GMS moth tips 3

Identification of micro-moth families

Birmingham & Black Country Biodiversity Action Plan

LOTTERY FUNDED

Introduction

This guide is intended for use by Garden Moth Scheme (GMS) recorders and other British and Irish moth enthusiasts. It is aimed at those who already have some understanding of moth taxonomy and morphology but struggle to easily home-in on which moth family a micro-moth belongs to. For further information about how to start out moth-trapping see www.gardenmothscheme.org.uk. There are currently over 1600 British and Irish micro-moth species, compared to around 800 species of macro-moth and 60 species of butterfly, so species identification is particularly challenging. Narrowing down identification to species requires additional information from training courses, websites and field guides.

This guide shows photographs of 45 micro-moth families at rest, together with identification tips, similar species, and the number of species in that family. Taxonomists disagree on the order and arrangement of families, but this guide follows the numbering system of Agassiz, Beavan, & Heckford 2013 (ABH) wherever possible. The guide is intended to be used with the excellent *Field Guide to the Micromoths of Great Britain and Ireland by Sterling, Parsons and Lewington, British Wildlife Publishing (2012, SPL*), which covers 1000+ micro-moth species. However, for the uninitiated, facing a light trap full of micro-moths starting from scratch with SPL can be both daunting and time-consuming.

Family names are different and are shown in a different order in SPL and B&F, so in order to reduce confusion, after the B&F numbers are quoted for each family the page numbers for the plates in SPL are also given. Beware that some species names differ between SPL and B&F, but moth recorders and many biological recording systems (e.g. Mapmate) tend to use the names in B&F, so this guide does the same. For completeness this guide also includes families that fly by day and are therefore rarely caught in moth traps.

1. Micropterigidae – 5 species

(*Micropterix* species - page 204)

Wingspan (wing-tip to wing-tip) 5-12 mm, caddis fly shaped. Forewings glossy, metallic bronze to purplish and steeply roof-shaped. Top and front of head are covered by a tuft of scales (yellowish in all but one species). Biting mandibles used to eat pollen, but difficult to see, proboscis absent. Flight season – May and June. Day-fliers, often found on flowers, particularly sedges and buttercups.

Micropterix calthella

Micropterix tunbergella

Likely in moth traps: no	Similar groups: Eriocraniidae

2. Eriocranidae – 8 species

(*Eriocrania* species – page 204)

Wingspan 9-14 mm, caddis fly shaped. Forewings are glossy golden or purple or a mix of both and steeply roof-shaped. Top and front of head are covered by a tuft of scales (dark coloured in all but one species which is yellowish). Mandibles are non-functioning, proboscis short. Flight season – March to May. This group can be identified more easily by checking their blotch leaf-mines with strings of frass. Day-fliers and can come to light, often fly over host trees, 6 species feed on birch.

Eriocrania subpurpurella

Eriocrania semipurpurella **mine on birch**

Likely in moth traps: yes	Similar groups: Micropterigidae

4. Nepticulidae – 100 species

(*Stigmella, Ectoedemia* and allies – page 204)

Wingspan 3-10 mm. Very small moths with short wings, this group includes Britain's smallest moth, size is only slightly bigger than a 'pin-head'! Top and front of head is covered by a tuft of scales, often yellowish and contrasting in colour with dark or black-ish head wings and body. Antennae rather short, $^{1}/_{3}$ to $^{2}/_{3}$ length of forewing, with large eye cap at base, which is usually white or pale-coloured and contrasting in colour with dark antennae, head, wings and body. Wings often have one or more white stripes or spots across them and are held shallowly roof-shaped. Proboscis is very short. Some species can be seen by day and some are attracted to light, but can be difficult to identify in the field and will probably need dissection to confirm. This family is usually easier to identify by the patterns of their larval gallery mines in leaves or by dissection.

Ectoedemia decentella

Ectoedemia atricollis

Stigmella aurella

***Stigmella aurella* mine on bramble**

***Stigmella tityrella* mine on Beech**

Likely in moth traps: yes	Similar groups: Opostegidae

5. Opostegidae – 4 species

(*Opostega* and *Pseudopostega* – page 204)

Wingspan 7-12 mm. Similar to Nepticulidae, usually larger and longer winged, eye caps much larger (nearly same size as head) and same colour as head. Head does not have prominent tuft of scales, as scales are white or pale and flat apart from small tuft between the antennae. Forewings are white or pale (not dark or blackish), with or without markings and held shallowly roof-shaped. Larval stages of British species not known, adults can come to light.

Opostega salaciella

Opostega salaciella

Likely in moth traps: yes	Similar groups: Nepticulidae

10. Tischeriidae – 6 species

(*Tischeria* and *Coptotriche* – page 206)

Wingspan 6-11 mm. Rest with front end raised, leaning unusually forward on legs. Wings held roof-shaped, quite long and slim, uniformly coloured orange/brown or with a partial dark border. Head is with rough scales on top, but smooth on face, less prominent than in Nepticulidae. Antennae almost as long as wings, with no conspicuous eye cap. Proboscis is short. Attracted to light, three species are uncommon or rare.

