



Moths of Poole Harbour Report 2017



Abby Gibbs & Chris Thain

Moths of Poole Harbour

Trial Study period 15/7/17 – 14/10/17

Chris Thain & Abby Gibbs

The project 'Moths of Poole Harbour' was set up in 2017 to gain knowledge of moth species occurring in Poole Harbour, Dorset, their distribution, abundance and to some extent, their habitat requirements. Discussions were had with relevant organisations and landowners around the harbour to establish preferred locations as well as key species to study for the remainder of the 2017 season.

The majority of moths have well-known flight seasons and habitat types, so it was important to direct efforts to target certain species in certain locations for the duration of the study.

Prior to commencing the project:

A meeting was held with Alison Stewart and Carolyn Steel at the DERC office in Dorchester. Concepts around the project were discussed, useful contact details obtained and, critically, an agreement for data sharing was agreed. DERC's preferred method for data entry is Living Record.

A visit to Mark Parsons, (Head of Moth Conservation) at Butterfly Conservation led us to focus our early efforts targeting the two 'Section 41' species, Dingy Mocha and Speckled Footman. A third Section 41 species, Shoulder-striped Clover which is mainly day-flying but also comes to light may be best looked for at the larval stage and could form the basis of targeted effort next year. The flight season was virtually over by the time trapping commenced. Mark was able to supply supporting literature, much of it unpublished.

Meetings were held to introduce the project (and seek permissions to trap) with Luke Phillips at Arne RSPB, Jez Martin at Poole Borough Council, and David Brown and Michelle Brown, National Trust ecologists on Purbeck. The project was enthusiastically supported.

Target Species:

Speckled Footman

This Red Data Book (RDB) species has apparently not been seen in Dorset for 10 or more years, probably because it has been relatively little looked for and can be difficult to attract to light. It was known from Canford Heath in the recent past. The moth is assumed to require Bristle Bent grass as its primary foodplant but little seems known of its ecological requirements. Coverage of Bristle Bent is far superior at Slepe Heath however. No Speckled Footman were caught during this time in a combined total of 15 nights effort and no records heard from anywhere else in the county. However, for much of the potential flight period the weather was definitely sub-optimum.

Dingy Mocha

We are reasonably familiar with this RDB species having caught several on Brownsea Island over the past 10 years or so. It has specific breeding conditions requiring young Sallow growth as the larval foodplant and is a species that may be compromised by unregulated livestock grazing on heathland sites. It is considered to be highly mobile (having to seek out young Sallow) but in decline. The high mobility of the species would probably account for past records on Brownsea and for the single adult caught on Slepe Heath on 17th July.

One of the most assured ways to monitor the species is to beat (using a beating stick and a white tray) suitable Sallows for larvae and we were given a training afternoon in this technique by Mark Parsons in Hurn Forest where eventually 2 larvae were located. It is a known site.

Subsequent to this, a putative location at Luscombe Valley LNR, considered to be the likely source of Brownsea records, was examined. Relatively little early-growth Sallow persists and all was searched thoroughly with negative result. Slepe Heath revealed no obvious immediately suitable breeding habitat either and neither did the site on Goathorn.

Southern Chestnut

Originally not a target species for the project, but several finds of this RDB species make it noteworthy to look into further. An initially surprising find of this species on Goathorn on 6th October more than justified the late season trapping effort. Initially quite tricky to identify, photographs were sent for verification by former county moth recorder Les Evans-Hill and Mark Parsons. We are grateful for the very rapid response.

The species is classified as RDB 2, following discovery in the UK in Sussex in 1990. It has become well-known on heaths on the north side of the harbour and is known to be spreading. Following the first record it was found quite easily on Holton Lee on 2 occasions (1 and 3 specimens), again on Goathorn on (3 on 12th October), and on Slepe Heath (3 on 14th October). Unfortunately, the 2 attempts to trap for it on Canford Heath had to be abandoned through inclement weather. It would be interesting to confirm its likely presence on other heathland sites such as Studland, Arne, Upton and Canford next year. It would now seem highly possible that it has indeed spread to all suitable habitat around the harbour. It has a very convenient habit of appearing on the wing, and coming to light, for only about 45 minutes after dusk.



Southern Chestnut
Goathorn 3rd October

Sites:

Canford Heath

Canford is continuously visited by the public, throughout much of the night and a site where traps could not be left unattended. For all sessions on Canford a call was put into Dorset Police to notify them of the presence of bright lights on the heath.

Maps of known extent of Bristle Bent and access keys were obtained from Terry Elborn and trapping began on July 15th. Two areas of the main ridge where significant Bristle Bent was present were targeted with 1 to 4 traps on 8 nights in July and August. On 22nd a more targeted effort in conjunction with Lance Featherstone and 6 members of Bournemouth Natural Science Society was held using 6 traps. This event was a long-standing pre-arrangement but was compromised by relatively unsuitable weather on the day. Generally speaking catches on Canford were modest and consisted mostly of expected species, though up to 150+ True Lover's Knot were caught in a single trap.



Slepe Heath

Recently cleared of conifers, Slepe has a far greater coverage of Bristle Bent and the plant is abundant in parts. Access was facilitated by NT who were able to drive kit onto the site and supplement it with 2 traps of their own so considerable effort could be made. Again, two main areas were targeted and work was carried out weekly for 8 consecutive weeks with 3-6 traps each time.

On 17th July a combined total of 914 moths of exactly 100 species were found. Of these 324 were Large Yellow Underwings! The catch included a single adult Dingy Mocha. Subsequent examination of the site found no suitable breeding habitat and the species is known to wander (despite being considered in decline). The 5 traps took substantially over 6 hours to sort through and we were joined by volunteer John Winterbottom for the duration.

Species of particular note included Grass Eggar (Notable A) trapped on 4 nights with maximum of 6 on 21st August, the declining Bordered Grey (Notable A) with 1 caught on 7th August, and Small Chocolate-tip (Notable B), one on 31st July. Other significant records of declining species include Anomalous (one on 28th August), Antler (one on 24th July) and White-line Dart.



