

**Watchtree Nature Reserve
Moth Monitoring 2007**



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1. INTRODUCTION

Moth trapping was carried out at Watchtree from March to October 2007, continuing from the trapping carried out annually since 2003. The moth trapping at Watchtree can only be used to produce a baseline species list. As trapping is only done twice per month it is not possible to use the data in any comparative way, either qualitatively or quantitatively.

2. METHODS

Moth trapping in 2007 followed a similar methodology to that used in 2006. The trap was set up twice per month, (April – October), in various locations to expand the coverage of habitats at Watchtree.

Several types of moth trap and bulb types were used in 2007. A Robinson trap, in combination with either a 40w twin-tube Actinic bulb or a high UV 25w blacklight blue bulb, was used in addition to a "Moonlander" trap with an 40w twin-tube Actinic bulb. In all cases the trap in use was powered by a 12v gel leisure battery. For National Moth Night, a variety of traps and bulb types was used, including several 125w Mercury Vapour (MV) bulbs which can only be run from a 240v A/C source. As this was a public event, white sheeting was also employed with MV and blacklight blue bulbs to attract moths where the public could view them in an accessible manner.

Moth trapping was undertaken when weather conditions were forecast to be favourable, i.e. no rainfall, little or no wind and overcast or little moonlight.

The moth traps was set up during the previous day or early evening using either a timer switch or a dusk-to-dawn light switch. The retention of moths within a trap will vary with trap type; Robinson traps have the highest retention ability of all. "Moonlander" traps tend to attract moths to the outside of the trap as well as into the trap, although the numbers that remain and settle on the outside of the trap is impossible to quantify. The trap was inspected early the following morning and moths were counted and identified. Photographs were taken to aid the identification of species which could not easily be identified on site, for example very worn specimens. The moths were then released into dense vegetation to prevent predation. A note was also made of the number of any individuals which escaped while checking the trap.

As well as night-flying moths, there are several species of day-flying moths present at Watchtree, in particular Six-spot Burnet and Narrow-bordered Five-spot Burnet. A healthy colony of Narrow-bordered Five-spot Burnet moths was located in 2003 while carrying out butterfly transects. This colony was centred round the west of Watchtree map area 10. In addition to the overnight moth trapping, two separate counts of Narrow-bordered Five-spot Burnet moth cocoons were carried out in late June and early July. Counts were made of cocoons on the length of fencing between Watchtree map areas 10 and 4b to collect information on the numbers of this species emerging. The wire fencing seems to be a favoured location for the larvae to pupate before emerging as adults. Although some cocoons are found on grass and plant stems close to the fence, the vast majority were located on the fence line. Although this method of counting will not give a total population count, it can be used as an index of the current year's flying adults and is therefore comparable from year to year, assuming their choice of pupating location does not change between years.

3. RESULTS

3.1 Moth Trapping

The cold, wet weather during much of the the 2007 survey period was not conducive to large catches of moths. It is thought that, nationally, moth catches were reduced by 60-70% (pers. comm. from other moth surveyors). The poor weather also meant that it was difficult to use the moth traps in the more exposed areas at Watchtree such as the open meadows and grasslands. Consequently, most of the moth trapping was limited to the mature woodland areas or areas sheltered by these woodlands. Surveying of moths in the open areas was therefore very limited in 2007.

Twenty-seven new species were recorded in 2007 compared to 19 new species in 2006. Part of this increase will be due to the use of a new type of moth trap, the Robinson trap, which has the highest retention rate amongst moth traps, and the additional trapping in April and October which increased the length of survey period to include a wider range of species' flight periods.

Table 1 shows the species and number of each species caught in 2007. Also included are the number of any moths which escaped when opening the trap the following morning and also any moths which were too worn to allow accurate identification.

