



# PondNet: Identifying Fairy Shrimp



# Fairy Shrimp

## *Chirocephalus diaphanus*

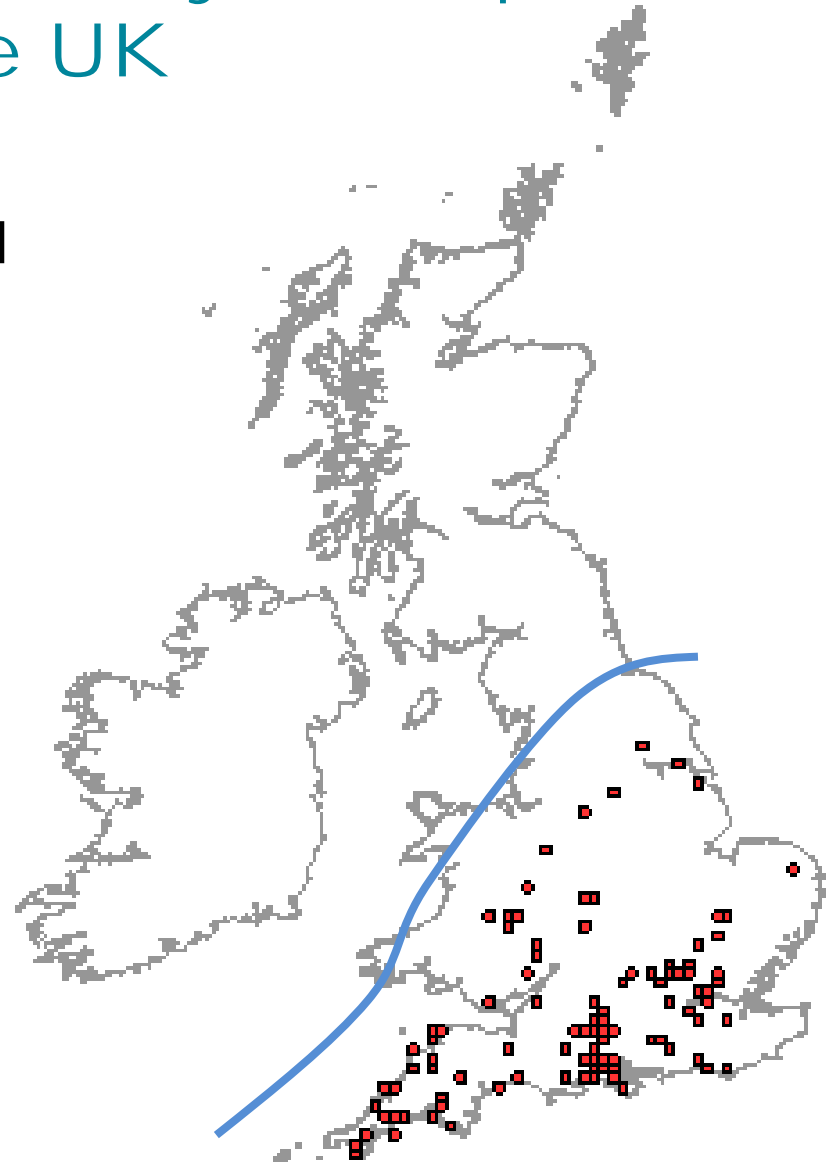


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Fairy shrimp are the archetypal temporary pond species. One of the living fossils - their well adapted body form has remained unchanged for millennia.

