

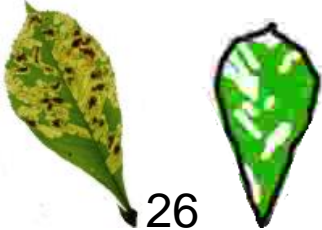
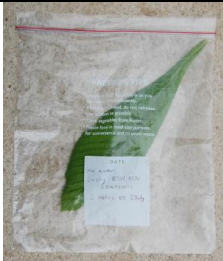




Pick a leaf from a conker tree infected with alien leaf miners, seal it in a bag so not even tiny insects can escape, and wait. The insects inside the leaf will hatch into adults. You will be able to identify the moths, the natural pest-controllers or the other insects after 2 weeks.

**Mission Part 1. Between 3 and 9 July (inclusive):**

 <p>Pick one leaf</p>	1 Find a horse chestnut tree which is under attack by leaf miner moths.
 <p>Remove one leaflet</p>	2 Write down the nearest postcode or the tree's location. You'll need this when you submit your results.
 <p>Count the mines or caterpillars</p>	3 Take a medium-sized transparent 'ziplock' plastic bag - we suggest 26x28cm (about A4 sized) - available as a food bag from supermarkets.
 <p>Seal the leaflet in a bag</p>	4 Pick a leaf that is within your reach. Don't climb the tree or a ladder!

- 5 Select from the leaf just ONE leaflet (a 'finger' from the hand-like leaf), which will fit in your bag without being folded over.
- 6 If there are insects on the leaf, brush them off. The insects we are interested in are still inside the leaf so cannot be brushed off.
- 7 Count the number of mines in the leaf (each mine is one whitish patch with a brown spot). You'll need this number when you submit your results.
- 8 Seal the bag with the leaflet inside, but don't squeeze **all** the air out.
- 9 Keep the bag in a cool room and away from bright light.
- 10 You can collect as many leaves from as many trees as you want, but put each leaflet in a separate bag. If you are collecting records from more than tree, write the location of the tree on each bag.

## Mission Part 2. Between 19 and 23 July (inclusive):

11 Look very carefully at the contents of your bag. Use a magnifying glass or hand lens if possible.

Identify the tiny insects that have emerged from the mines in the leaf.

The insect identification guide is at:

**www.ourweboflife.org.uk** then click on 'Mission: pest controllers'.



1 alien moth and 4 tiny pest controllers next to a 1 penny coin

12 How many alien moths, pest controllers and other insects can you see? One adult pest controller means one alien moth has been killed by it!

13 Submit your results by logging on to **www.ourweboflife.org.uk** and click on 'Mission: pest controllers'

### New for 2011. What is under the tree?

Look at all the ground under the tree's canopy.



Only short grass

Is there just mown grass?  
(Nowhere for leaf litter to collect)



Path edges

Bushes and undergrowth

Longer grass  
(as well as short grass)

Or is there other vegetation?  
(Where leaf litter will collect in the autumn)

The alien moths and their natural pest controllers may overwinter in the leaf litter under the tree, but in some places the leaf litter will be cleared away. We do not know how this will affect the number of natural pest controllers.

By the summer there is no sign of leaf litter, so we are asking you to record whether there are places that leaf litter could have collected.

Submit your records at **www.ourweboflife.org.uk**

Click on 'Mission: pest controllers'

**Important information.** Your results are part of a national scientific study and it is vital that the results are accurate, so:

1 Make sure your leaf is infected with the alien leaf-mining moth



Use a leaf with leaf miner damage (whitish patches with a brown spot)



Don't use leaves that have other brown or yellow patches (photo: David Glaves)

2 Pick the leaves and check for insects on the correct dates otherwise you may get no insects.

3 Identify the insects as accurately as you can and then submit your results.

### About this mission

- The purpose of this mission is to understand how likely the alien moths are to be attacked and killed by their natural pest controllers. We expect more wasps to be attacking the moths, in places where moths have been present for longer.
- These natural pest controllers are parasitic wasps which are vital in controlling numbers of many insects. Don't worry though, these wasps do not harm people.
- Records of leaves from which no insects emerged or only adult moths emerged are just as important as records of pest controllers.
- Studies elsewhere in Europe found only 1 in 10 alien moths were killed by the pest controllers. Is it more or less in Britain? Your data will help us find this out.
- *Optional.* If you have a very good quality magnifying glass you can even try to identify the species of pest controller. The '**Guide to species of pest controller**' is at [www.ourweboflife.org.uk](http://www.ourweboflife.org.uk) then click on '**Mission: pest controllers**'.

Here is some space for you to jot down your records:

Record when you collect the leaves:			Record when you check the bags:		
Tree location notes	What is under the tree?	Number of mines on the leaflet	Number of moths	Number of pest controllers	Number of other insects