Some species trapped at Watchtree have been recorded with the notation "agg." after the name. This is the standard recording method for aggregate species. Aggregate species are groups of species within a genus which are very difficult or impossible to identify with any degree of certainty without genital dissection. For example, Common Rustic, November Moth and Marbled Minor aggregates contains three species. Some species "pairs" which are present at Watchtree can also be difficult to identify with certainty. These include Red Twin-spot Carpet / Dark-barred Twin-spot Carpet and Copper / Svensson's Copper Underwing. In previous years individuals of Copper/Svensson's Copper Underwing caught at Watchtree were recorded under this "pair" category, but recent research has found that these species can be determined to species level based on the pattern of colouration on the palps and to a lesser degree on abdomen markings. Using this methodology Copper Underwing has been identified with certainty at Watchtree and recorded at species level status at Watchtree. One other species pair which has been recorded at Watchtree is Dark Dagger/Grey Dagger. Although these species cannot be separated without genital dissection, the caterpillars are easily identified. The record of Grey Dagger at Watchtree is of a caterpillar rather than an imago. Two other species at Watchtree have been identified from caterpillar records only; Chamomile Shark and The Vapourer.

Shown below Table 1 are additional records and corrections made to the species list for 2006. Photographs of particularly worn or difficult individuals were reviewed and/or passed for external comment and the resulting identifications or corrections noted.

Appendix 1 is a complete species list for Watchtree from 2003 – 2007.

3.2 Narrow-bordered Five-spot Burnet Moth (*Zygaena lonicerae latomarginata*)

Table 2 shows the counts of viable (live) cocoons, empty cocoons, non-viable (dead/damaged) cocoons & larvae located in 2007 and includes data from 2004 - 2005 for comparison. No cocoons, either viable or non-viable were located in 2007. No caterpillars or flying adults were found.

4. DISCUSSION

The extended trapping season into April and October accounted for 9 new species recorded at Watchtree in 2007. Although moth trapping was more limited this year in terms of range of habitat sampled due to weather and the effect of the cold, wet season, a reasonably high number of new species was recorded. As the newly created habitats continue to develop, the number of moth species recorded should continue to rise. As an example of this, one of the species which was recorded for the first time in 2007 was Spruce Carpet, attracted to the recently planted conifers.

There was no evidence of Narrow-bordered Five-spot Burnet Moth at Watchtree in 2007. No caterpillars, cocoons, or adults were recorded. The population of Narrow-bordered Five-spot Burnet Moth has been declining dramatically since the first surveys in 2004. A relatively small, isolated colony in a small area such as the one at Watchtree may be more prone to total loss due to a one or a combination of negative influences such as poor weather, parasite attack or habitat degradation or loss. Even if the current population has become extinct, habitat management which benefits this moth should be continued as re-colonisation may occur naturally in the future.

5. REFERENCES

- Skinner, B. (1998). Colour Identification Guide to Moths of the British Isles. Viking.
Waring, P. & Townsend, M. (2003). Field Guide to the Moths of Great Britain and Ireland. British Wildlife Publishing, Hampshire.

Table 1. Species list of moths trapped at Watchtree Nature Reserve in 2007.
New additions to the species list are in **bold**.

APRIL

10/04/2007

Woodland 8a

“Moonlander” Trap 40w Actinic

Early Thorn	<i>Selenia dentaria</i>	1
Early Tooth-striped	<i>Trichopteryx carpinata</i>	3
Small Quaker	<i>Orthosia cruda</i>	4
Powdered Quaker	<i>Orthosia gracilis</i>	2
Common Quaker	<i>Orthosia cerasi</i>	18
Clouded Drab	<i>Orthosia incerta</i>	3
Hebrew Character	<i>Orthosia gothica</i>	4
Twin-spotted Quaker	<i>Orthosia munda</i>	1

29/04/2007

Woodland 8a/3n

“Moonlander” Trap 40w Actinic

Hebrew Character	<i>Orthosia gothica</i>	2
Early Tooth-striped	<i>Trichopteryx carpinata</i>	1
Common Quaker	<i>Orthosia cerasi</i>	1
Clouded Drab	<i>Orthosia incerta</i>	1

MAY

22/05/2007

Woodland 8a

“Moonlander” Trap 40w Actinic

Pebble Prominent	<i>Eligmodonta ziczac</i>	1
Silver-ground Carpet	<i>Xanthorhoe montanata</i>	2
White Ermine	<i>Spilosoma lubricipeda</i>	1
Spruce Carpet	<i>Thera britannica</i>	1

25/05/2007

3(s)/2d

“Moonlander” Trap 40w Actinic

No moths

Table 1. cont. Species list of moths trapped at Watchtree Nature Reserve in 2007.
 New additions to the species list are in **bold**.

