S k i m m e r

Yorkshire Branch *of* The British Dragonfly Society

L. depressa Courtesy of Brian Lucas

Yorkshire Branch Magazine

2004

Next indoor meeting

The date of the next indoor meeting is
March 6th, 2 p.m., The Holy Name of Jesus Church,
Otley Road, Island Wood, Leeds 16

Editorial

The magazine is here at last! Many thanks for being patient. I think you will agree it was worth the wait. Many thanks to everyone who sent in articles, records etc. Don't stop, it won't be long before I will be starting on the 2004 edition. I was working on an article about Jill Lucas's excellent book ' Spinning Jenny and Devil's Darning Needle'. I began writing this, but when I became ill, it was abandoned. There will be a review of the 2004 season – I promise.

You will notice there are two new items in the magazine - Letters, though we need some letters to be sent in. If you have anything you need to say or get off your chest about Yorkshire Odonata please write so I can publish it for all to see. Also Questions and Answers, I have started it off with a few questions, the idea behind this is for members who want to know anything about Dragonflies can send questions in and also answer any questions put out. I am hoping this could be quite an interesting page especially if there are any conflicting views!

I also want to start a For Sale/Wants page this can be for anything to do with Odonata. Husbands and wives for sale/swap not included!

It has been an interesting year with us having a Summer (at last!) It will be interesting to see Norfolk Hawker and Downy Emerald. The Norfolk Hawker was a gripper for both Sue and myself. We had just Spurn after seeing the Great Spotted Cuckoo and then getting half way homefound that someone had seen a Norfolk Hawker! Choice words were said!

As with Spurn, Wintersett came up trumps with Yorkshire's second Lesser Emperor. Read the excellent article on how it was found. I spent a total of 13 hours looking for this creature. I was rewarded with the briefest view ever, I think I should stick to twitching birds not insects!

Finally I would like to thank everybody for their support over the last few months; I am now well on my way to a full recovery and so will be more active in 2004.

I would like to wish all members a Dragonfly filled 2004.

Steve Warrillow

Lesser Emperor – Wintersett Reservoir

9th August 2003 Steven Denny

August 9th 2003 was a very hot, cloudless day, which was typical of how most of the summer this year had been. This had resulted in good numbers of butterflies and dragonflies being recorded, due to the fact that flight periods were more or less continuous from early morning throughout the day due to virtually unbroken periods of bright sunshine.

At 15.30 hours I had wandered to the overflow on the west bank of Wintersett Top Reservoir with a wildly optimistic view of possibly seeing Bittern that had been in the marsh there a couple of days previously. I spent around fifteen minutes looking over the marsh and scanning a floating patch of Amphibious Bistort, which had revealed just Common Blue Damselflies rather than the hoped for Red Eyed Damselfly, which would have been new for the area. I was about to leave but a final scan through the damselflies at 15.45hrs was interrupted by a larger dragonfly that zipped across my field of view, and I found myself instinctively following it through my binoculars. Its very direct flight, quite low over the water struck me as unusual, but the sight of the bright, pale blue patch at the base of the abdomen on what was basically an olive – brown dragonfly immediately alerted me, and I was very quickly aware that I had one of the rarer emperors. At this point, I was not certain which one it was, Vagrant or Lesser, though for some reason I suspected that it was the latter. Though I had read through my copy of Dragonflies & Damselflies of Britain when I first got it in 1997, I could not remember any of the separating features, so I made notes on as much detail as I could straight after it went out of view. These consisted mainly of the pale base to the abdomen, which I thought extended onto the first two segments, with the remaining sections being olive brown. The thorax lacked the olive tone, being more regular brownish than the abdomen. The eyes were seen to be apple green, of which at the time I was unaware of the significance, and the wings appeared to be clear. This initial view consisted of several circuits in a generally circular route, one of which was quite far out into the lake (approx 100m), which lasted over a period of five minutes. I was aware that I had something good that I wasn't able to put a name to immediately, and that it was essential to get others on the scene to confirm it. Fortunately, I had my mobile phone with me so I was able to contact Mark Thompson, who was with Pete Senior at the time, just a brisk twenty minute walk away. It did not show again as I waited for them to arrive.

