



Moth Trap Challenge

Contents:

Teachers Notes

Work cards for:-

Angle Shades	Early Grey	Oak Beauty
Brimstone	Early Thorn	Pale Tussock
Brindled Pug	Elephant Hawk-moth	Peachblossom
Buff Ermine	Engrailed	Peppered
Buff-tip	Flame Shoulder	Poplar Hawk-moth
Chinese Character	Garden Carpet	Purple Thorn
Cinnabar	Hebrew Character	Satellite
Clouded Drab	Herald	Shoulder stripe
Common Footman	Large Yellow Underwing	Silver-ground Carpet
Common Marbled Carpet	Light Emerald	Streamer
Common Pug	March Moth	Twin Spotted Quaker
Common Quaker	Nut-tree Tussock	White Ermine

Appendix 1:- Curriculum topics

Appendix 2:- Photographic credits

Appendix 3:- Times of flight

Appendix 4:- Thumbnails of images

We hope you enjoy using these Work Cards.

Dear Teacher,

These workcards are for use with the AONB Moth trap.

Using a moth trap can be a rewarding experience in its own right but using the workcards will also allow you to cover several elements of the Key stage 1 and 2 curriculum in an interesting and meaningful way. These are given in Appendix 1.

Notes for the workcards.

Rather than try to identify all the moths that might be caught in the trap, a daunting task for even the expert, the workcards encourage the students to see if they can find a small number of specific, easily identified, moths. The species are carefully chosen to be those that are found in the area and are known to be common in moth traps. One or two, such as the Hawkmoths, are rather less common but may well be present.

You will be most successful in trapping moths if you choose an evening when the weather is dry, with very little wind and either overcast or moonless.

Before you put the trap out, divide the students into small groups and share the appropriate workcards between them with no more than 3 workcards per group. Ask them to look at the pictures and find any features that are worth looking for. Suggest they compare the size shown to their own fingernails or fingers. Look at the shapes their moths make, (triangular, oblong, flat, thick, thin). Are there any obvious markings or coloration? Are the moths smooth or hairy? You might ask them to make notes of their own to help them remember.

This means that when the trap is opened next morning each student/group is looking for just 2 or 3 species which are easy to recognise. All the students are involved in looking to see if **their** moths are there.

Open the moth trap outside with the students. Otherwise you will end up chasing moths all round the classroom.

Take each piece of egg carton out carefully and see what is there. The moths should be passed round to each group to see if they match the cards they have. As soon as a match is found put the moth into a small see-through container to look at back in the classroom.

If the moth doesn't match any of the cards either let it fly away into vegetation or put it into a covered bucket in the cool for later release (only keep one specimen per card). You might want to take photos.

Continue until all the moths have been either matched up or released.

(When you open the moth trap have a large covered bucket next to it where you can put the egg cartons with any moths you find after you have looked at them. The bucket should be kept in the cool and the moths released in nearby vegetation when the trap is empty.)

Back in the classroom look at each moth in turn with the whole class. Ask the students who have discovered a moth to look at the back of their card. Ask one student to read it out. Ask the other groups to see if their cards refer to any of the attributes. So for example the Elephant Hawkmoth card tells about large false eyes on the caterpillar. The Buff Ermine card tells about what eyes are really like in a caterpillar and the Angle Shade talks about the true eyes of a moth. This way the facts will be reinforced with each group using their cards even if they didn't find that particular moth on that occasion.

Possible activities to build on this are:

Make tables of moths caught by attribute (talk about the difference between wing length and wing span.)

Talk about life cycles of insects and the food chain.

Draw one of the moths caught and also write a description using lots of adjectives.

On future sessions when the students have learnt some moths you might want to be more adventurous. Listed on the BCCIC website is an Excel spreadsheet of all the moths which are frequently found in traps near you and the months in which they commonly fly.

Notes for setting up the Moth trap (Full instructions come with the trap)

Put the moth trap out in the evening. Make sure you put it somewhere quiet where the early morning sun will not bake the moths. Avoid anywhere easily visible from the road or near streetlights.

Collect it in the morning and put it in a cool place until you are ready to open it.

If you would like someone knowledgeable on hand the first time you use the moth trap just mention this when you book the trap and we will try to find someone to help. If you have any photographs of moths you would like identified then send them to Brian at hancockb410@gmail.com

If you would like more information on moths then try the Butterfly Conservation or Moths UK websites.