JUNE

09/06/2007

Woodland 8a

"Moonlander" Trap 40w Actinic

Elephant Hawk-moth	<i>Deilephila elpenor</i>	2
Poplar Hawk-moth	<i>Laothoe populi</i>	1
White Ermine	<i>Spilosoma lubricipeda</i>	10
Middle-barred Minor	<i>Oligia fasciuncula</i>	3
Clouded Border	<i>Lomaspilis marginata</i>	1
Brown China-mark	<i>Elophila nymphaeata</i>	1
Heart & Dart	<i>Agrotis exclamationis</i>	1
Silver-ground Carpet	<i>Xanthorhoe montanata</i>	1
Common Carpet	<i>Epirrhoe alternata</i>	1
Small Seraphim	<i>Pterapherapteryx sexalata</i>	1
Coxcomb Prominent	<i>Ptilodon capucina</i>	1
Marbled Minor agg.	<i>Oligia strigilis</i> agg.	1
Green Pug	<i>Pasiphila rectangulata</i>	1
Foxglove Pug	<i>Eupithecia pulchellata</i>	2
Common Lutestring	<i>Ochropacha duplaris</i>	1
Common Marbled Carpet	<i>Chloroclysta truncata</i>	1

20/06/2007

Concrete area east of Woodland 8b

"Moonlander" Trap 40w Actinic

Light Emerald	<i>Campaea margaritata</i>	1
Yellow-tail	<i>Euproctis similis</i>	2
The Drinker	<i>Euthrix potatoria</i>	1
Foxglove Pug	<i>Eupithecia pulchellata</i>	2
Riband Wave	<i>Idaea aversata</i>	1
Buff Ermine	<i>Spilosoma luteum</i>	2
Clouded Border	<i>Lomaspilis marginata</i>	1

Table 1. cont. Species list of moths trapped at Watchtree Nature Reserve in 2007.
New additions to the species list are in **bold**.

JULY

22/07/2007

Edge of runway on north side of Wetland area 7a

Robinson Trap 25w Blacklight blue bulb

Shaded Broad-bar	<i>Scotopteryx chenopodiata</i>	1
Yellow-tail	<i>Euproctis similis</i>	1
Large Yellow Underwing	<i>Noctua pronuba</i>	3
Dark Arches	<i>Apamea monoglypha</i>	4
Common Rustic agg	<i>Mesapamea secalis agg</i>	2
Smoky Wainscot	<i>Mythimna impura</i>	5
Ruby Tiger	<i>Phragmatobia fuliginosa</i>	1
The Drinker	<i>Euthrix potatoria</i>	2
Brown-line Bright-eye	<i>Mythimna conigera</i>	1
Swallow Prominent	<i>Pheosia tremula</i>	1

27/07/2007

Woodland 8a

Robinson Trap 25w Blacklight blue bulb

Mother of Pearl	<i>Pleuroptya ruralis</i>	2
Clouded Border	<i>Lomaspilis marginata</i>	3
Shaded Broad-bar	<i>Scotopteryx chenopodiata</i>	2
Common Wainscot	<i>Mythimna pallens</i>	1
Early Thorn	<i>Selenia dentaria</i>	1
Smoky Wainscot	<i>Mythimna impura</i>	5
Yellow-tail	<i>Euproctis similis</i>	1
July Highflyer	<i>Hydriomena furcata</i>	3
Coxcomb Prominent	<i>Ptilodon capucina</i>	1
Flame Carpet	<i>Xanthorhoe designata</i>	1
Brown China-mark	<i>Elophila nymphaeata</i>	7
The Drinker	<i>Euthrix potatoria</i>	1
	<i>Udea prunalis</i>	1
	<i>Evergestis pallidata</i>	3
	<i>Trachycera advenella</i>	2

Table 1. cont. **Species list of moths trapped at Watchtree Nature Reserve in 2007.**
 New additions to the species list are in **bold**.

