

# THE BEST CADDIS MAPS POSSIBLE

Ian Wallace

UK Trichoptera Recording Scheme  
Organiser

# Distribution Maps

Main product of a Recording Scheme ?

*Diplectrona felix*



10km square (hectad) resolution  
enough for a national overview

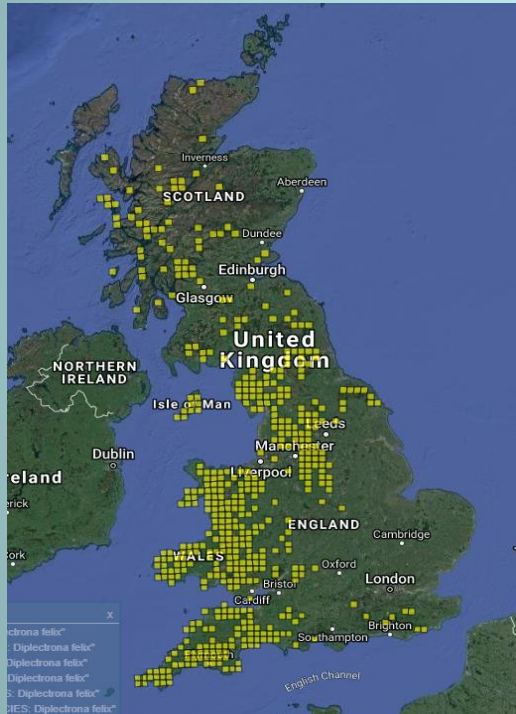
Add biology and you can write  
species accounts

1991

## *Diplectrona felix* COMMON

Throughout Britain

Streams which do not become warm in summer. Consequently found particularly in springs and small woodland streams



2018 Map

### *Diplectrona felix*

#### Status

Wallace (2016) *A review of the status of the caddis flies (Trichoptera) of Great Britain* classifies this as of Least Concern from a conservation viewpoint and it is not a Nationally Scarce Species.

#### Distribution, summary

England - widespread species but only common in north-west and south west.

Wales – widespread and common.

Scotland – mysteriously apparently absent from large parts of the country.

Ireland – widely distributed but not yet found in the centre, (O'Connor, 2015).

Isle of Man – widespread and common.

(Channel Islands – recorded but not mapped here).

#### Habitat

Small streams and trickles. This is known to require cool water so spring streams are especially favoured. The larvae are found on the larger stones and pebbles.

#### Life history and behaviour

Adults have been found mainly from April to September and there appears to be only one generation a year, though Edington & Hildrew (1995) record that occasionally larvae may take two years. Identifiable larvae can be found throughout the year.

The females lay on the underside of submerged stones.

The larvae make the characteristic sieving net of family Hydropsychidae attached to the larger items on the bottom. Williams *et al* (1993) found they fed exclusively on detritus and fragments of plant material.