Emmetia marginea

***Tischeria ekebladella* mine on oak**

Likely in moth traps: yes	Similar groups: none

8. Incurvariidae – 5 species

(*Phylloporia* and *Incurvaria* – page 206)

Wingspan 7-9mm (Phylloporia), or 11-16mm (Incurvaria). Small to medium-sized moths. Body held near horizontal at rest with wings in roof-shaped position. Forewings more than twice as long as wide (compare with Psychidae). Wings are matt brown or blackish, not glossy and held steeply roof-shaped. They can be unmarked or with white or yellow spots just on dorsum (trailing edge), or on both this and costa (leading edge) and maybe with a fascia (stripe across wing). Top and front of head with tuft of scales. Antennae are shorter than forewing, simple (with no side-branches) or for males of two species are pectinate (with short side-branches). Proboscis reduced or absent.

Phylloporia bistrigella

Incurvaria masculella

Incurvaria pectinea **mines on birch**

Likely in moth traps: yes	Similar groups: Prodoxidae, Psychidae, Heliozelidae

9. Prodoxidae – 7 species

(*Lampronia* – page 206)

Wingspan 9-18mm. Features very similar to the closely related Incurvariidae, as above. Antennae are simple (with no side-branches) or for males maybe with short cilia (hairs), but never pectinate (with short side-branches).

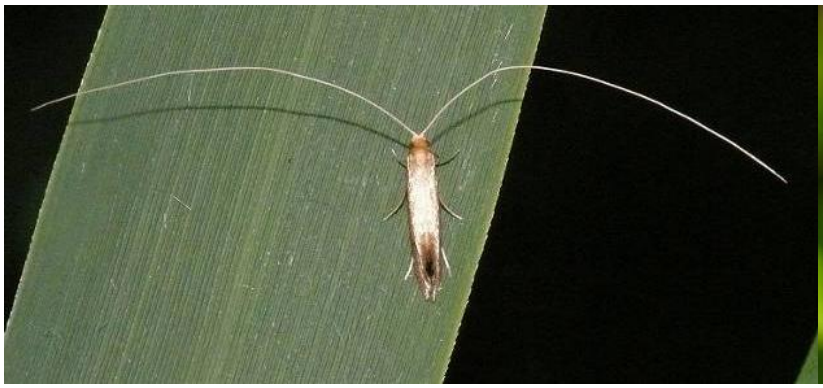
Lampronia fuscatella **mine on birch**

Likely in moth traps: yes	Similar groups: Incurvariidae, Psychidae, Heliozelidae

7. Adelidae – 15 species

(The longhorns - *Nematopogon, Nemophora, Adela, Cauchas* – page 205)

Wingspan 8-23 mm. Very long antennae, longer than the forewings, (longer in males and can be up to 4 times as long in some species) giving them their English name, the longhorns. All are day-flying. All have glossy wings except for *Nematopogon* and all hold wings steeply roof-shaped. Some caddis flies have equally long antennae, but hold them pointing straight forwards, not spreading as in Adelidae. Eyes of *Nemophora* are very large.



Nematopogon metaxella

Adela reaumella

Likely in moth traps: yes	Similar groups: none

Heliozelidae – 5 species

(*Heliozela* and *Antispila* – 0154 to 0159, page 204)

Wingspan 5-9 mm. Small moths, adults fly by day in late spring over the host trees and shrubs. Forewings with pale dorsal spot or spots or with a fascia (stripe across wing) and a costal (leading edge of wing) and a tornal (trailing edge corner of wing) spot and held steeply roof-shaped. Body rests with front end slightly raised. They look superficially similar to Incurvariidae, but head is very different with smooth scales. The head is dark coloured in all species and the lack of a tuft of scales makes it appear much smaller. Antennae are $^{2}/_{3}$ length of forewing. Proboscis is well developed.

Heliozela sericiella

Heliozela hammoniella **mine on birch**

Likely in moth traps: no	Similar groups: Incurvariidae, Psychidae, Prodoxidae

Psychidae – 21 species

(Psychids – 0175 to 0195, page 206)

Wingspan 10-28 mm. Females are wingless except *Narycia* and *Diplodoma* and two species are without males at least in the UK. Forewings usually broad and in most species not more than twice as long as wide, usually dull brown or grey, some species with speckled pattern, a few with indistinct fasciae (stripes across wing). Head is with a tuft of erect, raised or smooth scales. Antennae are usually bipectinate (branches on both sides) or in a few species with long cilia (hairs). Adults have non-functioning labial palps and therefore these are much reduced. Males only live for a few hours. Some species may be confused with Tineidae. May be easier to identify from their distinctive larval cases. They are also known as bagworms.

