

I need to first emphasise that I am not in any way an expert on the subject of Lepidoptera, Moths in particular, of which there are around 2500 species in the UK. As far as I know every County has its own recognised expert. Every County also maintains records of sightings. I have however developed a lot of useful experience and listened to experts.

To pursue this fascinating subject and the extraordinary diversity of Moth species, you will realistically need to invest in dedicated books and other literature. I own a number of books recommended by the expert in my own area. Details later.

You will find lots of information on Moth traps on the internet. There are a number of different design ideas. If you are considering a Moth trap and interested in the subject generally, I would first strongly recommend doing your own research and forming your own opinion on the best Moth trap design for you and possibly others in your circle of acquaintances. You can buy Moth traps and associated products if that suits you better.



This paper describes my own DIY effort (shown left) which is based on the well known Skinner Trap. I say based on as I adapted the idea to include a viewing area through which I could if needed photograph captured insects. Beetles as well as Moths. All true beetles have flight capability for part of their life cycle.

Since I quickly moved on to creating my macro rig, the viewing area has not actually been used much to photograph captives, though it has otherwise proved invaluable and I would not now be without it.

Left out overnight, many species crawl into the covered viewing area which is only a few millimetres high, to escape daylight in the morning.

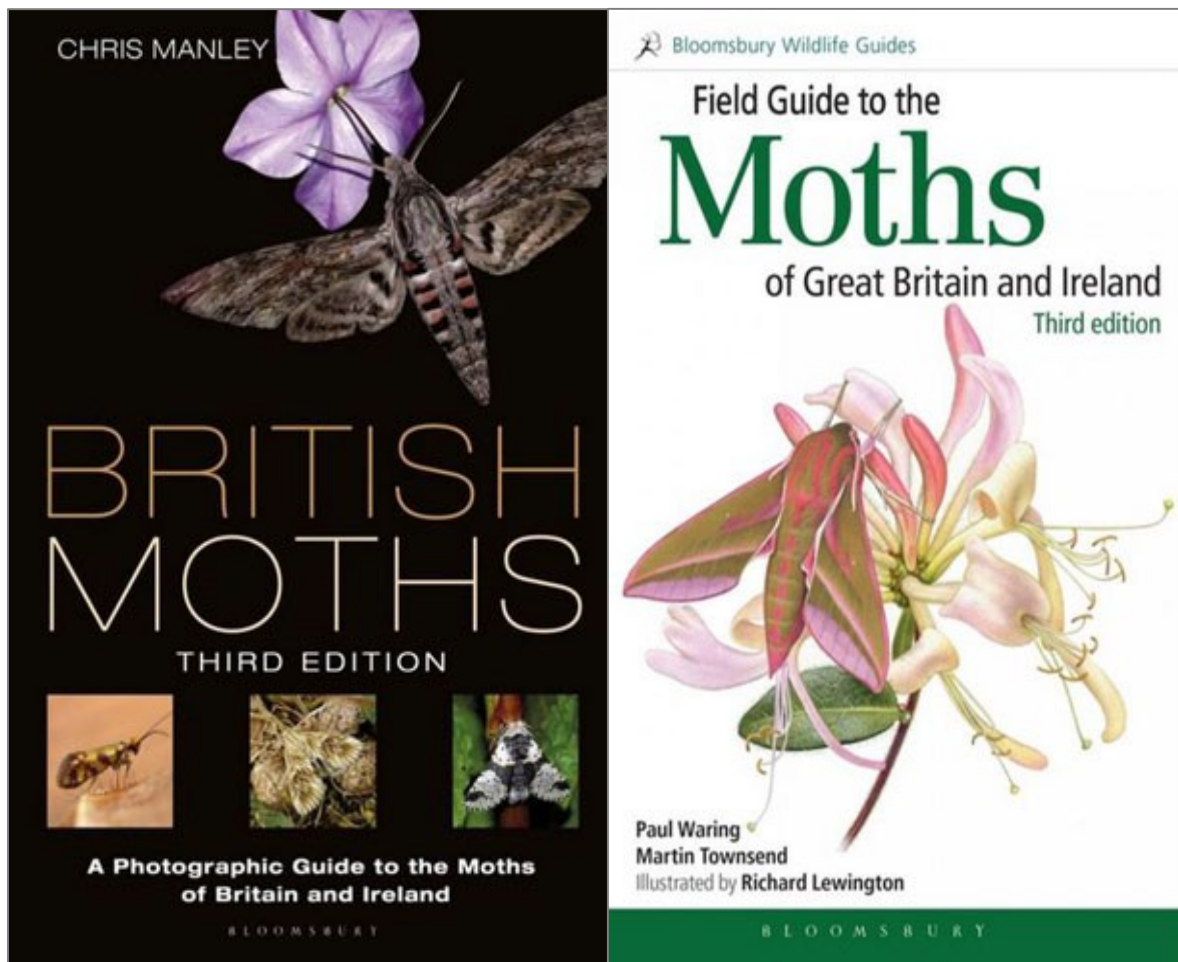
I can then see and examine some of my captives before counting and deciding which to capture (and how to capture) for my macro rig.

Details and measurements of my trap are not included here as there is plenty of information on the internet. To my knowledge dimensions not in any way critical. However I will create a construction document if anyone is interested and requests that information. Some details of my own introduced ideas may however be of interest to others:

- The glass I have used is 100% safe and robust *polycarbonate* sheet which is well known to my past experience. Unbreakable. More expensive but far superior to acrylic.
- The lamp is a low-energy lamp which I can drive all night from a portable power pack independent of mains supply. Handy if having a stint in a remote area at night.
- Some people line the trap walls with egg boxes for Moths to cling to. I have used some carpet tile off-cuts tacked to the walls with blobs of adhesive. Much easier to see, count and locate Moths of choice for the fashion parade later on my macro rig.
- The base of the viewing area can be lined with paper of different colours as an experiment. The base of the trap could include egg boxes as species still easily seen.

