (*Eurodryas aurinia*) also went extinct between 1923 and the last war (some confusion over the exact dates), the site appears very suitable as a place for re-introduction but at the current moment the national Species Action Plan is prioritising such work in the South West of Britain. As a result today we are left with a depauperate butterfly fauna. In 1998, 25 species were recorded, the most significant being the two national locally species: **Green Hairstreak** (*Callophrys rubi*) and **Brown Argus** (*Aricia agestis*). Two species of butterfly have benefitted from the carr invasion: **Speckled Wood** (*Pararge aegeria*) being first recorded in 1984 and the **Brimstone** (*Gonopteryx rhamni*) which is now very abundant as are its foodplants **Common Buckthorn** (*Rhamnus catharticus*) and **Alder Buckthorn** (*Frangula alnus*).

David Wilson, the co-author with Bernard Skinner of *Moths in the British Isles* has recently moved to the village of Wicken and is currently cataloguing and computerising all the known lepidoptera records for the National Trust in his capacity as moth and butterfly recorder for the Fen. This is an enormous task and he would be delighted to receive any records which readers may have from Wicken Fen. If you wish to check whether he has your records already he can be contacted on 01353 624843.

Dragonflies

Whilst Wicken is not an outstanding dragonfly site it is nevertheless a rich and important one, 18 of the county's 20 breeding species occur. In addition a number of vagrant species have been recorded over the years.

Formerly the reserve had an even greater dragonfly fauna, but unfortunately the decline in peat digging has seen the loss of four acid loving breeding species. Today the site is best known for its strong populations of **Hairy Dragonfly** *Brachytron pratense*, the **Variable Damselfly** *Coenagrion pulchellum* and the **Red-eyed Damselfly** *Erythromma najas*.

The complete list of dragonflies and damselflies at Wicken Fen, past and present is summarised in table 1. One further species the **Scarce Chaser** *Libellula fulva* may soon be added to the list, it is known to occur nearby on the Cam and this year a *Libellula* was seen by the author and Alan Stubbs which was probably this species but unfortunately sufficient views for a positive identification were not gained. The **Norfolk Hawker** *Aeshna isosceles* was certainly recorded from the Fens during the 19th century B the closest record to Wicken was Burwell Fen which is only 2 miles away. Discussions are currently being held to determine whether Wicken Fen (on the recently created grazing marshes) might prove a suitable site for their re-establishment in the Fens in light of the threats they face in Norfolk and Suffolk from the potential salt water flooding of their primary habitats.

Visiting Wicken Fen

The Fen is open everyday of the year except Christmas Day between dawn and dusk and there is a charge for entry to non-National Trust members. However permits can be issued (free of charge) to those wishing to run moth traps as long as they supply their records subsequently to the National Trust - but remember it is no place for the *mere dilettante*! If you wish to run a moth trap on the Fen please write for a permit (enclosing a stamp addressed envelope). It is also important that you let us know when you intend to come so that Property staff do not have to check out strange lights in the middle of the night!

A full account of Wicken Fen can be found in **Friday**, 1997 (the source used for much of the factual information in this paper). The checklist of species recorded at Wicken Fen can be found in **Friday and Harley**, 1999.

I would like to thank David Wilson for commenting on an earlier draft and to Pete Kirby for bringing the Carrington reference to my attention.

Carrington J.T. 1880 *Localities for Beginners No VIII - Wicken*. The Entomologist vol. XIII pp169-177.

Farren W. 1926 *A list of lepidoptera of Wicken and neighbouring Fens*. The Natural History of Wicken Fen, part III, edited by J.S. Gardiner. Bowes & Bowes, Cambridge

Friday L. & Harley B. 1999 *Wicken Fen B The Checklists*. Harley Books

Friday L. 1997 *Wicken Fen B the making of a wetland nature reserve*. Harley Books

Moore N. 1997 *Dragonflies (Odonata) in Friday 1997*

Skinner B & Wilson D 1984 *Colour Identification Guide to Moths of the British Isles* Viking

Adrian Colston, Property Manager, The National Trust, Wicken Fen, Lode Lane, Wicken, Ely, Cambs, CB7 5XP. Telephone: 01353 720274. E-mail: awnusr@smtp.ntrust.org.uk.

Table 1 Dragonflies and damselflies at Wicken Fen 19th century - present

Banded Demoiselle	<i>Caleopteryx splendens</i>	Localised on Wicken / Monk's Lode
Emerald Damselfly	<i>Lestes sponsa</i>	Common
Scarce Emerald Damselfly	<i>Lestes dryas</i>	Extinct
Large Red Damselfly	<i>Pyrrhosoma nymphula</i>	Common
Red-eyed Damselfly	<i>Erthromma najas</i>	Common along the Lodes and main ditches
Azure Damselfly	<i>Coenagrion puella</i>	Very common
Variable Damselfly	<i>Coenagrion pulchellum</i>	Common on ditches and Lodes
Common Blue Damselfly	<i>Enallagma cyathigerum</i>	Fairly common
Blue-tailed Damselfly	<i>Ischnura elegans</i>	Very common
Small Red Damselfly	<i>Ceriagrion tenellum</i>	Extinct early 20 th C - peat digging species
Southern Hawker	<i>Aeshna cyanea</i>	Common
Brown Hawker	<i>Aeshna grandis</i>	Common
Common Hawker	<i>Aeshna juncea</i>	Extinct early 20 th C - peat digging species
Migrant Hawker	<i>Aeshna mixta</i>	Common
Norfolk Hawker	<i>Aeshna isosceles</i>	Extinct - recorded on Burwell Fen 19 th C
Emperor Dragonfly	<i>Anax imperator</i>	Local on the Lodes
Hairy Dragonfly	<i>Brachytron pratense</i>	Common along the Lodes and main ditches
Four-spotted Chaser	<i>Libellula quadrimaculata</i>	Common - <i>praenubila</i> recorded 1998
Broad-bodied Chaser	<i>Libellula depressa</i>	Odd records – may breed in Borrow Pits
Scarce Chaser	<i>Libellula fulva</i>	Still to be discovered - known 1km away
Black-tailed Skimmer	<i>Orthetrum canellatum</i>	Common
Keeled Skimmer	<i>Orthetrum coerulescens</i>	Extinct early 20 th C - peat digging species
Black Darter	<i>Sympetrum danae</i>	Extinct - former peat digging species
Yellow-winged Darter	<i>Sympetrum flaveolum</i>	Immigrant - recorded 1998
Ruddy Darter	<i>Sympetrum sanguineum</i>	Common
Common Darter	<i>Sympetrum striolatum</i>	Very common