

# DRAGONFLIES ON LUNDY – A SUMMARY OF OCCURRENCE DURING THE LFS YEARS

by

Tim Davis

Harpers Mill, Berrynarbor, Ilfracombe, Devon EX34 9TB

gen@birdsoflundy.org.uk

## INTRODUCTION

Despite the number of small freshwater ponds dotted across the island, and the presence of a relatively large body of water in the form of Pondsburry, the Odonata – comprised of damselflies (Zygoptera) and dragonflies (Anisoptera) – have been surprisingly little studied on Lundy.

Formal wildlife recording on Lundy began in 1947, following the founding a year earlier of the Lundy Field Society. The LFS Annual Report for 1947 indicates that a collection of insects made that year included two species of Odonata but without identifying them to species. Remarkably, however, one of these records – of a Common darter *Sympetrum striolatum* – found its way into the current database of Devon dragonfly records; this shows that it was collected in July 1947 by R.L. Baxter and P.E. Parry of Cambridge University, two of a four-person party which also included subsequent LFS Warden Hugh Boyd.

'Miscellaneous' records in the 1948 Annual Report mention "several species noted, both adults and nymphs", but again without identifying the species concerned. The note also states "this would be a compact and interesting group for ecological study" – something that would not happen, and then only in part, for another 30 years.

The next three records also feature among the Devon records but not in LFS Annual Report: 'collections' of single adult Common darters on three days in May 1961 by LFS member A.L. Galliford of Liverpool. It was not until publication of the Annual Report for 1963-64 that the first record of a named species of Odonata appeared in print.

It took a widespread invasion of Four-spotted Chaser *Libellula quadrimaculata* during the first four days of June 1963 for this to happen – and what an amazing spectacle it must have been, with dragonflies seen in large numbers across much of the island: "thousands were present along the western sidelands," wrote LFS Warden Michael Jones in the 1963-64 LFS Annual Report.

While the report is unclear as to the exact year (1963 or 1964), a 'Further Note' at the end of the paper states that on "15th May, 1964, a large hatch of *Libellula quadrimaculata* was observed at Pondsburry", while a paper by John Burton in the journal *Atalanta* in 1996 acknowledges Michael's contribution and confirms the year as 1963.

Another 14 years passed until reporting of dragonfly species in the LFS Annual Report began to appear regularly, with the results of studies of Lundy's freshwater pools, led by Jenny George, appearing in the reports for three successive years, 1978 to 1980. There have since been just four blank years (1981, 1982, 1988 and 1990) up to 2015.

To date, 15 species (including two new to Lundy in 2015) have been recorded on the island, as summarised below, collated from LFS Annual Reports. In many instances the available

information is at best sparse, but dates, locations and observers' names are included wherever they have been given in past reports.

## DAMSELFLIES (Zygoptera)

### Beautiful demoiselle *Calopteryx virgo*

One record:

1985 29 Aug – a male photographed in Millcombe, “undoubtedly an immigrant individual” (A.J. Parsons).

### Blue-tailed damselfly *Ischnura elegans*

At least 21 records:

1978 undated record – one (S. Davies).

1979 Aug – one, Quarter Wall Pond 2 (just north of the main Quarter Wall Pond); four, Quarry Pond; and three, Rocket Pole Pond (J.J. George & B.M. Stone, reported in 1980 LFS Annual Report).

1983 12 Jun – present at Quarry Pond and a West Side field (A.J. Parsons).

1986 Sep – four, Quarry Pond (J.J. George & S.P. Sheridan).

1987 15-23 Aug – “common at Pondsburry and present at Quarry Pool” (A.J. Parsons).

1992 14 Jun – 20.

1995 31 Jul-2 Aug – present at Pondsburry [but could refer to *Enallagma cyathigerum*] (A.J. Parsons).

1996 15 Jun – Pondsburry.

1998 3 Sep – one.

2000 13 Jun – 20+ at Pondsburry.

