**Organic Materials Management: Compost Pile Critters**

**Adapted From:** <http://www.calrecycle.ca.gov/organics/homecompost/Critters/Default.htm>

**Level Two—Secondary Consumers**

**Nematodes** are tiny, cylindrical, often transparent microscopic worms, and are the most abundant of the physical decomposers. A handful of decaying compost can contain several million nematodes. Under a magnifying lens, nematodes resemble fine human hair. Some species feed on bacteria, fungi, protozoa and other nematodes.

**Protozoa** are the simplest form of animal organism. Even though they are single-celled and microscopic in size, they are larger and more complex in their activities than most bacteria. Protozoa obtain their food from organic matter in the same way bacteria will, but because they are present in far fewer numbers than bacteria, they play a much smaller part in the composting process. Protozoa ingest bacteria and fungi.

**Rotifers** are minute worms which usually have one or two groups of vibrating cilia on the head. Their bodies are round and divisible into three parts: a head, trunk, and tail. They are generally found in films of water and many forms are aquatic. The rotifers in compost are found in water which adheres to plant substances where they feed on microorganisms. Common foods of rotifers include: algae, protozoa (such as amoeba and paramecium), small crustaceans (such as water fleas and copepods), and small bits of plant or animal matter floating in the current. They'll pretty much eat anything that fits into their mouths.

**Flatworms**are, for the most part, general scavengers that graze on a wide variety of things including animal matter. As their name implies, flatworms are flat and usually quite small in their free-living form. Most flatworms are carnivorous and live in films of water within the compost structure. They eat protists (including Amoeba, Paramecium, and Euglena), rotifers, nematodes, small crustaceans, aquatic worms, and other soft-bodied animals. They also feed on dead animal matter and larger animals that are injured. Sometimes they even eat other flatworms, including their own kind.

**Springtails** are extremely numerous in compost. They are very small wingless insects and can be distinguished by their ability to jump when disturbed. They run in and around the particles in the compost and have a small spring-like structure under the belly that catapults them into the air when the spring catch is triggered. Springtails eat bacteria and fungi. Some feed on carrion (dead animals), and a few carnivorous species eat other springtails and small invertebrates. They also eat droppings of other [arthropods](http://www.calrecycle.ca.gov/organics/Glossary/Default.htm#Arthropod) and then meticulously clean themselves after feeding.

**Feather-winged beetles** are the smallest of all beetles and possibly of all insects. These beetles are distinguished by their feather-like wings. Some are blind and most live under bark in forests and woodland. Not surprisingly they go unnoticed. Most species feed on fungi.