- By maintaining a narrow gap under the viewing area (which is variable) Moths are required to lay flat.

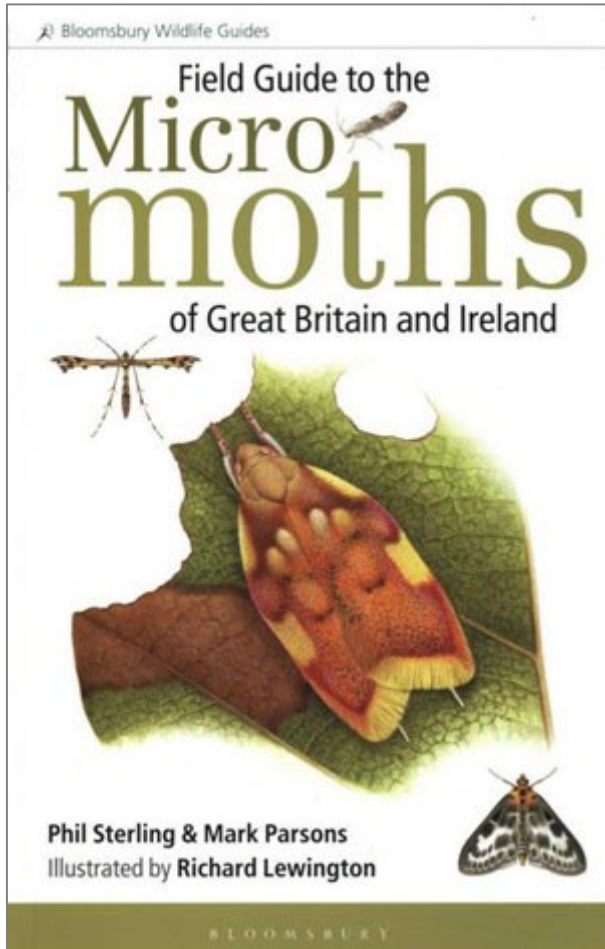
For identification (macro Moths) I rely on these two guides and each is essential to me. Neither book has proved sufficient to me to meet my needs. Depending on the species, one book may prove easier to use than the other. I also made myself a table lectern. Invaluable when perusing books trying to identify species.



It has to be said that identification of some species may prove impossible without the aid of magnification apparatus and more intimate knowledge of insect anatomy. This also applies to many other insects. Do not despair if you struggle. Experts also struggle. If I do not know I simply say so.

In addition the gender of species may be impossible to discern with the naked eye unless behaviour points the way. A classic example is the Four-spotted Chaser Dragonfly. Gender is indistinguishable to the human eye, whereas the gender of the Black-tailed Skimmer Dragonfly could not be more obvious. My first glimpse of the female of that species nearly blew me away. Spectacular. Behaviour can also be different. The male never rests on a vertical surface (plant stem) but the female, like most Dragonflies, always do.

In addition to my books I have produced my own small portfolio of species seen. These images are postcard size and include stages of development. My idea was for the portfolios to serve as a reminder in the future. Based on the hypothesis that the more Moths I meet, the more likely I am to have met the species before. That said I have been amazed at the number I have seen in a relatively short space of time, simply by being observant.



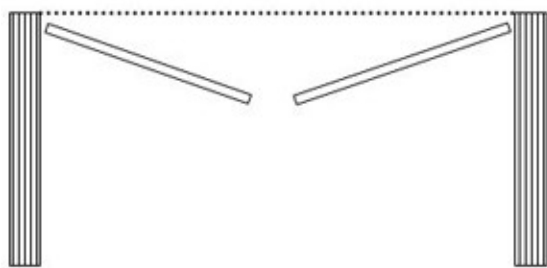
Now is the time to introduce Micro Moths which I know even less about. I can spot the familiar Plume Moths as shown on the book illustration and have met with others. Not easy to spot and dedication is required.

Knowledge of food plants helps if you are targeting a specific species. Not something I routinely do as I have far too many interests which take up my time. We must each make our own choices in these matters.

Even more challenging can be macro photography *in the field* like this Garden Grass Veneer Moth (*Chrysoteuchia culmella*). Minute in size and any hint of a breeze can sabotage shooting an image..



I like to experiment to try to improve my Moth trap catch. It is self-evident that location has an impact and one expert informs me that being too close to a body of water is not helpful. I have a pond in my garden and behind that the canal, over a drystone wall. Those wide wooded margins by the way a useful motorway for Hedgehogs and other wildlife.



In this depiction of the Moth trap (cross section), the UV lamp ordinarily stands above the dotted line exposed to flying insects.

I intend to try relocating the lamp inside the box, below the dotted line, to pull in more visitors. My hypothesis is that flying insects will still see the light if not the actual source and are more likely to be pulled in. Of course I may be wrong but that is all part of the interest.

A couple of samples below caught in the trap and photographed on the macro rig. See details of the rig and photography in Assets. The capture jar is placed on the stage and the insect allowed to settle down before removal of the jar for photography.





Elephant Hawk Moth (*Deilephila elpenor*): May 22



Oak Hook-tip Moth (*Watsonalia binaria*): May 22