AUGUST

21/08/2007

Woodland 8a

Robinson Trap 25w Blacklight blue bulb

Yellow-tail	<i>Euproctis similis</i>	1
Small Square-spot	<i>Diarsia rubi</i>	12
Lempke's Gold Spot	<i>Plusia putnami</i>	1
Flounced Rustic	<i>Luperina testacea</i>	4
Riband Wave	<i>Idaea aversata</i>	3
Canary-shouldered Thorn	<i>Ennomos alniaria</i>	2
Pebble Prominent	<i>Eligmodonta ziczac</i>	1
Smoky Wainscot	<i>Mythimna impura</i>	3
Shaded Broad-bar	<i>Scotopteryx chenopodiata</i>	1
Broad-bordered Yellow Underwing	<i>Noctua fimbriata</i>	1
Dotted Clay	<i>Xestia baja</i>	1
Common Carpet	<i>Epirrhoe alternata</i>	2
Dark Arches	<i>Apamea monoglypha</i>	1
Common Rustic agg	<i>Mesapamea secalis agg</i>	7
Square-spot Rustic	<i>Xestia xanthographa</i>	1
Common Wave	<i>Cabera exanthemata</i>	1
Rosy Rustic	<i>Hydraecia micacea</i>	1
Six-striped Rustic	<i>Xestia sexstrigata</i>	1
Lesser Broad-bordered Yellow Underwing	<i>Noctua janthe</i>	2
Brown China-mark	<i>Elophila nymphaeata</i>	1
Common Marbled Carpet	<i>Chloroclysta truncata</i>	1

30/08/2007

Woodland 8a

Robinson Trap 25w Blacklight blue bulb

Canary-shouldered Thorn	<i>Ennomos alniaria</i>	3
Small Square-spot	<i>Diarsia rubi</i>	1
The Dun-bar	<i>Cosmia trapezina</i>	1
Small Wainscot	<i>Photedes pygmina</i>	1
Lesser Broad-bordered Yellow Underwing	<i>Noctua janthe</i>	1

Table 1. cont. **Species list of moths trapped at Watchtree Nature Reserve in 2007.**
 New additions to the species list are in **bold**.

SEPTEMBER

08/09/2007

Area 10

Robinson Trap 25w Blacklight blue bulb

Canary-shouldered Thorn	<i>Ennomos alniaria</i>	3
Common Marbled Carpet	<i>Chloroclysta truncata</i>	1
Common Carpet	<i>Epirrhoe alternata</i>	1
Square-spot Rustic	<i>Xestia xanthographa</i>	3
Flounced Rustic	<i>Luperina testacea</i>	2
Large Yellow Underwing	<i>Noctua pronuba</i>	1
Brown-spot Pinion	<i>Agrochola litura</i>	2
Copper Underwing	<i>Amphipyra pyramidea</i>	1
Rosy Rustic	<i>Hydraecia micacea</i>	1
Pale Eggar	<i>Trichiura crataegi</i>	1

29/09/2007

2d (East of Woodland 8a)

Robinson Trap 25w Blacklight blue bulb

Canary-shouldered Thorn	<i>Ennomos alniaria</i>	1
Pink-barred Sallow	<i>Xanthia togata</i>	2
Green-brindled Crescent	<i>Allophyes oxyacanthae</i>	2
Red-line Quaker	<i>Agrochola lota</i>	2
Feathered Thorn	<i>Colotois pennaria</i>	2
July Highflyer	<i>Hydriomena furcata</i>	1

OCTOBER

21/110/2007

Woodland 8a

Robinson Trap 25w Blacklight blue bulb

Yellow-line Quaker	<i>Agrochola macilenta</i>	1
Red-line Quaker	<i>Agrochola lota</i>	1

25/10/2007

Woodland 8a

Robinson Trap 40w Actinic

November Moth agg.	<i>Epirrita dilutata</i> agg	2
Feathered Thorn	<i>Colotois pennaria</i>	8
Red-line Quaker	<i>Agrochola lota</i>	4
The Chestnut	<i>Conistra vaccinii</i>	1
Spruce Carpet	<i>Thera britannica</i>	1

Additional records.

21/06/2007 Beautiful Carpet (*Mesoleuca albicillata*). One disturbed during day-time in woodland 8b.

National Moth Night

11/08/2007

Watchtree Management Centre car park.