They arrived at 16.15, and after a 20 minute wait it eventually came into view again for around five minutes, and made several close passes by us as it went around its circular track out into the lake. On two or three occasions it passed us, as we sat on the bank, it passed within about five feet. Mark Thompson was able to confirm that it was in fact a Lesser Emperor, due to the wrap around patch on the abdomen, which was bright, pale blue rather than the more restricted violet blue of the Vagrant Emperor, and the clinching factor of the green eyes rather than brown of the latter species. There were no further sightings, despite observations being made until dusk.

A crowd of several observers had gathered the following morning, including myself, who were treated to brief, but conclusive views as it flew around close in at 10.35 and 10.40 hours. I left after the latter sighting, but it was seen subsequently the same day, and on several days after, by other observers, though it was not particularly easy to catch up with.

This is the first record of this rare vagrant to Britain for the Wintersett area, and is thought to be only the second record for Yorkshire.

Breeding of Emperor Dragonfly Anax imperator

At Loversall Delph, Potteric Carr Nature Reserve, Doncaster

At about 10 a.m. on 4th June 2002 an Anisopteran larva was observed half-way across the footpath on the south side of Loversall Delph pond, about 1 metre away from the water's edge, wriggling through the grass and making its way away from the pond from which it had obviously emerged. It was observed and videoed while it finished its traverse of the path, entered the taller grass along the path edge, and climbed a grass stem to a height of about 10cm. The dragonfly then proceeded to emerge from the larval case over the course of the next $2^1/_2$ hours, by which time the wings had been fully extended but not spread sideways.

Emergence followed the normal stages for Anisoptera, the larval skin splitting behind the neck, the dragonfly emerging to hang backwards and head down, before raising itself to grasp the larval skin and withdraw the abdomen, to hang in an upright position. The wings were then pumped up to final size. The emerged dragonfly was then left unattended until, on return to the site one hour later, it had flown or been predated. The exuvia was then collected.

The exuvia was later examined and identified as *Anax imperator* through the following features. It was 57mm long compared with 26mm for *Libellula quadrimaculata* Four- spotted Chaser, the commonest Anisoptera of Loversall Delph. Hammond, 1983, says that *Anax imperator* larvae are rarely less than 49mm. The dorsal view of the head corresponded precisely with that shown by Hammond, fig 13h, for *Anax imperator* and the anal appendage was 7mm long, being longer than the combined length of 5mm of segments nine and ten. Lateral spines were present on segments 7-9, as described by Brookes, 1997. Distinct differences eliminated the other possibilities for the time of year, *Brachytron pratense* Hairy Dragonfly, seen the previous week at the Delph, and *Cordulegaster boltonii* Golden-ringed Dragonfly, vagrant in 1990 (Hancox, 2001).

The emerged dragonfly had a green thorax and slender appendages, suggesting a female. There were no segmental spots. The thorax was not hairy, and *Brachytron pratense* is only 2/3rds the size of *Anax imperator*. *Cordugelatester boltonii*, although similar in size to *Anax imperator*, has a very distinct anal appendages, which this specimen did not have.

Interestingly, another similar larva, which had climbed a stalk in the pond mid-to-late morning, and was thought to be damaged because no emergence was observed, began to emerge at about 1400 hours, but one hour later had made very little progress, the green head having barely emerged from the split in the skin. Subsequent progress is not known to this observer. It would seem that the commonly held view that Odonata emerge overnight or very early morning does not apply to *Anax imperator* at Loversall Delph.

Hammond, C.O., 1983, p80. *The Dragonflies of Great Britain and Ireland (Second Edition)* Harley Books.

Brooks, S., 1997, p52. *Field Guide to the Dragonflies and Damselflies of Great Britain and Ireland.* British Wildlife Publishing.

Hancox, J. 2001, *Dragonflies of Potteric Carr*. Yorkshire Wildlife Trust.

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Questions and Answers…. Letters

The two following items I hope will be long running items for the magazine. If you would like to send letters to the Editor on any subject to do with Odonata, it does not need to be Yorkshire odonata it can be worldwide, so put pen to paper and write those letters.

