



# Riverfly Recording Schemes

Ian Wallace of the Caddis Recording Scheme



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**ARMI Database**

- ARMI Data
- o New account registration

**User login**

Username: \*

Password: \*

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## Anglers' Riverfly Monitoring Initiative

Nationally launched in March 2007

Riverfly Partnership tutors deliver one-day workshops to fishing clubs and other organisations committed to establishing a group to monitor the biological water quality of their local waters.



Anglers are natural guardians of the river environment, are in an ideal position to monitor the health of the watercourses they fish, by using the riverflies they aim to imitate with their artificial flies. Many angling and other interested groups expressed an interest to be able to carry out health checks on their waters. The Riverfly Partnership spearheads an initiative to allow interested groups to take action that will help conserve the river environment. This initiative provides a simple monitoring technique which groups can use to detect any severe perturbations in river water quality and puts them in direct communication with the local Ecological Contact of the Environment Agency (EA) / Scottish Environment Protection Agency - participating areas (SEPA) / National Resources Wales (NRW) / Northern Ireland Environment Agency (NIEA).

The monitoring scheme, used alongside routine monitoring by the EA / SEPA / NRW / NIEA, ensures that water quality is checked more widely and action taken at the earliest opportunity should any severe perturbations be detected. Further the monitoring initiative acts as a deterrent to incidental polluters. Successful schemes are underway within catchments in England, Wales, Scotland and Ireland.

Organisations interested in joining the initiative must have an individual prepared to act as a local coordinator (to act as a contact point between the EA / SEPA / NRW / NIEA and the monitoring group) and have members attend an official one-day Riverfly Partnership workshop, run by an accredited Riverfly Partnership Tutor. The workshop includes presentations and practical demonstrations.

See [press releases](#) for examples of successful Environment Agency prosecutions which are a result of the Monitoring Groups alerting the EA to such incidences.

**Riverflies Monitoring Database**

The Riverfly Partnership logo and the Riverfly Partnership logo.

+ Awaiting Response  
 Confirmed (by statutory body)  
 - On or above threshold

Scotland  
 United Kingdom  
 Edinburgh  
 Belfast  
 Isle of Man  
 London  
 Wales  
 England  
 Ireland

Leaflet | © OpenStreetMap contributors

# riverfly recording schemes



- Act as 'champions'
- Encourage recording
- Research and Conservation



Ephemeroptera (Mayflies)



Trichoptera (Caddisflies)



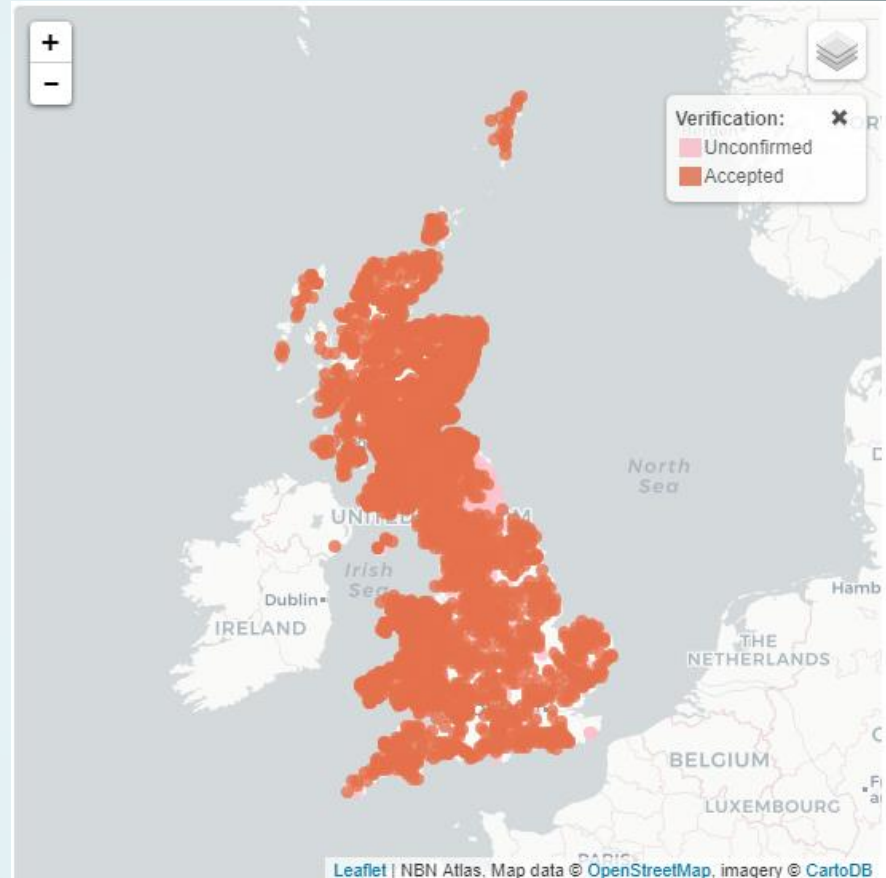
Plecoptera (Stoneflies)