Brown China-mark	<i>Elophila nymphaeata</i>	1
Antler Moth	<i>Cerapteryx graminis</i>	30
Common Rustic agg	<i>Mesapamea secalis agg</i>	5
Flame Carpet	<i>Xanthorhoe designata</i>	1
Garden Carpet	<i>Xanthorhoe fluctuata</i>	1
Large Yellow Underwing	<i>Noctua pronuba</i>	5
Lesser Broad-bordered Yellow Underwing	<i>Noctua janthe</i>	1
Iron Prominent	<i>Notodonta dromedarius</i>	1
The Drinker	<i>Euthrix potatoria</i>	2
Dark Arches	<i>Apamea monoglypha</i>	2
Smoky Wainscot	<i>Mythimna impura</i>	2
Barred Yellow	<i>Cidaria fulvata</i>	1
Ruby Tiger	<i>Phragmatobia fuliginosa</i>	3
Riband Wave	<i>Idaea aversata</i>	1
Rosy Minor	<i>Mesoligia literosa</i>	2
Small Fan-footed Wave	<i>Idaea biselata</i>	2
Orange Swift	<i>Hepialus sylvina</i>	1
Flame Shoulder	<i>Ochropleura plecta</i>	1
Flounced Rustic	<i>Luperina testacea</i>	2
Yellow-tail	<i>Euproctis similis</i>	1
Small Square-spot	<i>Diarsia rubi</i>	1
Worn/unidentified		1

Corrections.

Photographs of particularly worn or difficult individuals trapped in 2006 were reviewed and/or passed for external comment. Additions to the species list or corrections are set out below.

2006. A photograph of a very worn specimen of what was initially recorded as August Thorn trapped in August 2006 was reviewed and identified as **September Thorn** (*Ennomos erosaria*).

Table 2. Narrow-bordered Five-spot Burnet Moth counts 2007. Counts of viable (live) cocoons, empty cocoons, non-viable (dead/damaged) cocoons & larvae with data included for for 2004 - 2006.

1st survey

		25/06/2004	20/06/2005	28/06/2006	21/06/2007
Cocoons	live	102	1	0	0
	empty	24	9	3	0
	non-viable	?	0	0	0
Larvae		0	0	0	0

2nd survey

		07/07/2004	07/07/2005	05/07/2006	08/07/2007
Cocoons	live	9	2	0	0
	empty	97	0	0	0
	non-viable	10	0	0	0
Larvae		3	0	0	0

Appendix 1. Watchtree moth species list 2003 – 2007.
(New species recorded in 2007 shown in **bold**)

Bradley & Fletcher No.	Common Name	Scientific name
1036		<i>Acleris forsskaleana</i>
1358		<i>Evergestis pallidata</i>
1439		<i>Trachycera advenella</i>
1390		<i>Udea prunalis</i>
2306	Angle Shades	<i>Phlogophora meticulosa</i>
2176	Antler Moth	<i>Cerapteryx graminis</i>
1758	Barred Straw	<i>Eulithis pyraliata</i>
1765	Barred Yellow	<i>Cidaria fulvata</i>
1748	Beautiful Carpet	<i>Mesoleuca albicillata</i>
2442	Beautiful Golden Y	<i>Autographa pulchrina</i>
2110	Broad-bordered Yellow Underwing	<i>Noctua fimbriata</i>
1345	Brown China-mark Moth	<i>Nymphula nymphaeata</i>
2192	Brown-line Bright-eye	<i>Mythimna conigera</i>
2266	Brown-spot Pinion	<i>Agrochola litura</i>
2061	Buff Ermine	<i>Spilosoma luteum</i>
2154	Cabbage Moth	<i>Mamestra brassicae</i>
1913	Canary-shouldered Thorn	<i>Ennomos alniaria</i>
2269	Centre-barred Sallow	<i>Atethmia centrago</i>
2214	Chamomile Shark (caterpillar)	<i>Cucullia chamomillae</i>
2069	Cinnabar	<i>Tyria jacobaeae</i>
1887	Clouded Border	<i>Lomaspillis marginata</i>
2188	Clouded Drab	<i>Orthosia incert</i>
2343 / 2343a /	Common Rustic agg.	<i>Mesapamea secalis</i> agg.
1738	Common Carpet	<i>Epirrhoe alternata alternata</i>
1669	Common Emerald	<i>Hemitea aestivaria</i>
2050	Common Footman	<i>Eilema lurideola</i>
1657	Common Lutestring	<i>Ochropacha duplaris</i>
1764	Common Marbled Carpet	<i>Chloroclysta truncata</i>
2187	Common Quaker	<i>Orthosia cerasi</i>
2199	Common Wainscot	<i>Mythimna pallens</i>
1693	Common Wave	<i>Cabera exanthemata</i>
2297	Copper Underwing	<i>Amphipyra pyramidea</i>
2297 / 2298	Copper / Svensson's Copper Underwing	<i>Amphipyra pyramidea</i> agg.
2008	Coxcomb Prominent	<i>Ptilodon capucina</i>
2321	Dark Arches	<i>Apamea monoglypha</i>
1762	Dark Marbled Carpet	<i>Chloroclysta citrata citrata</i>
1725 / 1724	Dark-barred Twin-spot Carpet / Red Twin-spot Carpet	<i>Xanthorhoe ferrugata/spadicearia</i>
2159	Dog's Tooth	<i>Lacanobia suasa</i>
2130	Dotted Clay	<i>Xestia baja</i>
2114	Double Dart	<i>Graphiphora augur</i>
2128	Double Square-spot	<i>Xestia triangulum</i>
1862	Double-striped Pug	<i>Gymnoscelis rufifasciata</i>
2330	Dusky Brocade	<i>Apamea remissa</i>
1917	Early Thorn	<i>Selenia dentaria</i>
1881	Early Tooth-striped	<i>Trichopteryx carpinata</i>
1991	Elephant Hawkmoth	<i>Deilephila elpenor</i>
1980	Eyed Hawkmoth	<i>Smerinthus ocellata</i>
1923	Feathered Thorn	<i>Colotois pennaria</i>
1722	Flame Carpet	<i>Xanthorhoe designata</i>
2102	Flame Shoulder	<i>Ochropleura plecta</i>
2353	Flounced Rustic	<i>Luperina testacea</i>
1817	Foxglove Pug	<i>Eupithecia pulchellata</i>
2364	Frosted Orange	<i>Gortyna flavago</i>
1728	Garden Carpet	<i>Xanthorhoe fluctuata</i>
2082	Garden Dart	<i>Euxoa nigricans</i>