We hope the cards make the moth trap easier to use.

Brian Hancock and Ann Kitchen

Moth Trap Challenge

Am I in your moth trap?
Angle Shades Moth
(May and August to October)



I have lovely patterns on my wings and they have scalloped edges.



My wing length is about 2cm to 2.5cm.



Actual size





Like all moths I have big eyes which help me see in the dark.

I also have a ruff of hairs round my neck and along my back.

The scientific name for the Angle Shade Moth is *Phlogophora meticulosa*.



Bittern Countryside
Community Interest Company

and



Moth Trap Challenge

Am I in your moth trap?
Brimstone Moth (May to July)



I am yellow with reddish brown markings.

From my front to the end of my fore wing is around 2cm but my wing span can be 4cm when my wings are stretched out.



actual size

**I lay my small green eggs on Blackthorn,
Hawthorn and other trees. You can find
my caterpillars on the trees between
June and early October.**



**They like to be on their own and look
just like bits of twig with a projection
sticking up in the middle of their back.**

**The scientific name for the Brimstone Moth is
*Opisthograptis luteolata***



Bittern Countryside
Community Interest Company

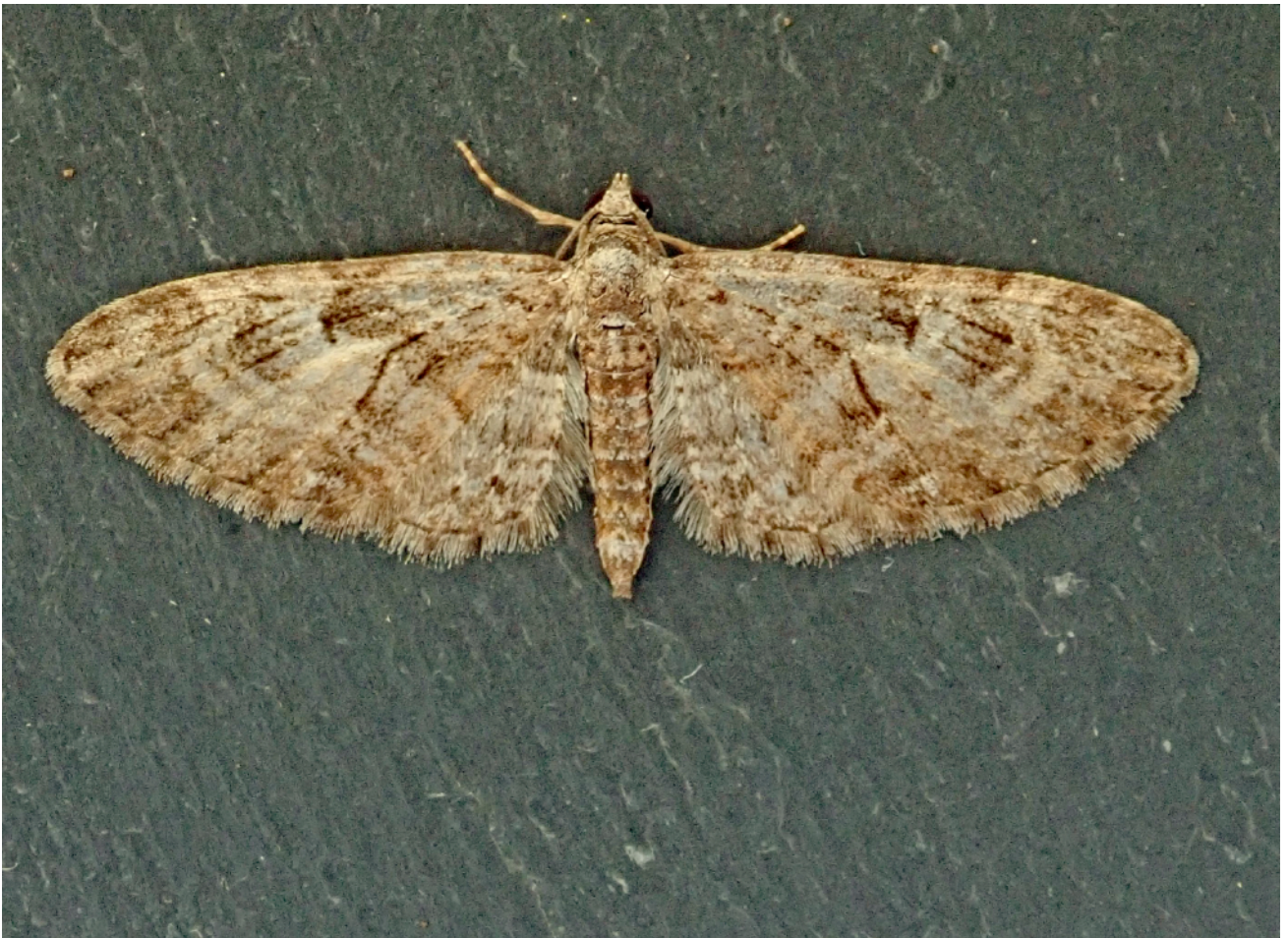
and



Moth Trap Challenge

Am I in your moth trap?

Brindled Pug Moth
(March to May)



I am a small moth and rest with my wings outstretched.

My wingspan is around 2 cm.



Actual size

I lay my eggs on Hawthorn and Oak.



**My caterpillars
are very small.**



Actual size



**When they are fully grown they turn into
pupae like this.**



Actual size



**The scientific name for a Brindled Pug Moth is
*Eupithecia abbreviata***



Bittern Countryside
Community Interest Company

and



Moth Trap Challenge

Am I in your moth trap?

Buff Ermine Moth

(May to June)



Can you see the row of black dots on my wing? Sometimes I am much paler than this.

My length is about 2cm.

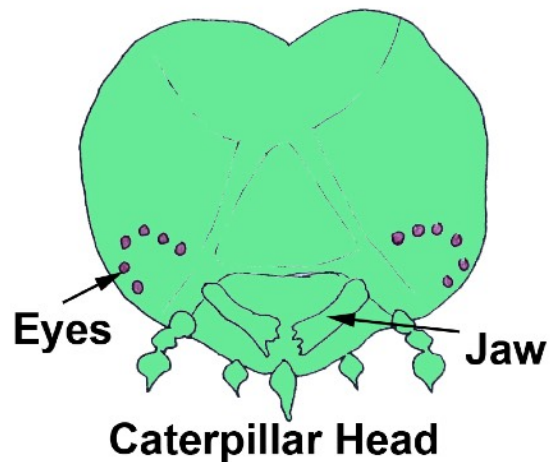
Actual size



I lay my eggs on plants like nettles and honeysuckle.