Finding it and recognising it in the wild





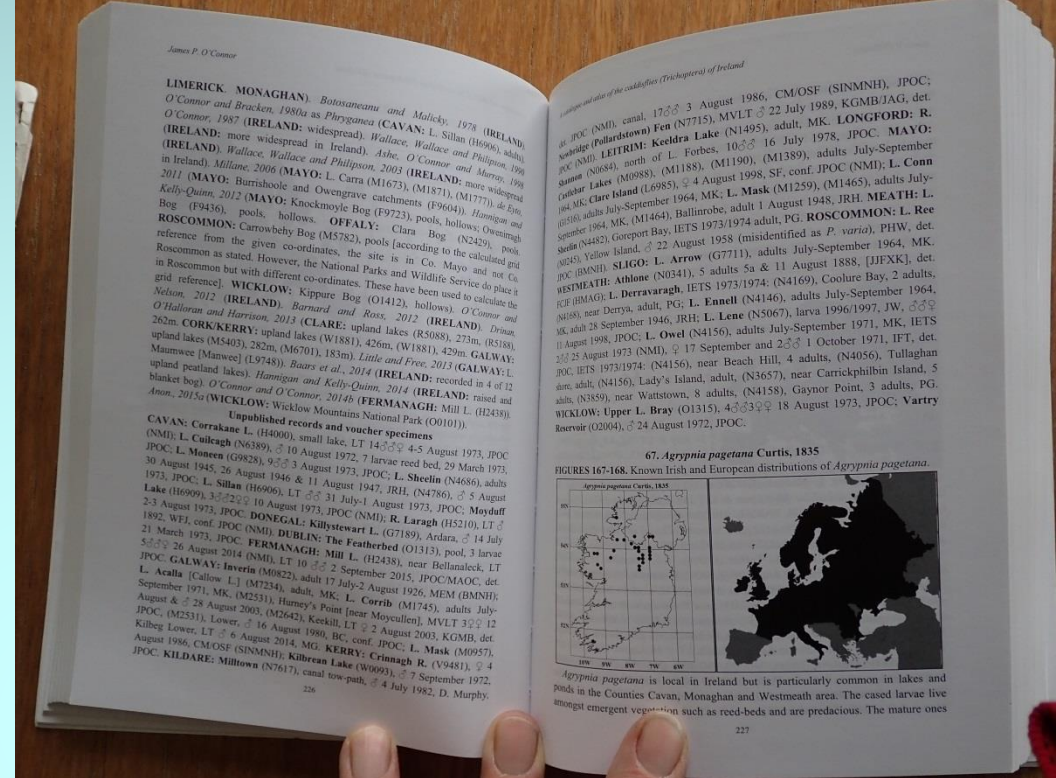
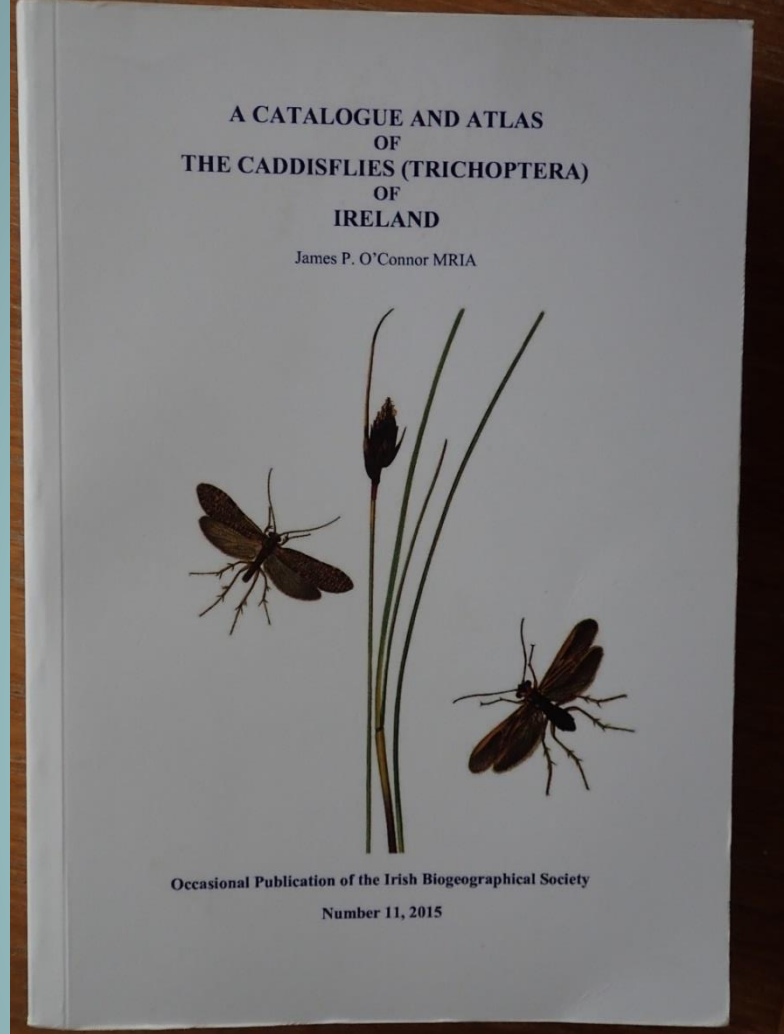
Ian Wallace

Jim O'Connor



# **Distribution Atlas of the Caddis (Trichoptera) of the British Isles**

(text ready mid 2020)



(Based on 20,000 records)

There are 500,000 for the other British Isles so new Atlas will have:-

- Maps
- Species accounts
- (Most) Record details being available via NBN or National Biodiversity Centre for Ireland

# 500,000 records with NBN

Best current maps are on the NBN Atlas

I would always like that to be the case

But the current maps could be better



# First task to get better maps

- find records that are not with NBN e.g.

## Local Environmental Record Centres (LERCs)

A few LERCs send data at full resolution to NBN

Several send data at 10km (hectad) scale to NBN

Many send nothing to NBN

How could I get LERC data not on NBN?

