



MOTHS OF POOLE HARBOUR REPORT 2018



Abby Gibbs & Chris Thain

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The Moths of Poole Harbour is a project commissioned by Birds of Poole Harbour, a local environmental education charity, in aid of establishing a baseline understanding of moth populations around the Poole Harbour area, whilst also supporting other NGO's on specific moth studies.

A total of 580 species have been identified so far. 355 of these are macro moths and 225 micro moths.

The project was invited to get involved in some wider project work with 'Back from the Brink' and consolidated recording effort at other key sites. The season started early with efforts to trap the micro-moth *Acleris hyemana* – the prey species of the parasitic Purbeck Mason Wasp. This made for a full and interesting season. The late summer drought made trapping frustrating at times, with catches in August over 80% down on a few weeks previously, which may result in under-recording on sites. It will be interesting to see what knock on effects this weather has in the next few years.

The project has continued to receive great support from a range of people and organisations (*see acknowledgements below*) and as an independent project works on a landscape scale unrestricted by land ownership. The project is grateful for access permissions in areas closed to the public. Special thanks go to Dr. Phillip Sterling (Butterfly Conservation) for micro-moth verification.



Bactra lancealana

Back from the Brink Projects

Purbeck Mason Wasp: This beautiful, yet parasitic wasp, restricted to the Dorset heaths in the UK, provisions its own larvae with the caterpillars of the micro-moth *Acleris hyemana*. The moth is active from September to the end of April and was looked for at five of the known wasp localities. The moth can be quite elusive and a total of 12 adults were caught on four of the twenty nights trapping. The maximum in any one night was 5, at Hartland Moor in mid-April. Later in the summer when the Wasps were on the wing, some success was had looking for the larval webs of *Acleris hyemana*. Several interesting heathland species were found on the back of this work, including good numbers of Emperor Moths. The males were found to respond very quickly to a pheromone lure.



Male Emperor Moth



Trapping for *Acleris hyemana* in March 2018



Purbeck Mason Wasp (© Terry Bagley) and its host: *Acleris hyemana* (© Heidrun Melzer)

Lesser Butterfly Orchid

From the second half of June, four trapping sessions were held at the known Lesser Butterfly Orchid site where eleven spikes flowered this year. The aim was to try to ascertain what species might be pollinating the Orchids. No direct Orchid / moth interactions were observed but the trapping revealed a high proportion (9%) of the moths were Hawk-moth species. Pine, Poplar and Privet Hawks were all caught but by far the highest number were of Elephant Hawk-moths. The *Sphingidae* are known to be the primary pollinators of Greater Butterfly Orchid and are strongly suspected for Lesser Butterfly Orchid also.

More work on both these projects is planned in 2019. It was noted by the project that using camera traps may be an ideal way to discern pollinators to the Orchids.



Lesser Butterfly Orchid and its potential pollinator; Elephant Hawk-moth

A total of 126 nights trapping was undertaken in 19 different locations in 2018. Single visits were made to Holton Heath, Round Island and for a Sandford Gardens event (traps were run in six gardens). A number of sites were identified for concerted trapping effort.

Speckled Footman

The 'Section 41' Red Data Book (RDB) species Speckled Footman was again targeted. One visit was made to the known former locality on Canford Heath in mid-July and two visits were made to Slepe Heath in the areas containing the grass Bristle Bent, but unfortunately the moth was not found.

Arne Moors

Although the moth fauna at Arne has been very well recorded for decades, Arne Moors has received little coverage and as it is earmarked for a potential habitat creation project, we were granted access by the RSPB. Seventeen trapping sessions were held at two different localities within the Moors (depending on the presence or absence of the cows)!

A total of 240 species were identified on the site with an assemblage of wetland species found. These included 2 RDB species (*Crambus silvella* and Southern Chestnut) as well as 2 Nationally Notable A species and 12 Nationally Notable B's. Trapping alongside the ditch it was lovely to be accompanied by a good population of Water Voles here. A stoat was seen once and a barn owl on two occasions.



Setting up at Arne Moors. Jersey Tiger.

Ballard Down

The project was invited to trap at the bird ringing station on Ballard Down this year. Twenty trapping nights took place from mid-May until mid-October. The site is very scrub rich and already known for attracting migrant birds, and for a location with no immediate water source proved exceptionally rich for moths with 312 species identified. Moths are clearly drawn from local habitats including heaths and chalk as well as from Little Sea on Studland. Notable migrants included 3 *Convolvulus* Hawk-moths, Clifden Nonpareil and 7 Jersey Tigers. The site is rich in other wildlife too and it was a treat to be shown numerous migratory warblers, including Grasshopper and Yellow-browed whilst emptying the traps.



Clifden Nonpareil



Convolvulus Hawk-moth and Grasshopper Warbler



Emptying traps at Ballard Down

Goathorn

The Perenco mitigation site at Goathorn was covered again with seventeen nights trapping. The species list is now 238 with 11 Nationally Notable B, 2 Nationally Notable A and 1 RDB species recorded. Southern Chestnut was found again in good numbers in early October. 12 Southern Chestnut were recorded on 4th October making it the second commonest moth on the site after Large Yellow Underwing!



On site at Goathorn



Rosy Marbled (Nb) and Lobster Moth

Holton Lee

A further nineteen trapping sessions were held at Holton Lee and the species total now stands at 317. The Flourish garden with its rich nectar sources was included on a number of occasions. The down side of that was up to 35 hornets in a single trap! Holton Lee provides a convenient location for providing 'show-and-tell' moths to take into the Birds of Poole Harbour Hub on Saturday mornings as well as showing to residents and clients of Holton Lee. This was done on a number of occasions throughout the summer.



Moth trapping at Holton Lee

Engagement

The project was invited to attend a number of wildlife-focused events this year. 'Bioblitzes' at Talbot Heath and the Flourish Garden at Holton Lee both proved productive. A locally organised Sandford gardens moth event saw traps put out in six gardens around the village and a decent species list was obtained. At Corfe Castle public events were held in early June and again in September. An estimated 3,000 people were entertained in June. 157 species

have now been recorded in Corfe Castle – a good number for trapping five times in September and twice in June. The Birds of Poole Harbour information Hub on Poole Quay proved an excellent place to show moths and discuss the project.



Showing our moth catch at Corfe Castle

The following are thanked for their help, support and encouragement;

David Brown at National Trust, Dr. Sophie Lake and Lindsey Death at Back From the Brink, Luke Phillips and Peter Robinson at RSPB, Mark and Mo Constantine, Paul Morton, Georgia French and Olly Slessor at Birds of Poole Harbour, Jez Martin and Terry Elborn at Poole Borough Council, Dr. Phil Sterling and Mark Parsons at Butterfly Conservation, Kevin Cook and Ade Parvin at Perenco, Alison Stewart at DERC, Pam Hunt, Karl Clennell, Bryan Pickess, Hannah Fry, Malcolm Barrett, Katy Barrett, Robin Heaward, RSPB Arne volunteers, John Winterbottom, Steve and Caroline Shepherd and family at Round Island, Bob Ashington (Natural England). All photographs by Abby Gibbs & Chris Thain except: Purbeck Mason Wasp – kindly supplied by Terry Bagley and *Acleris hyemana* - Heidrun Melzer.