Taleporia tubulosa

Psyche casta

***Taleporia tubulosa* case**

***Psyche casta* case**

Likely in moth traps: yes	**Similar groups: Incurvariidae, Prodoxidae, Heliozelidae, Tineidae**

Tineidae – 63 species

(*Psychoides, Nemapogon, Tinea, Oinophila, Opogona* and allies – 0196 to 0250 and 0277 to 0279, page 208)

Wingspan 6-30 mm. Forewings are roof-shaped, long and often without distinct tornal angle (between termen (outer edge) and dorsum (trailing edge)), often dull brown. Head is with tuft of scales (except *Psychoides* which has a smooth head). Labial palps are pointing forwards or downwards from head, with robust scales ('bristles') on second segment. Proboscis weakly developed. Antennae about $^{3}/_{4}$ length of forewings. *Oinophila* appears similar to *Elachista*, but with longer antennae and tuft of cilia along termen (outer edge of wing) less prominent. *Opogona* species have distinctive horizontal curved labial palps reminiscent of earwig pincers.

Triaxomera parasitella

Tinea semifulvella

Common Clothes Moth,
Tinea bisselliella

Yellow-V Moth,
Oinophila v-flava

Opogona omoscopa

Likely in moth traps: yes	Similar groups: Psychidae

Lyonetiidae – 9 species

(*Leucoptera, Lyonetia* - 0254 to 0263, page 216)

Wingspan 5-10 mm. Small moths, resting position with front end raised (*Leucoptera*) or not (*Lyonetia*), wings held in a steeply roof-shaped position. Forewings white and narrow. Head with tuft of scales on crown and eye caps present. Antennae are from $^{2}/_{3}$ length of forewing to a little longer than forewing. Mouthparts all weakly developed.

***Lyonetia clerkella* 'hammock' cocoon**

Lyonetia clerkella

Likely in moth traps: yes	Similar groups: Gracillariidae

Bedelliidae – 1 species

(*Bedellia* – 0264, page 216)

Wingspan 7-8 mm. Small micro-moths that rest with front end of body raised. Forewings narrow and rolled around the body. Head with tuft of scales on crown and eye caps absent. Antennae are about same length as forewing. Mouthparts are weakly developed. *Bedellia* could be mistaken for a gracillariid.

***Bedellia somnulentella* mine on bindweed**

Bedellia somnulentella

Likely in moth traps: no	Similar groups: Gracillariidae

Bucculatricidae – 13 species

(*Bucculatrix* – 0265 to 0276, page 209)

Wingspan 6-9mm. Small moths, resting position with front end raised, wings in roof-shaped position. Forewings narrow. Head is with a tuft of spiky scales. Eye caps are present and conspicuous. Antennae are from $^{2}/_{3}$ length of forewing to a little longer than forewing. Mouthparts all weakly developed.

Bucculatrix nigricomella **from above**

Bucculatrix nigricomella **from the side**

Likely in moth traps: no	Similar groups: Lyonetiidae, Gracillariidae

Gracillariidae – 95 species

(*Caloptilia, Phyllonorycter* and allies – 0280 to 0369, page 210)

Wingspan 4.5-16 mm. Small to medium-sized, rest with front end raised at around 40° (except *Phyllonorycter*, only slightly raised), often showing tufts of scales on legs. Wings are held steeply roof-shaped. Head smooth or with tuft of scales. Antennae are nearly as long or slightly longer than forewing, without eye cap. Labial palps are slender, pointing forwards. Proboscis present.

Caloptilia stigmatella

Aspilapterix tringipennella

Parornix anglicella

Phyllonorycter blancardella

Phyllonorycter hilarella

Phyllonorycter sagitella **mine on Aspen**

Likely in moth traps: yes	Similar groups: Bucculatricidae

Choreutidae – 6 species

(Nettle-tap and Choreutids – 0385 to 0390, page 232)

Wingspan 4-18 mm. Day-flying. Rest with body horizontal, but held well up on legs and wings held flat and in a delta position (except *Tebenna* with wings roof-shaped). Head smooth scaled. Antennae are half to $^{2}/_{3}$ length of forewing. Labial palps point forward. A very distinctive family. The broad forewings suggest Tortricidae, but the resting position is quite different.