The second item Questions and Answers I would like members to send in Questions which they would like to ask fellow members concerning anything at all to do with Odonata. Also I would like members to answer any questions raised. To get the ball rolling I have put several questions together and I would like members to answer them if possible and also please think of questions that could be put to the membership.

1. Why are Dragonflies called Dragonflies?
2. I have a garden pond which I think needs cleaning out when is the best time to do this?
3. Why aren't there any records of White-legged Damselfly considering the extensive canal network we have and that the species is found fairly commonly in the Midlands?
4. I am thinking of studying dragonflies, which binoculars are best for this and also which eyepiece should I use for looking at larvae etc in the field?
5. Can two different species of Dragonfly breed?

These as just to get things going, please send you answers and questions to: -

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E-mail: **swdragonfly@odonata2.freeserve.co.uk**

Dragonfly Life in a Moorland Pool

Brian Lucas 8, Camborne Drive, Fixby, Huddersfield, HD2 2NF

One of the pools that we visit every year is on Deanhead Moss, an area of moorland to the west of Huddersfield. The pool is at a height of about 1440 feet and covers an area of approximately 700 square yards. In order to give a better idea of the size, this is equivalent to a square with sides of twenty seven yards. The pH is 5.5, the alkalinity nil and the maximum depth of the pool is four feet. On a suitable day, one of the insects we see is *Aeshna juncea* – Common Hawker, and we usually see two or three males and the occasional female. In 2003 we decided to collect as many exuviae as possible and during six visits had a total of 276. This species has a life span of three or four years. The females lay diapause eggs and with their serrated ovipositors usually insert their eggs into vertical or horizontal plants that are at or above the water level. Here the embryos will grow to full size, but will not hatch until the following spring.

Whilst collecting the Common Hawker exuviae, we also found 163 exuviae of *Sympetrum danae* - the Black Darter. This species has a life cycle of only one year and like the Common Hawker, the females lay diapause eggs. In this species the eggs are washed off from the tip of the abdomen whilst 'dipping', and sink to the bottom of the water. The male holds the female whilst this occurs and it is he who controls the dipping motions. Like those of the Common Hawker, the embryos will grow and be ready for hatching later in the year, but cannot do so because of the low temperatures, and will have to wait for warmer weather in the following spring.

Last year (2003) the water level in the pool gradually lowered until on the 3rd September, the pool was completely dry for 58 days, and remained so until the 31st of October. The floor of the pool was badly cracked and virtually covered in the moss *Drepanocladus fluitans* (Hedw.) Warnst. On the first of November, after overnight rain, there were about three small puddles. However, by the 4th. of November, after heavy rain, 70% of the area was covered, but the water was not very deep. The marginal vegetation must have contained a large number of Common Hawker eggs which should not have been affected by the lack of water, but there would have been a lot of larvae from previous years and their future is more uncertain. With no water in the pool, normal food may not have been available, so as well as starvation, cannibalism could have occurred, especially as the larvae would have been of varying sizes due to the long life cycle. There would be no Black Darter larvae however, only eggs, which as we have seen, would be on the bottom of the pool, so these would get wetted again very quickly and thereafter continue their normal life cycle.

Diapause is a period of suspended or retarded development and it is the photoperiod experienced by the females of the two species mentioned, that determine whether they will lay diapause eggs or eggs with direct development. In some of the other species, diapause occurs in

the final instar of the larvae. Photoperiodism is the phenomenum whereby many plants and animals are stimulated or inhibited in production and other functions, by the daily periods of light and darkness to which they are subjected.

A good description of diapause in *Lestes sponsa* – Emerald damselfly is given in one of the books by Professor Philip Corbet and is as follows: - " During the summer, embryonic development will proceed rapidly until the diapause stage has been reached, after which it will slow up very considerably. The optimum temperature for diapause development in this species is about 10ºC. although it can proceed extremely slowly at other temperatures between 5ºC. and 20ºC. This means that in nature diapause is completed rapidly in autumn, before temperatures have fallen to less favourable winter values. Thus, by the time winter comes, the embryos are actually ready to hatch, but are prevented from doing so by the prohibitively low temperatures. The fact that the optimum temperature for diapause development lies below that which permits hatching results in hatching being postponed until temperatures rise in the following spring. Diapause in the Emerald Damselfly can therefore be seen as a physiological device ensuring that the egg is the stage which over winters. A similar arrangement is found in several other British species, particularly among the Aeshnidae".

