

Ground Beetles

by Lloyd Eighme, retired entomologist

These are very common beetles often seen in the garden. There are more than 2000 species of ground beetles found in the United States and Canada. Most of them are predaceous, killing and eating other insects, and for that reason are considered beneficial to the gardener. There is one in our area that eats slugs and snails. That is a real benefit to us! We need more of those.

The ground beetles in our area are extremely varied from tiny ones, less than 1/4 inch long to large ones more than one inch long. Most are black or brown, but some are brightly colored, shiny metallic blue or green. Their legs are long and fitted for running. Most do not fly and they search for their food on the ground, hence the name ground beetles. They remain hidden during the day and are most active at night. If you disturb one in the garden, it will run for cover, trying to hide from danger. Sometimes, they wander into the house, but will not live very long there because it is too dry for them. They do best in a moist environment and thrive in a well-watered garden and lawn.

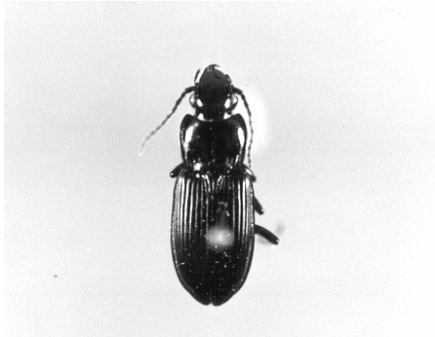
The larvae are also predaceous and when they hatch from the eggs that are usually laid under stones or leaf litter they feed on small insects or the eggs and larvae of other insects. The larvae do not look like the adult beetles. They have short legs and elongated, segmented bodies. They remain under cover in the soil and leaf litter where they find plenty of food. They are most active at night, the same time as when cutworms are doing their damage by chewing on the plants. If it were not for the ground beetles, we would see much more damage from cutworms than we do. The ground beetle larvae eat more cutworms than the adults because they are growing and require more food than the adults. Most ground beetle larvae complete their growth in one summer and change to the dormant pupa stage for the winter, emerging the next spring as adults. Often the adults live for 2 or 3 years.

Several ground beetles have been brought to the Clinic by clients concerned about what this beetle might be doing to their plants. It is good to be able to assure them that this is an insect friend and they do not need to worry about it. I hope no Master Gardener ever advises anyone to use pesticides to "control" this beneficial insect. You need to get acquainted with this large group of beetles so you do not make that mistake. There are a few illustrations in EB 1447 that will help you and there are several ground beetles in the MG insect collection. I have collected and identified 12 species of ground beetles in Skagit County so far and I am sure there are many more that I have not seen. If you find a beetle that you suspect might be a ground beetle, put it on my desk at the office and I will check it out for you if you leave your name with it. We need to identify as many of them as possible, so we can correctly advise people who ask us.

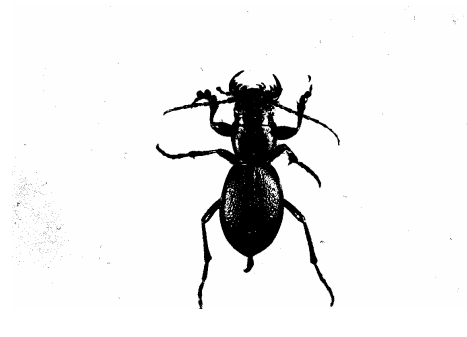
Very few ground beetles have common names. The Slug and Snail Eater (Scaphinotus marginatus) is common in Skagit County. The Bombardier Beetle (Brachinus fumans) is found in the Puget Sound area, but I have not seen it yet in Skagit County. Its common name refers to an interesting behavior. When disturbed, it gives off a pungent vapor like smoke from the tip of the abdomen with an audible pop. It is assumed that this is a defensive mechanism to frighten away its enemies.

Closely related to the ground beetles are the Tiger Beetles. We have several kinds in Skagit County. Like ground beetles they are predaceous and eat other insects. The tiger beetle larva lives in a vertical burrow dug in the soil. It waits at the surface for a passing insect or worm, which it grabs with strong jaws and pulls it down into the tunnel where it chews it up. The adult of the tiger beetle common in our area is a vicious looking creature with large toothed jaws. It looks very similar to ground beetles.

Learn to recognize these beneficial insects when you see them in your garden, so you can cheer them on to work for you.



A common ground beetle. Body length 3/4 inch.



Tiger Beetle (Omus). Aren't you glad they're small! (3/4 inch)



The slug and snail eater. Body length 1 inch.



A small ground beetle. Body length 1/4 inch.