

Bug-Wise

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Moths That Infest Stored Foods: Why are we seeing all of these little moths flying around the house? Probably because one or more items in the food pantry has ‘worms’ in it.

Seeing small moths flying about is often the first warning a homeowner has that they may have an insect infestation in some of their stored food items. Although the moths may be seen flying throughout the house, the caterpillars will be found feeding in containers of stored food items such as dried fruit, grains, grain products, or nuts. While such items are most commonly stored in the kitchen area, they are also found in other areas of the home.

Indian meal moth is the species that is most commonly encountered in homes, but there are several other species, including Angoumois grain moths, Mediterranean flour moths, and almond moths. All of these moths are small, around 1/4 to 3/8 inches long when at rest, but they vary in color depending on species.

Indian Meal moths are easiest to identify. They are about 1/4 inch long and rest with their wings folded tightly against the body. The front portion of the wings is light tan in color, but the back portion is a striking copper color. The immatures are light-colored caterpillars that are found feeding and producing webbing in infested food products. Mature caterpillars (see above photo) are a little over 1/2 inch long, with medium brown-colored head capsules.

The habits of these food-infesting caterpillars vary depending on species. Indian meal moths are ‘external feeders’, which means that they can feed on a wide range of dried food products. Pistachios, peanuts, dried fruit, whole corn, other whole grains, processed cereal products (such as flour, cereal, or oat meal), dried pet food, bird seed, and even rat bait are just a few of the products that may be attacked by Indian meal moths.

The caterpillars of Angoumois grain moths are internal feeders, which means that they prefer whole grains, such as corn, rice, and barley, and feed by boring into individual grains. In contrast, Mediterranean flour moth larvae cannot bore into whole grains and are most commonly encountered in flour and other processed grain products. However, they can and do occur in whole grain that is infested with other insects. In this situation they feed on the meal and frass produced by the other insects. Almond moth larvae can occur in dried fruit, whole or shelled nuts, such as almonds, peanuts, or pistachios, and other types of seeds. All of these caterpillars produce large amounts of silk webbing in infested products, and this webbing is one of the key signs of an infestation.

What do I do if I see some of these moths in my home? Regardless of which species of moth one has, the ‘treatment’ is pretty much the same. **Find the infested product, or products, and discard them; then be sure that any uninfested susceptible products are stored in bug-proof containers.**

Start by looking in the most likely places first: kitchen pantry, kitchen cupboard, and other places where dry food products are stored. Systematically check every susceptible product for signs of infestation. These include excessive amounts of ‘dust’, holes bored into containers (this is done by the larvae), holes or tunneling in the food items, silk webbing, and presence of caterpillars. If an infested product is found in an area, it is a good idea to go back and double-check all of the other products stored in that area. Make sure that susceptible products are stored in bug-proof glass or plastic containers. Foods can also be protected from infestation by storing them in a freezer or refrigerator. In addition moths and caterpillars

can be controlled by long-term exposure to sub-freezing temperatures. Temperatures and exposure times vary with species and life stage, but storing items in a deep freezer (at 0 ° F or lower) for a week or more will control most stored food pests.

Remove all food items from the pantry or cupboard and thoroughly clean and vacuum any spilled food products. Be sure to clean cracks and crevices, because caterpillars can develop on crumbs and flour that might accumulate in such locations. Mature caterpillars tend to wander about in search of a place to pupate, and often chew through the wrapping of the product in which they developed. Thorough cleaning and vacuuming also helps remove these wandering caterpillars and their resulting pupae.

If you want to treat with an insecticide, do so while the pantry, or cabinet, is empty and allow spray to dry before restocking food items. However, if one does a thorough job of sanitation, use of insecticides is not really necessary, and use of insecticides is not an effective substitute for thorough cleaning and storing products in bug-proof containers. If insecticides are used read the label carefully, before buying the product, to be sure that it is specifically labeled for use in and around food storage areas. There are a number of products containing active ingredients such as cyfluthrin or permethrin that are labeled for this use, which will provide relatively long-term residual control on treated surfaces. Several products containing natural pyrethrum (pyrethrins) are also labeled for this type use, but these provide very little residual control.

Don't restrict your search to the kitchen. Infestations of food-infesting caterpillars can occur anywhere in the house that there is a suitable, exposed food product. Some non-kitchen situations where infestations of these moths are commonly found are listed below.

- dry pet food
- packets of rat bait
- decorative corn
- bird seed
- cereal-based bath flakes
- candy bars
- food in pockets of clothes
- camping/hunting gear (trail mix, peanuts, etc)
- rodent caches (nuts or pet food stashed in wall voids)
- dried flower arrangements containing seeds
- dried nuts (especially peanuts, pistachios, or almonds)
- grain stored in bulk (corn, wheat, spelt, etc)
- stuffed animals/pin cushions (if stuffed with grain or beans)
- bean bags (stuffed with beans or grain)

How do I know these are not clothes moths? This is a good question to ask before beginning one's search. Some of the food-infesting moths, especially the Anguimoid grain moth, look a lot like clothes moths, at least superficially. Both are small, light-colored moths. However, when examined closely, the head of the webbing clothes appears reddish brown and fuzzy, because it is covered with many reddish hairs. In general, the food-infesting moths are strong fliers that may be seen anywhere in the house, while clothes moths are weak fliers that are normally only seen near the point of infestation. So if the moths are seen in or near a food storage area, they are likely one of the food-infesting species. If seen in or near a clothes closet, suspect clothes moths first, unless susceptible food products are also stored in the closet. V (See Bug Wise No. 1 of 2005 for information on clothes moths).

* This information is for initial planning purposes only. Always read and follow product label. Brand names listed here are examples only. Many insecticides are marketed under a number of different brand names. Other products containing the same active ingredient should provide equal performance, provided they are labeled for use in the site in question and are applied at equivalent rates.