



Moths of Poole Harbour is a project of Birds of Poole Harbour

Box-tree Moth (*Cydalima perspectalis*) Survey 2019 – 2020

In the 2019 Dorset Moths report it was stated that Box-tree moths were reported 27 times, mainly from the east of the county with evidence the species is now resident.

In addition, a PhD student from Royal Holloway, University of London, was studying the 3 colour morph variations and sex ratio of the species. To this end details on morphs and sex was recorded and the results are summarised here.



Fig. 1 White morph



Fig. 2 Intermediate morph

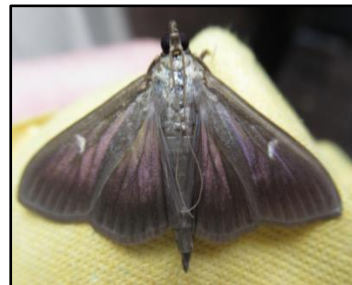


Fig. 3 Dark (Melanistic) morph

The three colour morphs of Box-tree moth, Hamworthy 2020

Box-tree moth is a new species in the UK, having been first recorded in 2008. In 2019 Robin Heaward began catching the species at Longfleet School in Poole and there may be many other records from the conurbation.

The Moths of Poole Harbour (MoPH) project first caught the species from a garden in Hamworthy in September 2019 and a total of 4 records were had that autumn with the last, a dark morph being on the very late date of 23rd October.

Box-tree moths were recorded on a further 17 occasions in 2020, between 7th June and 22nd September. Indeed they were recorded in such numbers in September that overall the species was the 3rd commonest in terms of individuals, behind only Large Yellow Underwing and Heart & Dart and ahead of Vine's Rustic and Square-spot Rustic. This from a total of 46 visits to the site.

On 20th September 2020 a total of 124 Box-tree moths were recorded from a total catch of 249 moths (of 34 species).

At Hamworthy the neighbouring garden has, or more accurately had, a fairly extensive box hedge and evidence that this has been largely destroyed, presumably by the moth larvae, is shown in the photo below.

Table 1. Box-tree Moths recorded

SITE	TIMES RECORDED	NUMBERS RECORDED	YEAR
Ballard	1	1	2020
Carey Estate	1	3	2020
Hamworthy	24	265	2019 & 2020

In 2020 the species was also found once at Ballard on 15th September (a white morph male), well away from any known Box, but only about 800m from human habitation, and at Carey Estate in Wareham.

Carey has a quantity of Box around the main garden but this area was little trapped in 2020 and no Box-tree moths were caught here. Instead 3 were trapped on 21st September from the top meadow. One white morph male, one white morph female and one intermediate morph female.

Table 2. Number of Box-tree moths recorded (from 2 MV traps) – Hamworthy

DATE	WHITE MORPH	INTERMEDIATE MORPH	DARK MORPH	UNRECORDED
17/9/2019				1
22/9/2019				10
26/9/2019				3
23/10/2019			1	
7/6/2020	1			
21/6/2020	1			
28/6/2020	1			
12/7/2020	3			
19/7/2020	2			
26/7/2020	4			
31/7/2020	1			
6/8/2020	1			
15/8/2020	3			
17/8/2020	1			
23/8/2020	1			
30/8/2020	5			
6/9/2020	3			
11/9/2020	24	3	3	
13/9/2020	1	1	2	
20/9/2020	75	20	14	15
22/9/2020	34	3	9	5

Table 3. Sex-ratio of colour morphs at Hamworthy

Date	White morph male	White morph female	Intermed. morph male	Intermed. Morph female	Dark morph male	Dark morph female	Undetermined
20/9/2020	46	29	17	3	12	2	15
22/9/2020	7	27	0	3	2	7	5

Overall percentage of colour morphs:

White morph: 71%

Intermediate morph 14%

Dark morph 14.5%

Overall Sex ratio (where recorded): Male 54%, Female 46%.

White morph sex ratio: Male 49% Female 51%

Intermediate sex ratio: Male 74% Female 26%

Dark morph sex ratio: Male 61%, Female 39%



Fig. 4 The Box hedge in the property adjacent to the Hamworthy recording garden

Box-tree moths accounted for 50% of the catch (124 individuals) from 2 MV traps on 20th September 2020.

Acknowledgements

Thanks go to Brian March for facilitating moth-trapping in Hamworthy. Photographs by Abby Gibbs and Chris Thain.