I strongly support role of LERCs to get the caddis data used

Caddis Recording Scheme data on NBN always had a CC-BY licence, so it can be used by LERCs commercially

But, few LERCs seem to download NBN data

That was an opportunity to be grasped

To get data to the LERCs

Get data back from them



bug that typically occurs in 'weedy shallows of slow and still water', according to Huxley (2003). The maps in that work show no records from the north-west Highlands, although it has been recorded from many of the Scottish islands.



### A working check-list of the Caddisflies (Trichoptera) of Highland

Ian Wallace

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schemes. There are 10 Highland species with that grade.

'ns' (denoting Nationally Scarce) is a species that in a UK wide context is recorded from between 16 and 100 post 1979 10km squares (hectads). This equates to Nationally Notable A and B of earlier schemes. There are 33 Highland species with that grade.

There are comparatively few hectads in Highland Region so most northern species tend to have a rarity status. They may be common there – an example would be *allengreni* that lives on stony lake

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alists' Field Club

2018). The enemy  
decline of the red  
e Royal Society B

### CHECK-LIST OF THE CADDIS (TRICHOPTERA) OF NORTHUMBERLAND AND DURHAM

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#### SUMMARY

Analysis of data in the UK Caddis Recording Scheme shows that 136 species of caddis, which is 68% of the UK list, have been recorded from Northumbria, 117 from Durham and 132 from Northumberland. The history of caddis recording in the region is discussed. Habitat requirements are summarised. The distribution of some rare species is described.

#### INTRODUCTION

##### Purpose of the check-list

Caddisflies are a small order of insects that are allied to the Lepidoptera, which they quite closely resemble at the adult stage. Their larvae are conspicuous and well-known freshwater insects. The check-list presented here summarises the knowledge of the distribution of the caddis of Northumbria at 1 September 2018. It is hoped it will help recorders put their observations into context.

servation Status is also taken from (2016). Two categories have been Highland species. Endangered is only to *Hagenella clathrata*, a species of *Molinia* marsh with past Highland records from Aviemore; it would be hard to find this attractive day-flying caddis.

Not surprisingly, several species are status of Data Deficient, which may probably have a conservation lack of records or biological information makes it impossible to assign a

Order of species is alphabetical to assist quickly check on the status of their species the title 'working' check-list.


As used in the table below follow & Ross (2012).

##### Information on future changes to the list

They are generally crepuscular and relatively weakly flying adults. This may make them less able to exploit global warming. Generally insufficient quality data to put only a handful of UK species are moving north and none of them have reached southern Scotland. There are species with a northern bias that do seem to spread north from an already localised

## Vice-County Based Check-lists

# So, I offered all the data sent to NBN to LERCs

[Home](#) [About](#) [Services](#) [Contact](#)

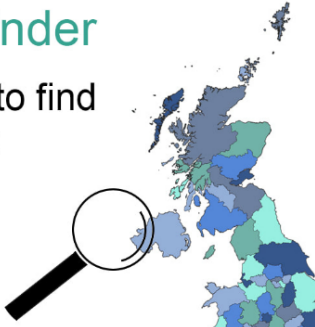
The Association of Local Environmental Records Centres is a membership organisation representing LERCs across the United Kingdom. It promotes the standing of LERCs as the definitive source of high quality, local, capture-resolution biodiversity data to inform the decision-making process, provides representation at a national and regional level and seeks to enhance the professional standing of LERCs through its Accreditation scheme. It provides a central voice for the UK's Records Centre community and provides a support-based network of knowledge and advice for its members. ALERC achieves this through the work of its directors, staff and members - find out more about [ALERCs Aims and Objectives](#) or our specialist [ALERC Working Groups](#).

## Find Your LERC

“ Local Environmental Records Centres (LERCs) are not-for-profit organisations that collect, collate and manage information on the natural environment for a defined geographic area. LERCs support and collaborate with a network of experts to ensure

### LERC Finder

Click here to find your LERC



I did NOT make data exchange a requirement of my data offer but hoped they would

I emphasised I only wanted data so I could add dots to the forthcoming published Atlas Maps

38 LERCs sent data

50,000 records

4,000 dots I would not otherwise have

(In addition to LERC data already on NBN)



# I gave feed-back to the LERCS about all their caddis records

- I already had similar data for that 10km square = probably correct
- Species generally common in area = probably correct
- All others looked at in more detail
- All records for Nationally Scarce and Rare species scrutinised carefully
- Told them of known (to me) problems with identification keys

