

Tobacco Moth

Ephestia elutella



(*Ephestia elutella*)

Description

Adults: The wings from tip to tip are up to 16 mm (0.625 inch) and the hind wings are uniformly gray. The upper wings are grayish brown with two light colored bands extending across each forewing.

Eggs: Oval, ivory in color and 2 mm (0.08 inch) long.

Larvae: Cream colored, brown head capsule, with rows of spots along the back. Microscopic examination is required to separate from other *Ephestia* moths.

Pupae: Pupal cases are whitish with a yellow to brownish colored pupa inside.

Life Cycle

Adult moths live for 10-14 days. Mated females can lay 20-120 eggs singly or in groups. Eggs hatch in 3-5 days in warmer months and up to 7 days in cooler months. Larvae feed and become mature in 25-64 days depending on food quality, temperature and humidity. Larvae will wander and pupation will occur away from infested materials. Adults emerge from the pupae in 8 to 10 days depending on temperature.

Damage and Detection

Granular frass the size of ground pepper can be found in and on food materials such as tobacco, cocoa, nuts, dried fruits, cereals, processed foods containing wheat, rice, corn, nuts, and seeds. The use of pheromone traps and inspections can determine location and degree of infestation.

Corresponding Products from Insects Limited

- [Hanging NoSurvivor Traps with Tobacco Moth Bullet Lure \(IL-180\)](#)
- [Tobacco Moth Bullet Lures Only \(IL-183\)](#)

QUICK SCAN

SIZE / LENGTH

Adult	0.625 inch (16 mm)
Eggs	0.08 inch (2 mm)

COLOR RANGE

Adult	Hind wings uniformly gray
Larvae	Cream colored, brown head capsule

LIFE CYCLE

Adult	Live for 10-14 days
Larvae	Feed and become mature in 25-64 days

FEEDING HABITS

Tobacco, cocoa, nuts, dried fruits, cereals, processed foods containing wheat, rice, corn, nuts, and seeds.

INFESTATION SIGNS

Granular frass can be found in and on food materials listed above.

Tobacco Moth Monitoring Guidelines

Lure

BULLET LURE® - Contains sex pheromone to attract male moths.

Lure Storage

Keep unopened lures in cool storage less than 16°C (60°F) or place in freezer for extended storage. Lures can remain frozen for up to 24 months or at room temperature for 12 months to retain their full effectiveness for use afterwards.

Trap Designs Used with Lure

NOSURVIVOR traps are diamond shaped sticky traps that can be hung from many locations. This design is the preferred trap for this moth that flies well.

THE SIGHTTRAP™ is the size of a NoSurvivor hanging trap and provides daily images and catch data to help with early detection. The data is available on the web and app-based software, ForesightIPM.

Trap Placement Techniques

Pheromone traps can be placed out year-round but are especially recommend during warmer months when temperatures exceed 12.5°C (55°F). Place hanging pheromone traps 1.5 m (5 feet) above ground or at eye level to allow for easy inspection when monitoring traps. In areas such as a pantry or home, place one or two pheromone traps per room. In commercial areas such as warehouses or retail stores, place pheromone traps 7.5–15 m (25–50 feet) apart to determine the presence or absence of tobacco moths. Increase pheromone trap density to 4.5–7.5 m (15–25 feet) apart to help locate source of tobacco moths. Keep pheromone traps 7.5 m (25 feet) away from exterior doors. Tobacco moth pheromone traps are best utilized in areas that store dried goods such as food, grains, seeds, nuts, dried fruit, animal feed, or pet food.

Trap and Lure Maintenance

Replace traps when glue is filled with insects or becomes dusty. Replace pheromone lures every 90 days. Replace all pheromone lures in a location at the same time. Do not cut the cap off the bullet lure. Do not stagger lure replacement over several weeks. Record date and number of catches to identify trending information.

Fun Facts

- Similar species include the Indian meal moth (*Plodia interpunctella*), Mediterranean flour moth (*Ephestia kuehniella*), and Almond moth (*Cadra cautella*)
- Other common names for the tobacco moth include cacao moth, warehouse moth, chocolate moth, and mite moth.
- Like many food moth species, adult Indian meal moths do not eat. Their larvae are vivacious feeders and damage dried goods.
- Larvae produce large amounts of silk which can contaminate dried food goods and clog machinery.
- Tobacco moths initiate flight at temperatures above 12.5°C (55°F).
- The pheromone that attracts the tobacco moth also attracts over 20 other moth species (*Ephestia spp.*, *Cadra spp.*, and *Spodoptera spp.*).