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## Clearwing moths in East Yorkshire

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Clearwing moths (Sesiidae) are convincing wasp, bee, fly or hornet mimics, but can be distinguished by their small head, four transparent wings, a dark patch on the forewings, and lack of a narrow 'waist' between the abdomen and thorax. There are 16 species on the UK list, but only eight have been recorded in Yorkshire and two of these, the White-barred Clearwing *Synanthedon spheciformis* and Red-belted Clearwing *S. myopaeformis*, were last seen in the 19<sup>th</sup> century (Sutton & Beaumont, 1989). Clearwing moths are generally under-recorded as they are not attracted to light traps, but the increasing use of pheromone lures has demonstrated that many are more widespread than previously believed. Pheromone lures work by replicating the chemicals released by adult females to attract males, which can then be observed or captured. My previous attempts with clearwing moth pheromones have been restricted to observing a lure deployed in the field for a few minutes. In March 2020, however, I was gifted a pheromone trap, which meant I could leave the lures unattended for a few hours. This article describes my experiences with clearwing moths in East Yorkshire (vice county 61) during the 2020 COVID-19 epidemic, when I recorded five of the six species with recent records in Yorkshire.

The Lunar Hornet Moth *Sesia bembeciformis* is probably the most widespread clearwing moth in East Yorkshire (Sutton & Beaumont, 1989), with a total of 21 records from 15 locations up to the end of 2019. There are typically only a small number of records each year, either of adults observed by day or larval exit holes in willow stumps. Unlike the other clearwing moths, there was no commercially available pheromone lure until 2020. Within the first week of its release, in late June 2020, the Lunar Hornet Moth pheromone lure had led to the capture of moths across the country, as evidenced by a flurry of records reported on social media. My lure arrived in early July and I tried numerous times in my garden (in Skidby) in subsequent weeks, but without success. I therefore took the opportunity to go to Skipwith Common, where the clearwing has been recorded previously, on 20 July 2020, with the specific aim of targeting clearwing moths. As I only had a few hours, my plan was to head straight to the Bomb Bay Loop, where I knew there are plenty of willows. My pheromone trap had been deployed elsewhere, so I simply hung the lure in a net from large willows for 10–15 minutes at a time. At about the sixth location, during the late morning, I heard and then saw a Lunar Hornet Moth approaching the lure, and successfully netted it for a photograph (see front cover). I failed to record any other clearwing moth that day and further attempts for Lunar Hornet Moth in my garden were unsuccessful, but I am optimistic it is present in the local area, perhaps at Risby Wood or

the areas of sallow off Willerby Low Road or Middledyke Lane in Cottingham. Use of the new pheromone lure will no doubt prove this species to be far more widespread than suggested by the current distribution map (see Box, 2020).

There are only a small number of known Red-tipped Clearwing *Synanthedon formicaeformis* sites in East Yorkshire, but willows, the larval food plants, are widespread and this clearwing is again probably under-recorded. There were 28 records from nine locations in East Yorkshire up to the end of 2019, a total that has been bolstered considerably by multiple sightings at Tophill Low Nature Reserve in recent years. Willow is not particularly common in the Skidby area and the nearest Red-tipped Clearwing records (at Tophill Low Nature Reserve and Broomfleet Washlands) are approximately 15km away, but I was nonetheless mildly optimistic that I would capture it in my garden. My attempts for the first couple of months were unsuccessful, most likely as the adults had not yet emerged, but I was delighted to finally catch one on 20 June 2020 (Figure 1a). As with Lunar Hornet Moth, an increase in the use of the pheromone lure will likely reveal Red-tipped Clearwing to be more widespread than currently known (see Box, 2020). Indeed, it would be worthwhile deploying the lure in any areas with willows, such as near still and running waters in the rivers Hull and Foulness valleys.

The Yellow-legged Clearwing *Synanthedon vespiformis* is apparently one of the scarcest clearwing moths in East Yorkshire, with just four records from three locations, and the nearest recent record (at Skipwith Common in 2014) is approximately 35km from Skidby. This is likely because oaks, the main larval food plants, are relatively uncommon in East Yorkshire. In addition to numerous attempts in my garden, I deployed the Yellow-legged Clearwing pheromone lure at North Cliffe Wood on 02 and 23 June 2020, Skipwith Common on 20 July 2020 and Risby Wood on 23 July 2020, but was unsuccessful. This was disappointing as there are some large oaks at all three of the sites and the species has been recorded at Skipwith Common previously. I was therefore extremely surprised to find one in the trap hanging from the apple tree in my garden on 24 July 2020 (see Figure 1b), especially as there had been nothing in the previous 3 days and the nearest moderately sized oaks that I am aware of are just over 1km away, with Risby (1.5km away) the nearest woodland with oak. It is impossible to know whether I simply captured a wandering individual or if the lure attracted it from a distant population, but I am optimistic that further attempts will prove Yellow-legged Clearwing to be present at North Cliffe Wood, Houghton Moor and Allerthorpe Common, and possibly at Risby Wood or in the vicinity of the small number of large oaks in Cottingham (e.g., near Castle Hill Hospital or Millbeck Wildlife Area).