Affiliated to:



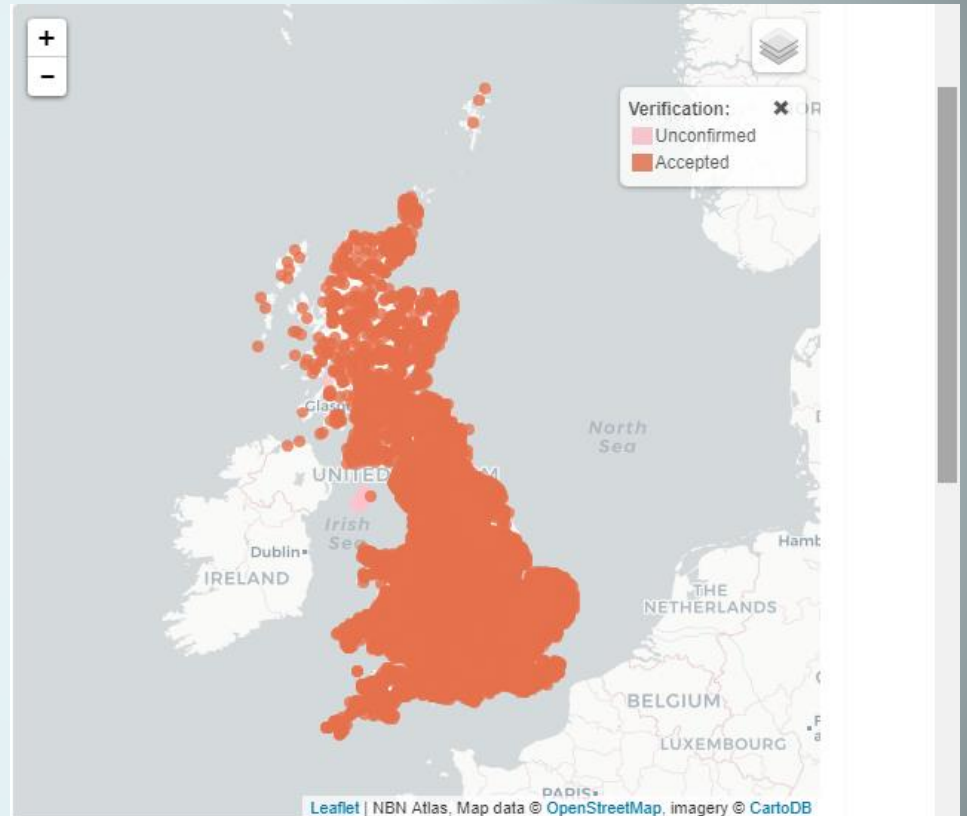
# Stoneflies (Craig Macadam)

- On NBN up to 2005
- 71,000 entries
- Mainly EA and SEPA



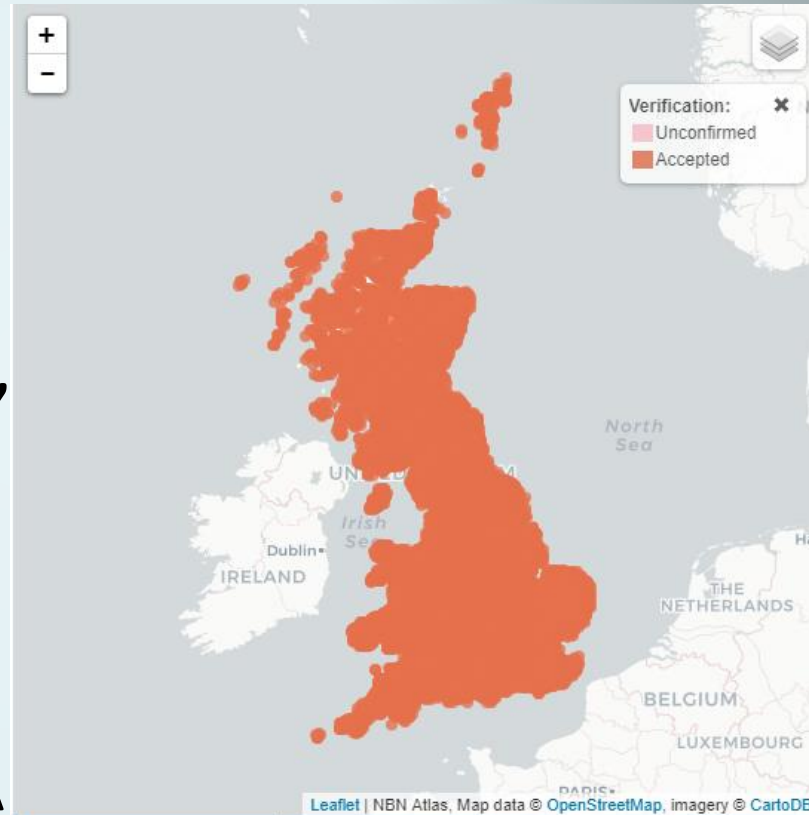
# Mayflies (Craig Macadam)