Grass Eggar



Bordered Grey



Small Chocolate Tip



Antler Moth



Checking the traps at Slepe Heath

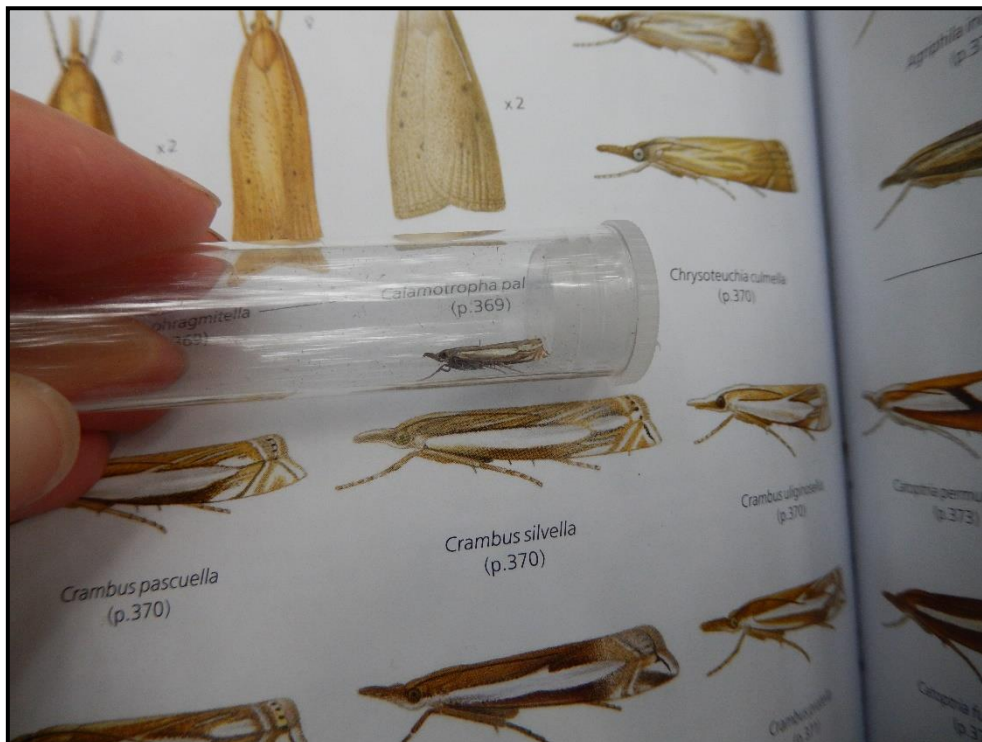
Holton Lee

We were aware that Holton Heath has not been surveyed much for moths as far as anyone is aware and have yet to work out access but the variety of habitats at next-door Holton Lee suggested a potentially very interesting site to survey. Once gain 2 areas have been targeted; around the boardwalk, woodland/ reedbed edge and new scrape and to a lesser extent the more wooded area surrounding the bird-feeder hide.

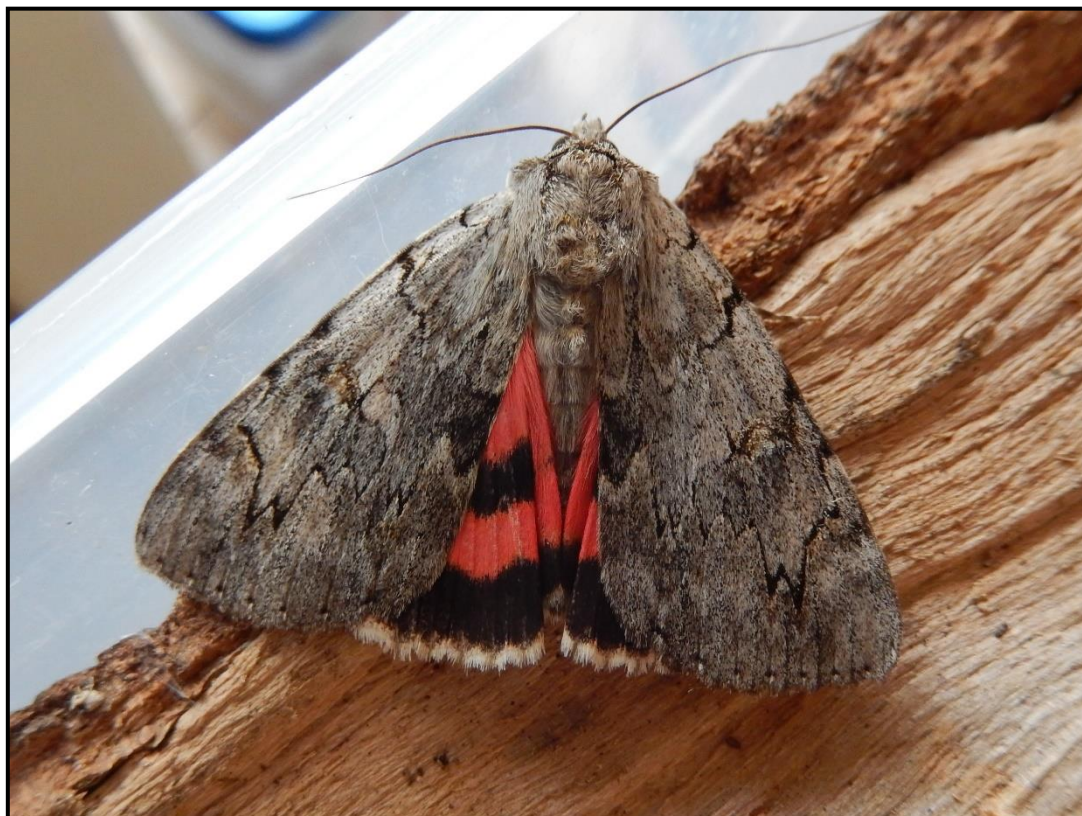
The very local *Crambus hamella* and rare *Crambus silvella* were recorded around a heathy pond on 22nd August. A number of commoner woodland species were recorded and there was Abby's extraordinary find of a superb Rosy Underwing on 24th August. This find was notable enough that Mark Parsons suggested we check to ensure that a temporary colony had not become established. This we did and found no further evidence.



Crambus hamella



Crambus silvella



Rosy Underwing

Abby's story of finding and verifying the Rosy Underwing can be found below after the site profiles.

Corfe Castle

We were asked at the outset if we would attend a National Trust LON (Land, Outdoors and Nature) event at Corfe Castle over two weekends in September. Trapping at the Castle was interesting with surprisingly good results, as well as being a somewhat enjoyably surreal experience. On the back of this we may be asked to trap more regularly there throughout the summer. The location, in the Corfe gap has the potential to draw in species from surrounding chalkland and heath as well as attracting migrant species. In the 2 weekends 5 migrant species were trapped and a colourful array of other species found to entertain visitors.

Of significance were the migrants, Hummingbird Hawk, Pearly Underwing, Rusty Dot Pearl, Pale Mottled Willow, Delicate. In addition, Heath Rustic is a local species recorded here.



Moth trapping at Corfe

**Hummingbird Hawkmoth
(bottom right)**



Visitors admire the catch of the day

Goathorn

Following a scoping site visit with Kevin Cook in early August, the Perenco mitigation site was targeted for recording. This is a remote site where equipment could safely be left but because it is time-consuming to reach the decision was to always remain on station while trapping. The area is heathland with significant recent conifer removal and a nice mix with some wet mire. Most of the species caught were expected late summer and autumn species but Feathered Brindie (Notable B) on 28th September and Southern Chestnut (RDB 2) 1 on 6th and 3 on 12th September were very good finds.



