The Granary Weevil
by Lloyd Eighme, retired entomologist

Many people are starving in some parts of the world because the food they should have has been eaten by the granary weevil (Sitophilus granarius) or its close relative the rice weevil (Sitophilus oryzae). The granary weevil is more common in the cooler climates and the rice weevil is most abundant in the warmer climates. They both do well in heated buildings and feed on many kinds of grain that are grown for food for humans and livestock.

Like other weevils, these also have a long slender snout with sharp jaws at the tip. They are small weevils, only about 1/8 inch body length. The female granary or rice weevil chews a small hole in a kernel of wheat, corn, rice or other grains and lays one egg in it. She then seals the opening with a glue-like substance. She can lay as many as 250 eggs in her life time of 8 months. In a warm environment the weevil can complete its growth from egg to adult in 4 weeks. Use your calculator to figure out how many weevils could come from one female in 8 months. If she lays 30 eggs the first month and half of those are female and those 15 females each lay 30 eggs the next month, etc., etc., how many weevils would there be in the eighth generation?

When I was at Oregon State University for graduate study, I was employed as a research assistant in the Entomology department and one of my assigned tasks was to maintain cultures of various pests of stored grain to be used in experimental work. I would inoculate a gallon jar of clean wheat with 50 granary weevils and it was heavy as I lifted it up on the shelf. Three months later, when I took the jar down to renew the culture it was as light as a feather. What had been solid kernels of wheat, were by then just empty hulls. Think about what happens to stored rice, corn and wheat in warm, humid climates where large numbers of people depend upon grains for food. Without proper storage facilities to keep the grain dry and clean the weevils probably eat more of it than the people do. They become accustomed to eating food with weevils in it. It has been said that the way to tell when foreign service people need a furlough is if they refuse to eat their rice if it does not have a few weevils in it.

Granary weevils and rice weevils both have been brought to the MG Clinic by people wanting to know where they came from and how to get rid of them. It is nearly impossible to process and store grain products even in our temperate climate without some infestation by these tiny weevils, so you are likely to find them in your kitchen if you keep a package of flour or cereal on the shelf too long. They are most often found in whole kernel or coarsely cracked grains where they lay their eggs and multiply. In milling and storage areas the adult weevils may wander into flour and other cereal products, but are not as likely to survive and reproduce there.

Granary weevils do not have wings that are functional. Rice weevils do have wings and can fly considerable distances. For that reason, determining which species it is may help in figuring out where it came from and how to get rid of it. The rice weevil usually has two light spots on each wing cover and is slightly smaller than the granary weevil which is uniform color. Their food habits and life cycles are essentially the same.

For more information about these weevils read EB 0472 and EB 0973. One of the easiest and safest ways to kill granary and rice weevils is by heating the infested food to 129 degrees F. for 30 minutes or by freezing it at –1 degree F. for at least 5 hours. You can eat it then if you want to, but maybe you would rather feed it to the animals.

The Granary Weevil. Body length 1/8 inch.