



# Warehouse Beetle

*Trogoderma variable*

## Description

**Adults:** Beetles are 2-3 mm (0.125 inches) long and brownish black in appearance. Their elytra (wing covers) are covered with fine hairs which can produce a mottled pattern in coloration.

**Eggs:** Oval, ivory in color and 0.5 mm (0.02 inches) long.

**Larvae:** 6-7 mm (0.25 inches) long and have a yellow white to dark brown coloured body which is covered with tufts of setae (hairs) on each body segment. There are paired patches of concentrated setae on the last four abdominal segments and usually a tuft of longer hairs at the tip.

**Pupae:** Pupal cases are oval in shape and hairy. Inside the pupal skin a whitish larva to blackish beetle may be visible.

## Life Cycle

This insect occurs in all life stages in warm buildings, throughout the year with two or three generations occurring each year. Females mate within one day of emerging from the pupa. Five to sixty eggs are deposited near a food site. Larvae will molt 5 or 6 times before pupating. The life cycle is completed in approximately 35 days. With poor food conditions, lower temps, or regular disturbance, the larval lifespan can be extended, and pupal stages may undergo diapause. Under these conditions, development can be extended by many months to over a year. Larvae rarely move from the site of egg laying if sufficient food is available.

## Damage and Detection

Both adults and larvae can feed on a wide variety of stored foods including cereals, candy, flour, fishmeal, noodles, dried spices, nuts, dead animal carcasses (drier stages), and pet foods. The larval stage prefers to hide in dark areas where food is stored, including processed and packaged foods, or in cracks and crevices where waste food has accumulated. The use of pheromone traps and inspections can determine the location and degree of infestation.

## Corresponding Products from Insects Limited

- [Hanging NoSurvivor Trap with Warehouse Beetle Bullet Lures \(IL-264\)](#)
- [Hanging NoSurvivor Trap with PTL Multi-Species Bullet Lure \(IL-408\)](#)
- [All Beetle Trap with RTU Gel \(IL-2750\)](#)

## QUICK SCAN

	SIZE	/	LENGTH
Adult	0.125 inch	(2-3 mm)	
Eggs	0.02 inch	(0.5 mm)	

COLOR RANGE	
Adult	Brownish black
Larvae	Yellow white to dark brown

LIFE CYCLE	
Adults	35 day life cycle
Females	Lay 50-60 eggs
Larvae	Molt 5-6 times before pupating

FEEDING HABITS	
Adults and larvae feed on wide variety of foods.	

INFESTATION SIGNS	
Larval stage prefers to hide in dark areas where food is stored.	



# Warehouse Beetle Monitoring Guidelines

## Lure

**BULLET LURE** Contains sex pheromone to attract male beetles.

**PANTRY PATROL** Pheromone /oil dispenser. Contains grain-based food attractants to attract males and female as well as sex pheromones to attract male Warehouse beetle.

**STORED PRODUCT BEETLE Lures** are food bait and pheromone lures that was specifically designed to make the Pantry Patrol gel into a tablet form.

**ALL BEETLE TRAP READY-TO-USE TRAY** is a preloaded accessory of the ALL BEETLE TRAP that contains either the PANTRY PATROL Pheromone/oil dispenser or the STORED PRODUCT BEETLE LURE and glueboard.

## Lure Storage

Keep unopened BULLET LURES, PANTRY PATROL pheromone /oil dispensers, READY-TO-USE TRAYS, and STORED PRODUCT BEETLE LURES in cool storage for 12 Months or in refrigeration for up to 24 months before using or discarding.

## Trap Designs Used with Lure

**NOSURVIVOR TRAPS** are diamond shaped sticky traps designed to be hung.

**ALL BEETLE TRAP** consists of three parts: A clear lid, blue base, and snap in tray. This device can be paired with many different types of attractants available by Insects Limited depending on the insect you are monitoring.

**PANTRY PATROL** “CORNER” pitfall traps contain a triangular pit to receive full dispenser of pheromone /oil. Dust cover is incorporated into cardboard packaging.

## Trap Placement Techniques

Pheromone traps can be out placed year-round but are especially recommend when temperatures exceed 12.5°C (55°F). Floor pheromone traps like the All Beetle Trap and Flat Trap are more effective at capturing warehouse beetles compared to hanging pheromone traps, however, hanging pheromone traps tend to stay clean longer and allow for easier inspection. 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 warehouse beetle. Increase pheromone trap density to 4.5–7.5 m (15–25 feet) apart to help locate source of warehouse beetle. Keep pheromone traps 7.5 m (25 feet) away from exterior doors. Warehouse beetle 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 many other Anthrenus, Anthrenocerus, Attagenus and Trogoderma species.
- Other common names include grain Trogoderma.
- Warehouse beetle larvae have hairs on their body called setae that can cause gastrointestinal irritation in infants, children, and at-risk individuals. They may also cause an allergic reaction.
- Warehouse beetles initiate flight at temperatures above 22.5°C (73°F).
- The pheromone that attracts warehouse beetle also attracts similar species including:
  - Khapra beetle (*Trogoderma granarium*)
  - Larger cabinet beetle (*Trogoderma inclusum*)