

BAREA ASBOLAEA, First for Britain, ADVENTIVE?

DISCOVERY

My wife Helen and I started trapping in 1999 after attending and being enthralled at a Cornwall Wildlife Trust moth meeting. We are lucky in that we both share our passion for moths. We live and trap at Buryas Bridge, a small hamlet just west of Penzance in Cornwall. Local habitat is a steep sided valley with many mature Sycamore and a some Ash. A few Oak and Beech etc struggle with the occasional gales of salt laden wind from the North coast, some 8 miles away. Surrounding farm land is very non intensive beef rearing.

Over the years we have had the occasional exciting catches such as a *Eublemma Purpurina* and *Spoladia Recurvalis*. We have now discovered our most notable catch has lain hidden in our records under a mistaken identity and we have to date caught over 180 of them!



Around 2006 we started looking more seriously at our micros. Among them was a very similar moth to *D. Pastinacella*, the Parsnip moth. Our book sources were quickly exhausted so we turned to friend Frank Johns. His mothing experience extends over 50 years. He has a very good library and the nearest match for our moth seemed to be *D. Pimpinellae*. Although Frank, and ourselves were not really happy with the identity because this species had only been recorded in Cornwall once before in 1904, and the food plant is not known to grow here. Frank also consulted Phil Boggis, former county recorder who also thought *D. Pimpellae* to be the nearest match, but he also was not sure about it. Pictures were sent to John Gregory, another county micro specialist. He thought it might be *D. Chaerophylli*. Frank also took an example of the moth to A. E. S. Exhibition but returned with no better ideas as to its identity. We continued to record it as *D. Pimpinellae* as Frank and ourselves felt there was no nearer match.

From our records we have traced a photo we took of the moth taken in 2004. Unfortunately we did not record others at that time due to our lack of experience and a positive I.D. We started naming the moth as *D. Pimpinellae* and were happy with separating it from the other *Depressaria* species in 2008 when we recorded 36 individuals.

The sheer numbers were starting to raise questions in that, apart from one other person, nobody else was getting this moth. Fellow enthusiast, Bernard Hocking at Crows an Wra, 5 miles West of here has had the moth occasionally, possibly two or three each year but was not convinced it was *D. Pimpinellae*. Unfortunately, because our current recording system does not allow records of *Depressaria* 'sp' for example, he has not recorded dates or numbers or when he first started catching the moth. Unless you initially give an unidentified moth a 'fictitious' name along with its photo, how do you 'record' its presence and numbers?. On two occasions we had taken our trap of moths to open meetings he has had on his farm for general interest. It is not inconceivable we have accidentally released one or two of these moths there. The very tiny re-catch rate we have had when marking other moths makes it very unlikely he would catch them again. Also, from accidental release up to a point where Bernard was trapping others within two or three years is far too short for the one or two we may have released to have multiplied sufficiently for him to have any chance of trapping others. Equally the numbers we catch would suggest the population must originate well before our first experience of it in 2004.

The turning point came in March 2010 when Frank tried genitalia examination of the moth. To his surprise it did not match *D. Pimpinellae* at all, nor any other UK moth he could find!. Frank sent photos and a set specimen to Jon Clifton (Anglian Lepidopterist Supplies). He became excited about the find and thought it might be new for Britain. He consulted Colin Plant (editor of *Entomologists Record*) who likewise thought the same. Images were sent to Martin Honey and Kevin Tuck at the British Museum (London). Their final conclusion was that the details matched *Barea Asbolaea*, an Australian moth. They then contacted Ted Edwards at the ANIC (Australian National Insect Collection). In an email Ted Edwards says, "I have looked carefully at the collection and I can only definitely identify *B. asbolaea* from Tasmania and so I must assume that this is the source of the British population".

[\(Also see Ted Edwards \(Australian National Insect Collection\) reply to our request for the biology background of B. Asblaea\)](#)

NUMBERS

In 2008, 36 were recorded from 41 night's trapping between first and last recorded, 13 nights having produced 1 or more individuals. Peak numbers were 7 on 16th May and 4 on 23d July.

2009 brought a total of 65 from 37 nights trapping between first and last, 24 nights with more than 1 individual. Peak numbers were 11 on 25th and 10 on 29th May.

In 2010 we have had 78 from 35 nights' trapping between first and last, 30 nights with 1 or more. Peak numbers 11 on 8th June and 8 on 18th June. It can be seen that totals have risen in relation to the trapping effort and particularly the proportion of successful nights with one or more caught. It would seem the population is expanding.

The 2008 and 2009 figures do show a 2-3 week gap in late July and then smaller catches suggesting two generations.

DISCUSSION

The origins of *B. Asbolaea*, we think, may well be the Trewidden ornamental garden and nursery where Antipodes plant importation and cultivation started in the 1860s. The gardens are about ½ mile away. Richard Morton head gardener at Trewidden says that by far the most importation from S. Australia and Tasmania was of *Dicksonia Antarctica* tree ferns in 1870/80. They have very rough 'hairy' trunks and could easily harbor eggs, larvae or pupae for the 2 month crossing by sailing ship.

By chance, on 20.4.07, I arranged a lamping evening at the gardens for the Cornwall Moth Group with 7 lamps running. Although just at the start of *B. Asbolaea* 'season' here, the evening produced no examples. This year we have held another overnight trapping session with 6 traps running, this produced a total of 7 *B. Asbolaeas*. This does not exceed the 'average' catch per trap we have at home. From this, initial thoughts are it seems there is no apparent concentration of the moths at Trewidden. This reinforces the idea that the moths have been there for some years and have spread from the gardens to our location, finding it equally attractive to the gardens there. In S. Australia the larvae of a similar species feeds on dead Gorse stems and rotting bark and plant material so it should be at home here. We have sent photos to other 'mothers' in the area so we can get an idea of population expansion but without success so far.

Regarding the moths at Bernard's site, I think it is possible the moth has 'spread' to there of its own accord although, to date, two recorders midway between us have yet to find any. We have discovered that Bernard has an ornamental garden about 1 mile away that also had *Dicksonia Antarctica* introduced in the 1920s. It is not inconceivable that he has a separate population originating there. Were these plants introduced elsewhere in the UK? Unfortunately the moth has received little or no study in its native Tasmania. Of the 10 specimens sent to Jon Clifton, all were males. Are the females wingless or not attracted to light?. Now we have an idea of its foodplant we will concentrate trapping next year near our considerable piles of shrub and tree prunings which have been quietly rotting for 20 years. A female would be good but we may not recognise it if we catch one!.

This has been an exiting but strange experience for us. It has been like someone giving you congratulations for winning a competition you entered 3 years ago but one that you didn't know you had entered.

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- Common, Ian F.B. 2000. Oecophorine genera of Australia III: The *Barea* group and unplaced genera (Lepidoptera: Oecophoridae). *Monographs on Australian Lepidoptera* 8: i-xvi, 1-453.



Size similar to Parsnip Moth and Brown House moth