# LERC Data Quality

Very few implausible records

Most were data entry errors

If an LERC sends data to NBN

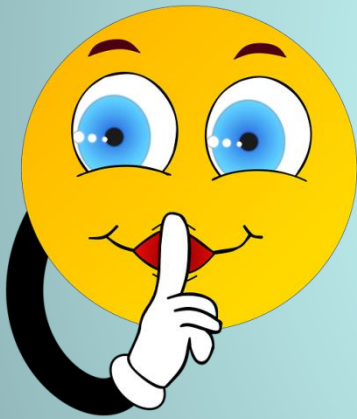
It would lack implausible records

So NBN maps would not be degraded

# Further records not with NBN

## Consultants & their clients

No idea how much is “out there”



Psst! I have found a rare  
caddis, what can you tell me  
about the species' distribution?



# Millions of records coming soon to NBN



(Summary of caddis data already on NBN via Caddis Recording Scheme)



Already on  
NBN

EA / NRW looking at how recording schemes can continue to contribute to their internal verification process

Enough about what is NOT with NBN!

Let's celebrate what is!!



For the 117,000 records (in addition to Caddis Recording Scheme 440,000) on NBN for example:

- From Government Sources
- From LERCs
- From iRECORD





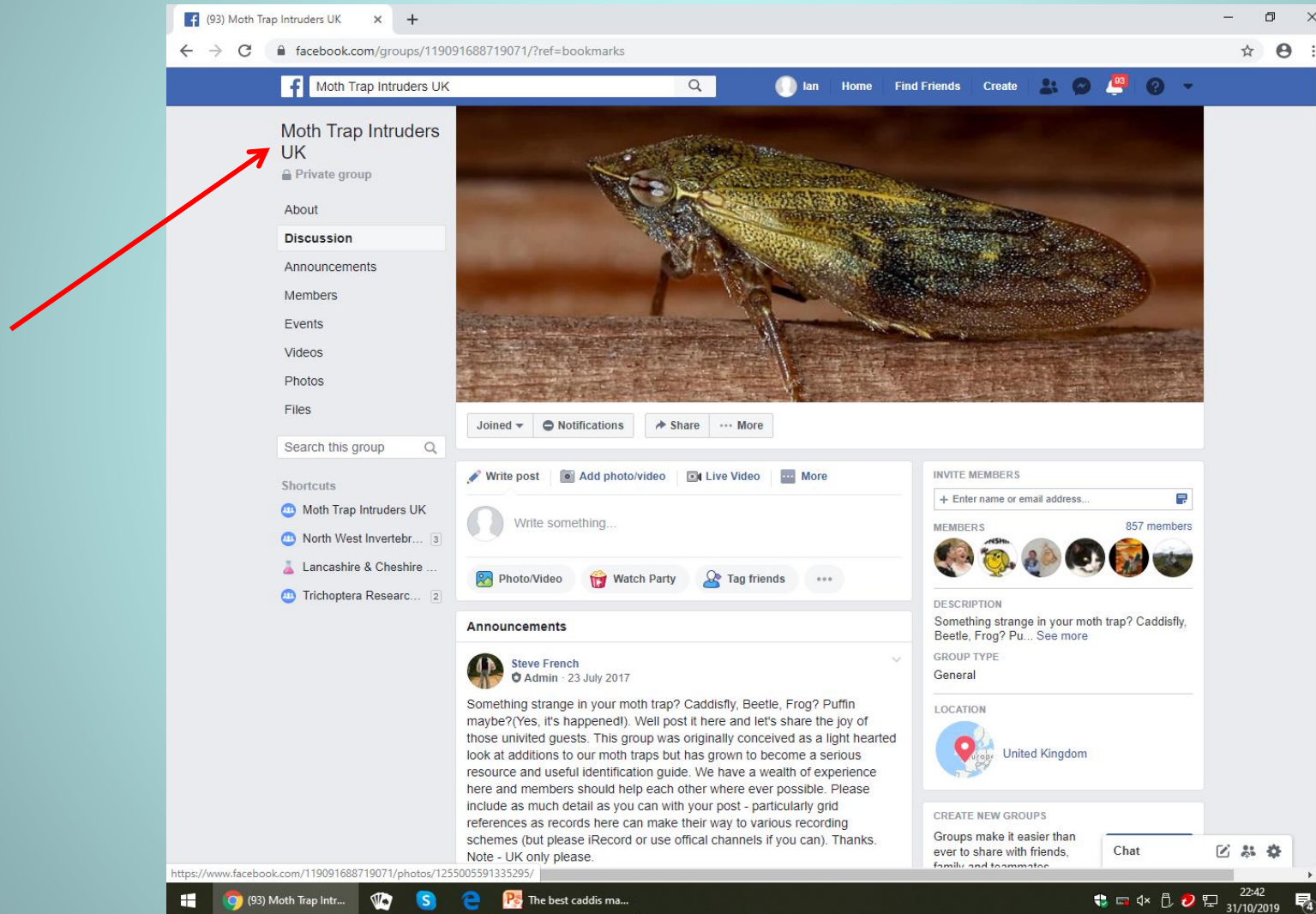
Like B.C. and A.D.