Observations on Southern Hawker (Aeshna cyanea)

In late summer 2001, a Southern Hawker female was seen laying eggs in my garden pond. Fortunately, this species is very easy to observe.

The pond in question is kidney-shaped, five metres long, with a depth at the shallow end of twenty-five cms., sloping down to the deep end, which is seventy-five cms. It was constructed thirty years ago with concrete walls and base. To the best of my knowledge, hawker dragonflies have not bred in it prior to 2001. The pond is usually emptied and cleaned out every four or five years. Additionally, weed clearing is carried out during the summer months every year. Three species of damselfly breed in the pond most years, the commonest being the Large Red.

The pond is thickly weeded with Canadian pondweed; the surface in summer is 75% covered in ornamental lilies and duckweed. The duckweed is skimmed off on a regular basis. The pond also has a good breeding population of newts and a small population of frogs. It is full of aquatic invertebrates, crustaceans, etc.

Southern Hawker prefers small shallow ponds in which to breed, so that garden ponds are often chosen as egg laying sites. This particular female made several short visits to my pond to lay her eggs. She would have used several other ponds in the area, which would be suitable for her special requirements. Eggs were deposited in moss, at or just below the water surface on the north-facing wall of the pond. I do not think this has any significance, as this was the most accessible side of the pond.

This species is unusual in that the eggs do not hatch the same year but stay in the state of diapause and hatch the following spring. As water levels in late summer are possibly at their lowest level the eggs are later covered with an additional depth of water, as the pond level in winter increases by several inches. Thus, the eggs are protected from the freezing conditions at the surface.

Summer 2002 revealed the successful hatching of the eggs. Small larvae were soon being caught in my grandson's net, along with newts etc. and they continued to grow throughout the year.

In summer 2003, again my grandson was the first to net the over-wintered larvae, now in their second year. They continued to increase in size and towards the middle of June several were soon near the water surface in thick weed. I had not been thinking too much about their requirement to leave the pond and become adults. I was surprised, therefore, by the first emergence on the 18th of June. The nymph had climbed from the water up a pampas grass leaf, which had been touching the water surface. The dried out insect finally took flight at 4 p.m. that afternoon. The day air temperatures was 17 degrees C, the pond water temperature was 15 degrees C. It was fortunate for me that the nearby clump of pampas grass had twenty or

so leaves which bent down to the water surface, as the pond has no marginal plants, which the nymph could climb.

The emergence of the adults followed no set pattern, although over half left the water during the hours of darkness. All but one did not take to flight until after 9 a.m., the one exception flew prior to that time following a particularly warm night. The exuviae all dropped off the stems within twenty-four hours and fell to the pond surface. Only one insect emerged during poor weather conditions, and this insect was monitored extremely closely, as I wanted to see if it would survive. The nymph had climbed out about 10 a.m., the sky was over-cast and it was quite windy. At 11.35 a.m. the skin began to split behind the neck and at 1.15 p.m. the insect appeared ready to fly. Unfortunately, the weather deteriorated and it started to rain. The newly emerged insect continued to cling to the leaf with rainwater running down the length of its body- would it survive !!!

It certainly did- it hung there through the day and night and half way through the following day before eventually flying off into much improved weather conditions.

To the best of my knowledge, none of these adults returned to the pond to lay eggs even though the species was seen 'hawking' around the garden.

Below are the dates when each adult left the pond:

June: 18th, 23rd, 25th, 27th and 28th

July: 6th, 7th, 10th, 13th, 15th and 20th

Harry N.Whiteley, Hadlow House, Hollins Hill, Esholt, nr Shipley.

Don't give in when the sun doesn't shine!

