# Ladybugs

Species: convergens Genus: Hippodamia Family: Coccinellidae Order: Coleoptera Class: Insecta Phylum: Arthropoda Kingdom: Animalia

## **Conditions for Customer Ownership**

We are a USDA compliant facility and hold all necessary permits to transport our organisms. Each state is assisted by the USDA to determine which organisms can be transported across state lines. Some organisms may require end-user permits. Please contact your local regulatory authorities with questions or concerns. To access permit conditions, <u>click here</u>.



*Never purchase living specimens without having a disposition strategy in place.* Live specimens should not be released into the wild! Please dispose of any unwanted organisms using the guidelines below.

## **Primary Hazard Considerations**

- Always wash your hands after handling the ladybugs.
- Ladybugs are considered docile. They can give a small nip, but they are considered harmless to humans. Be aware that they are quick-moving and can fly.

#### **Availability**

Ladybugs are available year-round, although they are wild-collected so shortages can occur.

## **Arrival Care**

- Your adult ladybugs will arrive in a plastic vial with a foam plug and a piece of netting for the ladybugs to hang onto. There will be a few moist raisins in the vial as a food and water source for the ladybugs.
- We over-pack each order of ladybugs. It is normal to have some deceased ladybugs in the vial. You will receive at least the quan-tity of live ladybugs stated on the vial.
- The ladybugs should be placed in their habitat as soon as possible. Place the vial into the habitat and remove the foam plug carefully so that you do not lose any of the ladybugs. They can fly away!
- You can decrease their activity by refrigerating the ladybugs for about 30 minutes before releasing them into the habitat.
- If you cannot put the ladybugs in their new habitat right away, the vial should be placed inside a refrigerator until the transfer can be made. While refrigerated, ladybugs will not be active. When removed from refrigeration, ladybugs will take about five minutes to warm up and become active again.

## **Captive Care**

#### Habitat:

- A 2–3-gallon plastic cage works well for keeping ladybugs. Make sure to put paper or netting between the top of the cage and the lid; the ladybugs can escape through very small openings. You can add hay, cut grass, sticks, and/or branches to the habitat to give the ladybugs things to climb on.
- The habitat should be misted daily with dechlorinated water to provide the ladybugs with moisture. You can dechlorinate tap water by leaving it out for 24–48 hours or by adding a dechlorinating agent to it.
- The habitat should be kept at room temperature (70–80°F). No special lighting or heat is required.

- Remove deceased ladybugs from the habitat once per week.
- The habitat should be cleaned at least every other week by replacing fouled substrate and wiping out the inside of the cage.

#### Care:

- Ladybugs are voracious predators and feed on many soft-bodied insects and eggs. Aphids are a common staple in the ladybug diet. You can also soak raisins in water until they are saturated, and then offer them as food.
- Place a damp paper towel in the habitat. Mist the paper towel and the habitat daily to provide moisture for the ladybugs.

#### Information

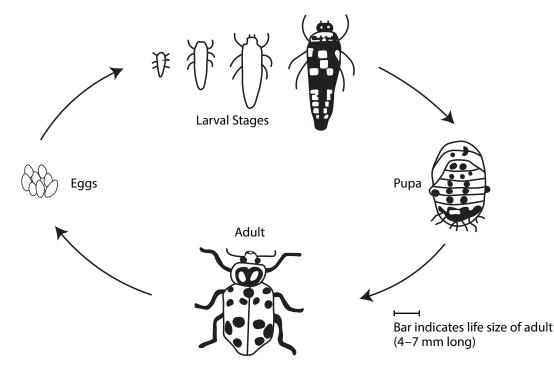
- Method of reproduction: Sexual.
- Within 1–3 days of emerging from the pupae, mating takes place. The male fixes himself on top of the female and internally fertilizes her using his aedeagus (insect equivalent of a penis). If aphids are abundant, the female can begin laying eggs 5–10 days after fertilization. She can lay 200–1,000 eggs in upright clusters of 15–30 eggs each over a 1–3 month period commencing in spring or early summer.
- Determining sex: Difficult to do with any certainty. Females have an ovipositor and males have aedeagus.

## Life Cycle

Complete metamorphosis.

- Egg: 1 mm in size and spindle shaped. Hatch out after 2–5 days.
- Larvae: Grow from 1 mm to 4–7 mm in length over a 3 week period. Have three pairs of prominent legs.
- Pupae: 4–7 mm in size. This stage may last from 2–12 days depending on temperature.
- Adult: 4–8 mm in size. They can live for a few months in the wild. They are oval with a convex shell that is red with black spots.

## Life cycle of the convergent lady beetle, Hippodamia convergens



## **Wild Habitat**

These ladybugs can be found in fields, forests, gardens, or anywhere that has ample vegetation infested with other insects that are a part of the ladybugs' diet. They are found in southern Canada, North America, and South America.

### **Special Notes**

- Ladybugs, also called Ladybird beetles, get their name from a pair of white convergent dashes on the first body segment. They are the most common species of ladybug found in the Americas.
- A single ladybug may eat as many as 5,000 aphids in its lifetime.
- Ladybugs were favored in European art and folklore, and were considered bringers of money or good fortune.

#### **Disposition**

- Adoption is the preferred method of disposition of ladybugs.
- If the ladybugs must be euthanized, one of the following steps should be taken before disposing:
  - Put them into a container or bag and freeze for 48 hours.
  - Place them in 70% isopropyl alcohol for 24 hours.
  - Autoclave them @ 121°C for 15 min.
- A deceased specimen should be disposed of as soon as possible. Consult your school's recommended procedures for disposal. In general, dead organisms should be handled as little as possible or with gloves, and wrapped in an opaque plastic bag that is sealed (tied tightly) before being placed in a general garbage container away from students.

