

Bealeswood Common, October 2021

Spiders!

Bealeswood Wildlife Recording Group (BWRG)

Previous monthly records and notes are posted at www.dockenfieldpc.org.uk/wildlife

It's Halloween so why not turn our attention to spiders? Arachnophobes can look away but in this 'season of mists and mellow fruitfulness' there is beauty to behold in this web spun on the Common early one morning



this month. It is the work of an araneid orb-weaving spider. There are 34 species of this family recorded so far in Britain. The web is silk produced by an organ on the lower abdomen called the spinneret. The threads are so fine that water droplets from autumnal mists are needed to reveal them to the eye. Identifying the species from its web is not exact science but this appears to be that of the Garden orb-weaver *Araneus diadematus*.



A little earlier in autumn, around the Devil's Bit Scabious colony, on the Common another orb-weaver was identified. One with a very recent history of colonisation in Britain. First found in Rye, Sussex in 1921, it

was localised there until late in the last century and seen for the first time in Surrey in 1998. Ours is the first observation on Bealeswood of the



Wasp Spider *Argiope bruennichi*. The photo shows the spider's underside, so the mimicking black and yellow bands of the wasp are not visible but the spinneret can be seen, as marked by the arrow. It is a large female about 40mm from toe to toe and remained motionless for 20 minutes, awaiting her next prey or, perhaps, after feasting on a smaller male once he had performed his nuptial duties. As shown on the BBC [Autumnwatch](#) programme (episode 3,

Oct 28th) her next priority is to spin a nest for her eggs that will hatch to produce a host of spiderlings in spring. Herein lies the secret of their expanding range, they haven't necessarily walked from Rye but ...flown. Or to use the term adopted by the scientists "ballooned". Both the spiderlings of orb-weaving spiders in spring and adult females in autumn perform this feat. The former to avoid the cannibalistic tendencies at their birthplace.

In the last decade more is being revealed about the orb-weaver's ability to produce tens of flight silk threads from the spinneret. These are microscopic in diameter (c.200nm) and over one metre in length. Then by judicious choice of a launch site they disperse - floating, then gliding using atmospheric air currents. Claims are made of spiders ballooning to three miles in altitude and 100s of miles in distance. So, Rye to Surrey and now well beyond is evidently achievable in one flight. The aerodynamics of the flight fibres is still being studied and requires an understanding of turbulent air flow on which tricky subject Einstein is quoted as saying "[when I die and go to heaven there are two matters on which I hope for enlightenment. One is quantum electrodynamics, and the other is the turbulent motion of fluids](#)".

Photos by Alex Potts (webs) and Alan Cox (female Wasp Spider)

Steve Lockett would like to invite you to Hatch Pond, The Street at SU82764056 on 6th November for a pond dipping session. Also, to inspect the new pond and perhaps burn up some of the debris removed earlier. It will be good to see what wildlife is in the pond after the restoration work over the past few years. Bring your wellies, fun starts at 10:00.

Dan & Alison Bosence, Alan & Pauline Cox, Philippa & Colin Hall, Steve Lockett, Alex Potts, Christina Rasmussen and Anne Tutt, 30th October, 2021.