



*Everything you should
know about clothes and
carpet moths.*

Instructions

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The included product instructions and all contained information are the results of many years of our experience, research, and endless dialogues with customers. The knowledge cumulated in this document is commonly accessible.

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All tips and hints included in this document are applied at the user's own risk. MothOut owner is not responsible for any damage caused by the cleaning techniques, insect extermination methods provided in this document.

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Introduction

Thank you very much for selecting the MothOut product and downloading this guide. After many years of experience with moths, we've learned that correct identification, understanding moths nature and taking the right course of action is the key to succeeding in the uneven battle with clothes/carpet moths.

This short guide will enable you to understand what moths are, how they cause damage, and how to treat moths infestation.

What are clothes/carpet moths?

Common webbing moth, Case-bearing moth and Pale-Backed moth are the main species responsible for all the clothes and carpet damages. These pests can destroy fabric, especially wool, fur, silk, feathers, felt, and leather. These materials contain keratin, a fibrous protein that the clothes moth larvae can digest.

Tineola bisselliella, in the UK, is known as the **Common Webbing clothes moth**, is a species of fungus moth (family Tineidae, subfamily Tineinae).



Tineola bisselliella

These moths are small, 6 – 7 mm (0.24 – 0.28 in) body length and 9 – 16 mm (0.35 – 0.63 in) wingspan (usually 12 – 14 mm or 0.47 – 0.55 in). They have narrow wings that are fringed, with small hairs. Moth females lay about 50 - 200 eggs, which in turn, hatch into the fabric-eating little machines. Moths can stay in the larvae stage for about a month, during which they eat and acquire all the nutrition they need to move to the next stage.

In lower temperatures and humidity, moths can stay in the larvae stage for even several years waiting for better conditions.

When caterpillars are ready, they spin webbing cocoons, of which it leaves as a tunnel or sheet of webbing across the attached material and pupates to an adult moth. These moth's adult form has a characteristic bright golden colour with no pattern on their wings.

Tinea Pellionella, is also known as **Case-bearing moth** or **Carpet moth** and same as a common webbing moth, belongs to the same family – Tineidae.



Tinea Pellionella

Their size is between 6 – 7 mm (0.24 – 0.28 in) body length, and 9 – 16 mm (0.35 – 0.63 in) wingspan, the same as the Webbing moth. The adult form is dark brown with two large and several small spots on their wings. Carpet moth females can lay 40 – 50 eggs, which hatch in 4 – 7 days and immediately start to eat, to acquire all necessary nutrition to move to the next stage of their life. Like the Common clothes moth, the larvae stage length depends on the temperature and humidity condition, also the access to the food, and it can take up to 3 months. Larvae then will spin a rice grain-sized cocoon in which transform into the adult form. The transformation process can take from 9 to even 19 days.

Monopis Crocicapitella, widely known as **Pale-Backed moth** also belongs to the same family as previous two species – Tineidae.







Monopis Crocicapitella

This moth recently spreading across the world faster and becoming more popular also in the UK. Their larvae pupate in a flattened cocoon of sand and fine debris, feeds on textiles, but also vegetable and animal refuse. They have been found in dead animals, bird's guano, bird's nests, and products of vegetable origin such as flour and corn. Wingspan 10 – 16 mm (0.39 – 0.63 in), which is in the same range as two previous moths.

Clothes/carpet moth adults do not feed, so they cause no damage to fabrics, but they are responsible for producing more and more destroying caterpillars. The only purpose of adult moths is reproduction, therefore they are so sensitive to pheromones. Females release the pheromones to inform males they are ready for mating. The larvae (caterpillars) of these moths are considered serious pests.

The biggest mistake many people make is the incorrect moth's identification. **Clothes moths can be easily mistaken with pantry moths.** Similar colour, shape, size it is not making the task easy. **We can help identify your moths** based on photograph provided, then suggest the best course of action.

Pantry Moth identification

			
Indian meal moth (<i>Plodia interpunctella</i>)	Tobacco Moth (<i>Ephestia elutella</i>)	Flour Moth (<i>Ephestia kuehniella</i>)	Almond Moth (<i>Cadra cautella</i>)

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Where do clothes and carpet moths come from

Webbing clothes moths are widely spread across the globe. Their natural environment is western Palearctic, but due to our lifestyle and travelling, there is probably no place in the world with no clothes moths presents. Recently clothes moths were even found in Australia.