2002 26 Jun-29 Sep – max 12.

2009 30 May – present at Pondsburry.

2012 28 May – 50 nymphs in Brick Field Pond (Alan Rowland);  
1 Jun – one at Quarry Pond (Chris Eve).

2013 26 Jun – present at Pondsburry (Alan & Sandra Rowland);  
7 & 8 Jul – three males and one female at Quarter Wall Pond (Alan Rowland).

2014 12 Jun – a mating pair and two males at Quarter Wall Pond (Tim Davis & Tim Jones);  
29 Jul – two near Quarry Pond (Chris Eve);  
30 Jul – one, Pondsburry (Tim Davis & Tim Jones);  
2 Aug – two near Quarry Pond (Chris Eve);  
14 Aug – three, Quarry Pond (Tim Jones).

2015 14 Jun – four males, Pondsburry (Tim Davis & Tim Jones);  
28 Jun – four, Quarry Pond (Alan & Sandra Rowland);  
28 Jun – four, Quarter Wall Pond (Alan & Sandra Rowland);  
30 Jun – four, including mating pair, Quarry Pond (Alan & Sandra Rowland);  
7 Jul – six, Quarry Pond (Andrew Jewels).

### Common blue damselfly *Enallagma cyathigerum*

At least 21 records:

1983 12 Jun – present at Pondsburry (A.J. Parsons).

1987 15-23 Aug – “common”, Pondsburry (A.J. Parsons).

1989 19 Jul – present (A.J. Parsons)

1992 14 Jun-28 Aug – max 100 on one day.

1993 25 May – three;

21 Jul – one;

Jul & Aug – eighteen caught in sweep samples (P. Clabburn & P.Long).

- 1995 31 Jul-2 Aug – present at Pondsbury [but could refer to *Ischnura elegans*] (A.J. Parsons).  
 1998 1 Aug-30 Sep – max 20.  
 2000 13 Jun – 50+ at Pondsbury.  
 2002 27 Jun-29 Sep – max 200+.  
 2003 14 Aug – one.  
 2007 18 Jun – one male.  
 2008 7 Aug – two at Pondsbury.  
 2009 27 Jun – present at Quarter Wall Pond.  
 2011 24 Jun-8 Jul – 12, including males and females at Quarter Wall Pond (Alan & Sandra Rowland).  
 2014 30 Jul – mating pair plus two males at Quarter Wall Pond (Tim Davis & Tim Jones).  
 2015 14 Jun – 30 males, four females & three teneral at Pondsbury Tim Davis & Tim Jones);  
 15 Jun – 37, Pondsbury (Tim Davis & Tim Jones);  
 28 Jun – four, Pondsbury (Alan & Sandra Rowland);  
 10 Jul – one male, Pondsbury (Andrew Jewels);  
 13 Sep – two, Pondsbury (Dave Chown).

## DRAGONFLIES (Anisoptera)

### **Migrant hawk** *Aeshna mixta*

At least 20 records:

- 1998 27 Sep – one, Pondsbury.  
 2002 29 Sep-3 Oct – one.  
 2003 14 Aug-24 Sep – two.  
 2005 16-22 Oct – max three (A.J. Parsons).  
 2006 19 Oct – one.  
 2010 20 Sep – one.  
 2012 21 Sep – one on the Terrace (Andy Jayne).  
 2013 24 & 26 Sep – one by Brambles East  
 2014 30 Jul – one, Lower East Side Path (Tim Davis & Tim Jones);  
 14 Aug – one, Millcombe (Tim Jones);  
 18 & 19 Sep – one, upper Millcombe (Andy Jayne);  
 23 Sep – one (Andy Jayne & Andy Turner);  
 26 Sep – one (Chris Dee);  
 29 Sep – one (Chris Dee & Andy Turner);  
 1 Oct – one, Millcombe (Chris Dee & Andy Turner);  
 6 Oct – one patrolling Millcombe gardens (Tony John, Luke Phillips, Tony Taylor).  
 2015 15 Sep – one at North Light hawking insects along the wall of the lighthouse (Tim Davis & Tim Jones);  
 17 Sep – one on Terrace (Tim Davis & Tim Jones);  
 19 Sep – three, North End (Tim Davis & Tim Jones);  
 25 Sep – one, location not given (Andy Turner).

