

Moth Sex – or “How Moths find a Mate”

Most moths are out and about in the dark, and the darker the better – they even don't like moonlight. And many of them are quite thinly distributed. And some females barely move any distance from where they emerge from their pupa, in fact some don't even fly at all. So how do they find a mate?

Well, mostly they do it by smell.

Females emit pheromones (chemical scents) specific to their species and males find them using their antennae as smell organs. The male moth's sense of smell is incredibly sensitive, and many of them have large feathery antennae to increase the chances of a few female pheromones being detected. Many male moths can detect a female from a mile away.

An interesting instance of this occurred a few years ago when I captured a female Oak Eggar in the moth trap. She was still in the trap during the day, with the covers ajar to allow air circulation, waiting to be released at dusk. In the early afternoon I was aware of several large dark butterflies or moths flying around the garden. I had no idea what they were but they were circling around the moth trap and then the penny dropped – they were male Oak Eggars responding to the female's scent. I had a look in the trap to check she was still there – she was but she was now mating with a male which had flown into the trap to join her! The other hopefuls which were still circling around were too late.

The ability to attract moths with pheromones is widely used to control those moths which are pests, for example in orchards. You can buy a pheromone lure for Apple Codling Moth which attracts all the males and then kills them before they can mate with a female, thus making sure your apples do not have a nasty wriggly surprise at the centre!

The facility is also used by moth enthusiasts – the Emperor Moth is a splendid moth which can be quite difficult to see, but if you buy a pheromone lure and hang it up in the back garden in the early afternoon you can attract several males very quickly, even when not really in suitable habitat. Around here, though, we don't need to do that – I get a few Emperor Moths in my trap each year in May and very large and beautiful they are too.

Rosemary Royle



Typical male antennae



Oak Eggars mating – the pale female is above and the dark male below



Emperor Moth