

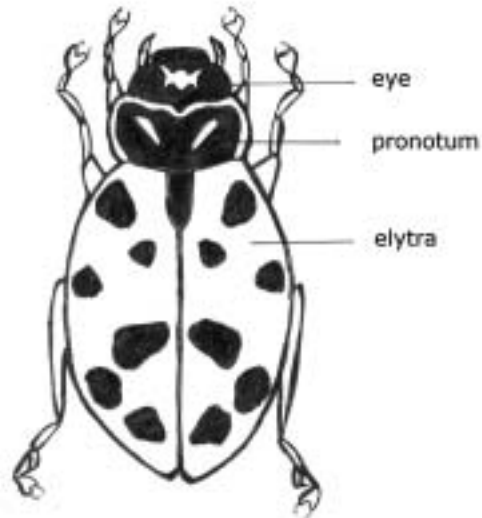
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Exploring Our Little Corner of the World with the Galiano Naturalists

by Megan Cowling

The charming and familiar red ladybug, or more formally known as the lady bird or lady beetle, belongs to the class of Insecta in the family Coccinellidae (which means “little sphere”). There are over 4500 species of lady beetle all over the world, with more than 450 species living in North America. The unifying theme to the family is one of a solid-coloured carapace (or *elytra*) punctuated by contrasting spots. However the combinations vary significantly, with such examples as black elytra with two red spots (the “Twice-Stabbed Ladybug”), pink elytra with black spots (the “Pink Ladybug”), as well as various examples of cherry red, orange, and yellow elytras. The brightly coloured carapaces and spots of the lady beetle family are an example of the evolutionary strategy of *aposematism*. In contrast to camouflage, the use of aposematism draws attention through vivid warning colours (such as yellows, oranges and reds) to convey to potential predators (such as birds or lizards) the presence of a toxin or noxious taste. Lady beetles do not wear these bright colours as an empty threat; rather they are considered toxic to small predators. Lady beetles are also armed with a form of chemical defense; they secrete a mildly toxic and foul-smelling oily yellow liquid from their leg joints.

The number of spots on a lady beetle also varies by species and age. Examples range from entirely spotless to more than 22 spots. On Galiano we are most likely to spot our native species, the Convergent Lady Beetle, *Hippodamia convergens*, which usually wears six spots. The Convergent



Drawing of adult Convergent Lady Beetle by Megan Cowling

Lady Beetle is a year-round resident here, but it hibernates in cold winter weather. Towards the end of fall, the lady beetle seeks out a dark, dry and insulated shelter. Ideal locations include places between layers of bark, leaf litter and firewood piles. Small crevices such as between wooden roof shingles and tucked in the eaves of attics and garden shed ceilings are also attractive.

Come the spring, adult lady beetles emerge and immediately begin searching for food, the opposite sex and a place to lay their eggs. Lady beetle eggs are small (the size of a pencil lead), yellow and oval. They are laid in clusters between 30 and 50 on the undersides of leaves. The eggs are laid close

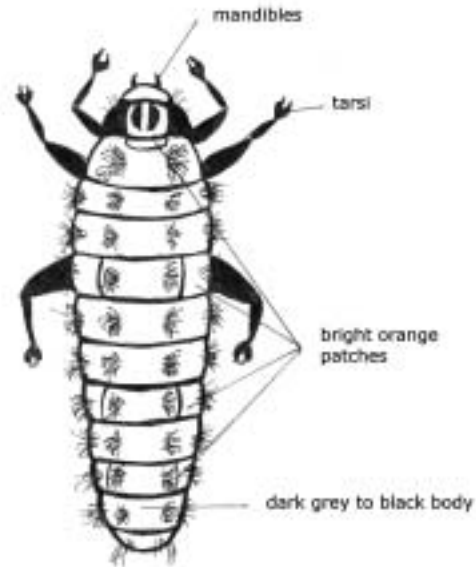
to or within aphid colonies, as aphids are the preferred food of lady beetles. In less than a week the larvae hatch out and begin voraciously feeding on aphids and other garden pest insects. One larva can consume 200 to 500 aphids in the three-week period before it pupates.

To the practical gardener this is fantastic news, as the aphid is a significant pest to roses, nasturtiums, dill and many other plants. The lady beetle larva captures aphids with its front feet (or *tarsi*) and uses its large sickle-shaped mandibles (retained in adulthood) to puncture the aphid's body cavity. They then suck the fluids from the body and leave the empty green husk of the aphid carapace behind.

The larva of the lady beetle is dramatically different from the commonly recognizable adult form. It is often described as crocodilian in appearance, a reference to the tapered body shape, although it possesses coarse black hair-like tufts and bright orange spots on a dark greyish blue to black body. In both its larval form and as an adult, the lady beetle also feeds upon spider mites, thrips, mealy-bugs, and whitefly larvae. Throughout one lady beetle's lifespan from larva to adult, it can consume more than 5000 aphids. Considering that lady beetles can produce up to six generations a year, the potential of these little insects as an environmentally friendly pest control is immense.

The lady beetle is commonly regarded as a beneficial insect and bears many different common names. The lady beetle's most used common name is traditionally said to refer to the Blessed Virgin Mary, as the "Blessed Lady's Beetle". In the Cherokee culture, the lady beetle's name means "Great Beloved Woman". However, there are also significantly less elegant common names for the lady beetle, such as "Burnabee", "May-bug", "Golden Knop" and "Devil's Chicken". In addition,

depending on region of the world, the lady beetle is known also as "God Almighty's Cow", "Dowdy Cows" and "Red Cows of God".



Drawing of larval stage of Convergent Lady Beetle by Megan Cowling

A lady beetle that lands on one's hand is said to be a sign of luck, fertility or having a wish granted. In order to best attract the lucky little lady beetle to one's garden, plant yarrow, fennel and clusters of tall ornamental grasses for the lady beetle to rest under. Once there, the lady beetle will often happily stay as long as there is a source of water and prey to feed upon.

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Natural Mysteries

Last month's mystery was: What is the advantage for nuthatches to go down a tree head first? Several different kinds of birds specialize in foraging on tree trunks and large branches, including woodpeckers, creepers, and nuthatches. The first two

groups of birds always have their heads pointed upwards as they search the bark for insect prey, while nuthatches may be pointed either upwards or downwards. Using a downward orientation allows nuthatches to probe and explore crevices in the tree bark, and find insects, that are hidden from a bird that only forages by looking and moving upwards. Unlike woodpeckers and creepers, nuthatches don't have long, stiff tail feathers to use as props when climbing up a vertical tree trunk. Instead, they have short, strong legs and feet which grip the surface and work equally well moving up or down the tree.

This month's Natural Mystery: Why do newts cross the road (Vineyard Way) in the fall?

Have an answer? Send your thoughts to galianonaturalists@gulfislands.com. Have a Natural Mystery of your own? Let us know, and we'll try to answer it.

THE GALIANO NATURALISTS are a group of curious explorers who enjoy observing, marveling, and sharing information about the natural world around us. Come join us. (galianonaturalists@gulfislands.com)