### **Southern hawk** *Aeshna cyanea*

Two records:

- 1999 30 Aug – one.  
 2003 12 Aug-26 Sep – two.

### **Common hawk** *Aeshna juncea*

Three records:

- 2002 23 Sep-3 Oct – one.

- 2007 9 & 10 Sep – one (J. Leonard).  
2008 13 & 14 Sep – one in Millcombe.

**Unidentified hawk dragonfly** *Aeshna* sp.

- 2011 1-15 Oct – one in Lower Millcombe on three dates.

**Emperor dragonfly** *Anax imperata*

Ten records:

- 1978 undated record – one (S. Davies).  
1981 22 Jul – one.  
1991 4 & 27 Aug – two (A.J. Parsons).  
2002 3 Jul – one.  
2012 6 Sep – one, a male photographed in flight over Quarter Wall Pond (Alan Rowland).  
2014 12 Jul – one at Quarter Wall Pond (Cambridge Conservation Volunteers);  
30 Jul – two males, Pondsburry (Tim Davis & Tim Jones);  
8 Aug – one patrolling Quarters Pond (Tony Taylor).  
2015 9 Jul – a male, Rocket Pole Pond (Andrew Jewels);  
15 Jul – a male “patrolling the edge of Pondsburry” (Tony Taylor).

**Vagrant emperor** *Anax ephippiger*

One record:

- 2015 13 Oct – one in Punchbowl Valley near West Side path (Ivan Lakin & Kevin Rylands).

**Golden-ringed dragonfly** *Cordulegaster boltonii*

One record:

- 2009 9 Sep – one near the Castle (Tony Taylor).

**Four-spotted chaser** *Libellula quadrimaculata*

Recorded on two occasions:

- 1963 1-4 Jun – reported in thousands across the island (Michael Jones).  
1964 15 May – a large hatch of emerging adults at Pondsburry (Michael Jones).

***Libellula* sp.**

- 1992 14 Jun – one, possibly Broad-bodied Chaser *L. depressa*.

**Black darter** *Sympetrum danae*

Two records:

- 1998 29 Sep – one at Pondsburry.  
2012 21 Oct – one hawking insects on the western edge of South West Field (Tim Davis).

**Ruddy darter** *Sympetrum sanguineum*

One record:

- 2014 21 Sep – a male (photographed) along the Lower East Side Path about halfway between St Helen's Combe and Quarterwall Copse (Andy Jayne).  
NB. Ruddy Darter inhabits weedy ponds and ditches, frequently in woodland, and is resident in south-east England and central Ireland but increasing its range ([www.british-dragonflies.org.uk/species/ruddy-darter](http://www.british-dragonflies.org.uk/species/ruddy-darter)).

**Red-veined darter** *Sympetrum fonscolombii*

One record:

- 2015 6 Jun – one photographed at Pondsburry (Richard Campey) – see colour plate 5.

### **Common darter** *Sympetrum striolatum*

At least 37 records:

- 1947 1 Jul – one (R.L. Baxter & P.E. Parry).  
1961 20, 21 & 25 May – singles (presumed to be specimens) collected by A.L. Galliford.  
1978 undated record – one (S. Davies);  
Jul – present at Pondsburry (J.J. George);  
1979 Aug – three larvae “seen stalking their prey” (J.J. George & B.M. Stone);  
Aug – one, Quarry Pond (J.J. George & B.M. Stone, reported in 1980 LFS Annual Report).  
1981 22 Sep – “Common on the East Side”.  
1984 25 Sep – “egg-laying” (A.J. Parsons).  
1987 15-23 Aug – “up to three on several occasions” (A.J. Parsons).  
1991 28 Jul-22 Sep – inc 50 on one day.  
1992 18 May-20 Sep – max 50 on one day.  
1993 Jul & Aug – seventeen caught in sweep samples (P. Claburn & P.Long);  
24 Jul & 10 Oct – present.  
1994 6 & 7 Oct – “maximum three”.  
1995 31 Jul – present at Pondsburry (A.J. Parsons).  
1996 31 Aug – one (male).  
1997 22 Jul & 19 Sep – one.  
1998 27 Sep-1 Oct – three, Pondsburry.  
1999 26-30 Sep – max five.  
2000 28 Aug – ten.  
2001 10 Oct – one.  
2002 23 Sep-12 Oct – max seven.  
2003 14 Aug-27 Sep – present (A.J. Parsons).  
2005 29 Sep-6 Oct – “singles” (A.J. Parsons).  
2006 14-18 Oct – one.  
2007 15-17 Oct – three.  
2008 3-16 Sep – maximum seven.  
21 Oct – a male along the East Side.  
2010 21 Sep & 6 Oct – singles.  
2011 1 Oct – one, male at Pig’s Paradise Pond (James Diamond);  
3 Oct – singles at the Terrace, along the main track above Gannets’ Combe and along the Lower East Side Path below Threequarter Wall (Tim Davis);  
6 Oct – one (Richard Campey).  
2014 30 Jul – one, Lower East Side Path (Tim Davis & Tim Jones);  
18 Sep – one, western end of Quarter Wall (Andy Jayne);  
20 Sep – one, Terrace (Andy Jayne).

### **NEW SPECIES AND FUTURE RECORDING ON LUNDY**

Of the three new dragonflies recorded in 2014 and 2015, Ruddy darter is a resident species in south-east England that is increasing its range, while Red-veined darter and Vagrant emperor are both migrants, the latter a long-distance traveller from Africa. That these three dragonflies are the latest to be recorded on Lundy is perhaps an indication of a warming climate, but also indicative of gradually increasing observer awareness of dragonflies and damselflies.

That said, the number of observers (to date predominantly visiting birdwatchers) submitting Odonata records remains small. Thus I would like to encourage LFS members who spend time around the island’s ponds, especially between May and October, to watch for dragonflies and

damselflies and to record their observations (especially of mating pairs or egg-laying females) in the LFS Logbook in the Tavern.

An excellent photographic field guide – Britain's Dragonflies by Dave Smallshire and Andy Swash (which helped me identify a Black Darter in South West Field) – can be found on the shelves near the Logbook.

The records listed above will be submitted to the Devon dragonfly recorder, Dave Smallshire, to supplement the small number of records currently held.

Looking to the future, what might be the likely new additions to the Lundy list of Odonata? With records of vagrants to Britain increasing in recent years, potential visitors from the continent include Small red-eyed damselfly *Erythromma viridulum*, Scarlet darter *Crocothemis erythraea* and Lesser emperor *Anax parthenope*, while from across the Atlantic perhaps Common green darter *Anax junius*, first recorded in Cornwall and the Isles of Scilly in 1998. New (and subsequently accepted) records will of course depend on the interest and skill levels of observers. Happily for those interested in dragonflies and damselflies, the latest field guides have made identification, while still challenging, that much easier.

## ACKNOWLEDGEMENTS

My thanks to Alan Rowland for his help in the compilation of this record, as well as Lundy's breeding dragonflies (see opposite), and to Tim Jones and Alan for their helpful comments on the text.

## REQUEST

If anyone has any dragonfly records from Lundy that are not listed above, please send them, with as much detail as possible, to Tim Davis at [gen@birdsoflundy.org.uk](mailto:gen@birdsoflundy.org.uk). Photographs would also be very welcome. Thank you.