B. iRECORD and A. iRECORD

Verified records available rapidly to potential users

7,500 caddis records to date

# A competitor for iRECORD ?



The screenshot shows a web browser window displaying the Facebook group page for 'Moth Trap Intruders UK'. A red arrow points from the left towards the group name in the left-hand navigation menu. The browser's address bar shows the URL: <https://www.facebook.com/groups/119091688719071/?ref=bookmarks>. The Facebook interface includes a top navigation bar with the user's name 'Ian' and options like 'Home', 'Find Friends', and 'Create'. The group's cover photo is a close-up of a green and black insect, likely a caddisfly, resting on a wooden surface. Below the cover photo are buttons for 'Joined', 'Notifications', 'Share', and 'More'. The left sidebar contains a search bar and a list of shortcuts, including 'Moth Trap Intruders UK', 'North West Invertebr...', 'Lancashire & Cheshire ...', and 'Trichoptera Researc...'. The main content area features a 'Write post' section with options to 'Add photo/video', 'Live Video', and 'More'. Below this is an 'Announcements' section with a post from 'Steve French' dated '23 July 2017'. The post text reads: 'Something strange in your moth trap? Caddisfly, Beetle, Frog? Puffin maybe?(Yes, it's happened!). Well post it here and let's share the joy of those uninvited guests. This group was originally conceived as a light hearted look at additions to our moth traps but has grown to become a serious resource and useful identification guide. We have a wealth of experience here and members should help each other where ever possible. Please include as much detail as you can with your post - particularly grid references as records here can make their way to various recording schemes (but please iRecord or use official channels if you can). Thanks. Note - UK only please.' The right sidebar contains an 'INVITE MEMBERS' section, a 'MEMBERS' section showing '857 members', a 'DESCRIPTION' section with the text 'Something strange in your moth trap? Caddisfly, Beetle, Frog? Pu... See more', a 'GROUP TYPE' section set to 'General', a 'LOCATION' section set to 'United Kingdom', and a 'CREATE NEW GROUPS' section. The bottom of the screen shows a Windows taskbar with various application icons and a system clock indicating '22:42 31/10/2019'.





Proposed Publication by Field Studies Council in its AIDGAP Series



Photo: Sharon Flint

# **Test Version of Field Guide for Identifying Caddis Adults**

For use with photographs and live specimens

Please do not copy this test guide as  
permission has not been sought to use the  
photos, but that will of course be done once  
a final selection has been made for use in  
the final publication

Ian Wallace: [laneschesh@hotmail.com](mailto:laneschesh@hotmail.com)

Sharon & Peter Flint: [flintsentomologists@btinternet.com](mailto:flintsentomologists@btinternet.com)



# So there are lots of dots on NBN maps

- Are they all accurate?
- No, but how significant are the errors?



- About 1,900 records with NBN
- For this species identification errors considered few

