Hygrobates setosus Besseling, 1942 (Acarina, Trombidiformes, Hygrobatidae) passively transported by a damselfly _Coenagrion puella_ (L., 1758) at Little Comberton, Worcestershire.

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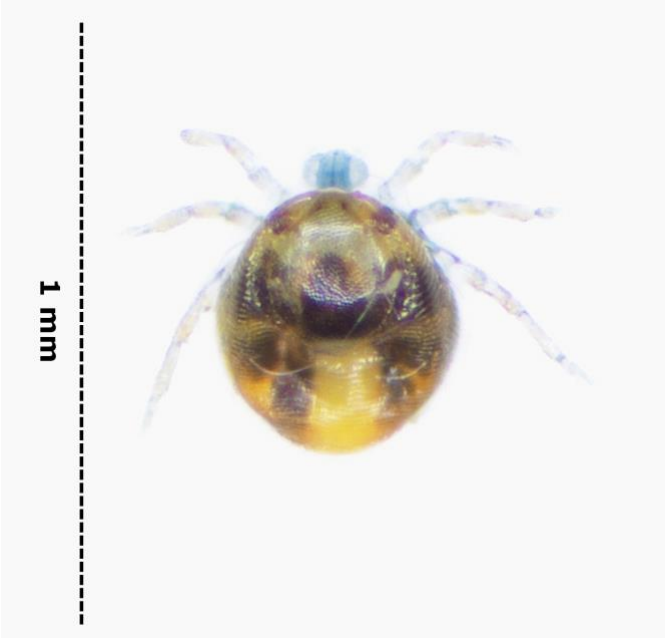
Introduction

On 3rd June 2017 a fresh adult female damselfly *Coenagrion puella* (L., 1758) flew into a room at Little Comberton, Worcestershire (S094 30 m O.D.) and landed on a painted wall where it remained for two days until it died. The likely source of the damselfly was a weedy garden pond situated no further than 50 m from its final resting place. The insect was then placed on white paper shortly after which a mite was observed crawling on it.

Discussion

The mite was examined microscopically (01) and was found to be an adult aquatic hygrobatid mite *Hygrobates setosus* Besseling, 1942. At 0.2 mm in length (02) invertebrates this small are likely to be overlooked but this observation raises the question of exactly how the mite was transported on the damselfly. Several species of *Hygrobates* are parasitic on aquatic Diptera (Gerecke, Gledhill, Pešić, & Smit, 2016) and the slow deterioration of the damselfly was reminiscent of parasitisation. However, subsequent dissection of the damselfly, whilst detecting some apparent breakdown of the internal thoracic tissues, failed to throw light on this.

01. The aquatic mite *Hygrobates setosus*. Little Comberton, Worcestershire, 3 June 2017. P.F. Whitehead



02. The aquatic mite *Hygrobates setosus*. Little Comberton, Worcestershire, 3 June 2017. P.F. Whitehead

More plausible is that this is a rarely observed example of phoresis in an aquatic mite which could have attached itself to the damselfly nymph and then later to the imago. Phoresis in astigmatid mites has been recognised for many years and is well documented in the literature (OConnor, 1994) but in this instance the dispersant was an adult mite not a hypopus which is morphologically differentiated to withstand the rigours of phoresis. Parasitism in hydrachnid water mites was discussed in the nineteenth century by Murray (1876) and later by Mellanby (1938). Gerecke, Gledhill, Pešić, & Smit, (2016) provide recent updates to knowledge of the group.

References

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Images

01. The aquatic mite *Hygrobates setosus*. Little Comberton, Worcestershire, 3 June 2017. P.F. Whitehead
02. The aquatic mite *Hygrobates setosus*. Little Comberton, Worcestershire, 3 June 2017. P.F. Whitehead