- On NBN up to 2017
- 232,000 entries
- Mainly EA and SEPA



# Caddis (Ian Wallace)

- On NBN to 2012
  - 263,000 (on NBN)
  - Current data base  
“nearly ready for NBN”  
440,000
- Many data sources  
under a half EA or SEPA

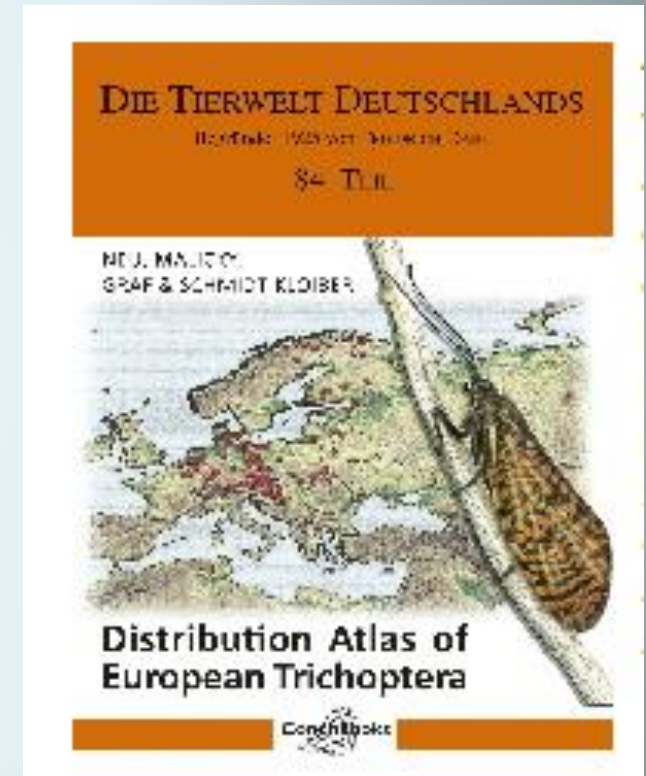
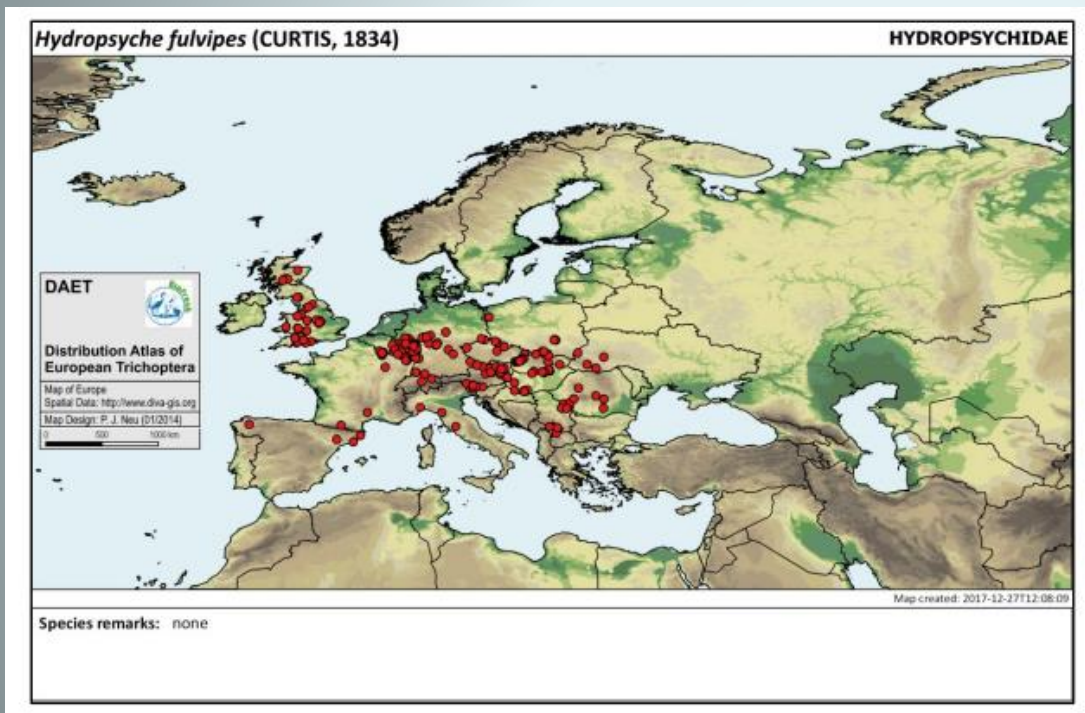