Appendix 1. cont. Watchtree moth species list 2003 – 2007.
(New species recorded in 2007 shown in **bold**)

Bradley & Fletcher No.	Common Name	Scientific name
2057	Garden Tiger	<i>Arctia caja</i>
14	Ghost Moth	<i>Hepialus humuli</i>
2444	Gold Spangle	<i>Autographa bractea</i>
2138	Green Arches	<i>Anaplectoides prasina</i>
1776	Green Carpet	<i>Colostygia pectinataria</i>
1860	Green Pug	<i>Pasiphila rectangulata</i>
2245	Green-brindled Crescent	<i>Allophyes oxyacanthae</i>
2150	Grey Arches	<i>Polia nebulosa</i>
2284	Grey Dagger (caterpillar)	<i>Acronicta psi</i>
2089	Heart and Dart	<i>Agrotis exclamationis</i>
2190	Hebrew Character	<i>Orthosia gothica</i>
2120	Ingrailed Clay	<i>Diarsia mendica mendica</i>
2000	Iron Prominent	<i>Notodonta dromedarius</i>
1777	July Highflyer	<i>Hydriomena furcata</i>
1666	Large Emerald	<i>Geometra papilionaria</i>
2107	Large Yellow Underwing	<i>Noctua pronuba</i>
1894	Latticed Heath	<i>Chiasmia clathrata clathrata</i>
2440	Lempke's Gold Spot	<i>Plusia putnami gracilis</i>
2111	Lesser Broad-bordered Yellow Underwing	<i>Noctua janthe</i>
2006	Lesser Swallow Prominent	<i>Pheosia gnoma</i>
2109	Lesser Yellow Underwing	<i>Noctua comes</i>
1961	Light Emerald	<i>Campaea margaritata</i>
18	Map-winged Swift	<i>Hepialus fusconebulosa</i>
2337 / 2338 / 2339	Marbled Minor agg.	<i>Oligia strigilis</i> agg.
2247	Merveille du Jour	<i>Dichonia aprilina</i>
2340	Middle-barred Minor	<i>Oligia fasciuncula</i>
1405	Mother of Pearl	<i>Pleuroptya ruralis</i>
2299	Mouse Moth	<i>Amphipyra tragopoginis</i>
171	Narrow-bordered Five-spot Burnet	<i>Zygaena lonicerae latomarginata</i>
1637	Northern Eggar	<i>Lasiocampa quercus callunae</i>
1795 / 1796 / 1797	November Moth agg.	<i>Epirrita dilutata</i> agg.
15	Orange Swift	<i>Hepialus sylvina</i>
1632	Pale Eggar	<i>Trichiura crataegi</i>
2158	Pale-shouldered Brocade	<i>Lacanobia thalassina</i>
2003	Pebble Prominent	<i>Eligmodonta ziczac</i>
1754	Pink-barred Sallow	<i>Xanthia togata</i>
1981	Poplar Hawk-moth	<i>Laothoe populi</i>
2186	Powdered Quaker	<i>Orthosia gracilis</i>
2323	Reddish Light Arches	<i>Apamea sublustris</i>
1760	Red-green Carpet	<i>Chloroclysta siterata</i>
2263	Red-line Quaker	<i>Agrochola lota</i>
1713	Riband Wave	<i>Idaea aversata</i>
2342	Rosy Minor	<i>Mesoligia literosa</i>
2361	Rosy Rustic	<i>Hydraecia micacea</i>
2064	Ruby Tiger	<i>Phragmatobia fuliginosa fuliginosa</i>
1779	Ruddy Highflyer	<i>Hydriomena ruberta</i>
1921	Scalloped Oak	<i>Crocallis elinguaris</i>
1915	September Thorn	<i>Ennomos erosaria</i>
1732	Shaded Broad-bar	<i>Scotopteryx chenopodiata</i>
1746	Shoulder-stripe	<i>Anticlea badiata</i>
2441	Silver Y	<i>Autographa gamma</i>
1727	Silver-ground Carpet	<i>Xanthorhoe montanata montanata</i>
1708	Single-dotted Wave	<i>Idaea dimidiata</i>
169	Six-spot Burnet	<i>Zygaena filipendulae</i>