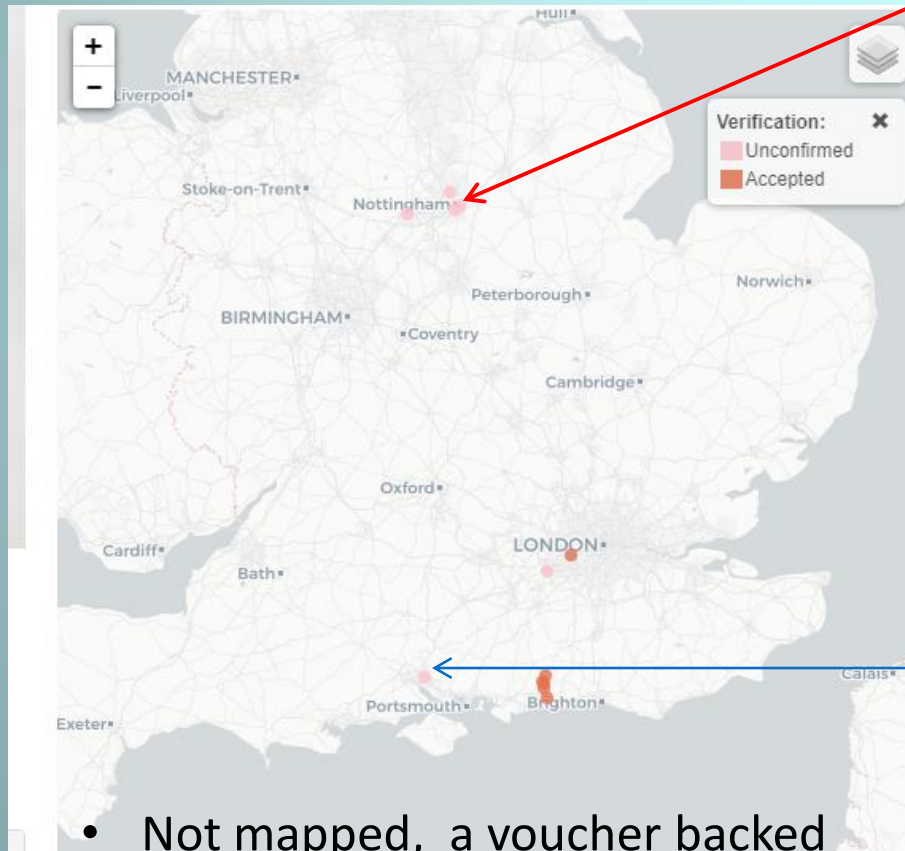
## *Diplectrona felix*

- Any errors from stronghold would not alter general opinion
- Isolated records from S.E England & Northern Scotland made by competent identifiers so probably OK
- So, NBN Map for *Diplectrona felix* can be regarded as OK for making distribution statement

LERCS have always supplied full data if I query a hectad level entry on NBN



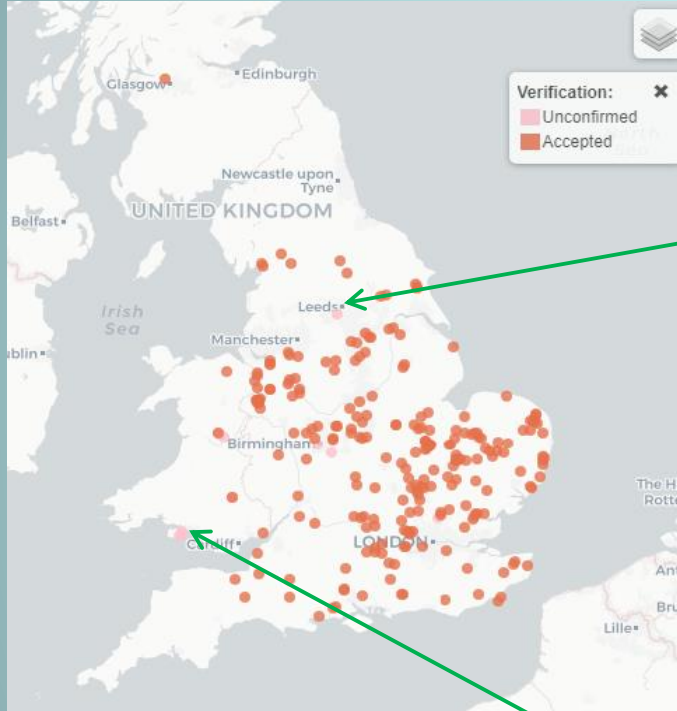
# *Hydropsyche bulgaromanorum*



- Nottingham area records (from Nottingham Museum) incorrect
- Confusion over what modern name to apply to *Hydropsyche guttata* that is in the collection and the wrong one being chosen from two options.
- Resources not available to correct NBN entry
- Literature only citation but seems plausible



# Inadequacy of “Unconfirmed” NBN Atlas symbol



Not considered by  
me as verifier



Considered plausible  
by me even though  
there is no voucher  
or photograph and I  
do not know the  
recorder

*Limnephilus decipiens*

# Categories of record and map dots

## ACCEPTED

- Voucher back-up (specimen or photo)
- Verifier considers very likely – e.g. in range and/or can vouch for the recorder's ability