Abby photographs Southern Chestnuts

A day in the life of a moth trapper – Finding and verifying a Rosy Underwing by Abby Gibbs

“I drove on to Holton Lee as usual, with my friend Karl in tow, not expecting too much from the nights haul as the weather had not been that kind to us in August this year. We had three traps out, one along the boardwalk, one on the woodland edge and one deeper in the woods. We sat down and went through the traps. In the last trap, the woodland trap, there was something large at the bottom, when I pulled out the tray, we both looked at the moth, eyes wide, and looked at each other, knowing we’d caught something a bit special. I took a couple of photos while we recorded the rest of what was on that tray. Then potted up the beast. And it was a beast, measuring over 6cm nose to tail. I saw a flash of red, thinking this was a Red Underwing or something similar. We turned to the page with the immense ‘Clifden Nonpareil’ and looked up the Red and Crimson Underwings, but this was slightly different and my excitement grew as I matched the markings on the page to that of the moth in my hand. It was clearly a Rosy Underwing, and Karl agreed. I read the text out loud. ‘Rare immigrant’, ‘recorded in the UK on 9 occasions since 1875’ and it listed each occasion. – ‘WHa...!’ – ‘Oh my God, this is super rare!’ I exclaimed. ‘Wow’ said Karl ‘What do we do with it?’. ‘Er...I need to get this verified’ I said, ‘I’ll take it to the centre and show them, but I’ll have to get it properly verified before we can shout about it’. We swiftly finished the remainder of the trap and packed up, retaining some of the better moths to show at the centre.

I met up with Paul, a volunteer at Holton who regularly joined us on moth trapping sessions via his electric buggy, I said ‘I’ve got something rather special here’ and showed him the moth, which he was thrilled to see. Entering the office, I showed them what I’d found and asked for Paul Morton’s phone number, which I apparently didn’t have on my phone. I rang him and left a message. Then got my thinking cap on, ‘who did I need to phone?’. I texted Chris, who was on a train to Headingly but he was, of course sceptical of my find, asking ‘was I sure?’. I was. So, I took the moth and Karl home and started researching and ringing around. Looking at pictures on the internet and the Dorset Moths website, it was clear this moth was very rare indeed.

This is what it said on the Dorset Moths webpage;

“In Dorset, the moth has been seen on two occasions: Corfe Castle, one in a trap for wasps in the walled peach garden at the rectory on 9 September 1892 (Reverend E Bankes), Portland, at MV light on 11 September 1993 (M Cade).”

And this is what it said on the UK Moths website;

“A very rare visitor to the British Isles, with only a handful of records. The most recent was on the Isle of Wight, Hampshire in 2009.”

Oh my, so, I started ringing around – starting with Butterfly Conservation – ‘Hello, can I speak to Mark Parsons please?’, ‘Sorry, Mark’s on holiday, he’ll be back next week’ (NEXT WEEK!?), ‘Ok, can I speak to anyone else that could verify a moth for me?’, ‘Well, there’s no one in the moth office at the moment’, ‘.....(I paused thinking)’, ‘Is it urgent?’ offered the voice at the other end of the phone. I sat there, poised on the edge of my chair, ‘VERY RARE MIGRANT’ plastered across my screen, sweaty palms and beating chest, cold moth burning a hole in my fridge. “Fairly” I uttered. ‘Is there anyone else I can contact that could verify this moth for me?’ I rattled through a few names ‘Phil Sterling, Les Evans-Hill...’ ‘No, sorry’, but she offered me a name of someone I could try, so I took the number, thanked her and hung up.

I then went back to 'old faithful' – Facebook, Dorset Moths Facebook group, I knew Les Evans-Hill was pretty active on there. I went to his page and sent him a message, hoping that he would see it imminently. I waited and checked on the moth.

Not long after, Les had seen my message! Yes! He replied. I asked if he'd be able to verify my Rosy Underwing via some photographs, of which I had quite a selection now. He said, yes, he would have a look. So, I sent him the clearest pictures, and, thank goodness, he replied, saying a definite 'Yes', WAHOO! But, that he had already verified another one this week from Abbotsbury! NOooooo!! My glory whisked away in an instant! But still, a brilliant find, he was very happy for me.

The next day, I was visited by three fridge twitchers; Marcus and his brother and later on Chris, who was desperate to see this moth in the flesh. That night, we took it back to Holton Lee so it could carry on its journey, wherever it was off to next."



Engagement

A particularly enjoyable aspect of the work is the opportunity to show people colourful and interesting moths and engage with people of all ages on the subject. We were able to undertake this particularly well at Holton Lee and Corfe Castle and have thought up ways in which this effort could be significantly enhanced.

The Corfe Castle event was visited by 1,271 people on the first weekend, the vast majority of whom came in to see the displays inside the marquee. The second weekend had similar visitor numbers, certainly over 1,000 people.

At Holton Lee we were joined for trapping on several occasions by regular volunteer Paul on a disability access buggy. This shows that with the excellent infrastructure a good deal more could be achieved. We took moths to the centre on several occasions, to the RSPB-led woodland walk event and to the Wednesday gardening group. A brief discussion was held with the new leader of the

spinal-injuries unit about potential for further collaboration next year.

Abby posted regular updates and photographs on the Dorset Moths Facebook page inviting members to join us at various locations through the season. This attracted a fair amount of attention and at least two members of the public joined us at the Corfe Castle event specifically as a result of one post. The digital promotion of the project is something we would like to develop further.

The project came to the attention of Buglife and, following exchanges of Emails, we have been invited to the 'Important Invertebrate Area' training initiative at Wareham in November.

Issues encountered

At times it was not possible or practical for both of us to go out in the evening and set the traps. Most mornings we would empty the traps together, but on occasions we were alone. Therefore, we decided to use a 'buddy' system to ensure we knew where each other was and at what time. We texted each other when we left home, when we arrived on site and when we were leaving the site so that for Health & Safety purposes we were covered. This worked on most occasions, although due to the remoteness of some sites, signal was very poor and one had to drive away from the site in order to send the message.

We both used our own cars for the project, carrying the kit and driving off-road onto the various sites. This was problematic in that our cars were not ideal vehicles to be taking off road and there was potentially a danger of creating ruts, getting stuck or scratching the paintwork on gorse and bramble. Visiting members of the public were not used to seeing standard cars on any of the sites, so were always suspicious of our activity. The best way to counter this was to wind the window down and initiate the conversation, thereby allowing them to ask about the project and appreciate that we were authorised to be on site. Another issue was that due to the bulk of the kit, we could only take one passenger and times where we wanted to take a third person or more, we ended up taking two cars which seemed excessive. At Slepe Heath, we were assisted by David Brown and a National Trust landrover in the first trapping site to get the kit to the trapping locations.

Further work proposed

- All 1,820 records from this season to be entered into Living Record by trap location.
- Individual site reports produced for each partner organisation in line with any specific format requested.
- A major component will be to search and process all historic moth records held by DERC for the recording area. There are some 20,000+ for Brownsea alone.
- Contact key recorders and moth trappers, past and present and seek opinions and guidance on areas of investigation.
- Develop 2nd summer partnership for Slepe, Canford, Holton Lee and Goathorn. In light of the proposal for major habitat work on Arne Moors it could be very worthwhile to approach RSPB for permission to record in the area prior to any major landscaping work commencing.
- Acquire pheromones for use on sites next year. At those sites where morning trap processing

occurs (e.g. Holton Lee and Slepe) these could be readily deployed while traps are monitored.

