

From Nigel Jones and Ian Cheeseborough – February 2012

Stelis phaeoptera – a rare cuckoo-bee that may be widespread in Shropshire



Stelis phaeoptera female – photographed in a Shrewsbury garden.

Can you help us to establish this bee's frequency in Shropshire and surrounding areas?

What we want you to do:

Put up trap-nests in your garden this year, then in the autumn let us have them to rear out bees and wasps during spring and summer 2013.

Background

Stelis phaeoptera is a cleptoparasite (referred to as a cuckoo-bee) on a widespread host – *Osmia leiana* and possibly other host species. In Britain it is very rarely encountered. There have only been 90 records of *S. phaeoptera* in the last 189 years! However, in Shropshire, since 2003 this cuckoo-bee has been recorded from Ruyton XI Towns, Shrewsbury, Bayston Hill and Craven Arms. It is regularly seen in a garden in Shrewsbury. On one occasion six individuals were reared from trap nests that had been placed in a garden in Bayston Hill.

What are trap nests?

Trap nests are not traps! It is simply a term used to describe suitable nest sites, deliberately placed where solitary bees and wasps might use them. Larvae, or next season's fully formed adults overwinter in the nests. By collecting trap-nests in, and then sleeving them to capture emerging bees and wasps, we can establish which species have used the trap nests. The emerging adults can be released after being identified. This will hopefully include individuals of *S. phaeoptera*, but even if no *Stelis* emerge, we will still gain valuable insights into the occurrence of a range of aerial-nesting bees and wasps, and may even discover new species to Shropshire.

The trap nests we use are sections of plant stem, of varying diameters, packed into small containers (recycled tins and plastic milk bottles). These just need to be hung, during spring and summer in suitable places around gardens.



Osmia leaiana males freshly emerged and ready for identification - June 2008

Where should trap-nests be placed?

Trap-nests should be placed in sunny, south to east facing positions, at least four feet above ground level. Do not hang them in trees or places where the trap-nest will be over-shaded – where they are unlikely to be used. If possible locate them close to or even on linear features, e.g., fences, walls, sheds and hedges (not too close to hedges though to avoid shading). Aerial nesting bees frequently search along such features for potential nest sites and hosts. Trap nests can be fixed to a post in a suitable position.

Any special precautions?

Make sure that trap-nests do not have their open ended entrances facing “uphill”. Hang them just below horizontal, providing a gentle slope, so that the entrances are at the lowest point. This avoids rain accumulating in the nests. Damp will destroy any inhabitants. Also, bees and wasps will tend to avoid using downward sloping tubes as nests.

How can I make my own trap nests?

Making trap nests is simple. Dead hogweed, fennel, angelica and other hollow plant stems are suitable. Stems which are solid across the nodes are best, otherwise you will need to seal one end yourself.

- Cut just behind a node on the stem. With hogweed and other umbellifers this provides a sealed end to the tube.
- Then cut to a suitable length - between 4 – 9 inches is fine.
- Bundle the stems together, for instance in a tin or other container like this:



What next?

During September we will contact you to arrange collection of your trap nests. The following spring and summer we will identify and record emerging bees and wasps.

In the autumn of 2013 We will produce a report detailing the findings of the project. This will include a table of all the species that we record, so you will know what we found from your garden. If we do find anything exciting, we will provide immediate feedback to you.

If you would like to participate in this project please provide the following details

- Your name and address
- Contact email address and/or telephone number
- Location where your trap nests are being placed (if different from your home address) with postcode or OS grid reference



Left: Male *Osmia leaiana* bees – a widespread bee and a host of *Stelis phaeoptera*.