## SUGGESTED NEW CATEGORY of SYMBOL

- Carefully considered as Plausible but no good supporting evidence

## UNCONFIRMED

- What it says – not looked at [yet] by a verifier

# Problem of queried “Accepted” records

way out of range



Good that NBN now has a system for records to be queried and discussed with submitter

# Some identification issues cannot be resolved amicably

“NO! it is species Y”

“It is species X”





# NBN as the Record Adjudicator?



Judge Jo



Ian Wallace



Jim O'Connor

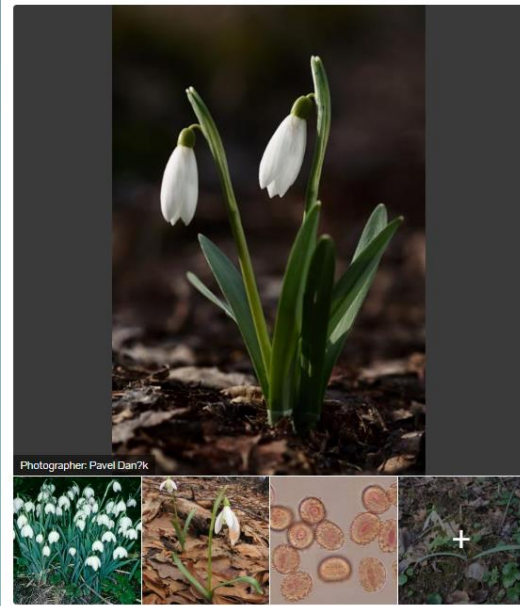
# **Distribution Atlas of the Caddis (Trichoptera) of the British Isles**

“The great thing about a published Atlas is that you can just ignore records you feel are wrong”

*Garth Foster author of the Water Beetle Atlas*

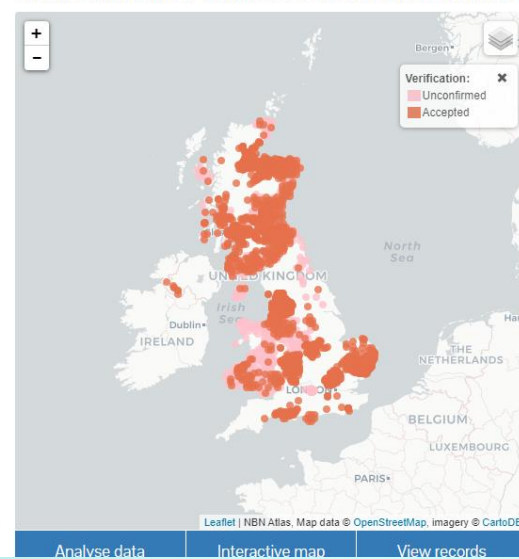
# **Distribution Atlas of the Caddis (Trichoptera) of the British Isles**

- The published Caddis Atlas will have better maps than the NBN Atlases
- I want a general user to have access to the best possible maps
- I want that to be via the NBN Atlases

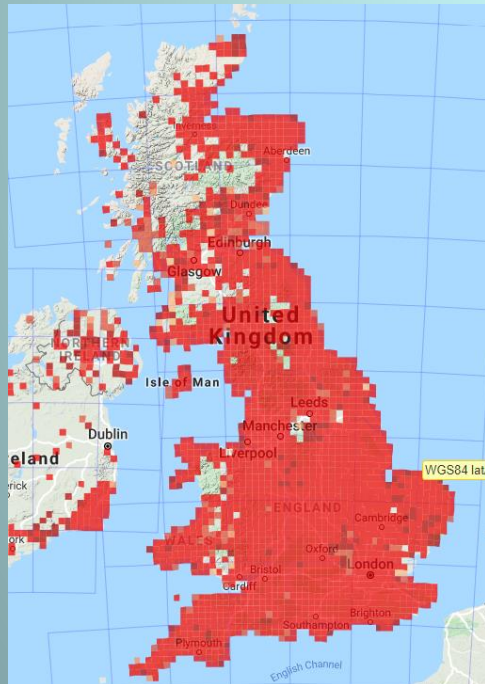


9,790 records (9,790 in total)

This map contains both point- and grid-based occurrences at different resolutions