- Work with BOPH to explore use of the new Information Hub on Poole Quay. The offer could include permanent display material / information on the project and regular (weekly?) 'show-and-tell' sessions with specimens, prior to their release.
- Significant further development of Social media opportunities for publicising open events etc. Regular (weekly?) postings with pictures for BOPH website.
- Explore opportunity to develop our own Facebook page/ group to regularly post pictures and invite members of the public to join us.
- Closer liaison and ties with Dorset Moth Group, Important Invertebrate Area initiative etc.
- Business cards created so that these can be handed out to interested parties.

Acknowledgements:

The following people have helped, supported and encouraged the project, we thank them all.

Mark Parsons at Butterfly Conservation, Alison Stewart and Carolyn Steel at DERC, Michelle Brown and David Brown at National Trust. Les Evans-Hill, Karl Clennell, John Winterbottom, Jez Martin and Terry Elborn at Poole Borough Council, Paul Morton at Birds of Poole Harbour, Mark and Mo Constantine, Neil Stevens at Liveability, Kevin Cook and Ade Parvin at Perenco. Luke Phillips at RSPB, Lance Featherstone, Mark Spencer, Pam Field, Grenham Ireland, Jonathon McGowan, Ashley Leftwich, Malcolm Storey.

All photographs used in this report were taken by Abby Gibbs and Chris Thain.

Appendices:

1. Canford Heath trap lists
2. Corfe Castle trap lists
3. Goathorn trap lists
4. Holton Lee trap lists
5. Slepe Heath trap lists

Appendix 1: Canford trap lists

CANFORD HEATH 4/8/17

True Lover's Knot	34
Small Purple-barred	3
Narrow-winged Pug	22
July Belle	6
Agnopterix umbellana	1
Dotted-border Wave	2
Horse Chestnut	5
Beautiful Yellow Underwing	10
Large Yellow Underwing	2
Flame Shoulder	2
Common Rustic	1
Double-striped Pug	2
Ruby Tiger	5
Agriphila inquitella	3
Dark Sword-grass	2
Agriphila straminella	7
Synaphe punctalis	4
Cohilis molliculana	1
Iron Prominent	2
Large Yellow Underwing	6
Lesser Broad-bordered Yellow Underwing	2
Straw Dot	3
Ypsolopha scabrella	1
Brimstone	1
Scarce Footman	1
Willow Beauty	1
Knot Grass	1
Canary-shouldered Thorn	1
Dingy Footman	1
Pebble Prominent	1

CANFORD HEATH 6/8/17

Narrow-winged Pug	18
Agriphila inquitella	3
Setaceous Hebrew Character	2
True Lover's Knot	5
Beautiful Yellow Underwing	1
Agriphila straminella	2
Synaphe punctalis	6
Iron Prominent	1
Straw Underwing	1

CANFORD 10/8/17

Oak Eggar	1
Synaphe punctalis	14
Agriphila inquitella	15
Cochylis atricapitana	1
Agriphila geniculea	8
Lesser Swallow Prominent	1
Large Yellow Underwing	3
Lesser Broad-bordered Yellow Underwing	2
Flame Shoulder	1
Common Emerald	1
Lesser Swallow Prominent	1
Common Rustic	1
Setaceous Hebrew Character	1
Agriphila straminella	3
Common White Wave	1
Rustic / Uncertain	1
Beautiful Yellow Underwing	1

CANFORD HEATH 19/8/17

Large Yellow Underwing	50
Narrow-winged Pug	5
Agriphila inquitella	9
Agriphila latistria	2
White-Point	2
Dark Sword-grass	1
Lesser Swallow Prominent	2
Brimstone	1
Setaceous Hebrew Character	1
Beautiful Yellow Underwing	1
Broad-bordered Yellow Underwing	4
Lesser Broad-bordered Yellow Underwing	9
Angle Shades	1
Shuttle-shaped Dart	1
Least Yellow Underwing	2
Common Wave	1
Double-striped Pug	1
True Lover's Knot	1
Synaphe punctalis	2
Iron Prominent	1
Pebble Prominent	1
Lesser Yellow Underwing	1
Straw Underwing	1

CANFORD HEATH 22/7/17

Buff Arches	1
True Lover's Knot	30
July Belle	4
Dun-bar	2

Scoparia ambigualis	1
Synaphe punctalis	1
Clay	2
Broad-bordered Yellow Underwing	3
Canary-shouldered Thorn	1
Catoptria pinella	1
Large Yellow Underwing	21
Bright-line Brown-eye	2
Agriphila selasella	1
Lesser Yellow Underwing	2
Agriphila straminella	1
Pediasia contaminella	1
Chevron	1
Elephant Hawk	2
Dark Arches	2
Narrow-winged Pug	1
Horse Chestnut	4
Uncertain / Rustic	1
Scarce Footman	3
Ruby Tiger	2
Synaphe punctalis	1
Chrysosteuchia culmella	1
Smoky Wainscot	1
Buff Ermine	1
Dingy Shell	1

CANFORD HEATH 26/7/17

Small Purple-barred	4
True Lover's Knot	10
Straw Dot	1
Narrow-winged Pug	13
Synaphe punctalis	4
Double-striped Pug	3
Large Yellow Underwing	6
Agriphila inquinatella	2
Grass Emerald	3
Nomophila noctuella	2
Broad-bordered Yellow Underwing	2
Shuttle-shaped Dart	3
Bright-line Brown-eye	1
Common Rustic	5
Horse Chestnut	3
Agriphila straminella	2
Pine Hawk	1
Ruby Tiger	3
Scarce Footman	1
Early Thorn	1
Chevron	1
Horse Chestnut	10
Marbled White Spot	1
Pediasia contaminella	1

Ling Pug	3
Dingy Shell	4
Beautiful Yellow Underwing	1
Grey Dagger	1
Endotricha flammealis	1
Lesser Broad-bordered Yellow Underwing	1
Eupocaelia angustana	1
Common Emerald	1
Chrysosteuchia culmella	1
Common Rustic	1
Dark Sword-grass	1
Ringed China-mark	1

CANFORD 13/10/17

Black Rustic 1

Appendix 2: Corfe Castle trap lists

CORFE CASTLE 15/9/17

Large Yellow Underwing	26
Light Emerald	9
Brimstone	4
Setaceous Hebrew Character	4
Angle Shades	4
Feathered Gothic	6
Dusky Thorn	6
Flounced Rustic	20
Willow Beauty	1
Hedge Rustic	1
Snout	11
L-album Wainscot	1
Common Wainscot	2
Lilac Beauty	1
Canary-shouldered Thorn	1
Broad-bordered Yellow Underwing	2
Dark Spectacle	2
Autumnal Rustic	1
Neglected Rustic	2
Square-spot Rustic	7
Buff Ermine	1
Common Marbled Carpet	1
Horse Chestnut	1
Green Carpet	1
Double-striped Pug	1
Emmelina monodactyla	1
Large Wainscot	1
Flame Shoulder	1
Celypha lacunana	1
Feathered Ranunculus	1

