

Be Good to Your Worms

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Aristotle referred earthworms as “intestines of the earth” because they are important soil organisms that help decompose plant litter, (i.e., thatch) and recycle nutrients. Worms help break down and condition plant remnants in their gut. Their tunnels help oxygen and water enter the soil more easily and their castings (waste) enrich it.

Earthworms are the most numerous in the top six inches, but are also found in the subsoil, bringing mineral rich soil from below to the surface. Research shows in 100 square feet of garden soil, earthworms may bring four to eight pounds of soil to the surface each year.

Earthworm castings have organic matter levels much higher than the surrounding soil and significant levels of nitrogen, phosphorus, potassium and many micronutrients in a form all plants can use. For example, a 200 square foot garden with a low worm population of only five worms per cubic foot will provide over 35 pounds (about 1/3 pound per worm) of top-grade fertilizer each garden year.

Not only do they produce this fertilizer, but spread it

thoroughly within the top 12 inches of soil and incorporate it as far down as six feet. A soil that is well managed, rich in humus may easily support 25 worms per cubic foot, which translates into at least 175 pounds of fertilizer per year for the same 200 square foot garden.

This means your garden or lawn can be supplied with far more fertilizer and superior quality than a dry or granular, fast-acting chemical fertilizer of 10-20 pounds. In fact, these fertilizers may even repel the earthworms that are present. As the fertilizers become soluble, they may leach down into the soil and force the earthworms to seek refuge elsewhere.

Worms make other contributions, such as adding calcium carbonate, a compound which helps moderate soil pH. Over time, earthworms can help change acid or alkaline soils toward a more neutral pH.

Earthworm tunnels help to aerate and loosen the soil. This allows more oxygen in, which not only helps the plant directly, but also improves conditions for certain beneficial soil



bacteria. Finally, the tunneling of the earthworms provide an access to deeper soil levels for the numerous smaller organisms that contribute to the health of the soil.

How can you encourage earthworm activity? First, use a mulching mower (one that leaves the grass on the lawn)

or spread the lawn clippings in the garden area to “feed your worms.” Because earthworms are less active when the soil’s dry, watering may be necessary.

Since earthworms are beneficial, control measures are not required and there are no treatments registered for earthworm control. If the mounds of soil on your lawn really bother you, you can break them up with a rake.

In summary, earthworm activity in your soil is good for your lawn and garden. Earthworm activity should be encouraged. They help incorporate organic matter, improve the soil structure, improve water movement through the soil, improve plant root growth and minimize thatch build-up in lawns.

Thirteen-lined Ground Squirrels

These are Nebraska’s most common native ground squirrel. You can view these ground squirrels during the day in golf courses, cemeteries, parks, yards and open areas with closely-mowed vegetation. They are recognized by their thirteen light stripes with rows of light spots that run the length of its tan/brown-colored back. Thirteen-lined ground squirrels are usually about 11 inches long, including their 5 to 6-inch tail.

Thirteen-lined ground squirrels dig burrows 15 to 20 feet long and often have more than one entrance. Escape burrows are shorter and have only one entrance. The burrow entrances are inconspicuous, appearing only as small, two-inch diameter holes in the ground. Mounds are seldom present at the burrow entrances, but occasionally the grass will appear well worn. Burrow entrances often are plugged at night. These ground squirrels hibernate in their burrows from October to late March/early April.

BENEFITS: These ground squirrels are important prey food for many predators including badgers, coyotes, hawks, weasels and a variety of snakes. Thirteen-lined ground squirrels benefit people by feeding on many harmful



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Thirteen-lined ground squirrels (above) dig burrows with two-inch diameter entrance holes (right).

weeds, weed seeds and insects. They also provide people enjoyable opportunities to view wildlife with family and friends.

WHAT THEY EAT: Thirteen-lined ground squirrels feed primarily on seeds, garden vegetables, flowers and insects. During summer, insects can make up half their diet.

DAMAGE: Create burrows in lawns, golf courses, cemeteries, parks and earthen dikes. They can also dig up newly planted seeds, consume sprouting seeds and damage garden vegetables.

Control Options

We should not attempt to eliminate these ground squirrels, but rather, should manage their populations at levels where they can be appreciated.

FENCING: 1/2-inch wire

mesh can be used around gardens and flowerbeds. Should be at least 18 inches high and buried six inches into the ground.

