



Rockin E Gardening Handouts

Tips and Suggestions for 'Year-Round' Gardening

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Earwigs Unknown Good Bugs or Known Bad Bugs?



Earwigs are one of the most disliked insects. Despite their scary appearance and bad reputation, earwigs are not directly harmful to humans. In fact, they are often beneficial, acting as scavengers of decaying matter, soil organisms, fungi, and algae. They are also predators, and they feed on fleas, mites, aphids, slugs, snails, insect eggs, larvae, and many other slow-moving bugs. Thus, they serve as beneficial predators, not harmful ones.

They are quite harmless to humans but can become an unwanted pest in the garden, and occasionally an invader inside the home. Earwigs are mainly active at night, usually hiding during the daytime. They are often found in clusters in the soil, especially under wood, stone, mulch, compost and debris piles. Earwig damage is often minimal and tolerable, and often goes unnoticed unless the population becomes too high.

The name earwig, which literally means “ear creature,” originated from the widespread superstition that these insects crawl into the ears of sleeping people. Moreover, many individuals once believed that after the earwig gained access into the human ear, it could bore into the brain. These insects do not crawl into the human ear, and obviously the superstition is false, but most people are still a little apprehensive at the site of them.



Earwigs are both pests (bad bugs) and beneficial insects (good bugs) depending on where you find them.

There are 22 types of Earwigs in the United States and there are over a 1,000 different species all over the world.



Female

On females the pincers are fairly straight, while male pincers are more curved and caliper-like. These pincers are used as both offensive and defensive weapons. Though they may try to pinch if captured and handled, they do not harm people.



Male

The common earwig is about 5/8 inch long and dark brown with a reddish head and pale yellow-brown legs.

Unknown Good Bugs

Earwigs actually are beneficial insects: most of the time. Earwigs are a funny type of beneficial insect because people tend to dislike them about as much as they dislike spiders. And like spiders, most people try to kill them as soon as they see them.



Earwigs, along with other scavengers like millipedes, pillbugs, and sowbugs, are part of a large group of creatures that are ‘sanitary engineers’; they help clean up the environment by feeding on decaying plant material, and, as a bonus, they eat both live and dead insects. They are found primarily in mulch and decaying leaves.



Earwigs are sneaky little devils. They feed at night, and during the day, they hide in almost any handy, dark, and confined space, especially one that’s moist, such as under mulch, loose bark, garden debris, and garden pots.

Earwigs may not always be considered beneficial, especially if you have a greenhouse, or if you are trying to grow vegetable seedlings. In large numbers, earwigs can damage living plants and can become greenhouse pests.

Earwigs eat mites, aphids, fleas, insect eggs, snails, and other slow moving bugs; but they may also gobble up some beneficial insects as well.

Earwigs are so good at killing insects that many gardeners in European countries place shelters in their fruit trees to provide a safe haven for earwigs, so they can multiply. Earwigs will control aphids that attack apples, plums, and pears.



Earwigs are scavengers, roaming the yard for delicacies such as insects and decaying plant matter. While scavenging, earwigs provide another beneficial service; they help pollinate flowers.



If no food is found, they will seek their food from another source; live plants. It is then that the gardener notices the damage, and complains about the destruction they cause.

While it is true that they may inflict minor damage in the garden, particularly to flowers and seedlings, their presence is generally far more beneficial than detrimental.

Even though these rather unsightly little creatures can be a help in the garden, or do some damage to plants, or are annoying, they present no health hazards, even in large numbers.



So, what did you decide - for your garden. Are they a ‘Good Unknown Bug’ or a ‘Bad Known Bug’?

If you answered it is a good bug, you can try managing your earwig population by monitoring them regularly.

Management of these creatures is not easy. You need to decide if you can tolerate the little bit of damage they do, in exchange for their potentially beneficial role in your garden.

If you want to do a population check, lay a piece of garden hose, about 12 inches long, on the ground near a mulch or a compost pile. The next morning you will have a sample of your earwig population.

The best prevention is keeping plants strong, and healthy enough, to withstand a little nibbling, and modifying the environment to discourage their presence.

A bug hotel attracts many different beneficial insects, including earwigs. These are designed to provide a nesting place for insects to lay eggs, or to find a place to hide.



Bug Hotel

Known Bad Bug Image

The earwig's biggest problem seems to be one of image: its scary-looking pincers, and its name; meaning "ear creature." These two factors still evoke unfounded fears that they can crawl into the ears of a sleeping person, and bore into their brain.



