

**Encounters with *Volucella zonaria* and *Volucella inanis* in 2020**

Roger Umpelby.

As with many recorders I'm sure, I frequently get asked "what's this?" and very often the answer is quite easy, but some are more of a challenge. A request to identify some 'maggots' in a house in Kemerton in mid-November 2019 initially was a puzzle. These were extremely strange looking large legless larvae that I had never seen before (01, 02, 03). Clearly they were Dipteran larvae but which one? Then the vital piece of information was offered – "We do have a wasp nest in or beyond that partition wall". At least that indicated that the genus was most likely to be *Volucella* as the larvae of three *Volucella* species live in social wasp nests (Ball & Morris 2013).

Identifying invertebrate larvae is notoriously difficult, partly due to the lack of keys and detailed descriptions or images, but an excellent guide to hoverfly larvae was produced by Graham Rotheray (Rotheray 1993). This guide did have just one problem though, only two of the three *Volucella* species known to be associated with wasp nests are included. *V. zonaria* is not mentioned. It was however clear that the larvae were not *V. inanis* as larvae of this species lack the very long and obvious projections on the sides of each segment of the Kemerton specimens. This still left *V. pellucens* and *V. zonaria* as possibilities. Rearing through to adult was the best way to confirm the species, but the larvae were very varied in size and most, if not all, appeared to be immature and perhaps not ready to pupate. Not surprisingly I decided against trying to collect larval food from an active wasp nest and hoped at least one adult would emerge from the eight larvae I had been given! Just over six months later in early June 2020 one adult *V. zonaria* emerged, a very impressive beast indeed (04, 05, 06).



01. *Volucella zonaria* larva dorsal. Roger Umpelby.



04 *Volucella zonaria* adult female. Roger Umpelby.



02. *Volucella zonaria* larva lateral. Roger Umpelby.



05. *Volucella zonaria* adult female dorsal. Roger Umpelby.



03. *Volucella zonaria* larva ventral. Roger Umpelby.



06. *Volucella zonaria* adult ventral. Roger Umpelby.

Both *V. inanis* and *V. zonaria* are relatively new to Worcestershire with first records being in 2002 (McGee 2002 & Green, McGee & Westwood 2003) and 2004 respectively (Westwood & Green 2004). Although references to the food of the larvae of *V. inanis* all seem to agree that they predate social wasp larvae, not all agree about the food of *V. zonaria* larvae. Most authors regard *V. zonaria* larvae as just being scavengers; however The Hoverfly Recording Scheme reference (Hoverfly Recording Scheme web site) states it also predates larvae and pupae.

I had seen adults of *V. inanis* several times locally, but these were usually dead and sometimes squashed by neighbours who had found them in their house. So it was good to see and photograph a healthy adult male in my garden in Ashton-under-Hill in early August 2020 (07). As for *V. zonaria*, I had only seen one previously in Hertfordshire, but in late August 2020 on ivy flowers in a narrow strip of woodland close to home, was a female *V. zonaria* (08) along with several other hoverfly species and social wasps. It was interesting to see that when it was flying, it moved and looked even more like a hornet than when at rest, but it flew silently without the deep 'hornet drone'. It did have one last surprise when I viewed the picture later; it had a passenger (09). This passenger mite was presumably a phoretic mite, but there was not enough detail in the photograph for identification and the specimen had long since flown! That was not quite the end of the story as, just after drafting this article, I found that Rob Foster had published a similar article in 2019, but his is about *V. inanis* larvae at his home in Yorkshire (Foster 2019).



07. *Volucella inanis* adult male. Roger Umpelby.



08. *Volucella zonaria* adult female on ivy. Roger Umpelby.



09. Mite passenger on *Volucella zonaria*. Roger Umpelby.

#### References

- Ball, S. and Morris, R. 2013. *Britain's Hoverflies*. Wild Guides, Princeton University Press, Woodstock
- Rotheray, G. E. 1993. *Colour guide to hoverfly larvae*. Dipterists Digest No 9, Derek Whiteley, Sheffield - [https://diptera.info/downloads/df\\_1\\_9\\_Colour\\_Guide\\_to%20Hoverfly\\_Larvae.pdf](https://diptera.info/downloads/df_1_9_Colour_Guide_to%20Hoverfly_Larvae.pdf)
- McGee, K. 2002. Diptera, records of note, 2002. *Worcestershire Record* 13:31
- Green, H., McGee, K., Westwood, B. 2003. *Volucella inanis* reaches Worcestershire. *Worcestershire Record* 14:19
- Westwood, B., Green, H. 2004. Big hoverflies in Stourbridge. *Worcestershire Record* 17:30
- Hoverfly Recording Scheme <http://sgbtest.me.uk/hrs/species-details/379>
- Foster, R. 2019. *Volucella inanis* larvae on my stairs' carpet!! *Hoverfly Newsletter* Number 66 Autumn (Dipterists Forum).

#### Footnote

On 12<sup>th</sup> September 2021 I observed another *V. zonaria* at virtually the same place that I saw it last year. The one I saw last year flew almost soundlessly, but yesterday's individual had a very distinct drone, similar to a hornet in flight.

#### Images

01. *Volucella zonaria* larva dorsal. Roger Umpelby.
02. *Volucella zonaria* larva lateral. Roger Umpelby.
03. *Volucella zonaria* larva ventral. Roger Umpelby.
04. *Volucella zonaria* adult female lateral. Roger Umpelby.
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