CULTURAL: One of the best ways to discourage ground squirrels is to allow vegetation to grow taller. Urban resi-



dents can deter them by creating tall, dense plantings of shrubs, ornamental grasses or flowers around the borders of their property. Ground squirrels are not discouraged by rocks or soil blocking their entrances, they’ll just dig around them.

REPELLENTS: limited success — not usually recommended.

TRAPPING: Several types of traps are effective for ground squirrel control including live traps and wooden snap-type rat traps.

Learn more in the NebGuide (G92-1110-A) “The Thirteen-Lined Ground Squirrel: Controlling Damage” available at the extension office or online at lancaster.unl.edu

Winged Termites or Ants? Termite Control Workshop, May 19

To the untrained eye, winged termites look a little like winged ants. To add to the confusion, termites and ants both swarm during the springtime.

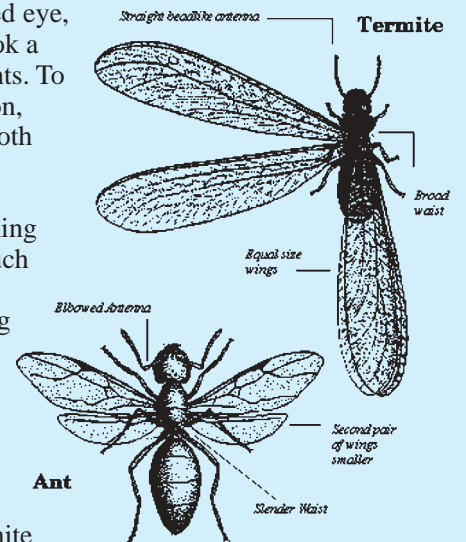
Termite swarming outdoors aren’t much cause for alarm. However, swarming termites inside the house are usually a sign the home has a termite infestation that needs attention.

Come to a termite workshop for homeowners.

“Everything Homeowners Need to Know About Termites and Termite Control” will be held Thursday, May 19, 6:30 - 9:30 p.m. Cost for this program is \$25 and includes up-to-date reference materials.

UNL faculty, Barb Ogg, Clyde Ogg and Dennis Ferraro will discuss termite biology, behavior, prevention, inspection, treatment options and effectiveness. Buzz Vance, from the Nebraska Department of Agriculture’s Pesticide Enforcement Program will discuss how education and understanding the termiticide label can help protect consumers against fraudulent practices.

Termites aren’t as much of a problem in Nebraska as compared with southern states, but this is one of the only homeowner workshops in the U.S., organized and delivered by cooperative extension personnel. Information presented is unbiased and based on results of research studies. (BPO)



What is Mange?

Most wild animals are hosts of numerous parasites, including ticks, fleas, lice and mites, that feed on blood or animal tissues. We have had calls from concerned citizens about ragged-looking squirrels that have lost large patches of fur. This is a typical sign of mange mites.

Mange is a term commonly used to describe the obvious signs of a burrowing mite infestation on an animal host. Mange mites are microscopic eight-legged arthropods, related to ticks and spiders. Each different animal species probably has some kind of burrowing mite parasite associated with it. Most mites are fairly host specific, meaning the mite variety survives best on one species of animal or closely related animals (like mice and rats). Some of these mites that infect other animals can attempt to feed on humans and non-related animals and cause some discomfort. However, the discomfort should be short-lived because these mites usually cannot establish on these other hosts.

Mange mites burrow into the skin of animals, feeding on subcutaneous tissues. The site of the infestation becomes irritated, itchy and results in scratching by the host animal. Hair loss results in a very unkempt appearance.

The human “mange” mite is caused by a mite species known as *Sarcoptes scabiei*. It produces a medical condition commonly called “scabies,” which is usually contracted from an infested person. It is highly contagious. These mites infest body areas where skin is thin, like between fingers, the bend of the knee and elbow. Elderly and babies are often more susceptible to scabies than the general population. Intense itching accompanies scabies, and scratching can result in secondary bacterial skin infections. A medical doctor must be consulted for proper diagnosis and treatment of scabies.

Dogs, cats and most domesticated animals also have mites associated with them. One particular group of mites, called cheyletiellid mites, parasitize small animals, specifically birds, cats, dogs and rabbits. They can cause itchy bites on people, including pet owners, who handle these animals. A veterinarian should be consulted for a proper diagnosis and treatment of the animal.

It is sad to see wild animals looking so ragged and pathetic, but very little can be done to help them. Control of burrowing mites would require catching the animal and treatment from a veterinarian. Like other natural afflictions, mange may be nature’s way of eliminating weak individuals, thinning populations so only the healthiest survive. (BPO)

