



## Battling Beetles

by Carol Quish, UConn Home and Garden Education Center

Beetle control in the garden is a constant battle during the month of July. They appear in large numbers ready to eat everything in the vegetable and flower garden. Daily scouting for damaged plants and adult beetles helps win the war against them and salvage the plants. The first line of defense is to identify the enemy. Knowing which beetle is eating what plant is key to controlling these pests.

The life cycle of all beetles has four stages: egg, larva, pupa and adult beetle. Japanese, Asiatic garden and Oriental beetles lay eggs on the soil, where they hatch into white grubs and feed on plant roots. Pupation takes place under the soil, too. The adult beetles emerge after pupation, rising out of the soil, often in large numbers, looking to feed and mate. Females will then lay the next generation of eggs on the soil. There is one generation per year for most of the garden pest beetles.

The most common garden pest beetles are also lawn pests as white grubs (larvae) feed on grass roots. Grubs can also be found in the vegetable and perennial gardens. Grubs can be controlled in the lawn by using conventional grub control. Organic options are parasitic nematodes and Bt galleria. Milky spore disease is a biological control but will only kill the Japanese beetle grubs.

Bag traps to catch and contain adult beetles are available. They are specific to each species of beetle and use a pheromone lure as an attractant. Place the trap away from the garden to keep the beetles from finding your plants. The organic options are a good choice in a vegetable garden.

Other natural control measures are already in the environment. Tiphia wasps feed on the grub stage, killing the larvae. One can hand pick beetles and drop them into a container of soapy water. Attract birds to the your garden to feed on the beetles by providing avian friends lots of perching spots with sticks and plant supports. Place a saucer of water or birdbath in the garden to invite them for a visit and meal. Floating row covers are another strategy that can be used to keep beetles off until plants flower and need pollinators to reach the flowers.

Japanese beetles are cosmopolitan feeders. They feed on over 300 different host plants but prefer some more than others. Roses, sunflowers and beans are favorites of this metallic green and

copper colored winged beetle. The white grub is C-shaped with a tan head. The adults are active during the day and hide nearby at night. Japanese beetles were brought to New Jersey accidentally in 1916 from Japan and have spread up and down the eastern states. They are steadily moving westward. Japanese beetle feeding results in ragged foliage and distorted flowers. They are even known to chew on fruits and vegetables. Their damage can be extensive, especially when there is a large population.

The Oriental beetle is a mottled tan and dark brown beetle, active during the day also. They are native to Asia and are in many eastern states. They feed on a wide range of plants, especially the blossoms. Oriental beetles are most active in the afternoon and early evening before it gets dark.

Asiatic garden beetles are cinnamon brown in color and a little smaller than Japanese beetles. As the name implies, they are native to Asia, brought here around 1920. Favorite plants for them are basil and roses. These beetles feed at night and hide in the soil below plants during the day. Scraping through the soil below night damaged plants will reveal the sleeping beetles. Flooding the area with a good soaking will also bring them to surface for capturing and killing.

Squash beetles are another big pest in my garden. They are yellowish-orange with 14 black spots. Their life cycle is different than the other three beetles mentioned above. Adults overwinter in leaf litter and under loose tree bark, flying to the garden during the end of June. Squash beetles lay their eggs on the underside of squash, pumpkin and cucumber leaves and hatching out into a yellow, spiny larval grub to feed directly on the leaves. The adult and larval stage can destroy a crop quickly. Monitor daily for adults and turn over leaves to look for eggs which can be crushed or removed with sticky tape. I find clear packing tape and blue painters tape wrapped around my hand with sticky side facing out works well without ripping the leaves. Less eggs means less larva and adults eating the plants.

For questions about garden insect pests and their control or queries on other gardening topics, feel free to contact us, toll-free, at the UConn Home & Garden Education Center at (877) 486-6271, visit our website at [www.ladybug.uconn.edu](http://www.ladybug.uconn.edu) or contact your local Cooperative Extension center.



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