Nettle-tap Moth, *Anthophila fabriciana*

Prochoreutis sehestediana

Likely in moth traps: no	Similar groups: none

Glyphipterigidae – 14 species

(*Glyphipterix*– 0391 to 0397, *Orthotelia,* Acrolepiinae - 470 to 476, page 214)

Wingspan 6-28 mm. Small to medium-sized moths. At rest the wings are raised and lowered in a distinctive fashion in *Glyphipterix*. Those of *Orthotelia* and Acrolepiinae are kept motionless. All hold wings in a steeply roof-shaped position. Forewings are moderately long but with a distinct tornus (corner between termen (outer edge) and dorsum (trailing edge)). Head smooth or with a tuft of scales on crown. Antennae are about $^{3}/_{5}$ length of forewing. Labial palps are slender, slightly upcurved (strongly in *Orthotelia*). Proboscis is well developed (except *Orthotelia*). Most *Glyphipterix* species have a series of costal (leading edge of wing) markings and a dorsal (trailing edge of wing) hook which could lead to confusion with *Cydia* species (among the tortrixes). Orthotelia resemble one of the smaller wainscots (Noctuidae). *Orthotelia* seems ill-matched in this group.

Glyphipterix simpliciella

Acrolepia autumnitella

Orthotelia sparganella

Likely in moth traps: no	Similar groups: *Cydia* (tortrixes), wainscots

Douglasiidae – 2 species

(Tinagma – 0398 to 0399, page 216)

Wingspan 8-9 mm. Small moths that are mainly diurnal. Rest with front end raised. Forewings narrow, without distinct tornus (corner between termen (outer edge) and dorsum (trailing edge)), dark grey, with or without spot or fascia (stripe) and held roof-shaped. Head is with smooth scales. Antennae without eye cap and about $^{2}/_{3}$ length of forewing. Labial palps are short and point forward. Associated with Viper's-bugloss (*Echium vulgare*).

The GMS and UK Moths (www.ukmoths.org.uk) require pictures of the two species (*Tinagma balteolella* and *Tinagma ocnerostomella*). Good photographs are very valuable identification tools, so please get it touch if you have any.

Likely in moth traps: no	Similar groups: none

Argyresthiidae – 25 species

(*Argyresthia* – 0401 to 0423, page 212)

Wingspan 7-13 mm. These small moths rest usually with head down and abdomen raised up at an angle. Forewings long, with or without distinct tornus (corner between termen (outer edge) and dorsum (trailing edge)) and held steeply roof-shaped and often shiny or with white markings. Head is with smooth face and erect tuft of scales on top. Antennae about $^{3}/_{4}$ length of forewing, without eye cap. Labial palps are pointing forwards or curved upwards. Proboscis present, though sometimes weakly developed.

Argyresthia bonnetella

Argyresthia brockeella

Argyresthia goedartella

Likely in moth traps: yes	Similar groups: none

Yponomeutidae – 25 species

(*Yponomeuta* and allies– 0424 to 0445, 0450, page 211)

Wingspan 7-26 mm. Wings at rest in steeply roof-shaped position, antennae rest along wings or pointing forwards, body held horizontal in *Yponomeuta*, with head held slightly down in *Swammerdamia* and more steeply so in *Zelleria* and *Kessleria*.. Forewings long, with or without distinct tornus (corner between termen (outer edge) and dorsum (trailing edge)). Head is with smooth, raised or erect tuft of scales. Antennae about $^{3}/_{4}$ length of forewing, without eye cap. Labial palps are pointing forwards or curved upwards. Proboscis present, though sometimes weakly developed. *Yponomeuta* moths have rows of black dots along the forewings.

Yponomeuta evonymella

Yponomeuta rorrella

Zelleria hepariella

Pseudoswammerdamia combinella

Cedestis subfasciella

Scythropia crataegella

Likely in moth traps: yes	Similar groups: Ethmiidae and Thistle Ermine (a pyralid moth)

Roeslerstammiidae – 2 species

(*Roeslerstammia* - 0446 to 0447, page 209)

Wingspan 11-14 mm. Forewings are metallic bronze and held steeply roof-shaped. Head is with erect tuft of scales. Antennae are about $^{4}/_{5}$ length of forewing, dark with a white section before tip. Labial palps are long, curved upwards.

Roeslerstammia erxlebella

Likely in moth traps: yes	Similar groups: none

Praydidae – 5 species

(*Prays* – 0448 to 0449c, page 216)

Wingspan 8-16 mm. At rest front is slightly raised and wings steeply roof-shaped, antennae laid alongside wings. These are small to medium-sized moths with forewings long, without distinct tornus (corner between termen (outer edge) and dorsum (trailing edge)). Head smooth. Antennae are $^{1}/_{2}$ wing length. Labial palps curved upwards.

Prays fraxinella

***Prays fraxinella* (melanic form)**

Likely in moth traps: yes	Similar groups: none

Ypsolophidae – 16 species

(*Ypsolopha* – 0451 to 0463, *Ochsenheimeria* - 0251 to 0253, page 215)

Wingspan 9-32 mm. These small to medium sized moths have long forewings, with or without distinct tornus (corner between termen (outer edge) and dorsum (trailing edge)) and held steeply roof-shaped or wrapped around the body. *Ypsolopha* have head completely smooth or with erect tuft of scales on top. They have forward pointing antennae and upward curving labial palps. *Ochsenheimeria* are day-flying, with head densely covered with shaggy tuft of scales and antennae held at a wide angle, short, slightly over half length of forewing, often clothed with spreading scales. All of this gives the moth a shaggy appearance, with 'hairy' antennae, head and wings. Proboscis present.

