



Recording Moths in Wicklow Mountains National Park

By Eleanor Sutherland

The Education Guides in Wicklow Mountains National Park operate a weekly moth trap throughout the year to survey night flying moths. Our findings contribute to a nationwide monitoring programme, called the Garden Moth Survey.



Buff Arches

In fact, the results are also collated with those of moth recorders from all around Britain and Ireland. The records of the Garden Moth Survey are also sent to Ireland's National Biodiversity Data Centre (NBDC). Outside of the Garden Moth Survey, anybody can record a casual sighting of a moth with the NBDC, thereby contributing to our knowledge of the range and flight seasons of our moths.

There are various types of moth trap available. We use a Skinner trap with a 25W blue black light. The light is mounted above a wooden box with two Perspex sheets forming a V-shaped opening. Moths are attracted to the light and hopefully fly through the perspex funnel to get caught unharmed inside the crate. We fill the bottom of the crate with old egg boxes which provide safe, warm and dry hiding places for the moths that get trapped.

The light is switched on at dusk. Early next morning, we switch off the light. We then check all around the outside of the box for moths that didn't go into the trap but are perched nearby. Then we carry the crate inside and the fun starts.

We use special transparent collecting jars and carefully tap the sleeping moths into the jars. Moths become torpid when the temperature drops towards dawn. They need warmth to fly. One method they adopt to warm up is to shiver their wings to create heat, or else the sun warms them sufficiently for them to fly.

Our challenge is to try and get all the moths singly into jars before they get active. Sometimes I use a small dry artist's paintbrush to move them. You should not touch the surface of a moth's wings as they are covered in tiny scales, a bit like a tiled roof. If they lose scales, they won't be able to fly well.



Burnished Brass



Buff-Tip



Muslin Moth



Water Carpet



Merveille du Jour

Identifying - comparing a live moth to the guidebook



The scales are different colours which gives the wings their wonderful patterns. Their colour, together with the moth's size, wing and body shape help us to identify the species. We need magnifying glasses at times to be sure about the subtle variations of pattern and colour. Moths come in all sorts of shapes and sizes and their study is fascinating.

Emptying the moth trap is great fun! On a cold winter's morning, there is some time before the moths become active, but in the warmer weather we get quite a bit of extra exercise chasing the escapees around the building with a butterfly net in one hand and a jar in the other.

Some moths are also masters of disguise. They use their camouflage to stay alive and away from the attention of hungry birds during the day. They can be very hard to spot as they hide in the corners, so we have to check very carefully around all the places they find to evade us.

On a good warm summer night we may get several hundred moths in the trap. In winter we may only get one or two, or even none at all. It is amazing how one can still get moths flying at night in very cold conditions.

Other species sometimes get caught in the trap. We get cockchafers in May, and parasitic wasps and craneflies. One morning we found a bat which was trying to get an easy 'take-away' supper. On warm, still summer's evenings, we get hundreds of midges in our box. This adds to the excitement as we try to escape the midges, while capturing the moths. All the moths, and any other creatures that we have caught, are safely released after they have been identified and recorded. We release the moths into vegetation where they have a safe place to hide from birds.

Luckily, most days, the Guides have reverted to 'semi-normal' humans by the time the first of the visitors to our National Park Education Centre have arrived.

Why on earth would we go to all this trouble you might ask? Well, moths and butterflies are what we call 'indicator species'. They are very dependent on weather conditions and specific habitats to thrive, so recording species and numbers gives a good indication of what is happening in our natural environment. They give us clues about climate changes, pesticide usage, and the health of our habitats. Moth and butterfly



numbers are impacted very quickly compared to other species.

And in case you think that it is enough excitement to operate a moth trap once a week in work hours, we have three Education Guides who also run moth traps at home in their spare time, and contribute data for their areas to the Garden Moth Survey and to the NBDC.

But for me, the best part of moth trapping is the sheer, delicate beauty of every moth wing and the remarkable way their colours and shapes blend with their preferred plant species to render them almost invisible.

How To Start Recording Moths

You may often find moths attracted to your lights at night, or even perched or flying by day. These casual records can be recorded on either the Moths Ireland website (www.mothsireland.com) or the National Biodiversity Data Centre website (www.biodiversityireland.ie). They share records, so it does not matter which website you use. Just remember not to record them on both websites or they will be counted twice!

Moths can be difficult to identify, but there are some very good websites out there. All the following have good identification resources. If you are consulting a UK website, just remember that some of their species are not found in Ireland. Moths Ireland have good maps for each species, so it's a good idea to check the range if you are unsure about your identification.

- www.mothsireland.com
- www.irishmoths.net
- www.hantsmoths.org.uk/flying_tonight.php

There is also a very active Moths Ireland Facebook page which offers great help with identification to moth trappers of all levels of expertise.

As you get more interested, you may want to invest in a guide book. There are two main identification 'bibles'— one for the macro moths (the bigger ones), and one for the micros. The micros can be especially tricky, so start with the macros until you feel confident of your skills.

Field Guide to the Moths of Great Britain and Ireland – Bloomsbury Wildlife Guides ISBN 9781472964519 (3rd ed.)
Field Guide to the Micro Moths of Great Britain and Ireland – Bloomsbury Wildlife Guides ISBN 9781472964526

You may wish to invest in a moth trap and start some serious recording. There are various websites that sell moth traps. It's worth chatting to some moth recorders, either in person or on line, to get their advice before investing. Please remember that you do need an annual permit from National Parks & Wildlife Service to operate a moth trap.

There is a great buzz when you discover a rare species in your moth trap. But be warned, you may even end up like the Education Guides, chasing small flying moths around a room in the early morning hours or poring over textbooks, magnifying glass in one hand and much needed coffee in the other, discussing the tiny variations in the wing shape of a little moth after a safari like hunt around the windows and light fittings of your own kitchen!