

The Spider Fungus - *Gibellula pulchra*

ROSEMARY WINNALL



Gibellula pulchra, 17 September 2011

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During a Wyre Forest Study Group field meeting on 17th September 2011, we found ourselves following the deeply incised Dowles tributary valley northwards in Longdon Wood. We were searching for molluscs and fungi and so kept low in the valley where damper conditions prevailed.

I was down near the stream scrabbling around in the leaf litter hoping to unearth an unsuspecting slug when I came across a very small white fluffy ball under the leaves (see photograph). It was covered with soft 'spicules' and these reminded me at first of a white *Scymnus* ladybird larva! Closer handlens inspection revealed, however, that the white colouration was due to a fungal mycelium. It was passed around the group and I believe it was Rosemary Hill who spotted correctly that the fungus had been formed on a spider, identifiable by its protruding leg parts.

Ted Blackwell (from Herefordshire Fungus Group) had asked me to look out for fungi on spiders several years previously. Although we had often found flies, and less commonly beetles and caterpillars with fungal

infections, this was the first spider body I'd found so encumbered.

The specimen was duly photographed and sent off to Ted who was able to tell me that it was an Ascomycete fungus, the sexual stage (teleomorph) of which is *Torrubiella arachnophila*. As the taxonomy had recently changed he then passed it on to Brian Spooner at Kew who confirmed the fungus as *Gibellula pulchra* (with long conidiophores), the commoner of the two British *Gibellula* species. Unfortunately we were unable to identify the spider!

Apparently, the fungal spores land on the spider, germinate and grow down through the exoskeleton to feed on the internal body of their host by secreting digestive enzymes. The spider dies and the fungus erupts through the exoskeleton (which is too tough to digest and thus remains identifiable), where the asexual spores are eventually released from the protruding branches or conidiophores.

This is just one of many other invertebrate pathogens to be discovered in the Wyre Forest! Can we find some others?