Dave Booth

We all dream about beautiful sunny days when the air is full of dragons and damsels, and my most outstanding recollection of such a day goes back to 1995 in the Burren in Ireland when the vegetation around one lough was literally swarming with thousands of damselflies, with large numbers of Variable. My best photograph of Variable however was obtained on a dull, miserable day near Catfield Fen in Norfolk, and although you had to really get down to it and carefully search the waterside vegetation, there were no end of them present. In fact, very often, if you want a decent photograph, dull days are the best time to try.

On a day when most people would opt to stay in and watch TV, I recall seeing hundreds of White-legged damsels down in the vegetation on the banks of the River Severn at Atcham near Shrewsbury which, together with scores of Banded Demoiselles, were so confiding they would settle on your hand quite readily. Two Club-tailed Dragonflies actually emerged under our noses on this occasion, one of which was photographed climbing its stalk, by yours truly standing in calf deep water – which is surely superior to watching anything on TV?

In July 2000 we were in Scotland, and on one really fine day we had decided to go photographing orchids, expecting the fine weather to last for a while. However that day proved to be the one and only really nice day we had in a whole week, and dragonflies had to be searched for on poor weather days. I wasn't surprised when careful searching in waterside vegetation uncovered several Northern Damselflies at a small, very accessible pool near Boat of Garten, but I was surprised by what was actually on the wing on a damp, cloudy afternoon at Loch Pollen, Buidhe in Glen Affric. There were both Brilliant and Downy Emeralds, and loads of White-faced Darter, all flying low and around the water's edge.

Finally, on another very unpromising afternoon weather wise, I will never forget the scores of Banded Demoiselles and tens of Scarce Chasers vegetation hopping on the banks of the River Ouse near Huntingdon in July 2001. The morning of that day was beautiful and we had successfully photographed Black Hairstreaks at Glapthorne, but when the weather changed at lunchtime we were in two minds whether or not to go to Huntingdon! As I have mentioned butterflies, the best photos of Adonis Blue I have taken were of specimens down in the grass on a windy, miserable day at Lydden Down in Kent!

Must be a message in there somewhere!

Wildlife of Lower Hopton, Mirfield

I regularly go for walks with my dad and baby sister by the pond and the river. A couple of months ago they were building a new estate across the road from the river. They built a sewage pipe, which let the rubble and cement go into the river, which polluted the river. The next day my friend and me went to the river and found that the water had gone a sandy brown colour. It smelt awful. There were no ducks or birds there. We normally get Ducks, Canadian Geese, Herons, Kingfishers, Moorhens and Swans.

There's a place called 'Pattersons' between the river and the ponds where nearly all of Mirfield wildlife lives. They are trying to build an estate, which upsets me because of all the wildlife, which would be lost. There are a lot of dragonflies one of which is called the brown hawker.

Dragonfly

Silently the astonishing dragonfly
Circles the gleaming waters
Of the dazzling ponds

The beautiful wings of the dragonfly
Flutter like flapping petals of the foxglove
The most handsome creature

Mother nature created

This is the dragonfly
And its beautiful habitat

Ella-Mae Robinson Aged 9

Strange Common Darter

Peter Larner

On 2nd October my wife and I visited the old lead workings at Yambury above Grassington (Grid ref SE 019658). We were looking for fungi, but I noticed a pond with emergent vegetation and some pondweed (Potamageton sp) that looked right for dragonflies so I wandered over to have a look at it.

There was a hawker dragonfly flying around – probably Common Hawker (*Aeshna juncea*) although it didn't come near enough for a positive identification. Then I noticed several male Black Darters (*Sympetrum danae*), plus one or two pairs, with at least one pair ovipositing. I took some photographs of a male, and then noticed an odd-looking Common Darter (*S. striolatum*) near the water's edge.

Through binoculars I was able to see that it had two circular white spots on its head; more precisely, one on the top surface of each of its compound eyes. At first I assumed that this was simply a reflection of the sunlight, but as the dragonfly moved its head, I could see that these spots remained in place, whilst the usual shiny reflective patches moved across the surface of its eyes. Additionally these white dots were matt not shiny, looking as if they had been painted on. I wondered if this insect had been part of a mark and recapture scheme, but I gather that marks are normally made on the wings.

