

# Derme<sup>s</sup>tid Beetle

876270

**Species:** *maculatus*  
**Genus:** *Derme<sup>s</sup>tes*  
**Family:** Dermestidae  
**Order:** Coleoptera  
**Class:** Insecta  
**Phylum:** Arthropoda  
**Kingdom:** Animalia



## ***Conditions for Ownership***

***Never purchase living specimens without having a disposition strategy in place.***

There are currently no USDA permits required for this organism. In order to protect our environment, never release a live laboratory organism into the wild.

## ***Primary Hazard Considerations***

- Always wash your hands after handling these beetles.
- There are no health risks from dermestid beetles and they will not bite.
- Dermestid beetles can become pests if released, by feeding on organic goods such as leather, wool, feathers, dried food or collections (such as insects). The larvae can also bore holes in wood when they are ready to pupate. Take care not to let any escape.
- Avoid breathing residual dust.

## ***Availability***

- No seasonality. Dermestids are bred in our labs, so are generally available year around.
- Dermestids will arrive packed in a 4 oz. jar or 8 oz. container, with a few pine shavings. Healthy larvae and adults are very active. They can live in the container they are shipped in for about 3–4 days before needing to be transferred to a habitat.
- We over-pack each order of beetles. It is normal to have some deceased beetles in the container. You will receive at least the quantity of live beetles stated on the container.

## ***Captive Care***

### **Habitat:**

- Add pine shavings, dog food and/or cardboard as substrate to a depth of about 1 inch. The adult beetles can fly, so use a secure lid that permits ventilation but not escape. A 5 gallon aquarium will house about 500 dermestids. Keep beetles at room temperature (somewhere between 70–80°F) and away from direct heat and light. Dermestids thrive in a dark, slightly humid (60–70%) environment. If the colony is too wet it may develop mites, which can have a detrimental effect on the beetles' health.

## Care:

- Food: The beetles' diet consists of any dead animal, but we recommend [Freeze-Dried Hearts 641092](#) or [Freeze-Dried Grass Frogs 640001](#) placed on top of the substrate. Begin with the equivalent of one to two frogs depending on the size of your container (2–10 gallon). Replacement substrate is available separately; order item number [880261](#). Check their food supply once a week and add more as needed. The dermestids will devour the soft tissue, leaving the bones. You can also use meat from a grocery store or road kill, but any non-freeze-dried items may create an offensive odor.
- Water: Lightly mist food and tank daily, but not to the point of sogginess.
- Care: Do not clean the cage out too often. As long as it doesn't get too wet or grow mold, you can leave it for up to six months. The beetles will breed readily on their own.

## Information

- Method of Reproduction: Sexual.

## Life Cycle

- Complete metamorphosis. Development from egg to adult takes about 64 days. Eggs hatch in three days. The larvae will molt six times. Pupae rest for 7–11 days before emerging as adults that live 1–3 months.
- Sexing: Males and females can be differentiated by comparing antennal segments. Male terminal antennomeres are substantially longer than the female's. This can only be observed under a microscope.

## Wild Habitat

- *Dermestes maculatus* has spread around the world in tropical and temperate environments. Its original habitat is unknown. They can be found near carcasses or in bird nests in the wild, but have also made themselves at home in human habitations. They are decomposers that feed primarily on dead animals. Predators include birds, lizards and mammals that feed off of decomposing carcasses and also relish the protein-rich dermestids.

## Special Notes

- Dermestids can digest keratin, a component of hair and feathers, which most animals can not digest.
- Dermestids are often used in museums or taxidermy shops to clean skeletons. They can also be pests in these places by destroying collections. The larvae do the most damage.
- There are more than 500 species of dermestids worldwide.
- Dermestids can help solve crimes. Investigators check the stage of development of different decomposers and depending on other factors, like temperature and location, can estimate the time of death of a victim.

## Disposition

- We do not recommend releasing any laboratory animal into the wild, and especially not insects that are considered to be pests or not native to the environment.
- If the insects must be euthanized at the end of study, follow one of these procedures:
  - Put them into a container or bag and freeze for 48 hours.
  - Place the organism in 70% isopropyl alcohol for 24 hours.
  - Autoclave the organism @ 121 °C for 15 minutes.
- A deceased specimen should be disposed of as soon as possible. Consult your school's recommended procedures for disposal. In general, dead insects should be handled as little as possible or with gloves, wrapped in an opaque plastic bag that is sealed (tied tightly) before being placed in a general garbage container away from students.