They hatch into green caterpillars with a yellow stripe along each side.

Like all caterpillars they have 6 tiny eyes on either side of their head. These can only see light and dark. They don't see objects in the same way that you do.



When they are large enough they turn into pupae under the leaves to sleep until spring.

The scientific name of the Buff Ermine Moth is *Spilosoma luteum*.



Moth Trap Challenge

Am I in your moth trap?
Buff-tip Moth (May to June)



I am carefully patterned so I do not get eaten. The light brown area at the wingtip looks like the end of a broken twig.

My length is between 2cm and 3.5cm



Actual sizes



I lay my eggs on many types of trees such as Oak, Lime, Hazel and Birch, all of which grow in our area.

You can find my caterpillars between July and early October. They are covered in long white hairs. They like to stay together until they are nearly full grown.



When they are old enough they crawl down the tree and turn into pupae under the leaves to sleep until it is time to emerge.

The scientific name of the Buff-tip Moth is *Phalera bucephala*.



Moth Trap Challenge

Am I in your moth trap?

Chinese Character Moth

(May to July)



I am a very small moth and when I am resting I crouch down to look like a bird dropping.

My wing length is about 1cm to 1.5cm.



Actual size

My caterpillars are brown and have a large hump behind the head and a pointed tip at the tail end. They feed on Blackthorn and Hawthorn leaves.



Blackthorn



Hawthorn

The scientific name for the Chinese Character Moth is *Cilix glaucata*.



Bittern Countryside
Community Interest Company

and



Moth Trap Challenge

Am I in your moth trap?

Cinnabar Moth

(June to July)



My hind wings are all red. You can often see me flying in the daytime.

My wing length is about 2cm.

Actual size



My orange and black caterpillars like to live in groups. They eat Ragwort and this makes them poisonous. They are easy to spot.



The scientific name for the Cinnabar Moth is *Tyria jacobaeae*.