I managed to take a few photographs but even after studying them through a lens I am no nearer having an explanation for this strange phenomenon. The dragonfly was certainly alive; it flew off and returned at least once whilst I watched it, so it was obviously also able to see. Has anyone any ideas?

Editor.

If anyone has any ideas, please send them in and they will be published.

Bransholme Fishing Lake, Hull, E.Yorkshire

Andrew Ashworth

Good dragonfly spots in East Yorkshire, like most wildlife habitats, are at a premium, so it was with great pleasure that a friend introduced me to an area on the north edge of Hull last year. The site is also rare in that it has a fair degree of protection, being council owned. Great Crested Newt is present demanding full protection. It also has full public access; indeed a wheelchair would probably manage.

One small lake with good marginal vegetation has a small shallow pond covered with pondweed next to it. The two ponds are surrounded by scrub and grassland creating a substantial buffer against surrounding development and agriculture.

In just a few visits in 2002 the following species have been seen:

Enallagma cyathigerum

Ischnura elegans

Coenagrion puella

Anax imperator

Aeshna grandis

Aeshna mixta

Libellula quadrimaculata

Sympetrum striolatum

Sympetrum sanguineum

Pond dipping has shown the presence of the following larvae:

C.puella

I.elegans

A.imperator

There is a good selection of common butterflies. Birds have included Grasshopper Warbler and Barn Owl.

This is such an easily accessible site and anyone in the Hull area would do well to call in.

Parking is easy adjacent to the ponds having driven down the Bransholme Road to Grid ref TA111 348. Please secure vehicles and valuables although I have had no trouble to date. In fact the local youngsters have even shown a genuine interest (in the dragonflies that is, not my car!)

Filey Dams Nature Reserve

Filey Brigg Ornithological Group (FBOG) was formed in 1977. The group gradually extended its recording area over the years and eventually included a tract of marshy land on the town's western outskirts that had a tendency to flood in winter. This area, known as 'The dams' became a Yorkshire Wildlife Trust reserve in the mid 1980's as environmental improvements were made to it, mainly to guarantee areas of permanent freshwater. Although primarily of ornithological interest, The Dams holds significant numbers of Smooth and Great Crested Newts and a wide variety of marshland plants, including Adder's-tongue Fern and Nodding Bur-marigold.

As the area of permanent freshwater developed and habitat improvements continued to be made, interest in Odonata recording grew and since 1996, they have been systematically recorded in FBOG's annual reports.

The status of several species is still rather patchy, partly due to the fact that recording here is still in its infancy, but also because of the lack of public access to the freshwater margins (to look for exuviae etc). For this reason, only a checklist is included here to cover all species recorded between 1995 and 2002. It is thought that at least seven species breed on a regular basis and the species recorded in this eight year period are as follows: -

Calopteryx splendens Banded Demoiselle
Lestes sponsa Emerald Damselfly
Coenagrion puella Azure damselfly
Enallagma cyathigerum Common Blue Damselfly
Ischnura elegans Blue-tailed Damselfly
Pyrrhosoma nymphula Large Red Damselfly
Aeshna cyanea Southern Hawker
Aeshna grandis Brown Hawker
Aeshna juncea Common Hawker
Aeshna mixta Migrant Hawker
Anax imperator Emperor Dragonfly
Libellula quadrimaculata Four-spotted Chaser
Orthetrum cancellatum Black- tailed Skimmer

Sympetrum danae Black Darter

Sympetrum flaveolum Yellow-winged Darter

Sympetrum fonscolombii Red-veined Darter

Sympetrum sanguineum Ruddy Darter

Sympetrum striolatum Common Darter

Being situated virtually on the east coast adds an interesting dimension to Odonata recording here, for it is an ideal location to see some of the movements of the migratory species. Already several records have hinted at the reserve's potential.

In August 1995, three Yellow-winged Darters turned up and Red-veined Darters have been recorded in 1997,2000 and 2002 and probably also in 1998 and 2001. (The highest count for this latter species being nineteen males and two females in June 2000)

Influxes of several of the more common species have also been noted and these have been seen to tie in with migratory movements on a more national scale. In autumn 1997 for example, Migrant Hawker numbers reached eighty whilst those of Ruddy and Common Darter peaked at 100+ and 175 respectively.