NBN



BSBI

*Common Snowdrop*

Many other instances where the best maps are not currently on NBN

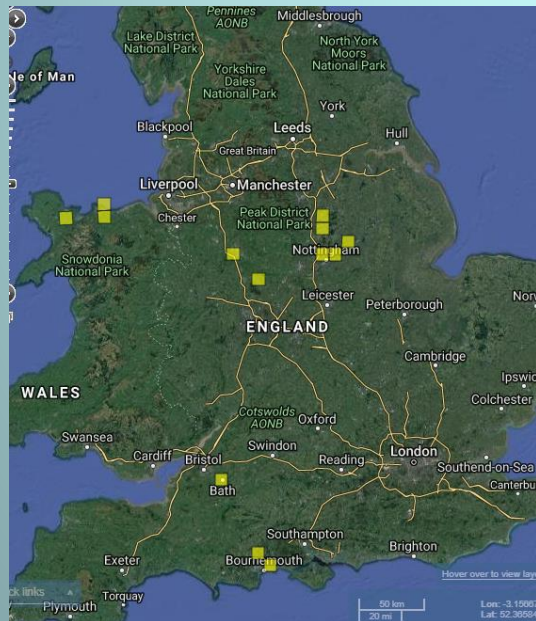


I found this weird spider recently in my local garden centre on the Wirral



Identified it quickly as *Uloborus plumipes*, alias  
The Garden Centre Spider

Looked at NBN



Fortunately I knew of the Spider Recording Scheme

General recorders / users look  
to NBN  
for the best maps

How can that be achieved?

I identify an iRECORD submission as *Chaetopteryx villosa* –  
(Also known as the Flying Gooseberry)

I would like the recorder to have fast access to:



***Chaetopteryx villosa***

**Status**

Wallace (2016) *A review of the status of the caddis flies (Trichoptera) of Great Britain* classifies this as of Least Concern from a conservation viewpoint and it is not a Nationally Scarce Species.

**Distribution, summary**

England, Wales & Scotland – widespread and common.  
Ireland – widespread, (O'Connor, 2015 but who notes that the flight time of autumn to early winter makes it under-recorded).  
Isle of Man – no records – which is remarkable as there is a lot of suitable habitat.  
(Channel Islands – recorded but not mapped here)

**Habitat**

It is found in streams and rivers and stony lake shores of impoverished, upland lakes. In areas where there are many small stony streams this species is ubiquitous.

**Life history and behaviour**

Adults have a late flight period with most being taken between September and November. The pupae emerge from the pupal case and they swim ashore and once beached the adult emerges from the pupal skin (Silfvenius, 1906 and Solem, 1986). They are ready to mate at once and it lasts up to 12 days (Solem, 1986). The long mating and general slow pace of life of the adult means that it has been possible to prove that this species may mate a second time before producing a second egg mass, (Solem, 1984). The females drink water and need that to initiate egg-laying (Wichard & Wagner, 2015), but couples could be kept alive for 3-4 weeks without (Higler, 2008). Majecka *et al* (2011) provide a very detailed description of the eggs and their development. They are laid above water a favourite spot was the underside of moss-covered logs, often in groups, or on alder tree roots. They were usually 2 cm above the water and when the larvae hatched they dropped into the water. Presumably at some sites the eggs would become submerged by rising water levels but by choosing a late laying time that is reduced as levels would have already risen. However, Majecka *et al* thought it was reduced predation by things like frogs that was the benefit of late laying.

In this country and elsewhere some of the eggs hatch quickly and the resulting larvae overwinter at instar 1 or 2, after a burst of feeding, and resume growth in spring. Some of the eggs are presumed not to hatch until spring as instar 1 continue to be found, Tolcamp (1980) noted instar 1 up to May in his Netherlands streams. Majecka, Majecki & Walaszek, (2011) also report delayed hatching in cold

***Chaetopteryx villosa* SUMMARY ACCOUNT**

Widespread and common except in western Scotland.

Streams, rivers and upland lakes that have some stony substratum



Via NBN



# Data Quality is one major issue?

- Corrupting maps with unverified data



## Biological Records Vetting Agency Headquarters Building

Lots of players with differing objectives

A fully functioning

National Biological Record Data Exchange Network

Still seems a way off



# What would help little me?

- More LERCS down-loading data from NBN
- LERCS to put all verified data on NBN at least at hectad level
- Minor changes to NBN map presentation

## A few more hours in the day to:

- Get 2019 data ready for submission to NBN
- Complete Atlas and species accounts

# LERCS who do not submit, at least hectad level data to NBN Is this your national image?

LITTLESHIRE LOCAL ENVIRONMENTAL RECORDS CENTRE



Motto – What we have we hide



Warning! Data given to this Record  
Centre will NOT be readily made available  
for national use

# NBN is this your national reputation?

NBN Maps seem to  
be missing lots of  
records