Bittern Countryside
Community Interest Company

and



Moth Trap Challenge

Am I in your moth trap?
Clouded Drab Moth
(March to April)



I am a furry moth with rich brown markings.

My length is between 1.5cm and 2 cm



Actual sizes



I lay my eggs on trees in the spring. I prefer Oak but also use other large trees.

You can find my caterpillars between May and early July. They grow to about 4 cm.



Can you see the prolegs and 3 pairs of true legs?

Their tiny spiracles or breathing holes are just below the light stripe.



The scientific name for a Clouded Drab Moth is *Orthosia incerta*



Bittern Countryside
Community Interest Company

and



Moth Trap Challenge

Am I in your moth trap?

Common Footman Moth

(June to August)



I am a small moth. My wings fold together over my back. My underwings are creamy yellow.

My wing length is about 1.5cm.

Actual size



My black and orange caterpillars have long yellow hairs and overwinter from August to May.



They like to eat lichens and algae as well as the leaves of trees like Hawthorn.

The scientific name for the Common Footman Moth is *Eilema lurideola*.



Bittern Countryside
Community Interest Company

and



**Arnside &
Silverdale**
Area of Outstanding Natural Beauty

Moth Trap Challenge

Am I in your moth trap?

Common Marbled Carpet Moth

(May, June, September and October)



I am quite a small moth. I come from a large family of carpet moths.

Others you might find are the Garden Carpet and the Silver Ground Carpet.

My length is about 1.5cm.

Actual size



I lay my eggs on a wide variety of small plants. Between July and September they hatch into bright green hairless caterpillars.

Like most caterpillars they have 3 pairs of jointed legs at the front and some pairs of prolegs that help them to hold on to things near the back as well as an clasper. My caterpillars have 2 pairs of prolegs and are called loopers.



When they are large enough they turn into shiny green pupae under the leaves to sleep until spring.

The scientific name of the Common Marbled Carpet Moth is *Chloroclysta truncata*.

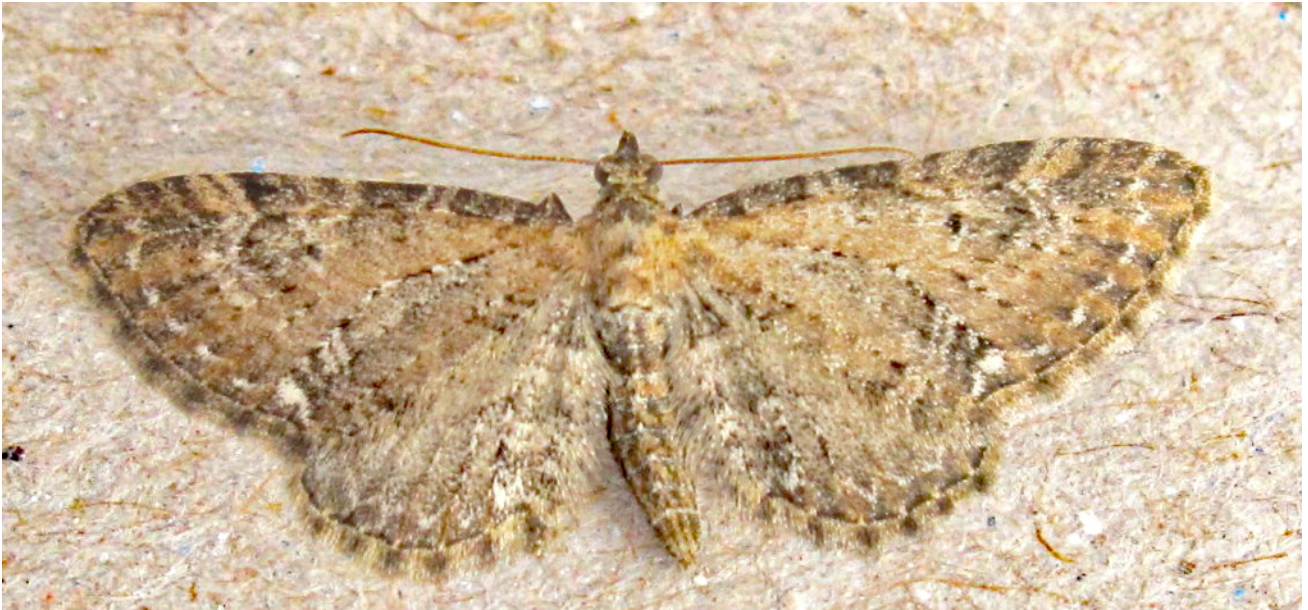


Moth Trap Challenge

Am I in your moth trap?