Case-bearing moths have been in the UK since at least Roman times. They probably travelled from South Africa in Victorian times when merchants started importing feathers, skin, and other organic materials.

Once people realise clothes moths are present in their house, they wonder what brought these pests indoors. Although clothes/carpet moths can get into our house through the open doors and windows, most likely they are introduced to a home by someone: on sweater from the shop, vintage blanket, antique fabrics, even new purchased clothes or on visitor clothing.

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Life cycle

Clothes/carpet moths like the warmth, they thrive in heated buildings and are usually unable to complete their life cycle outdoors in the UK.

Females lay between 30 and 200 eggs. They hatch and immediately begin to feed. Larvae are only about 1 millimetre long, burrow into clothes, carpets, and other items made of fabric such as furniture, so it is hard to see them until they get bigger. Caterpillars don't eat fast, but their large population can produce costly damage.

In ideal conditions (24 °C and 70 - 75% humidity), hungry larvae will take three months to mature into moths, but it could take up to nine months. That

is a lot of munching time. Lower temperatures and humidity will only slow development.

At this point, the caterpillars spin cocoons and spend another approximately 10 (case-bearing moth) – 50 (webbing moth) days developing into adults. Adults can live for an additional 15 - 30 days, after which they die.

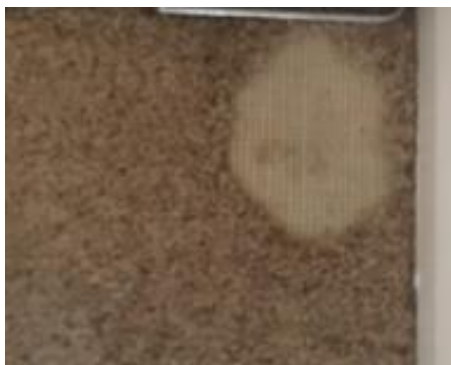
Moths adult form have only atrophied mouthparts and cannot feed. All feeding damage is done by the caterpillar (larval) form. Adult moths have only one goal **it is to reproduce**.

Heated buildings allow clothes moths to develop year-round. The overall **life cycle from egg to egg typically takes 3 - 6 months, two generations per year**.

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Understanding moth infestation - How to get rid of clothes and carpet moths

The first symptom indicating moth infestation is damage - holes in clothes or damaged carpet with bold places. The damage usually occurs in dark, peaceful places. Moths chose these areas as a safe place to build their nests to start their family and grow their population.



Moths prefer dirt such as spilt on carpets, pet's hairs, sweat on clothes which supply moth's larvae with nutrition and moisture.

Clothes / Carpet moths can be found:

- In drawers
- In wardrobes
- Under sofas
- Beneath rarely moved, heavy furniture
- Behind curtains

The extent of moth damage depends on the degree of infestation. Clothes moths infestation left without control can very fast evolve and cause very costly damages around the house.

If you noted holes in your clothes, inspect your cupboards and wardrobes. You will be looking for white webbing and frass. You may even find moth larvae.

Inspect carpets and rugs, especially around the edges, undersides and under bits of furniture. Check the backs of curtains, footstools or sofas that have fabric undersides. You may have to move some heavy furniture.

Once this work is complete, all you need to do is **deploy MothOut Traps**, which are designed to monitor their activity.

There are a lot of elimination and prevention techniques in section 6 “Tips & hints to get rid of moths infestation”



How MothOut traps work instructions

MothOut kit provides an early warning system for clothes in wardrobes, drawers, also secure rugs and carpets, fabric furniture, curtains or even loft insulation.

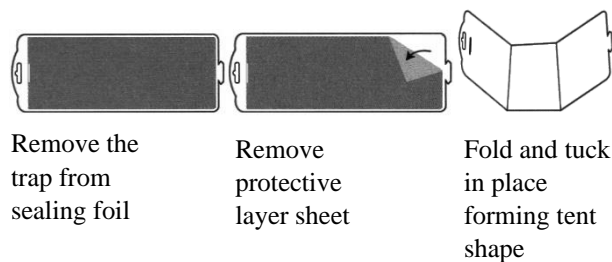
How does it work?