CORFE CASTLE 16/9/17

Brimstone	3
Light Emerald	2
Large Yellow Underwing	48
Angle Shades	7
Feathered Gothic	5
Flounced Rustic	11
Sallow	1
L-album Wainscot	3
Small Square-spot	3
Burnished Brass	1
Snout	1
Square-spot Rustic	4
Lesser Yellow Underwing	1
Setaceous Hebrew Character	6
Lunar Underwing	1
Buff Ermine	1
Hedge Rustic	2
Autumnal Rustic	1
Flame Shoulder	1
Common Wainscot	1
Hummingbird Hawk	1

CORFE CASTLE 22/9/17

Large Yellow Underwing	14
Lesser Yellow Underwing	10
Square-spot Rustic	6
Flounced Rustic	6
Dark Spectacle	1
Dusky Thorn	3
Pink-barred Sallow	1
Canary-shouldered Thorn	1
Angle Shades	1
Vines Rustic	1
Common Wainscot	1
Setaceous Hebrew Character	15
Small Square-spot	1
White-point	1
Black Rustic	1
Straw Dot	4
Brimstone	2
Centre-barred Sallow	2
Snout	5
Celypha lacunana	3
Light Emerald	1
Pandemis cinnamoneana	2
Epiphyas postvittana	2
Flame Shoulder	1
Lunar Underwing	1
Pinion-streaked Snout	1

Single-dotted Wave	1
Burnished Brass	2

CORFE CASTLE 23/9/17

Light Emerald	10
Dusky Thorn	14
Snout	14
Willow Beauty	12
L-album Wainscot	7
Brimstone	2
Large Yellow Underwing	18
Common Wainscot	2
Square-spot Rustic	6
Dark-barred Twin-spot Carpet	1
Setaceous Hebrew Character	10
Epiphyas postvittana	12
Flounced Rustic	6
Centre-barred Sallow	4
Lesser Yellow Underwing	3
Clepsis consimilana	2
Blastobasis lacticolella	1
Canary-shouldered Thorn	1
Angle Shades	2
Pandemis cinnamomeana	2
Hedge Rustic	2
Lunar Underwing	8
Eudonia angustea	1
Rosy Rustic	2
Single-dotted Wave	1
Feathered Ranunculus	1
Pinion-streaked Snout	2
Small square-spot	2
Acleris laterana	1
Small Wainscot	1
Tachystola acroxantha	1
Straw Dot	4
Common Marbled Carpet	1
Heath Rustic	1
Pale Mottled Willow	1
Pearly Underwing	1
Turnip	1
Double-striped Pug	1
Hypatima rhomboidella	1

Appendix 3: Goathorn trap lists

GOATHORN 31/8/17

Large Yellow Underwing	16
Eudonia pallida	2
Tawny-barred Angle	5

Square-spot Rustic	3	
Horse Chestnut	2	
Lesser Broad-bordered Yellow Underwing		1
Narrow-winged Pug	1	
Lesser Yellow Underwing	1	
Grey Pine Carpet	4	
Setaceous Hebrew Character	4	
Canary-shouldered Thorn	4	
Plain Wave	1	
Eudonia mercurella	1	
Neglected Rustic	1	
Lesser Yellow Underwing	1	
Agriphila tristella	2	
Scoparia basistrigalis	1	
Epinotia ramella	1	
Black Arches	3	
Common Footman	1	
Flame Shoulder	1	
September Thorn	2	
Six-striped Rustic	1	
Broad-bordered Yellow Underwing		1
White Speck	1	
Agriphila latistria	1	
Cydia ulicetana	1	
Double-striped Pug	1	
Chevron	1	

GOATHORN 14/9/17

Nomophila noctuella		
Broad-bordered Yellow Underwing	3	
Setaceous Hebrew Character	5	
Large Yellow Underwing	43	
Light Emerald	4	
Canary-shouldered Thorn	2	
September Thorn	2	
Neglected Rustic	2	
Autumnal Rustic	1	
Square-spot Rustic	1	
Agriphila latistria	1	
Horse Chestnut	3	
Lunar Underwing	1	
Grey Pine Carpet	1	
Pempelia palumbella	1	
Angle Shades	2	
Common Wainscot	1	

GOATHORN 28/9/17

Grey Pine Carpet	3	
Large Yellow Underwing	6	
Pempelia palumbella	1	

Lesser Yellow Underwing	6
Nomophila noctuella	1
Grey Pine Carpet	2
Blastobasis lacticolella	1
Heath Rustic	2
Pink-barred Sallow	1
Epiphyas postvittana	2
Horse Chestnut	1
Bright-line Brown-eye	1
Pine Carpet	1
Feathered Brindle	1

GOATHORN 7/9/17

Narrow-winged Pug	1
Setaceous Hebrew Character	2
Large Yellow Underwing	7
Nomophila noctuella	1
Flame Shoulder	1
Feathered Gothic	1
BBYU	2
Eudonia mercurella	1
Mouse	1
Cydia splendana	1
Epinotia ramella	1
Straw Underwing	1
Scoparia basistrigalis	1
Agriphila latistria	1

GOATHORN 5/10/17

Black Rustic	1
Grey Pine Carpet	1
Southern Chestnut	1

GOATHORN 2/10/17

Black Rustic	8
Tachystola acroxantha	1
Pine Carpet	2
Udea ferrugalis	1
Merveille du Jour	3
Southern Chestnut	3
Grey Pine Carpet	3
Yellow-line Quaker	2
4-spotted Footman	1

Appendix 4: Holton Lee trap lists

HOLTON LEE 12/8/17

Black Arches	8
Buff-tip	1

Lesser Broad-bordered Yellow Underwing	5
Drinker	1
Southern Wainscot	3
Setaceous Hebrew Character	2
Iron Prominent	1
Small Wainscot	3
Gold Spot	1
Lesser Swallow Prominent	2
Common Wave	1
Rosy Wave	1
Large Yellow Underwing	8
<i>Agriphila selasella</i>	1
Least Yellow Underwing	2
<i>Agriphila straminella</i>	2
Dingy Footman	1
Straw Dot	3
Peacock	2
Rosy Footman	2
<i>Synaphe punctalis</i>	2
<i>Pandemis cerasana</i>	1
Clouded Border	1
<i>Pandemis corylana</i>	3
Flame Shoulder	5
<i>Argyresthia goedartella</i>	2
<i>Agriphila inquinatella</i>	1
<i>Epigoge grotiana</i>	1
Oblique Carpet	1
Orange Swift	1
<i>Merificama mulinella</i>	1
Small China-mark	1
Bird Cherry Ermine	1
Brimstone	1
Scalloped Hook-tip	1
<i>Eudonia lacustrata</i>	1
Common Wainscot	2
<i>Lozotonioides formosana</i>	2
<i>Eudonia mercurella</i>	4
<i>Eudonia truncicolella</i>	5
<i>Agriphila tristella</i>	2
<i>Ypsolopha parenthesesella</i>	1
Double-striped Pug	2
Scarce Footman	1
White Point	1
<i>Nomophila noctuella</i>	1
Pine Carpet	1

