

Snow Flea, *Boreus hyemalis* (L., 1767 Mecoptera: Boreidae) found mating in Wyre Forest

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Snow Fleas mating, 12 November 2013

John Bingham

The Wyre Forest Study Group has been recording the distribution of *Boreus hyemalis* as part of the ongoing mapping of a number of interesting or key species found in the forest (Winnall 2009) (Bingham 2012). Denise and myself have found several new sites and starting to understand more of the preferred habitat. On November 12th 2013 we visited Withybed Wood looking for late season fungi. The weather was fine and sunny if a little cold, after heavy rain had fallen during the night. Denise found the first *Boreus hyemalis* at the base of a mature oak tree in a valley. This was our earliest record for the species. As we then knew they were out we stopped to look on the steep bank above Dowles Brook in an area of mature oak coppice with a bare but mossy ground layer.

It was only a matter of minutes before we both started to find more, then I noticed a pair in copulation. This was the first time we had managed to see mating behaviour and then we found a male with a female locked on his back using the modified wing cases. *Boreus hyemalis* is flightless and the wings are reduced to buds in the female, but the male has two spine-like outgrowths or claspers formed by the wing case that are used in courtship to hold the female. The photographs show the female with her body arched and antenna folded lying across the back of the male held by the claspers. Later they assume a more normal mating posture with the female on top with the male claspers holding on to her front legs, her antenna tucked under her body and mid and hind legs tucked together.

I searched the internet for images of this mating behaviour but found nothing showing the male spines

or claspers actually holding the body of the female, although this behaviour is well documented (Buglife web links). So this is yet another interesting aspect of these fascinating creatures. We discovered 11 individuals on the slope but only covered a fraction of the bank so many hundreds could have been present in the extensive mossy coppice stools. Typically moss that covered base of the trees, or moss covered old oak coppice stools were the best areas to look.

(Ed. See map on page 80 showing Snow Flea records)

References / Reading

- Bingham, J. (2012) Snow Flea *Boreus hyemalis* (L., 1767 Mecoptera: Boreidae) in Wyre Forest. Worcestershire Record April, No 32, pages: 13-14. WRBC.
- Whitehead, P W. (2010) Snow Flea in Worcestershire. Worcestershire Record, April, No.28. WBRC.
- Winnall, R. (2009). Snow Flea, *Boreus hyemalis* (L.,1767) (Mecoptera: Boreidae). Wyre Forest Study Group Review 2009. 10:42.
- Buglife: <http://www.buglife.org.uk/discoverbugs/bugofthemonth/snowflea>.
- Buglife: <http://www.buglife.org.uk/bugs-and-habitats/snow-flea>



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