Traps:

The inner side of the trap is covered with glue containing pheromones to attract male moths.

We are using the perfume-like substance naturally produced by moth females attracting males to start the mating process and the new life cycle. Pheromones are fragrance-free for humans but very intensive to moths. They are tuned to discover them and find their source. The moths are tricked into the trap, thinking they smell a mate, but when they arrive at the source of the pheromone, they get trapped on the sticky surface instead.

Traps are easy to build:



Each of our traps is sealed in foil to guarantee effectiveness, and once opened works for up to 3 months.

We've designed a dedicated space at the bottom of each trap for recording the start date. This helps you track when the trap expires, so you can replace it once it's full of moths or after three months, whichever comes first.



Our traps can be used anywhere: stretched flat under furniture where carpet moths love to hide, shaped in a triangle around the house or inside the drawers or wardrobes in standing or hanging position, thanks to included optional hooks.



For the best results, use one trap per room or keep at least 3 meters gap between them. Moths will identify the source of pheromones more precisely and will be lured to the trap faster. Too many pheromone sources in the small area may confuse moths.

Once moths are captured in the traps, you can send them to us for further identification and expert guidance on the appropriate next steps, also listed in Section 6 of this eBook.

Lavender

The lavender sachet is our way of offering you a little something extra from our brand.

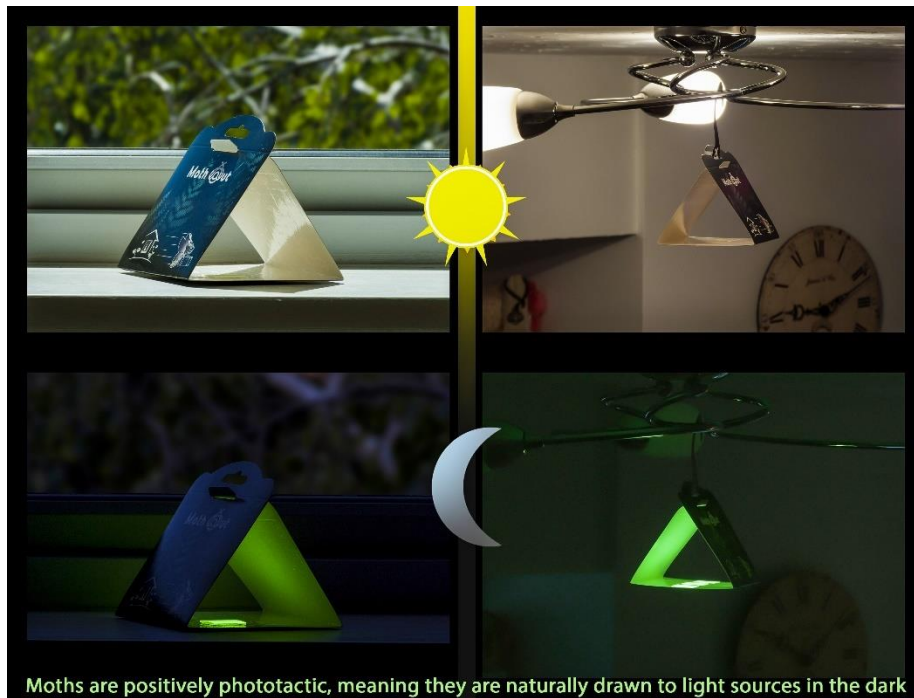
Many of our customers have mentioned that moth infestations are often accompanied by unpleasant odours. Lavender with its Latin name “Lavare”, meaning “to wash”, is known for its clean, refreshing aroma. It works as a natural deodorizer, neutralizing the unpleasant odour associated with moths and promoting a fresher environment.

Simply place the lavender pouch in areas where you want to eliminate the musty scent and enjoy the fresh, soothing fragrance. Squeeze the bag frequently to stimulate lavender and release a fresh aroma.