HOLTON LEE 15/8/17

Flame Shoulder	1
Orange Swift	6

Small Wainscot	1
Celypha lacunana	2
Tawny-barred Angle	1
Eudonia mercurella	1
Agriphila selasella	2
Agriphila tristella	1
Shuttle-shaped Dart	1
Southern Wainscot	1
Clepsia spectrana	2
Bactra lancealana	2
Pebble Prominent	1
White Point	1
Large Yellow Underwing`	11
Common Rustic	1
Eudonia truncicolella	1
Lesser Swallow Prominent	1
Pebble Hook-tip	1
Dusky Thorn	1
Oblique Carpet	1
Common Wainscot	1
Agriphila tristella	1
Rosy Rustic	1
Black Arches	2
Southern Wainscot	4
Scarce Footman	1
Drinker	1
Double-striped Pug	1
Setaceous Hebrew Character	1
Angle Shades	1
Lesser Broad-bordered Yellow Underwing	1
Dark Sword-grass	1
Iron Prominent	1
Bright-line Brown-eye	1

HOLTON LEE 22/8/17

Tawny-barred Angle	1
Argyresthia goedartella	20
Agriphila tristella	2
Tachstola acroxantha	2
Vapourer	1
Ypsolopha dentella	1
Scoparia basistrigalis	2
Cydia splendana	8
Common Wave	5
Pinio-streaked Snout	2
Caloptilia alchimiella	1
Ypsolopha parenthesella	1
Flame Shoulder	1
Carcina quercana	1
Eudonia mercurella	1
Brown China-mark	4

Pebble Prominent	1
Poplar Hawk	1
Iron Prominent	1
Agriphila tristella	3
Buccalatrix ulmella	1
Orange Swift	1
Epinotia ramella	1
Cochylimorpha straminea	1
Eudonia pallida	1
Shuttle-shaped Dart	1
Lesser Broad-bordered Yellow Underwing	2
Large Yellow Underwing	8
Pebble Hook-tip	1
Agriphila inquinatella	1
Common Wainscot	2
Scarce Footman	1
Crambus hamella	1
Common Carpet	1
Lobesia abscisana	1
Crambus silvella	1
Rosy Footman	1

HOLTON LEE 24/8/17

Black Arches	1
Agriphila tristella	3
Large Yellow Underwing	8
Rosy Rustic	1
Bactra lancealana	1
Flame Shoulder	4
Lesser Broad-bordered Yellow Underwing	1
Spectacle	1
Common Wave	1
Rosy Wave	2
Common Rustic	1
Small Wainscot	2
Setaceous Hebrew Character	5
Straw Dot	2
Green Carpet	1
Southern Wainscot	2
Orange Swift	3
Honeysuckle Moth	1
Small China-mark	2
Agriphila straminella	1
Southern Wainscot	1
Tawny-barred Angle	1
Scalloped Hook-tip	1
Agriphila latistria	1
Cydia ulicetana	1
Cydia splendana	1
Pinion-streaked Snout	1
Canary-shouldered Thorn	1

Vines Rustic	1
Celypha lacunana	1
Rosy Underwing	1
Eudonia mercurella	1
Double-striped Pug	1
Pebble Prominent	1

HOLTON LEE 26/8/17

Lesser Swallow Prominent	3
Oak Hook-tip	1
Snout	1
Agriphila tristella	7
Pandemis corylana	1
Black Arches	1
Pebble Hook-tip	1
Cydia ulicetana	5
Orange Swift	6
Setaceous Hebrew Character	11
Bactra lancealana	6
Bactra robustana	1
Canary-shoulder Thorn	1
Large Yellow Underwing	23
Brown China-mark	3
Eudonia pallida	5
Flame Shoulder	4
Agriphila latistria	2
Small Emerald	1
Eudonia truncicolella	1
Celypha lacunana	2
Lesser Broad-bordered Yellow Underwing	1
Blood Vein	1
Southern Wainscot	6
Cyclamen Tortrix	2
Epiphyas postvittana	1
Agriphila straminella	1
Bright-line Brown-eye	1
Six-striped Rustic	6
Broad-bordered Yellow Underwing	1
Shuttle-shaped Dart	1
Spectacled	1
Small Wainscot	1
Common Wainscot	1
Double-striped Pug	1
Small China-mark	1
Bulrush Wainscot	1
Common White Wave	1
Straw Dot	1

HOLTON LEE 29/8/17

Broad-bordered Yellow Underwing

Small Wainscot	
Six-striped Rustic	
Brown China-mark	4
Common Wave	
White Point	
Epinotia ramella	6
Large Yellow Underwing	13
Eudonia pallida	5
Setaceous Hebrew Character	4
Small China-mark	4
Ypsolopha parenthesesella	
Angle Shades	2
Orange Swift	2
Small Fan-footed Wave	
Tawny-barred Angle	3
Agriphila selasella	2
Green Carpet	
Bactra lancealana	
Eudonia mercurella	4
Agriphila tristella	
Celypha lacunana	
Light Emerald	
Cydia ulicetana	
Cryptoblabes bistriga	
Grey Pine Carpet	
Neglected Rustic	
Flame Shoulder	

HOLTON LEE 2/9/17

Green Carpet	1
Light Emerald	2
Large Yellow Underwing	11
White Point	1
Square-spot Rustic	9
Agriphila tristella	2
Brimstone	2
Angle Shades	1
Southern Wainscot	1
Snout	6
Small Square-spot	1
Frosted Orange	1
Common Marbled Carpet	1
Setaceous Hebrew Character	13
Canary-shouldered Thorn	1
Vines Rustic	2
Silver Y	1
Celypha lacunana	3
Ruby Tiger	1
Heart and Dart	2
Flame Shoulder	5
Bactra lancealana	1

Eudonia pallida	1
Pandemis corylana	1
Flounced Rustic	1
Epinotia ramella	1
July Belle	1
Oak Hook-tip	1
Orange Swift	1
Willow Beauty	1

HOLTON LEE 6/9/17

Canary-shouldered Thorn	3
Large Wainscot	1
Six-striped Rustic	1
Round-winged Muslin	1
Large Yellow Underwing	3
Feathered Gothic	1
Turnip	1
Dark Arches	1
Orange Swift	1
Tawny-barred Angle	1
Purple Bar	1
Square-spot Rustic	1
Neglected Rustic	2
Crambus hamella	1
Small Wainscot	1
Flounced Rustic	1