Common Pug Moth

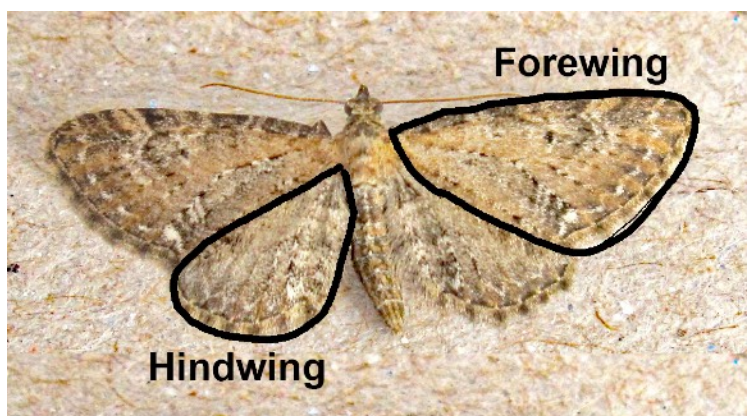
(May to August)



I am a very small moth.

I spread my wings very wide when I am at rest. This means you can see both my forewings and hindwings.

My wingspan is around 2cm



Actual size

I lay my eggs in small groups on trees like Hawthorn and Willow.

They are white and are the size of a grain of sugar.



The scientific name of the Common Pug Moth is *Eupithecia vulgata*



Bittern Countryside
Community Interest Company

and



Moth Trap Challenge

Am I in your moth trap?

Common Quaker Moth

(March to April)



I have a oval mark and a kidney shaped mark on each wing.

My length is between 1.5cm and 2 cm

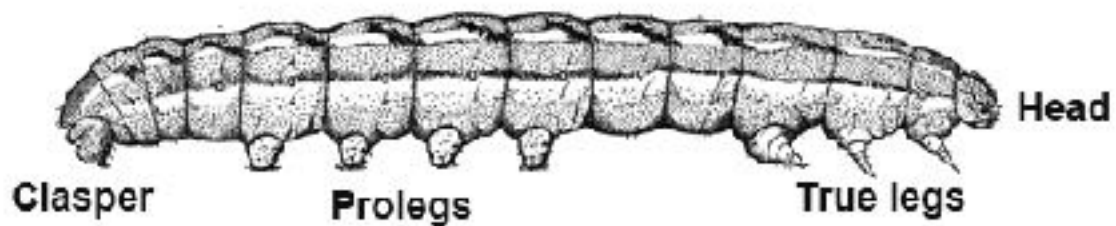


Actual sizes



I lay my eggs at the base of buds of various types of large trees.

At first my green and yellow caterpillars live in the leaf buds. They have 3 pairs of legs and 5 pairs of prolegs. The back pair are called claspers.



When they are older they rest under the leaves.

The scientific name for the Common Quaker Moth is *Orthosia cerasi*



Moth Trap Challenge

Am I in your moth trap?
Early Grey Moth (March to April)



I sometimes have a purple tinge.

My legs are hairy at the top and stripey at the bottom.

My length is between 1.5cm and 2 cm



Actual sizes



I lay my eggs on Wild Honeysuckle. You can find my yellowish-green caterpillars eating its twining stems. They will shed their skins several times before they are big enough to pupate.



Wild Honeysuckle

The scientific name for the Early Grey Moth is *Xylocampa areola*



Bittern Countryside
Community Interest Company

and



Moth Trap Challenge

Am I in your moth trap?

Early Thorn Moth (April and September)



I have scalloped wing edges and sit with my wings closed over my back.

I have 2 crescent markings on each wing.

My length is between 1.5cm and 2.5 cm



Actual sizes



**I lay my eggs on trees like Hawthorn,
Alder and Silver Birch in the spring.**

**You can find my caterpillars in the trees
between May and early July. They look
all knobbly like twigs so they can't be
seen.**



Even the front legs look like buds.

**If you look hard you can see the
breathing holes or spiracles, one on each
segment.**

**The scientific name of the Early Thorn Moth is
*Selenia dentaria***



Bittern Countryside
Community Interest Company

and



Moth Trap Challenge

Am I in your moth trap?

