# A Gardener's Best Friend

*By Eric Dinerstein*

The words "lovable" and "insect" rarely share the same sentence when uttered by adults, the adjective "lovable" usually passed over in favor of some descriptor more like "#^$*!-ing" insects. But for kids, there is one group where the kinder word is fitting: ladybugs. What is it about ladybugs, or more correctly, ladybird beetles, that children find so adorable? I have seen no empirical studies about cuteness in insects so I will venture a few guesses.

Somehow, we often associate animals that are round or roly-poly with cuteness. Think beavers, or hedgehogs, bear cubs, or even porcupines. Whatever rolls up into a ball, we want to cuddle. Well, maybe not porcupines. But if the body plan is long and sinuous like a snake, or has a mouth full of pointed teeth, or sports a sharp tip to its abdomen, like a hornet, we reach for a stick or a can of Raid. Ladybird beetles seem more like wind-up toy bugs, so clown-like in their coloration, with seven black polka dots on the body set off against a rich crimson shell. Maybe it's the way they take off, like little helicopters with wing flaps, that makes them so engaging. Perhaps it's instead because kids learn early that these creatures are harmless but voraciously eat other bugs that threaten the backyard garden. From any perspective, ladybird beetles are among the most beloved of insects, and not just in the eyes of kids.

Animal behavior theory, however, suggests that we should be wary if we have a sudden urge to eat them. In nature, the combination of red and black, in any orientation—spots or stripes—is considered warning coloration, a visual shout-out to stay away. In the case of ladybird beetles, the striking contrast of red and black signals to birds that they are distasteful.

Over 430 species of ladybird beetles exist in the United States, some introduced, brought in to control aphids that suck the juices out of important commercial crops. These species of ladybird beetles vary between having bands or spots. The spotted species can be distinguished by the number of black dots on them—such as the two-spotted and the seven-spotted, the latter being the most common ladybird beetle that children love to draw and hold in their hands. But there are also thirteen, fourteen, fifteen, seventeen, and twenty-spotted ladybird beetles.

Ladybugs consume a wide variety of garden pests including, in addition to aphids, cinch bugs, asparagus beetle larvae, alfalfa weevils, thrips, potato beetle larvae, spider mites, and mealybugs, to name a few. Adult ladybird beetles can eat their own weight in aphids every day and a larva, also aphid feeders, can consume more than 50 per day. That is serious pest control if you have hundreds of beetles in your tomato patch.

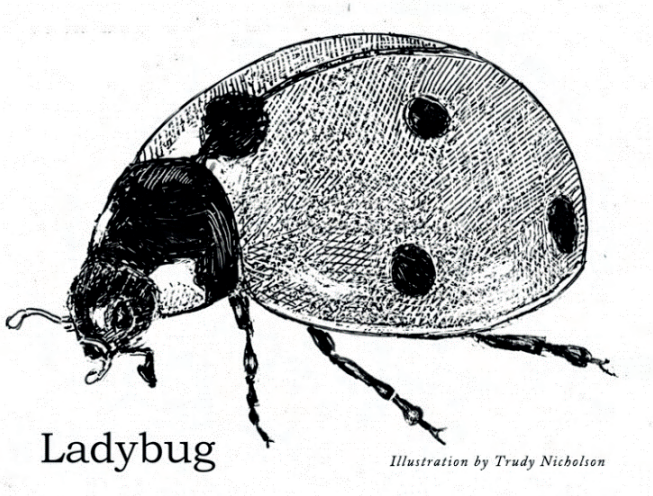

*Illustration by Trudy Nicholson*

Ladybugs are so helpful in producing bountiful gardens that some enthusiasts purchase and release these beetles in hopes of adding additional biological control to the mix. Unfortunately, beetles do fly, and these introduced beetles rarely stay put. The life cycle of the ladybird beetle essentially guarantees this outcome. Unlike most insect species in our area, ladybird beetles overwinter as adults, hiding in secluded spots (under logs or branches, for example) and often in large aggregations, there being safety in numbers. But early in spring, these clusters of ladybirds disperse in search of prey and suitable sites to lay their eggs, laying up to 1,000 eggs on plant surfaces and often where aphids are plentiful. Once ladybirds have devoured the aphids in an affected garden, they will move on in search of happier hunting grounds down the street in the neighbor's bushes. The best way to attract ladybird beetles to your garden from places nearby and keep active populations of them in your garden as long as possible, is to avoid the use of pesticides and herbicides that kill them as well as your targeted pests.

Ladybirds do have predators beyond the human pesticide user. Swifts and swallows, two groups of birds that feed on the wing, are immune to the toxins emitted by ladybirds and pick them off in flight. Some spiders feed on ladybirds, as do dragonflies, frogs, and true sucking bugs. Parasitic wasps kill them as well, using the bodies of the poor ladybirds as food for their own larvae. Nature can be brutal.

But ladybirds must be doing fairly well in avoiding these predators, as they are still flitting about in gardens, at least those free from pesticides. Stop spraying your vegetables and flowers and make a home for these helpful friends. They make wonderful neighbors, even if they soon move on.