Ypsolopha sequella

Ypsolopha scabrella

Likely in moth traps: yes	Similar groups: none

Plutellidae – 7 species

(*Plutella, Rhigognostis, Eidophasia* – 0464 to 0469, page 213)

Wingspan 12-23 mm. These small to medium sized micro-moths have long forewings, with or without distinct tornus (corner between termen (outer edge) and dorsum (trailing edge)) and held steeply roof-shaped. Head is completely smooth or with erect tuft of scales on top. They have forward pointing antennae and upward curving labial palps.

Diamond-backed Moth,
Plutella xylostella

Eidophasia messingiella

Likely in moth traps: yes	Similar groups: none

Epermeniidae – 8 species

(*Phaulernis, Epermenia* – 0477 to 0484, page 232)

Wingspan 7-15 mm. At rest front slightly raised and wings held steeply roof-shaped, antennae laid alongside wings. Forewings long, usually with distinctive raised tufts if scales on dorsal (trailing) edge, and/or with hooked apex (tip). Head smooth. Antennae are $^{3}/_{5}$ wing length. Labial palps are curved upwards.

Epermenia falciformis

Epermenia chaerophylella

Likely in moth traps: yes	Similar groups: none

Schreckensteiniidae – 1 species

(*Schreckensteinia* – 0485, page 232)

Wingspan 9-12 mm. An unmistakeable species which is partly diurnal (day-flying). Forewings at rest held flat and slightly diverging, hind-legs held up in the air in a very distinctive way. Forewings narrow. Head smooth. Antennae are $^{3}/_{5}$ length of forewing. Labial palps are slightly up-curved.

Schreckensteinia festaliella

***Schreckensteinia festaliella* feeding on bramble**

Likely in moth traps: no	Similar groups: none

Coleophoridae – 109 species

(*Coleophora* and allies – 0486 to 0589, page 222)

Wingspan 6-22 mm. Small to medium-sized moths resting position nearly horizontal, wings held roof-shaped or rolled around body, antennae pointing forwards in resting position. Forewing is narrow without tornal angle (corner between termen (outer edge) and dorsum (trailing edge), often without markings. Head smooth. Antennae are $^{2}/_{3}$ to $^{3}/_{4}$ length of forewing. Labial palps are slender, moderately curving up in front of head. Adults can be difficult to identify, so identification may be easier from examination of larval cases or by dissection.

Metriotes lutarea

Coleophora trifolii

Coleophora anatipennella

Coleophora discordella **case on Common Bird's-foot-trefoil**

Likely in moth traps: yes	Similar groups: none

Elachistidae – 113 species

(*Elachista, Agonopterix, Depressaria, Ethmia, Blastodacna* and allies – 0590 to 0633, 0646, 0657, 0666-0722, 0902-0907, page 219)

Wingspan 6-34 mm. Small to medium-sized moths. A recent taxonomic review has merged Elachistidae with various other groups including *Agonopterix*, *Depressaria* and *Ethmia*. This is therefore now a very varied family. *Elachista* have resting position with wings steeply roof-shaped, antennae directed backwards. Forewings about three times as long as wide, with indistinct tornal angle (corner between termen (outer edge) and dorsum (trailing edge), usually white, grey or blackish. Ochreous or brown coloration in only a few species. Many species need dissection to confirm ID. *Agonopterix* and *Depressaria* have broad wings held flat and are usually white, grey or brown with dark dots or dashes as markings. *Ethmia* are distinctively patterned black and white. Wings held rolled around body, antennae are held alongside the body. Forewings are long, with tornal angle (corner between termen (outer edge) and dorsum (trailing edge)). The black dots on thorax and black spotted wings could cause confusion with *Yponomeuta* species. *Blastodacna* and allies have prominent scale tufts on long slender wings. In all groups; body is held near horizontal, head usually smooth. Antennae are approximately $^{3}/_{4}$ length of forewings. Labial palps slender, drooping, pointing forwards or curved upwards.