Light stickers

Moths are attracted to the light. This happens because they use the moonlight to navigate. The attached stickers absorb light during the day and emit it back at night. Apart from moths, there are many other insects that the light attracts them.



* Please note. Traps to be used in dark places don't need light stickers.

Tips & hints to get rid of moths infestation

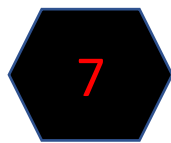
Steps to take to speed up moths extermination and prevent future infestations.

When it comes to moths, prevention is very important. Here are several things you can do to remove and keep these winged pests away:

- **Change hoover bags often** - to make sure you remove larvae and eggs from your property. Hoover carpets, rugs, even furniture (also underneath) frequently and empty your hoover bag outside, preferably after each hoovering.
- **Wash all newly purchased clothes** – clothes shops and warehouses are the perfect places for the moths. Full of food! Wash all the new clothes before mixing them with the rest of the collection.
- **Keep clothes clean** – female moths like to lay eggs on fabrics stained with sweat as the larvae gain more nutrients from these. Wash clothes before putting them back in your wardrobe to prevent it.
- **Keep furniture clean** – regularly vacuum around the bottom and edges of wardrobes, cupboards, and drawers, where moth eggs can be hidden out of sight. Keep wardrobe ventilated to prevent damp and musty conditions which clothes moths like.
- **Store away clothes you won't be wearing** – store freshly laundered clothes in a vacuum bag, especially made of wool.

- **Take out items hanging up** – shake them at least once a month, moths hate being disturbed.
- **Clean storage boxes and suitcases** – these might be hiding eggs or larvae.
- **Check vintage purchases** – antique items, vintage clothes, should be cleaned before being placed with the existing fabric.
- **Wash clothes at the highest temperature** – moths don't like too high temperatures. Temperature above 55°C – 60°C will kill larvae and eggs. Make sure to read labels on clothes before, as too high temperatures may damage clothes, especially wool.
- **Iron clothes before storing them in the wardrobe** – good practice is to iron clothes before putting them away for the next time. The high ironing temperature will also kill larvae and eggs. For most delicate items, iron through cloth or towel. Always read labels on clothes.
- **Heat carpets and rugs** – another way to kill larvae and eggs in carpets with high temperatures is to use a hairdryer. Set up the high temperature and heat the carpet slowly moving from one edge to the other. Test it first in the hidden, unexposed place as some types of carpets may be damaged with high temperature. You may also iron through the cloth. Ironing, however, is more dangerous to the carpet as it produces a higher temperature.
- **Use the weather** – on a hot day, lay clothes, carpets, rugs outside to let the sun fry the eggs and larvae. Brush it thoroughly to remove shells and survived insects.

- **Freeze clothes that cannot be exposed to high temperature** – Put clothes in the bag and freeze the pack for a couple of days. The low temperature will kill moths, eggs, and larvae.
- **Clean bottom of wardrobes and drawers with vinegar** – use the water-vinegar mix to clean clothes storage.
- **Use Monitoring traps regularly** – place traps in corners, behind curtains, under furniture, in wardrobes, on the carpet, behind the TV stand. These are the places where clothes moths love to build their nests. Moth traps will enable you to detect the first signs of infestation at an early stage.



Conclusions

Our home should be a warm, safe, and inviting space, a place where we can relax, enjoy time with family and friends, and create cherished memories. Unfortunately, this sense of comfort can be disrupted by unwelcome invaders that settle in uninvited and damage our belongings.

A clothes moth infestation can be both distressing and costly. However, by taking swift action and following the right steps, you can reclaim your home and restore peace and harmony.

Eliminating clothes moths is not a simple task, it requires time, effort, and persistence, especially in more severe infestations. That's why we've created this guide to help you understand the nature of clothes moths and how to effectively control them. By following these steps, you'll make the extermination process more manageable and significantly increase your chances of success.

Remember: Prevention is always better than cure.

Using MothOut clothes moth traps all year round will help monitor if moths are present around you.

This guide will help you to take steps preventing from clothes moths being introduced to your home.

Once again, thank you very much for choosing MothOut product!

Best of luck.

MothOut Team