HOLTON LEE 15/9/17

Eudonia mercurella	1
Light Emerald	5
Small Wainscot	4
Large Yellow Underwing	3
Square-spot Rustic	1
Frosted Orange	1
Eudonia pallida	1
Flounced Rustic	1

HOLTON LEE 18/9/17

Canary-shouldered Thorn	2
Broad-bordered Yellow Underwing	2
Large Yellow Underwing	28
Brimstone	1
Snout	2
Setaceous Hebrew Character	4
Bactra lancealana	2
Eudonia pallida	1
Square-spot Rustic	5
Lesser Yellow Underwing	1
Pearly Underwing	1

Small Wainscot	2
Light Emerald	4
Oak Hook-tip	1
Orange Swift	1
Pinion-streaked Snout1	
Eudonia truncicolella	1
Lunar Underwing	1

HOLTON LEE 19/9/17

Large Yellow Underwing	1
Light Emerald	3
Square-spot Rustic	1
Lesser Yellow Underwing	1
Tachystola acroxantha	1
Pink-barred Sallow	1
Setaceous Hebrew Character	1
Pinion-streaked Snout1	
Autumnal Rustic	1
Common Wainscot	1

HOLTON LEE 25/9/17

Canary-shouldered Thorn	1	
Pine Carpet	1	
Grey Pine Carpet	6	
Brown China-mark	1	
Light Emerald	1	
Large Yellow Underwing	1	
Small Wainscot	1	
Hofmanophila pseudospretella	1	
Broad-bordered Yellow Underwing		1
Dusky Thorn	2	
Eudonia angustea	4	
Small Wainscot	1	
Straw Dot	1	
Gypsonoma sociana	2	

HOLTON LEE 26/9/17

Large Wainscot	2	
Setaceous Hebrew Character	1	
Snout	1	
Double-striped Pug	1	
Small Wainscot	1	
Broad-bordered Yellow Underwing	1	
Yellow-tail	1	
Grey Pine Carpet	1	
Eudonia pallida	1	
Lesser Yellow Underwing	1	
Frosted Orange	1	
Pinion-streaked Snout2		

HOLTON LEE 3/10/17

Pine Carpet	1
Small Wainscot	3
Gold Spot	1

HOLTON LEE 6/10/17

Large Yellow Underwing	2
Black Rustic	3
Grey Pine Carpet	2
Southern Chestnut	1

HOLTON LEE 10/10/17

Small Wainscot	1
Southern Chestnut	3

Appendix 5: Slepe Heath trap lists

SLEPE HEATH 17/7/17 6 TRAPS

Scarce Footman	45
Pebble Hook-tip	3
Broad-bordered Yellow Underwing	20
True Lover's Knot	107
Eucosma cana	2
Orchard Ermine	1
Large Yellow Underwing	358
Narrow-winged Pug	1
Agriphila straminella	17
Chrysosteuchia culmella	22
Synaphe punctalis	12
Pempelia genistella	19
Diamond-back	4
Silver Y	3
Ruby Tiger	21
Crambus pascuella	1
Double-striped Pug	1
Aristotelia ericanella	32
Beautiful Yellow Underwing	23
Common Rustic	12
Dioryctria abietella	1
Small Purple-barred	3
Common Footman	4
Pine Hawk	2
Horse Chestnut	13
Hypsopygia costalis	1
Annulet	2
Dark Arches	7
Nut-tree Tussock	3

Catoptria pinella	4
Pale Prominent	2
Brachmia blandella	1
Blastobasis adustella	1
Rustic agg.	7
Chevron	4
Ear spp.	1
Buff Footman	2
Dwarf Cream Wave	2
Gold Triangle	1
Poplar Hawk	1
Peppered	2
Yellow-tail	4
Scalloped Hook-tip	3
Elephant Hawk	4
Lesser Yellow Underwing	2
Pebble Prominent	1
Brown-tail	4
Purple Thorn	1
Riband Wave	9
Buff-tip	4
Smokey Wainscot	10
Grass Emerald	8
4-spotted Footman	1
Rosy Footman	6
Plain Wave	3
Dark Sword-grass	8
Sallow Kitten	2
Iron Prominent	1
Dingy Footman	2
Bactria lambdella	1
Minor Agg.	1
Knot Grass	1
Least Yellow Underwing	1
Udea lutalis	1
Drinker	1
Sharp-angled Peacock	1
Round-winged Muslin	2
Lesser Swallow Prominent	1
Bordered Sallow	1
Birch Mocha	1
Argyresthia goerdartella	10
Dun-bar	1
Agriphila tristella	1
Crambus perlella	1
Small Scallop	1
Willow Beauty	1
Cydia splendana	1
Bright-line Brown-eye	1
Clay	1
Chinese Character	1
Apotomis turbidana	1

4-dotted Footman	1
Uncertain	5
Poplar Grey	1
Endotricha flammealis	1
Agriphila geniculea	1
Acleris asperana	1
Herald	1
Garden Tiger	2
Straw Dot	1
Twin-spotted Wainscot	1
Mother of Pearl	1
Brindled Pug	1
Iron Prominent	1
Scarce Footman	17
Beautiful China-mark	1
Nomophila noctuella	1
Eudonia mercurella	1
Dingy Mocha	1
Marbled White-spot	1

100 species 914 moths
SLEPE HEATH 24/7/17

Common Footman	1
Large Yellow Underwing	132
Aristotelia ericanella	103
Pebble Prominent	2
Horse Chestnut	8
Chrysosteuchia culmella	50
Agriphila straminella	18
Scarce Footman	23
Straw Dot	1
True Lover's Knot	106
Cream Wave	1
Dark Arches	7
Dotted Border Wave	2
Diamond-back	8
Synaphe punctalis	16
Flame Shoulder	6
Foxglove Pug	2
Broad-bordered Yellow Underwing	29
Argyrotaenia idungiana	1
Common Rustic	3
Purple Thorn	1
Silver Y	1
Pyrausta aurata	1
Beautiful Yellow Underwing	43
Nomophila noctuella	3
Udea ferrugalis	4
Common Carpet	1
Coxcomb Prominent	1
Scarce Footman	2

Rustic agg.	2
Lesser Broad-bordered Yellow Underwing	2
Nut-tree Tussock	1
Antler moth	1
Hypsopygia costalis	1
Sallow Kitten	3
Uncertain	4
Twin-spotted Wainscot	1
Brachmia blandella	1
Monochroa cytisella	1
Donacula forficella	1
Bactra lancealana	1
White-line Dart	1
Endotricha flammealis	1
Pine Carpet	4
Birch Mocha	1
Narrow-winged Pug	6
Amblyptilia onathadactyla	1
Eupoecilia angustana	1
Ear spp	1
Privet Hawk	1
Dark Sword-grass	2
Smoky Wainscot	2
Dog's-tooth	1
Dun-bar	1
Setaceous Hebrew Character	1
Bactra lancealana	1
Ruby Tiger	3
Round-winged Muslin	1
Agriphila inquinatella	3
Eupoecilia angustana	1
4-spotted Footman	1
Lesser Yellow Underwing	2
Monopis laevigella	1
Double-striped pug	2
Lesser Swallow Prominent	3
Garden Tiger	1
Udea lutalis	1
Rosy Footman	2
Ringed China-mark	2
Onocera semirubella	1
Single-dotted Wave	1
Drinker	1
Pale Prominent	2
Phycitodes maritima	1
Yellow-tail	1
Dingy Footman	2
Narrow-winged Pug	1
Chevron	2
Paraponyx statiotata	1
Wormwood Pug	1
Grass Emerald	1