Elachista albifrontella

Elachista maculicerusella

Agonopterix alstromeriana

Semioscopis steinkellneriana

Parsnip Moth,
Depressaria heraclei

Telechrysis tripuncta

Ethmia bipunctata

Chrysoclista linneella

Likely in moth traps: yes	Similar groups: Coleophoridae, Tortricidae, Gelechiidae, Yponomeutidae, Thistle Ermine (a pyralid moth)

Oecophoridae – 27 species

(*Denisia, Esperia, Batia* and allies - 0634 to 0656, page 217)

Wingspan 6-22 mm. Body held near horizontally or with tail up in *Batia unitella*, wings in roof-shaped position, or flat and overlapping, antennae often held along sides of body below wings, but pointing forwards in *Esperia*. Forewings are often broad, usually narrower with weak tornal angle (corner between termen (outer edge) and dorsum (trailing edge), varied in markings, some species brightly coloured. Head smooth. Antennae are about $^{2}/_{3}$ length of forewing. Labial palps are strongly developed usually curved upwards.

White-shouldered House-moth, *Endrosis sarcitrella*

Oecophora bractella

Ruddy Streak, *Tachystola acroxantha*

Likely in moth traps: yes	Similar groups: Gelechiidae

Peleopodidae – 1 species

(*Carcina* – 0658, page 218)

Wingspan 16-20 mm. Body held with head slightly higher and wings flat and overlapping. Forewings are broad with a curved costa. Head with smooth scales. Antennae are approximately same length as forewing. Labial palps are quite long and curve upwards.

Oak Longhorned, *Carcina quercana*

Likely in moth traps: yes	Similar groups: Tortricidae, Elachistidae and Oecophoridae

Lypusidae – 4 species

(*Pseudatemelia* – 0659 to 0662, page 218)

Wingspan 9-21 mm. Body held with head slightly higher and wings in shallow roof-shaped position. Forewings are long, without a distinct tornal angle (corner between termen (outer edge) and dorsum (trailing edge). Head with tuft of scales on crown and smooth face. Antennae are approximately $^{3}/_{4}$ length of forewing. Labial palps are moderate length and curve slightly upwards.

Pseudatemelia flavifrontella

Likely in moth traps: yes	Similar groups: Oecophoridae and Gelechiidae

Chimabachidae – 3 species

(*Diurnea, Dasystoma* – 0663 to 0665, page 218)

Wingspan 16-28 mm. All species have females with wings reduced and incapable of flight. Body held with head slightly higher and wings in shallow roof-shaped position and slightly overlapping. Forewings are broad with small scale tufts when fresh. Antennae are approximately $^{2}/_{3}$ length of forewing. Labial palps are short and forward pointing or curve slightly upwards.

Diurnea fagella

Diurnea fagella

Likely in moth traps: yes	Similar groups: Elachistidae, Oecophoridae and Gelechiidae

Gelechiidae – 163 species

(Gelechiids – 0723 to 0869, page 226)

Wingspan 6-22 mm. Resting position with front end of body slightly raised or horizontal, wings held flat, roof-shaped or rolled around body, antennae most often held alongside the body. Forewings moderately to very long, tornal angle (corner between termen (outer edge) and dorsum (trailing edge)) present or not, colouration and markings very varied, but two discal spots and one in the fold are usually present. Scale tufts occur on the middle of the wing in a number of species, metallic markings in a few. Hindwings have the termen concave and apex often extended to a point. Head smooth. Antennae are about $^{2}/_{3}$ length of forewing. Labial palps are curved strongly upwards in front of head, often reaching above head, second segment frequently with conspicuous tuft of scales. In a few species labial palps are long and pointing straight forwards. Many species need dissection to identify, but others are distinctive in the field.

Metzneria metzneriella

Aristotelia ericinella

Athrips mouffetella

Teleiodes sequax

Hypatima rhomboidella

Dichomeris ustalella

Likely in moth traps: yes	Similar groups: Oecophoridae, Blastobasidae

Autostichidae – 4 species

(*Oegoconia* – 0870 to 0872, page 216)

Wingspan 11-16 mm. Rest with body near horizontal, wings folded flat and partly overlapping, antennae alongside the body. Forewings quite narrow, mainly blackish with pale fasciae (stripes across wing). Head smooth. Antennae are about $^{2}/_{3}$ forewing length. Labial palps curve upwards in front of face.

Oegonia quadripuncta

Likely in moth traps: yes	Similar groups: like Gelechiidae, but with prominent stripes across wings

Blastobasidae – 7 species

(*Blastobasis* – 0873 to 0876, page 216)

Wingspan 13-22 mm. Rest with body near horizontal, wings are rolled around body and antennae alongside the body after the moth is fully settled. Forewings are long, without tornal angle (corner between termen (outer edge) and dorsum (trailing edge)), dull grey, brown or ochreous with weak markings, usually with a pair of dots at $^{2}/_{3}$ length. Head smooth. Antennae are $^{2}/_{3}$ length of forewing. Labial palps are strongly curved upwards, third segment pointed.

Blastobasis adustella

Blastobasis lacticolella

Likely in moth traps: yes	Similar groups: Gelechiidae

Stathmopodidae – 3 species

(*Stathmopoda* – 0877 to 0877b, page 221)

Wingspan 8-14 mm. Rests with body near horizontal, wings are rolled around body, but characteristically with hind-legs held at right angles to body. Forewings are long, head smooth, antennae $^{3}/_{4}$ length of forewing. Labial palps are long, slender and curved upwards.