The Dams is open to the public and easily accessed off Muston Road at the end of Wharfedale (between Filey Secondary School and the railway station). There is a small car park and two hides from which most of the freshwater habitat can be observed. A logbook is provided in one of the hides for visitor's records and who knows, you might be able to add Small Red-Eyed Damselfly to our list in the near future!

T.I.Corbett

References

F.B.O.G. (1996-2002) Odonata report in Filey Brigg Ornithological Group Annual Reports

First and last dates for Odoanta in Yorkshire 2003

Species	First	Place	last	Place
C. splendens	24-Jun	Melbourne	20-Jul	Spurn
P. nymphula	23-Apr	Wintersett	12-Jul	Fairburn Ings
C. puella	27-May	Fairburn Ings	8-Sep	Spurn
I. elegans	5-May	Woodhouse Mill	27-Sep	Wintersett
E. cyathigerum	29-May	Fairburn Ings	14-Sep	Wintersett
L. quadrimaculata	19-May	Spurn	10-Sep	Spurn
L. depressa	24-Jun	Spurn	29-Jun	Spurn
S. striolatum	7-Jun	Spurn	19-Nov	Fairburn Ings
S. sanguineum	12-Jul	Fairburn Ings	4-Oct	Fairburn Ings
S. fonscolombii	30-May	Spurn	5-Aug	Spurn
S. danae	7-Aug	Wintersett	6-Oct	Spurn
L. sponsa	21-Jun	Fairburn Ings	20-Sep	Wintersett/Fairburn
A. grandis	21-Jun	Wintersett	18-Sep	Fairburn Ings
A. isosceles	20-Jul	Spurn		
A. mixta	9-Jul	Fairburn Ings	26-Oct	Wintersett
A. juncea	29-Jun	Wintersett	14-Sep	Wintersett
A. cyanea	5-Jul	Wintersett	14-Sep	Wintersett
A. imperator	13-Jun	Fairburn Ings	21-Aug	Fairburn Ings
A. parthenope	9-Aug	Wintersett		
C. aenea	22-Jul	Spurn		
O. coerulescens	23-Jun	Jugger How	12-Jul	Biller Howe
O. cancellatum	30-May	Spurn	21-Aug	Fairburn Ings
C. boltonii	26-Jun	Wheeldale Beck	20-Jul	Rosedale Abbey

Species list for Yorkshire

Species marked with * are believed to be extinct in Yorkshire

Calopteryx virgo	Beautiful Demoiselle
Calopteryx splendens	Banded Demoiselle
Lestes sponsa	Emerald Damselfly
Pyrrhosoma nymphula	Large Red Damselfly
Ceriagrion tenellum	Small Red Damselfly
Erythromma najas	Red-eyed Damselfly
Ischnura elegans	Blue-tailed Damselfly
Enallagma cyathigerum	Common Blue Damselfly
Brachytron pratense	Hairy Dragonfly
Aeshna juncea	Common Hawker
Aeshna mixta	Migrant Hawker
Aeshna cyanea	Southern Hawker
Aeshna grandis	Brown Hawker
Anax imperator	Emperor Dragonfly
Anax parthenope	Lesser Emperor
Cordulegaster boltonii	Golden-ringed Dragonfly
Libellula quadrimaculata	Four-spotted Chaser
*Libellula fulva**	Scarce Chaser
Libellula depressa	Broad-bodied Chaser
Orthetrum cancellatum	Black-tailed Skimmer
Orthetrum coerulescens	Keeled Skimmer
Sympetrum striolatum	Common Darter
Sympetrum sanguineum	Ruddy Darter
Sympetrum fonscolombii	Red-veined Darter
Sympetrum flaveolum	Yellow - winged Darter
Sympetrum danae	Black Darter
*Leucorrhinia dubia**	White - faced Darter

New species recorded in 2003

Aeshna isosceles	Norfolk Hawker
Cordulia aenea	Downy Emerald

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