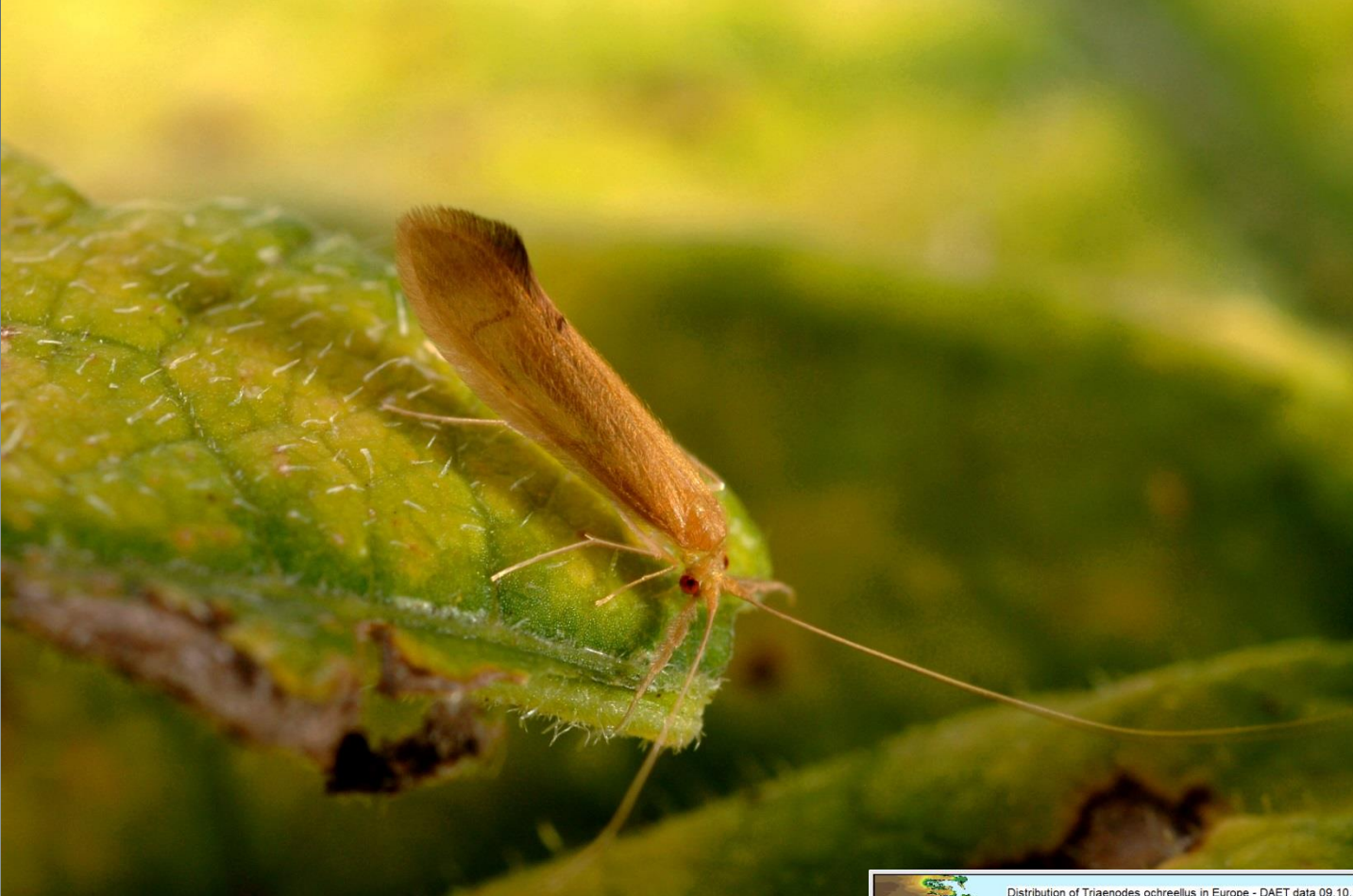
# Looking ok?

