

Getting to Know the Lady Bird Beetle

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The Convergent Lady Bird Beetle, *Hippodamia convergens*, is a well known and important friend of the gardener. It is very beneficial in controlling pests and can be invited in as a natural part of the garden. But there are some serious questions about whether, or not they should be artificially introduced. Purchasing lady bird beetles for biological pest control is probably a waste of money. An understanding of the lady bird beetle's complex life cycle, and migratory instincts shows why.

. In both the larva and adult forms, lady birds eat hundreds of aphids and scale insects. The lady birds spend the winter in huge clusters of hibernating beetles in rotten logs and brush piles under a protective blanket of snow high up in the western mountains. With the warmer days of spring, the beetles become more active and prepare for their migratory flight to the lowlands and a season of aphid hunting. On a warm day they take off and fly up several thousand feet where they locate a layer of air that is 55 F which, hopefully, will carry them to a good place to spend the season.¹ They don't feed up in the mountains before their flight.

. Once they arrive in our gardens and fields, the beetles begin to eat aphids and to lay eggs. Each beetle can lay up to 1500 eggs in a two month season. The larvae, which look like little orange and black crocodiles, travel over stems and leaves while they gobble up about 25 aphids per day; the adults eat around 50 aphids per day.¹ Whenever there is a shortage of aphids for the lady birds, the adults will eat nectar and pollen, a diet which prepares them for the long return migration to the mountains and the winter's hibernation. Once the beetles switch to pollen and nectar they are all through laying fertile eggs and are preparing for their journey.^[3]

. The best way to keep lady bird beetles around for a full season, then is to make sure that there are enough aphids for them to feed on. We can plant trap crops, crops that are particularly favored by aphids, all through the growing season. A few Brussels sprouts plants, for example, might harbor enough aphids to keep enough beetles around so that any sudden increase in aphid population on trees or roses or cabbages will be controlled by the lady bird beetles, other predators such as green lace wings, and various parasites.^[4] Some people go up into the mountains in the winter and find huge clusters of the hibernating beetles; often 60 gallons in one spot.^[1,2] These are brought down to the low lands where they become the property of companies which specialize in selling agents of biological control through the mail. Here the beetles are cleaned and packaged and stored under refrigeration until they are sold and released in someone's garden.

. Now, getting shaken out of a package into a garden during warm weather is just about the same as being up in the mountains in the warm spring weather to a lady bird. So as soon as she warms up a little she will obey the instincts that evolution has imprinted on her behavior and will fly up vertically until she encounters a layer of air at F, and fly off to seek her fortune elsewhere.^[1,2,3,4,5,6] Only after such a flight will she eat aphids and lay eggs. So it does us no good to purchase convergent lady bird beetles for our gardens. In fact it may do some harm.

. In California researchers found that there was a parasitic wasp that infected some of the beetles during their stay in the mountains.^[3] The larvae of the wasp spends the winter within the hibernating beetle. When spring comes, the parasitized beetles are unable to migrate, the

wasp emerges and stays in the mountains. Only the unparasitized. beetles make it to the valleys. By transporting both parasitized and. unparasitized lady bird beetles, man has made it theoretically possible. for the wasp to infect beetles in the valleys as well as in the mountains. This has NOT been found to happen yet, but it is quite possible. that this disturbance in the migratory patterns and natural selection. could result in an imbalance in the dynamic relationship between The. beetles and the parasites which could seriously reduce the lady bird. beetle population.

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