Yellow Mayfly *Potamanthus luteus* at Norchard, Worcestershire2018

Mike Southall

Following an exceptional haul of moths on the night of the 6th July 2018 which had included a new species for Worcestershire, *Metalampra italica*, I set the traps again on the following evening. One of the traps I set in an asparagus field near to my house in Norchard, a Skinner trap, with a 125 watt Mercury Vapour bulb, which I inspected later in the night and potted two Mayflies (01) and a Lacewing. The Lacewing I identified as the Nationally Notable, *Nothochrysa fulviceps*.

The Mayflies were confirmed as being Yellow Mayflies, *Potamanthus luteus*, by Craig Macadam on my iRecord entry. I subsequently found online a species management sheet published by Buglife, written in 2011, about the Yellow Mayfly.

01. Yellow Mayfly *Potamanthus luteus* at Norchard, Worcestershire 2018. Mike Southall.

It states: "**The Yellow mayfly** is one of Britain's rarest mayflies. The nymphs or larvae of this mayfly typically live in silt trapped amongst stones on the riverbed in pools and margins and grow to between 15 and 17 mm. They are streamlined with seven pairs of thick feathery gills that are held outwards from their sides. The adults have three tails and large hindwings. The body is a dull yellowish-orange with a distinctive broad yellowish-brown stripe along the back. The wings are yellow and the cross-veins a dark reddish colour. Due to its rarity and decline in numbers this insect has been made a Priority Species on the UK Biodiversity Action Plan.

Life Cycle

There I one generation of this mayfly a year which overwinters as larvae. The adult mayflies are short lived and emerge between May and late October (with peak emergence in July). They will typically emerge at dusk and usually from the surface of the water, although they may also emerge by climbing up stones or plant stems partially or entirely out of the water.

Distribution map

This mayfly is historically a rare species with populations in the River Wye and Usk, Herefordshire. The most recent surveys show a dramatic decline in the River Wye population and have failed to find this species in the River Usk. A small population has however recently been found in the River Teme in Worcestershire.

Habitat

In the Herefordshire streams where this species has been found, the larvae have been found under loose stones, preferring mobile sections of shingle or a mixture of larger stones with loose shingle such as those found downstream of bridges or at the confluence of tributaries. The highest densities of larvae can be found at sites with deeper, slower-flowing water ie. c.35cm deep/0.15m per second. Adults can be found in bankside vegetation and nearby trees."

The species management sheet then explores threats and causes of decline, followed by habitat management recommendations, and environmental stewardship options. One of the possible threats says that as the adults of this species are attracted to light, the positioning of bankside lights, such as road lights, may also have a deleterious effect on breeding populations.

After photographing and releasing the Mayflies I was surprised to find two more a week later, the 14th of July, this time in my garden Robinson moth trap. I recorded another on the 26th of July again in my garden moth trap. My garden is situated a mile and half to the east of the River Severn, the most likely source of the mayflies, and at 200 feet altitude, 150 feet higher than the river. It seems remarkable that the insects should travel so far from the river if that is there breeding location, or are they utilising a water body nearer to this site? However, the nights of occurrence were warm, over 16° C, and ideal for dispersal.

iRecord details a record of an adult at Alveley 27/06/2017, and another at Stourbridge on the 28/07/2017, and I have heard of recent sightings from Bewdley and Shrewsbury, which add weight to a River Severn population.

In his book *Wildlife in the Marches* Mark Lawley discusses dot-distribution maps. He shows two National dot maps for Spreading Bellflower and Yellow Mayfly and questions "Do these distribution maps accurately represent the British distributions of these species, or do they only indicate those districts in which naturalists have recorded them, with other localities in which they occur omitted through ignorance?"

This may be the case, but I have been running moth lights for nearly twenty years and this is the first year I have recorded Yellow Mayflies. This suggests a recent colonisation of the river in my area.

References.

Buglife Species Management Sheet. Prepared by Suzannah Dangerfield. Acknowledgements: Craig Macadam

Bratton J. 1990 *A review of the scarcer Ephemeroptera and Plecoptera of Great Britain*. Research and Survey in Nature Conservation No.29 JNCC, Peterborough.

Lawley, M.2015 *Wildlife in The Marches.* Marches Publications, Ludlow.

Macadam, C (2011) *Species dossier: Potamanthus luteus, Yellow mayfly*. Buglife.

Image

01. Yellow Mayfly *Potamanthus luteus* at Norchard, Worcestershire 2018. Mike Southall.