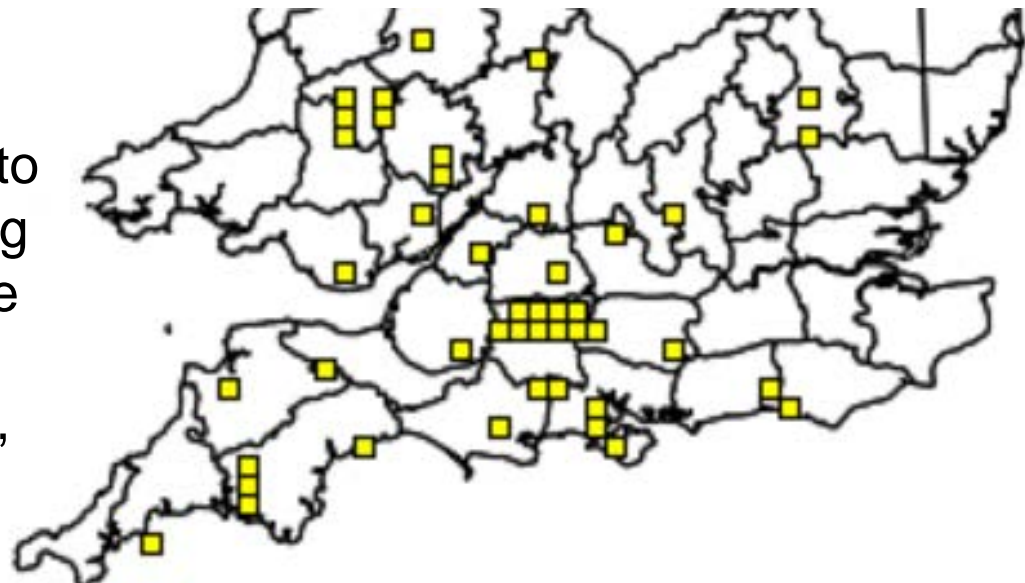
# Distribution of Fairy Shrimp in the UK

- In the last 300 years they have always had a patchy distribution
- Only ever recorded from roughly 100 10km<sup>2</sup>
- Distribution related to rainfall, evaporation rates and geology
  - i.e. formation of temporary ponds on circum-neutral soils



# Records entered to NBN in the last 50 years – only 50 10km grid squares

Further declines in the last 50 years has reduced them to just a few remaining strongholds – in the New Forest, Hampshire, Devon, Radnorshire and Sussex.



By far the largest meta population remains on Salisbury Plain, Wiltshire.

# How to identify Fairy Shrimp

Easy to identify as they don't look like anything else you'll find in the pond:

- 3cm long – a large head with short antennae and a tail with a fork (called the telson)
- Swims on its back using its 11 phyllopods (pseud legs) to propel itself through the water.
- They pass food particles down a food groove to the mouth along with oxygen.
- Males have tusks which they use to hold the females while mating.
- Females carry their eggs in a sack at the base of their tail.



**Claspers**



**Telson**



**Pseudo-legs**

**Egg sac**

## Other species in similar habitats

For reference – other species which are called shrimps or which may be encountered when looking for Fairy Shrimp (although they look very different in appearance once you know what to look for!)



Freshwater aquatic shrimps (*Crangonyx pseudogracilis* and *Gammarus aquaticus*) – note the multiple jointed legs, long antennae, and no tail/telson (easily seen in Fairy Shrimp). They also have a characteristic curved body outline, and scurry along the pond base rather than swimming in the water column.



Larvae of aquatic water beetles (Coleoptera spp) - note the 6 jointed legs (not the pseudo-legs of Fairy Shrimp), large pincer-like jaws and lack fully developed eyes. Fairy Shrimp have 'googly' eyes on either side of the head giving them a comical appearance.

# Zippering through the teenage years



Hard to identify when they first hatch as they look like the many of the small microcrustacea found in ponds – they quickly go through a series of moults and within a few weeks are recognisable in their adult form (c. 2 weeks or less).



# Laying eggs as quickly as possible before predators catch them . . .



Fairy Shrimp become sexually mature long before they reach maximum size – producing just a few eggs (i.e. 5 eggs) when only one cm in size.

As size increases they produce more and more - some really large females can produce as many as 600 eggs.

# You are what you eat!



Fairy Shrimp will feed on any organic particles – if the pond is full of algae they may even turn bright green. Large adults can even manage a water flea or two.

## What is their habitat type?

- Always associated with circum-neutral temporary ponds – but within this there is a lot of variation
- Some ponds are broad and shallow – in hard-grazed commonlands
- Some ponds are deep (c.1m) on the edge of wooded habitats
- Some sites are historic ponds – appearing in the same spot each time it rains for hundreds of years – some sites are wheel ruts which may be there for a decade and then gone again.



# A typical temporary pond







Common grazing land -  
Spring





Common grazing land -  
Summer





Wooded habitat –  
but still grazed



Temporary ponds  
created in tank  
wheel ruts –  
Salisbury Plain