There were 13 records of Currant Clearwing *Synanthedon tipuliformis* from 12 locations in East Yorkshire up to the end of 2019. I recorded it in my garden in Skidby in 2019 and was confident I would do so again in 2020, especially as I now had a pheromone trap and was forced to work at home during the COVID-19 lockdown. As with Red-tipped Clearwing, my initial attempts were probably before the adults had emerged, but I eventually recorded one on 16 June 2020 (Figure 1c). I did not try again until 25 June 2020, when I again captured a singleton, but subsequent occasional attempts were unsuccessful. I have only two Blackcurrant *Ribes nigrum* bushes in my garden, and the small and infrequent catches suggest that the individuals I captured probably originated from gardens elsewhere in the village. Use of the pheromone lure in gardens and allotments with currant bushes may reveal that the Currant Clearwing is widespread in East Yorkshire.

There are just over 50 records of Six-belted Clearwing *Bembecia ichneumoniformis* from approximately a dozen locations in East Yorkshire. Historically, most records were from coastal areas with abundant Common Bird's-foot-trefoil *Lotus corniculatus*, but the distribution has moved inland in recent decades (Sutton & Beaumont, 1989) and it is now most frequently recorded at Kiplingcotes Nature Reserve, Tophill Low Nature Reserve and various sites in the Hessele area (Box, 2020).



Figure 1a. Red-tipped Clearwing *Synanthedon formicaeformis*.



Figure 1b. Yellow-legged Clearwing. *Synanthedon vespiformis*.



Figure 1c. Currant Clearwing *Synanthedon tipuliformis*.



Figure 1d. Six-belted Clearwing *Bembecia ichneumoniformis*.

Images: Andy D. Nunn.



There is a small patch of Common Bird's-foot-trefoil in my garden but I was not confident about recording Six-belted Clearwing there and, indeed, despite numerous attempts I was unsuccessful. However, an opportunistic attempt at North Cave Wetlands, during a strategic family lunch break next to a large patch of Common Bird's-foot-trefoil, led to the capture of one on 11 July 2020 when I netted an individual approaching the lure (see figure 1d). I consider it unlikely that Six-belted Clearwing is resident in the Skidby area, as the land use is mainly arable, but locations with abundant Common Bird's-foot-trefoil, such as Flamborough Head, the Spurn area (e.g., Sammy's Point), nature reserves with wild flower meadows and brownfield sites, could support the species.

I also deployed a Large Red-belted Clearwing *Synanthedon culiciformis* pheromone lure in my garden on numerous occasions, as well as at North Cliffe Wood on 02 and 23 Jun 2020, and Skipwith Common on 20 July 2020, but without success. The lack of success in my garden was not unexpected as birch, the larval food plant, is uncommon in the area, with the nearest birch woodland approximately 15km away (at North Cliffe Wood). There are just four records of Large Red-belted Clearwing from two locations, most recently at Skipwith Common, in East Yorkshire. In hindsight, it was probably too late in the year when I visited Skipwith Common, as the main flight period of adults in Yorkshire is in May and June. Despite my failure to record Large Red-belted Clearwing at North Cliffe Wood there is still a chance that it occurs there and/or at Houghton Moor, as well as at Skipwith Common and Allerthorpe Common.

Although I failed to record Large Red-belted Clearwing at North Cliffe Wood, two *Triaxomera fulvimitrella* (Tineidae) were attracted to the lure on 2 June 2020. I was initially surprised by this, but subsequent enquiries revealed that other people had experienced the same and that a range of 'non-target' species can be attracted to pheromone lures. For example, the Anglian Lepidopterist Supplies website (<https://www.angleps.com/pheromones.php>), from where I purchased my pheromone lures and trap, states that Red-belted Clearwing can be attracted to the Large Red-belted Clearwing lure. Similarly, the Yellow-legged Clearwing lure can attract Orange-tailed Clearwing *Synanthedon andreaeformis*, and the Currant Clearwing lure can attract White-barred Clearwing. Deploying pheromone lures can therefore be a worthwhile exercise even when the intended species is unlikely to be present, and would substantially improve our understanding of the status and distributions of clearwing moths in Yorkshire.

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### Bibliography

Beaumont, H.E., Fletcher, H.F., Smith, D.R.R., & Relf, P.A. (2019) Yorkshire Butterflies and Moths 2019 An assessment of their status and distribution, *Argus* 87, 1-131.

### References

Box T. (2020) Yorkshire Moths, available at <http://www.yorkshiremoths.info/portal>, last accessed on 28/09/2020.

Sutton S.L. & Beaumont H.E. (eds) (1989) *Butterflies and Moths of Yorkshire: Distribution and Conservation*, Yorkshire Naturalists' Union.