- Yes but...
- EA cuts could decimate a highly effective multi—talented workforce and considerably reduce number of new records

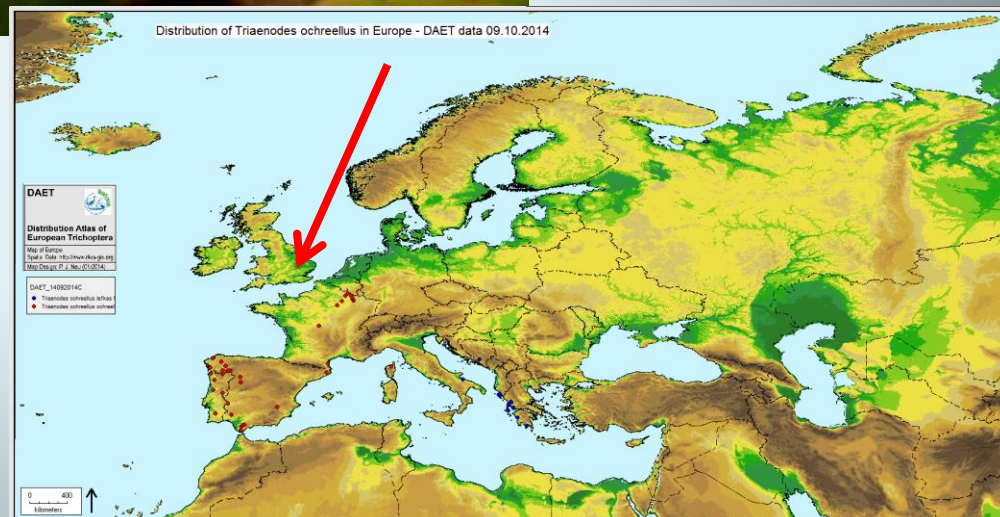


# Distribution Atlas of European Trichoptera (DAET)

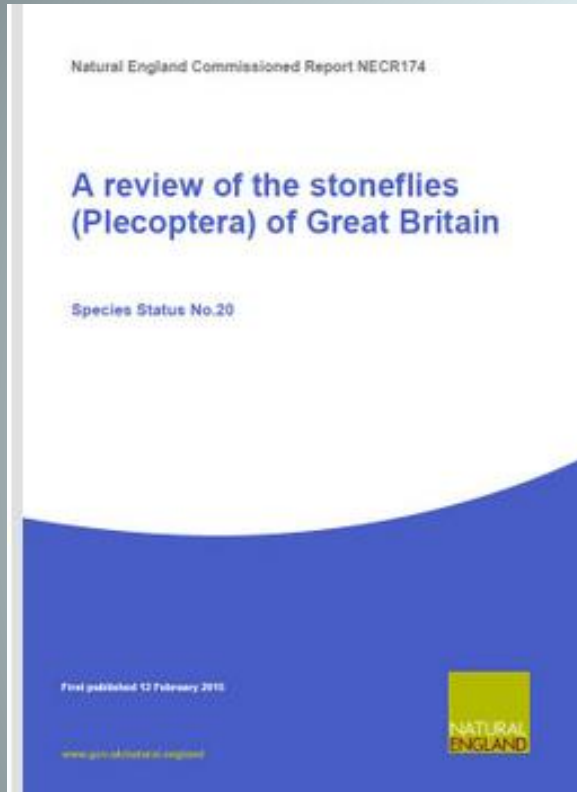




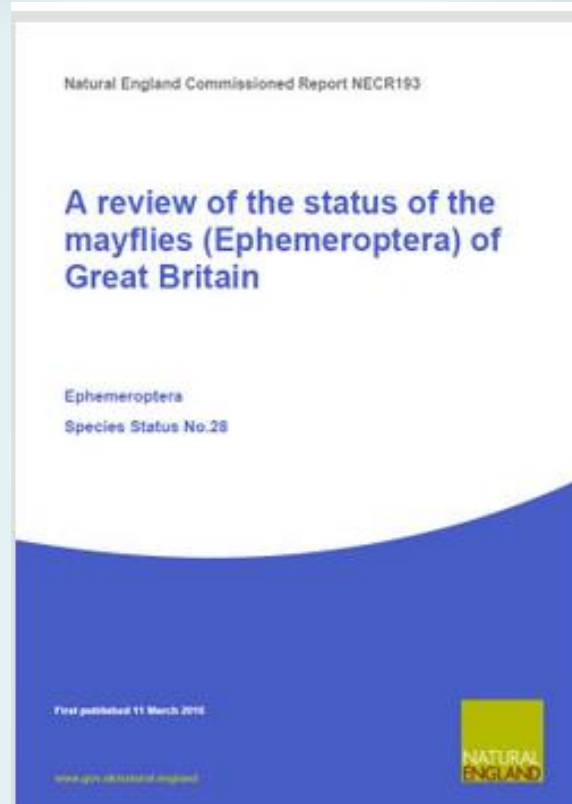
*Triaenodes ochreellus*



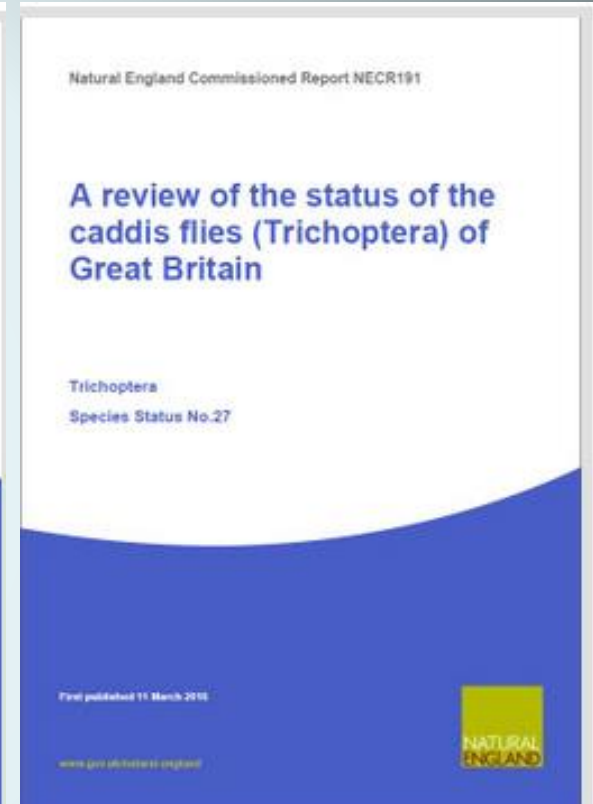
# Status Reviews



2015



2016



2016

# Status Reviews

- Conservation status using IUCN criteria
- Based on analysis of numbers not hunches
- Justified searches for rare and data deficient species

# Riverfly enthusiasts

- Willing to travel to see, then to look for elsewhere
- Very high quality 'twitching'

# Isogenus nubecula



Extinct? No, re-discovered 2017 at its only UK site, the River Dee, North Wales

# Potamanthus luteus



Now found widespread in the  
River Severn



# Ironoquia dubia



First larvae seen in UK for over 40 years



# Brachyptera putata



## Help us find the Northern February red

The Northern February red stonefly (*Brachyptera putata*) is found only in Scottish rivers. We need your help to map which rivers it lives in. It's easy to get involved by following the three steps below:

### Step 1

Look at fenceposts alongside the river in February and March to see if they have stoneflies on them.



### Step 2

Take a picture of the stoneflies on the post.



### Step 3

Send your photographs to:

**[scotland@buglife.org.uk](mailto:scotland@buglife.org.uk)**

Please use the subject 'STONEFLY' and include the following information:

- Your name
- Photograph date
- River name
- Location (grid reference if possible)

You can also tweet your photo and information to **[@BuglifeScotland](https://twitter.com/BuglifeScotland)**

Photo credits: Gus Jones and Stewart Taylor

# Electrogena affinis



# Adicella filicornis



Dramatic increase in numbers of living people who have knowingly seen this alive In the UK 1975 (1) 1985 (2) 2014 (3) 2018 (6)