Stathmopoda pedella

Likely in moth traps: no	Similar groups: none

Batrachedridae – 3 species

(*Batrachedra* – 0878 to 0879a, page 221)

Wingspan 8-16 mm. Rest with front end slightly raised, wings rolled around body and antennae held alongside body. Forewings are very long, without tornal angle (corner between termen (outer edge) and dorsum (trailing edge)), grey-brown or ochreous. Head smooth. Antennae are $^{4}/_{5}$ length of forewing. Labial palps curved upwards in front of head.

Batrachedra praeangusta
(from above)

Batrachedra praeangusta
(from side)

Likely in moth traps: yes	Similar groups: none

Momphidae – 15 species

(Mompha – 0880 to 0893, page 224)

Wingspan 6-19 mm. Rest with body near horizontal, forewings are steeply roof-shaped or rolled around body and antennae held alongside body. Forewings long, without tornal angle (corner between termen (outer edge) and dorsum (trailing edge)), usually with scale tufts, sometimes with bright coloured and metallic markings. Head smooth. Antennae are $^{3}/_{4}$ length of forewing. Labial palps are curved upwards in front of head, sometimes reaching above head.

Mompha propinquella

Mompha epilobiella

Likely in moth traps: yes	Similar groups: Cosmopterigidae

Cosmopterigidae – 16 species

(*Cosmopterix* and allies – 0894 to 0901, 0908 to 0910, page 225)

Wingspan 8-22 mm. Forewings long and narrow, smooth or with scale tufts and sometimes fasciae (stripes across wings) may be metallic and brightly coloured. Antennae are $^{3}/_{4}$ to $^{7}/_{8}$ length of forewing. Other characters are as in Momphidae.

Cosmopterix pulchrimella

Cosmopterix lienigiella

Limnaecia phragmitella

Likely in moth traps: yes	Similar groups: Momphidae

Scythrididae – 12 species

(*Scythris* – 0911 to 0920b, page 225)

Wingspan 7-20 mm. Day-flying, but is not often seen flying. The resting moth is with body nearly horizontal, wings rolled around body and antennae alongside the body. Forewings long, tornal angle (corner between termen (outer edge) and dorsum (trailing edge)) indistinct, dull brown or glossy bronze coloured, often without markings. Head smooth. Antennae half to $^{2}/_{3}$ length of forewing. Labial palps curved upwards in front of head, not reaching above head. Many species may need dissection to confirm ID.

Scythris grandipennis

Likely in moth traps: no	Similar groups: Gelechiidae, Coleophoridae, Elachistidae

Tortricidae – 399 species

(cochylids, tortrixes – 0921 to 1287, page 233)

Wingspan 7-30 mm. Rest with body held horizontally, wings flat and overlapping, roof-shaped or rolled around body, antennae laid back above the wings or diverging and pointing up at 45°. Forewings often rather broad, with distinct tornal angle (corner between termen (outer edge) and dorsum (trailing edge)), a wide wing-base is characteristic of many species, some have the apex (corner between termen (outer edge) and costa (leading edge)) curved forwards; the males of many species have a costal (leading edge) fold in the basal part of the wing (closest to head). Wings much reduced in female *Exapate*. Head with tuft of raised scales on top, face smooth. Antennae short, less than $^{2}/_{3}$ length of forewing. Labial palps short, drooping, pointing forwards or slightly upcurved, second segment densely scaled or tufted, third segment short and blunt (*Sparganothis* has long palps pointing straight forward). Most species can be readily identified in the field, but a few small groups may need dissection for ID. Species can usually be separated into one of three large groups of species; cochylids (species numbers 921 to 968), tortricids (species numbers 969 to 1062) and olethreutinids (species numbers 1063 to 1287). Cochylids typically are small to medium-sized, holding their wings roof-shaped and have palps directed downward, reminiscent of a ‘pig’s nose’, with most species being yellow or cream-coloured or black and white.

Tortricids are the typical tortrixes with wings most often held flat or near flat and partially overlapping and having the classic 'bell-shaped' tortrix outline. Many species are brown with other mottled markings across wings and most are medium to large in size. Olethreutinids usually hold their wings shallow to steeply roof-shaped or rolled around their bodies. They are usually small to medium-sized and are usually characterised by pale and dark stripes near the apex of the wing along the costa.