## REFERENCES

- Claburn, P.A.T. 1993. Freshwater biological survey of Lundy, 1993: Further studies of the fauna of Pondsby. *LFS Annual Report* 44: 73-83.
- George, J.J. 1978. The freshwater fauna of Lundy. *LFS Annual Report* 29: 46-48.
- George, J.J. & B.M. Stone. 1979. The flora and fauna of Pondsby. *LFS Annual Report* 30: 20-31.
- George, J.J. & B.M. Stone. 1980. A comparative investigation of the freshwater flora and fauna of the Lundy ponds. *LFS Annual Report* 31: 19-34.
- George, J.J. & Sheridan, S.P. 1986. Further investigations of the flora and fauna of the Lundy freshwater habitats. *LFS Annual Report* 37: 35-46.
- Jones, Michael. 1963-64. Invasion of dragonflies. *LFS Annual Report* 16: 22-23.
- Libellula quadrimaculata* LINNAEUS, 1758 in North-west Europe in 1963. *Atalanta* (May 1996) 27 (1/2): 175-187. [Würzburg, ISSN 0171-0079]

## BREEDING DRAGONFLIES ON LUNDY

Only four Odonata species are so far known to have bred on Lundy:

- ❑ **Common blue damselfly** – larvae in Pondsburry (Clabburn 1993) and in Ackland's Moor Pond (Alan Rowland pers. obs.)
- ❑ **Blue-tailed damselfly** – larvae in Quarter Wall Pond, Quarry Pond, Rocket Pole Pond, St Helen's spring, 1979 to 2007; and in Brick Field Pond in 2012 (Alan Rowland pers. obs.)
- ❑ **Four-spotted chaser** – a large hatch at Pondsburry in 1964 (Jones 1963-64)
- ❑ **Common darter** – larvae in Pondsburry and in Quarry Pond 1978 to 2004; and in Widow's Tenement Pond, 2010-2011 (Alan Rowland pers. obs.).

Although there is plenty of habitat in the form of ponds and pools spread across the island, a restricting factor is the drying out of suitable areas in prolonged dry spells – especially the Lundy streams which are too intermittent to offer a stable breeding habitat. Thus the more likely species to breed successfully are those whose life cycles – from mating, egg-laying and larvae to adult emergence – are one or, at most, two years and which are better adapted to ephemeral habitat.

While longer periods of drought will see the drying out of standing areas of fresh water – even of the larger areas like Pondsburry (as in 1984) and Quarter Wall Pond (in 2006) – (re)colonisation either from other areas of the island or through immigration has been observed. For example, Brick Field Pond dug in *circa* 2010 had 50 Odonata larvae when surveyed during the LFS 'Discover Lundy' week in 2012. In addition, some of the waterbodies on Lundy, e.g. Rocket Pole Pond, are pumped out during dry spells, which may artificially exacerbate their dessication.

Of dragonflies, Clabburn (1993) wrote: "*Isolation would not be an important factor concerning the colonisation of Lundy ... as the flight powers of the Odonata are well known.*" So beyond the four species known to have bred on Lundy, what other species could breed on the island in future?

Potential candidates include **Migrant hawk** (one-year life cycle; requires warmth), **Emperor dragonfly** (two-year life cycle and a frequent 'pioneer' colonist of new waterbodies), **Vagrant emperor** (likes to breed in temporary waters; first Lundy record in 2015), **Four-spotted chaser** (two-year life cycle; has already bred at least once), **Ruddy darter** (one-year life cycle; increasing nationally; recorded on Lundy in 2014), **Red-veined darter** (recent invasions to Britain; recorded on Lundy in 2015; first recorded breeding on Skokholm in 2015).

Less likely would be **Southern hawk** (second-year nymphs require fish or tadpoles as prey), **Common hawk** (recorded in North Devon but has a minimum three-year life cycle), and **Golden-ringed dragonfly** (minimum two-year life cycle; breeds in running waters, especially fast-flowing streams with gravel beds).

Whichever, it is surely only a matter of time before at least one of these dragonflies – or another species altogether – attempts to breed on Lundy.