# Ylodes simulans



# Riverfly Recording Schemes

## Annual meeting

- 2016 – Windermere
- 2017 – Rowardennan
- 2018 – Wyre Forest
- 2019 – Malham



# Increase recording by improving identification resources

- More and better quality



# MAYFLY LARVAE (EPHEMEROPTERA) OF BRITAIN AND IRELAND:

Keys and a Review of their Ecology

J. M. ELLIOTT U. H. HUMPEsch



FRESHWATER BIOLOGICAL ASSOCIATION

# A KEY TO THE ADULTS OF THE BRITISH EPHEMEROPTERA

J. M. ELLIOTT  
U. H. HUMPEsch



FSC

BRINGING  
ENVIRONMENTAL  
UNDERSTANDING TO ALL

# A Pictorial Guide to British Ephemeroptera

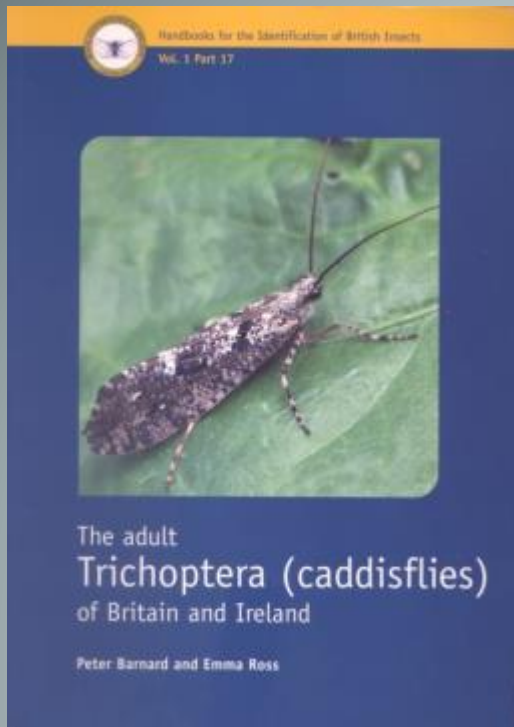
By Craig Macadam and Cyril Bennett



AIDGAP







# Test Guide to Identifying Caddis Adults

For use with photographs and live specimens

by





Ian Wallace and Sharon Flint,  
assisted by Peter Flint

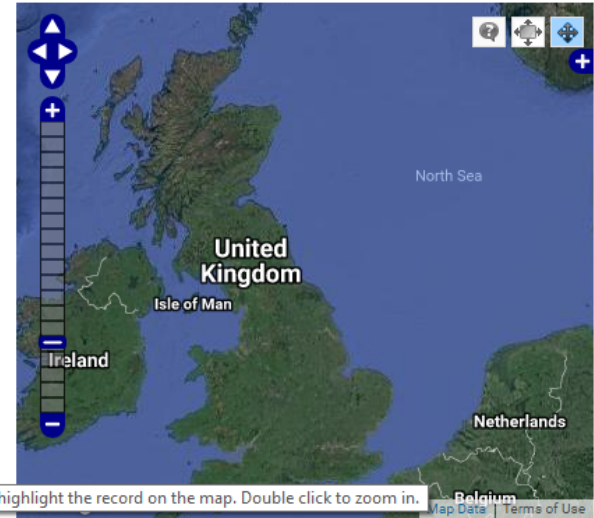
Home » Verify

## Verify

Filter: Select filter...

[Apply](#) [Reset](#)[Create a filter](#)[Review grid](#)[Review tick list](#)Records [Log](#)

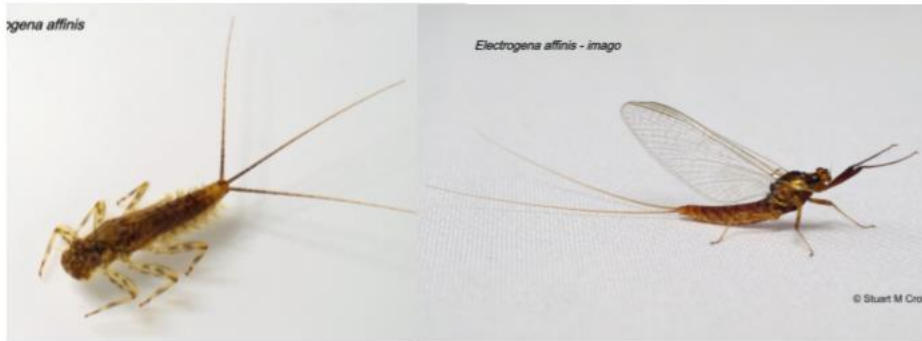
ID	Source ID	Species	Common name	Site name	Original grid ref	Date	Recorder	Images	Auto check	Last updated
8006074	23 42	Limnephilus lunatus		Fair View, Cleeton Lane, Skipsea, East Yorkshire, YO25 8SR	TA16945524	26/09/2018	McWilliam, Stephen		⚙️	27/09/2018 18:51
8005947	23 42	Limnephilus lunatus		Fair View, Cleeton Lane, Skipsea, East Yorkshire, YO25 8SR	TA16945524	25/09/2018	McWilliam, Stephen		⚙️	27/09/2018 18:40
8005813	23 42	Limnephilus lunatus		Fair View, Cleeton Lane, Skipsea, East Yorkshire, YO25 8SR	TA16945524	22/09/2018	McWilliam, Stephen		P	27/09/2018 18:14
8001568	23 42	Limnephilus lunatus		Churchill Avenue Garden	SP817122	26/09/2018	Clark, Ryan		P	27/09/2018 09:17
8000244	23 42	Halesus radiatus		Treshnish House, outbuildings	NM352485	14/09/2006	Prasad, Anand		🔍	26/09/2018 19:15
8000231	23 42	Anobolia nervosa		Treshnish Old Schoolhouse	NM356486	01/05/2007	Prasad, Anand		🔍 📄	26/09/2018 19:10
7997797	23 42	Limnephilus affinis		Sandown Levels	SZ606852	12/05/2018	Wildlife, iWatch		P	26/09/2018 14:20
7997796	23 42	Grammotaulius nigropunctatus		Sandown Levels	SZ606852	12/05/2018	Wildlife, iWatch		🔍 🌐	26/09/2018 14:20
7997795	23 42	Glyphotaelius pellucidus		Sandown Levels	SZ606852	12/05/2018	Wildlife, iWatch		🌐	26/09/2018 14:20
	23 42	Limnephilus lunatus		Garden, ...	SP807101	19/09/2018	Rankin, ...		P	25/09/2018 14:27



You can:

- Select the records to include in the list of records to verify using the drop-down box above the grid.
- Filter the list of records by using the **Create a filter** button and save filters for future use.
- Click on a record in the grid on the left to view the details.
- When viewing the record details, verify, reject, query or email the record details for confirmation.
- When viewing the record details, view and add comments on the record.
- Click on media files in the grid or on the record details Media tab to review the original file and check the record's identification.
- Use the ... button to the left of each record to view bulk-verification options for similar records.
- Use the **Review grid** button above the grid to apply changes to all the records loaded in the grid in one step.
- Use the **Review tick list** button above the grid to apply changes to a selection of records from the grid in one step.