Appendix 1. cont. Watchtree moth species list 2003 – 2007.
 (New species recorded in 2007 shown in **bold**)

Bradley & Fletcher No.	Common Name	Scientific name
2133	Six-striped Rustic	<i>Xestia sexstrigata</i>
2345	Small Dotted Buff	<i>Photodes minima</i>
1702	Small Fan-footed Wave	<i>Idaea biselata</i>
1759	Small Phoenix	<i>Ecliptopera silaceata</i>
2182	Small Quaker	<i>Orthosia cruda</i>
1882	Small Seraphim	<i>Pterapherapteryx sexalata</i>
2123	Small Square-spot	<i>Diarsia rubi</i>
2350	Small Wainscot	<i>Photodes pygmina</i>
2198	Smoky Wainscott	<i>Mythimna impura impura</i>
1769	Spruce Carpet	<i>Thera britannica</i>
2134	Square-spot Rustic	<i>Xestia xanthographa</i>
2474	Straw Dot	<i>Rivula sericealis</i>
2007	Swallow Prominent	<i>Pheosia tremula</i>
2258	The Chestnut	<i>Conistra vaccinii</i>
2368	The Crescent	<i>Celaena leucostigma leucostigma</i>
1640	The Drinker	<i>Euthrix potatoria</i>
2318	The Dun-bar	<i>Cosmia trapezina</i>
1947	The Engrailed	<i>Ectropis bistortata</i>
1980	The Flame	<i>Axylia putris</i>
2136	The Gothic	<i>Naenia typical</i>
2469	The Herald	<i>Scoliopteryx libatrix</i>
1884	The Magpie	<i>Abraxas grossulariata</i>
1754	The Phoenix	<i>Eulithis prunata</i>
2274	The Sallow	<i>Xanthia ictertia</i>
2477	The Snout	<i>Hypena proboscidalis</i>
1858	The Vapourer (caterpillar)	<i>Orgyia antiqua</i>
1288	Twenty-plume Moth	<i>Alucita hexadactyla</i>
2189	Twin-spotted Quaker	<i>Orthosia munda</i>
2060	White Ermine	<i>Spilosoma lubricipeda</i>
2081	White-line Dart	<i>Euxoa tritica</i>
2264	Yellow-line Quaker	<i>Agrochola macilenta</i>
2030	Yellow-tail	<i>Euproctis similis</i>