Elephant Hawk-moth (May to July)



**My wingspan is
between 4.5cm
and 6cm.**



Actual sizes



I lay lots of green eggs one at a time on various Willowherbs but I like to sip nectar from the flowers of Honeysuckle.



Rosebay Willowherb

You can find my caterpillars eating leaves between June and early October.



They are either brown or green and have markings that look like eyes.

The scientific name of the Elephant Hawk-moth is *Deilephila elpenor*.



Moth Trap Challenge

Am I in your moth trap?
Engrailed Moth
(April and July)



I am a black, brown and white moth with a white fringe to my wings.

My wingspan is between 3 cm and 4 cm



Actual sizes

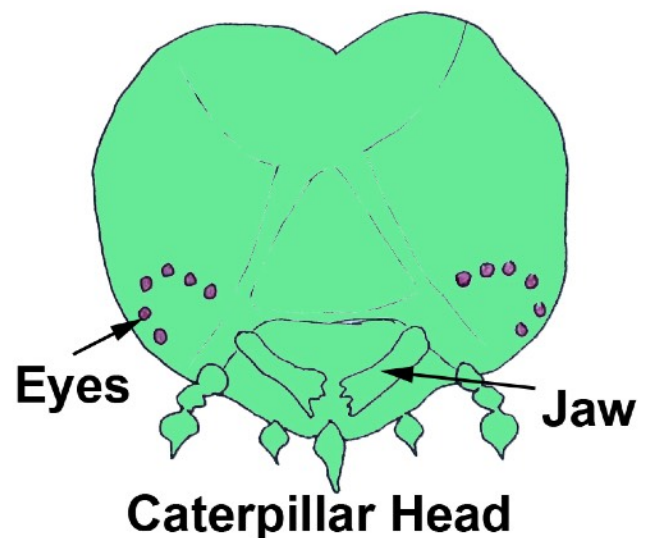


In the daytime I sometimes rest on the bark of trees. Can you find me here?



I have very good eyesight in the dark but my caterpillars do not.

They have 6 small eyes on either side of their head which can just see light or dark.



The scientific name of the Engrailed Moth is Ectropis bistortata



Bittern Countryside
Community Interest Company

and



Moth Trap Challenge

Am I in your moth trap?

Flame Shoulder Moth

(May, September and October)



**You may see me all through the summer
with my bright straw coloured stripes.**

My hindwings are plain white.

**I am quite a small moth with a wing length
of about 1.5 cm**



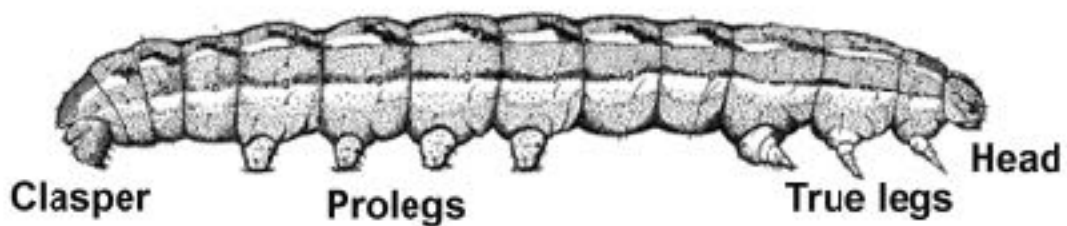
Actual size



I lay my bright orange eggs on groundsel, dock and plantain.



My green caterpillars have 3 pairs of legs and 5 pairs of prolegs.



They sleep at night near the base of the plant.

The scientific name of the Flame Shoulder Moth is *Ochropleura plecta*.



Moth Trap Challenge

Am I in your moth trap?

Garden Carpet Moth

(May, June and September)



I am quite a small moth. I come from a large family of carpet moths.

Others you might find are the Common Marbled Carpet and the Silver Ground Carpet.

My length is about 1.5cm.

Actual size



I lay my eggs on plants like Garlic Mustard and others in the cabbage family.



Between June and September they hatch into looper caterpillars with dark tops and light sides. If you startle them they will stand straight up on their hind prolegs like a seed pod.

When they are large enough they turn into shiny chestnut brown pupae under the leaves to sleep until spring.

The scientific name of the Garden Carpet Moth is *Xanthorhoe fluctuata*.