# Electrogena affinis



*Electrogena affinis* is one of the rarest mayfly species in Great Britain. It is found in a single catchment where it has a very limited distribution. This factsheet has been produced to provide information on this species and the threats that it faces.

### Identification

There are two species of *Electrogena* known from the UK. *Electrogena affinis* is a species of lowland watercourses whereas *E. lateralis* is more typical of faster flowing watercourses in the middle to upper catchment. Fresh specimens of *Electrogena affinis* can be readily separated from *E. lateralis* by the presence of light patches on along the front of the head (figure 1). In *E. lateralis* the front of the head is uniformly coloured.



Further features to separate the species are found on the leg (figure 2). The tarsal claw of *E. affinis* has between two to five small teeth (figure 3); *E. lateralis* only has a single tooth. The ventral edge of the femur has a fringe of fine setae in *E. affinis*; in *E. lateralis* there are only a few isolated setae.



Figure 2: Middle leg of *Electrogena affinis*

# Improvements to the higher level keys too

Notes on the identificat x + v

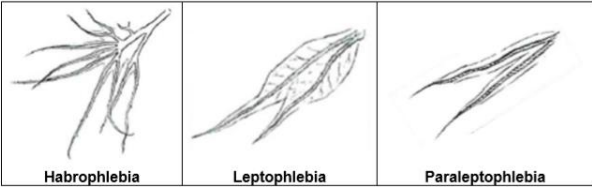
file:///C:/Users/DR/Dropbox/Key%20discussions/Ephemeroptera/Notes%20on%20the%20identification%20of%20Leptophlebiidae%20nymphs. ☆ ☆ ☆

## Identifying the British species of Leptophlebiidae

There are three genera of Leptophlebiidae present in the British: *Habrophlebia*; *Leptophlebia*; and *Paraleptophlebia* comprising one, two and three species respectively. This guide is designed to help with the identification of these species.

### First steps

Mature nymphs are easy to take to genus if they still have their gills attached (Figure 1). I say 'if' as gills on Leptophlebiid nymphs seem to be a bit of an optional extra as they readily fall off during sampling and handling.



**Habrophlebia**      **Leptophlebia**      **Paraleptophlebia**

Figure 1: Gill shape of Leptophlebiidae genera

*Habrophlebia* has multiple branching gills, like little trees. The gills of *Paraleptophlebia* are like little letter 'Y's or tuning forks. Those of *Leptophlebia* are similar but broadened out from the base to form a flattened plate. Be careful because the gills of immature *Leptophlebia* don't broaden out until the nymphs are about half grown and until then they resemble the strap-like gills of *Paraleptophlebia*. This often catches people out and a number of records of *Paraleptophlebia weneri* – a relatively rare species – have turned out to be immature *Leptophlebia marginata*. So if you've got a small specimen (<5mm) or the gills are damaged you'll have to look at the mouthparts to separate the genera. The idea of looking at mouthparts usually fills the novice with dread but it's actually relatively straightforward. First you'll need a preserved specimen as you'll need to detach the head from the body and then 'pick out' the mouthparts under a microscope with a fine needle. You're looking for the maxilla and the maxillary palp. The image at <https://www.for.gov.bc.ca/hts/risc/pubs/aquatic/mayfly/assets/ms1996-5.jpg> should help you locate them. Once you've found them the genus can be confirmed as follows. In *Habrophlebia* and *Leptophlebia* the maxillary palp is shorter than the maxilla, whereas in *Paraleptophlebia* the maxillary palp is longer than the maxilla (Figure 2).

Windows taskbar: Notes on the ident... Riverfly Recording... Document1 - Micr... Ephemeroptera th... Ephemeroptera 19:01 27/09/2018

# DNA profile of species

Modern collection of pure ethanol preserved specimens of freshwater species being assembled at NHM by Ben Price

- Almost complete coverage for Mayflies and Stoneflies
- Underway for caddis

# Future for Riverfly Recording in UK

- Increase in recording
- More accurate records
- Profile of riverflies increased
- More recorders

# Money requested for:

- Annual meeting
- Recording apps and paper things too
- Training to get more verifiers