Mouse	1
Lunar Yellow Underwing	1
Small Fan-footed Wave	1
Pempelia genistella	1
Square-spot Rustic	1

86 species 663 moths

SLEPE HEATH 31/7/17

Canary-shouldered Thorn	1
Smoky Wainscot	4
Aristotelia ericanella	10
Endotricha flammealis	1
Agriphila inquinatella	17
Large Yellow Underwing	25
True Lover's knot	4
Beautiful Yellow Underwing	3
Small Wainscot	1
Flame Shoulder	1
Narrow-winged Pug	3
Least Yellow Underwing	1
Common Rustic	1
Straw Dot	1
Agriphila straminella	2
Flame Shoulder	3
Synaphe punctalis	2
Broad-bordered Yellow Underwing	1
Cydia splendana	1
Lesser Broad-bordered Yellow Underwing	1
Rustic agg.	4
Small Chocolate-tip	1
Eupocaelia angustana	1
Udea ferrugalis	1
Eudonia mercurella	1
Double-striped Pug	1
Lesser Swallow Prominent	1
Annulet	1
4-spotted Footman	1
Rosy Footman	1
Small Scallop	1

SLEPE HEATH 7/8/17

Miller	1
Grass Emerald	2
Agriphila inquinatella	7
Ruby Tiger	2
Double-striped Pug	5
Dark Sword-grass	3
Setaceous Hebrew Character	2
Agriphila straminella	2

True Lover's Knot	13
Eupocelia angustiana	11
Beautiful Yellow Underwing	4
Bordered Grey	1
Large Yellow Underwing	16
Archers Dart	1
Aristotelia ericanella	21
Agriphila tristella	1
Narrow-winged Pug	6
Horse Chestnut	1
White-line Dart	1
Broad-bordered Yellow Underwing	1
Sallow Kitten	1
Shuttle-shaped Dart	1
Poplar Hawk	1
Sdynaphe punctalis	1
Bactra lancealana	1
Flame Shoulder	2
Udea ferrugalis	1
Grass Eggar	3
Silver Y	1
Small Purple-barred	1
Least Yellow Underwing	2
Knot Grass	1
Sharp-angled Peacock	1
Spectacle	1
Dark Arches	1
Lesser Broad-bordered Yellow Underwing	1
Eudonia mercurella	2
Dingy Footman	1
Rustic / Uncertain	1

SLEPE HEATH 14/8/17

Agriphila straminella	5
Brimstone	1
Peacock	1
Horse Chestnut	1
Grass Eggar	4
Scalloped Hook-tip	2
True Lover's Knot	1
Black Arches	1
Lesser Broad-bordered Yellow Underwing	4
Silver Y	2
Large Yellow Underwing	84
Agriphila inquinatella	10
Small Wainscot	2
Beautiful Yellow Underwing	6
Southern Wainscot	1
Vines Rustic	5
Broad-bordered Yellow Underwing	2
Dark Sword-grass	4

Smoky Wainscot	1
Setaceous Hebrew Character	2
Agriphila tristella	1
Pine Carpet	1
Mouse	1
Double-striped Pug	2
4-spotted Footman	1
Aristotelia ericinella	2
Agriphila geniculea	1
Lesser Yellow Underwing	1
Flame shoulder	2
Agriphila tristella	3
Lesser Swallow Prominent	2
Narrow-winged Pug	5
Minor agg.	1
Bactra lancealana	1
Archers Dart	1
Catoptria pinella	1
Chevron	1
Rustic / uncertain	1
Udea ferrugalis	1
SLEPE HEATH 21/8/17	

Angle Shades	1
Large Yellow Underwing	94
Beautiful Yellow Underwing	3
Rustic / Uncertain	1
Bactra lancealana	1
Grass Eggar	6
Small Wainscot	5
Gold Spot	1
Lesser Broad-bordered Yellow Underwing	2
Flame Shoulder	4
Agriphila tristella	2
Dark Sword-grass	2
Common Wainscot	1
Setaceous Hebrew Character	1
Common Rustic	1
Pinion-streaked Snout	1
Eudonia mercurella	1
Agriphila tristella	1
Broad-bordered Yellow Underwing	1
Catoptria pinella	1
Vines Rustic	2
Agriphila inquitella	2
Agriphila straminella	1
Narrow-winged Pug	1

SLEPE HEATH 28/8/17

Grass Eggar	3
Angle Shades	1

Large Yellow Underwing	34
Cydia ulicetana	3
Brown China-mark	1
Beautiful Yellow Underwing	3
Vines Rustic	1
Flame Shoulder	2
Bactra lancealana	1
Anomalous	1
Canary-shouldered Thorn	2
Broad-bordered Yellow Underwing	1
Archers Dart	1
Crambus hamella	8
Horse Chestnut	2
Agriphila inquinatella	1
Agriphila tristella	1
Agriphila geniculea	5
Square-spot Rustic	2
Lesser Broad-bordered Yellow Underwing	1
Small Wainscot	1
Agriphila latistria	2
Gold Spot	1
SLEPE HEATH 14/10/17	

Lesser Yellow Underwing	1
Black Rustic	6
Small Wainscot	3
Large Yellow Underwing	2
Pink-barred Sallow	1
Pine Carpet	1
Yellow-line Quaker	2
Chestnut	11
Grey Pine Carpet	3
Epiphyas postvittana	2
Straw Dot	1
Feathered Thorn	1
Red-line Quaker	1
Flounced Chestnut	3
Southern Chestnut	3
Udea ferrugalis	1
Red Sword-grass	1

SLEPE HEATH 4/9/17

Common Wainscot	1
Cydia splendana	2
Large Yellow Underwing	8
Six-striped Rustic	3
Crambus hamella	21
Silver Y	1
Square-spot Rustic	5
Eudonia pallida	2
Small Square-spot	1

Pandemis corylana	1
Small Wainscot	1
Brimstone	2
Notocelia uddmanniana	1
Flame Shoulder	5
Anomalous	1
Broad-bordered Yellow Underwing	3
Grey Pine Carpet	1
Lesser Yellow Underwing	1
Epiphyas postvittana	1
Horse Chestnut	2
Archers Dart	1
Lunar Underwing	2
Feathered Gothic	1
Mirificama mulinella	1