Agapeta zoegana

Cochylis atricapitana

Barred Fruit-tree Tortrix, *Pandemis cerasana*

Eulia ministrana

Acleris emargana

Apotomis sauciana

Ancylis badiana

Pammene regiana

Likely in moth traps: yes	Similar groups: Oak Nycteoline (Noctuidae)

Alucitidae – 1 species

(*Alucita* – 1288, page 228)

Wingspan 13-18 mm. All four wings divided into six `fingers', which is obvious when wings held spread, but less so when wings held closed over back. Antennae are about $^{1}/_{2}$ length of forewing. Unmistakeable.

Twenty-plume Moth, *Alucita hexadactyla*

Likely in moth traps: yes	Similar groups: none

Crambidae – 145 species

(grass pyralids, *Scoparia,* china-marks, *Evergestis, Pyrausta, Anania, Udea* and allies – 1289 to 1412, page 253)

Wingspan 9-44 mm (some female *Acentria* are wingless). A large group with varying characteristics. Resting insect with body parallel to surface, or raised at the front, occasionally with tail raised, or body raised above surface on long legs, wings held flat, overlapping or not and often spread to various degrees, roof-shaped or rolled around body, antennae usually laid back parallel over thorax and abdomen. Forewing long to broadly triangular, very varied in markings, but commonly with two cross lines in central section of wing. Head is with raised tuft of scales on crown, face smooth or with raised tuft of scales. Antennae are about $^{3}/_{4}$ length of forewing. Labial palps very varied, but most often long and directed forwards. There are several subfamilies. One of these, the Crambinae, has species with relatively narrow forewings, resting with wings rolled around body. They have long, forward directed palps and characteristically rest on grass stems upside down.

Chrysoteuchia culmella

Eudonia mercurella

Garden Pebble, *Evergestis forficalis*

Pyrausta purpuralis

Small Magpie, *Eurrhypara hortulata*

Rust-dot Pearl, *Udea ferrugalis*

Likely in moth traps: yes	Similar groups: Pyralidae

Pyralidae – 89 species

(pyralids – 1413 to 1486a, page 251)

Wingspan 10-44 mm . A large group with varying characteristics. Rests with body parallel to surface, or raised at the front, occasionally with tail raised, or body raised above surface on long legs, wings held flat, overlapping or not and often spread to various degrees, roof-shaped or rolled around body, antennae usually laid back parallel over thorax and abdomen. Forewing long to broadly triangular, very varied in markings, but commonly with two cross lines in central section of wing. Head with raised tuft of scales on crown, face smooth or with raised tuft of scales. Antennae about $^{3}/_{4}$ length of forewing. Labial palps very varied, but most often long and directed forwards. There are several subfamilies. One of these, the Phycitinae has species with relatively narrow forewings, resting with wings rolled around body. They have palps varying from short to long, most often curved upwards or pointing forwards.

Bee Moth, *Aphomia sociella*

Trachycera advenella

Thistle Ermine, *Myelois circumvoluta*

Likely in moth traps: yes	Similar groups: some Crambidae

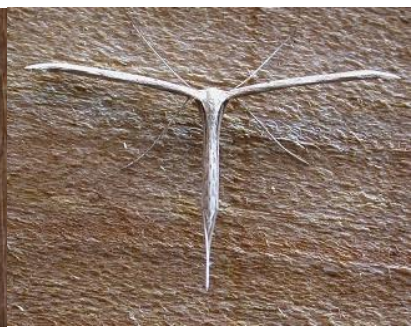
Pterophoridae – 44 species

(plume moths – 1487 to 1524a, page 229)

Wingspan 11-35 mm. Rest horizontally with wings extended at right angles to body, forewings often completely covering hind-wings. Forewings divided into two fingers, hind-wings into three. Legs are very long. *Agdistis* has wings undivided, and at rest wings are extended upwards at 40° to horizontal, but stands up high on its very long slender legs. Body and wings therefore form characteristic 'T' or 'Y' shape in resting moth. Labial palps point forward or gently curve upwards.

Capperia britanniodactyla

White-plume Moth, *Pterophorus pentadactyla*



Emmelina monodactyla

Likely in moth traps: yes	Similar groups: none

APPENDIX

NON-MICROS

Several small noctuids (at the end of the noctuids such as Horse Chestnut, Small Marbled, Spotted Sulphur, Cream-bordered Green Pea, Straw Dot, White-line Snout, Pinion-streaked Snout, Marsh Oblique-barred) and nolids (Short Cloaked, Least Black Arches and others) have been frequently mistaken for micros. They differ from Crambidae and Pyralidae (with which they are most likely to be confused) in not usually having antennae folded back over the top of the body. Oak Nycteoline looks like a tortrix, but the long straight palps distinguish it from tortrixes.

Least Black Arches, *Nola confucalis*

Small Marbled, *Eublemma parva*

Cream-bordered Green Pea, *Earias dorana*

Oak Nycteoline, *Nycteola revayana*

Straw Dot, *Rivula sericealis*

Pinion-streaked Snout, *Schrankia costaestrigalis*

Dave Grundy, 2013