

Giant Oak Aphid *Stomaphis quercus* (Linnaeus, 1758) Hemiptera, Aphididae found at Devil's Spittleful NR.

John Bingham

At the Devil's Spittleful near Kidderminster, there are a number of colonies of the Jet Black Ant *Lasius fuliginosus*, one of which is known to have been present for at least forty years. At this colony, some large and distinctive aphids have been noted over a number of years, but their identity remained a mystery. These were secretive aphids which remained hidden deep within the tree bark, making identification difficult. It was only when I noticed an adult aphid on the surface of the bark and photographed it on 26th July 2024 (01) that their true identity was revealed.



01. Giant Oak Aphid on oak with *Lasius fuliginosus* in attendance. Devil's Spittleful 26.07.24. John Bingham.

I sent several images of this large, brown and shiny aphid to expert Bob Dransfield at the Influential Points webpage and he kindly named the species as Giant Oak Aphid *Stomaphis quercus*. This species is almost always attended by *L. fuliginosus* ants who milk it for honeydew (02). The partnership of the aphid with this particular ant species on oaks is apparently a unique combination in the UK. Further exploration revealed that both ant and aphid are living on three different oak trees in this general area, though there are also Jet Black Ant colonies without the aphids.

Other species of *Stomaphis* aphids are attended by different ants or are found on different tree species. The Giant Maple Aphid *Stomaphis graffii* lives on sycamores and other maples *Acer* spp. and Pale Giant Oak aphids *S. wojciechowskii* are found on various trees, but usually in association with the Brown Tree Ant *Lasius brunneus* not *L. fuliginosus* (Young 2020/21).

The Devil's Spittleful record is a significant one since *Stomaphis quercus* is very rare and was at one time thought to be extinct in the UK, but was found at Cavenham Heath, Suffolk in 2017 by Brian Eversham. This Worcestershire site appears to be the only current location for the aphid outside the Cavenham area, though Bob

Dransfield at Influential Points notes that some *Stomaphis* recorded on oaks with *Lasius fuliginosus* at Besford by Jean Young in 2021 were "almost certainly" *Stomaphis quercus*. There could be more sites in Worcestershire, so it is worth checking any *L. fuliginosus* colonies on oak trees. Look deep in the fissures on the tree trunk at 1-2 metres height, particularly where there are clusters of ants attending the aphids. Often the aphids are hidden by the masses of ants, but with an illuminated lens you can see their large bodies and enormously long rostra, the piercing mouthparts which allow them to tap the sap from the thick oak bark. These rostra, buried deep in the bark make escape from predators a difficult matter and so the ants' protection is very important to the aphids and has strengthened their mutualistic relationship. Records of *Lasius fuliginosus* without aphids are also of value, since this ant appears to be a declining species nationally.



02. A cluster of *Lasius fuliginosus* revealing the presence of Giant Oak Aphids hidden deep in the oak bark fissures. Devil's Spittleful 31.07.24. John Bingham.

References

Young, J. (2020/21). Observations of Jet-Black Ants and giant aphids at Besford. *Worcestershire Record* 48:70-77. Influential Points webpage. Available at: https://influentialpoints.com/Gallery/Stomaphis_quercus_giant_oak_aphid.htm. [Accessed 20.11.24].

Images

01. Giant Oak Aphid on oak with *Lasius fuliginosus* in attendance. Devil's Spittleful 26.07.24. John Bingham.

02. A cluster of *Lasius fuliginosus* revealing the presence of Giant Oak Aphids hidden deep in the oak bark fissures. Devil's Spittleful 31.07.24. John Bingham.