Of course, there is no truth to these fears, even though earwigs, like moths, beetles, cockroaches, ants, and flies may wander into your ear by accident.

While menacing in appearance, the pincers are harmless to man. They are used as a defense mechanism against other predators.

Another image problem stems from their sheer numbers. If people see large quantities of earwigs in their gardens, they are likely to blame them for the damage that was actually inflicted by other pests.



Earwigs produce a pheromone (scent). Scientists believe that this pheromone is the reason that earwigs cluster together in large numbers.

Known Bad Bug Damage

As juveniles, they eat plants, but as adults, their usual food includes bits of rotting fruit, ants, decaying plant material, or perhaps a small caterpillar. However, when nothing more delectable is available, all earwigs will take bites out of the flowers, fruits, and leaves of your plants.



Earwigs will eat leaves, flowers, and tender roots. Their favorites are; dahlias, marigolds, zinnias, sunflowers, grasses, butterfly bush, hollyhocks, lettuce, strawberries, potatoes, roses, bean and beet seedlings, berries, apricots, peaches, and the silk of sweet corn. Earwigs are also notorious for eating holes in buds and blooms of Clematis while leaving the foliage alone.

When serious feeding damage occurs, leaves will have numerous, small, irregular holes, giving the plant a ragged appearance. As this type of damage can often be mistaken for the same type of damage caused by other pests such as slugs, or caterpillars. It is important to be sure you've identified the real culprits, by looking for feeding earwigs, on your plants, after dark.



Known Nuisance Bugs

Like boxelder bugs, crickets, and lady beetles, the earwig is usually an accidental household invader. They enter houses either by accident, or when seeking shelter, especially in the fall as the cold weather approaches, or during periods of prolonged dry weather during the summer. Earwigs that are inside the house, do not cause any harm or destruction to the structure. If disturbed, earwigs may produce a noticeable foul odor.



They are an annoyance and a nuisance because of their presence. They might be feeding on stored grain products, or they may have simply found a way inside, and cannot find a way back outside. According to experts, humans have nothing to fear from earwigs, but most folks would prefer not to find one in their bathtub early in the morning.

Although earwigs don't do any damage inside the home, most people are averse to finding them there. Keep them out by caulking cracks and crevices, use screens on doors and windows, and weatherstrip the doors.

Earwigs found inside the house can be vacuumed, swept out, or picked up, and discarded. Indoor treatment with household insecticides used for cockroaches could be used in cracks and crevices that serve as points of entry, and along baseboards, window sills and door thresholds. Such treatments may only provide limited benefit, because more earwigs may still wander in from outdoors.

Earwig Life Cycle

The life cycle of the earwig consists of egg, nymph and adult. In early spring, after overwintering in soil, the female earwig lays up to 60 eggs in the top section of soil. In about seven days, the eggs hatch and nymphs emerge. The female tends to the eggs and nymphs for the first two weeks.



Earwig larvae resemble adults because they develop from egg to adult through gradual metamorphosis. Over a 70 day period, the nymphs pass through four instars (growth stages) before becoming an adult, similar to grasshoppers.



Egg laying can take place twice per year (spring and summer). Adult earwigs will be most noticeable in July, August and September.

Earwigs are unusual among insects. Female earwigs exhibit maternal care. When she is ready to lay her eggs, she drives the male out of the underground nest. She cleans and moves her eggs around in the nest so they don't get moldy. She guards them meticulously from other earwigs. She also cares for and feeds the newly hatched young until they are able to fend for themselves.

Adults may or may not have wings, but they rarely fly. Earwigs live for approximately one year, but most often, the males die during the winter months.

Earwig Population Management

Managing earwig problems is an easy 3-step process.



First, figure out who is actually the pest. If you find that you have excessive damage on your plants, go look for the culprit. If you see slime on the plant, or the surrounding soil, it could be snails or slugs eating your plants. Caterpillars may leave poop, pupae or webbing. To be certain, go out at night with a flashlight to see who is actually feeding on your plants.



You can also use traps to monitor earwig populations, but, just because you catch earwigs, it does not necessarily mean that they are the culprits. Earwigs can be present in large numbers and still not be causing much damage.

Second, eliminate the conditions or environment that earwigs like best. Earwigs prefer moist, tight, dark places, with plenty of food to eat.

Third, control the real culprit.

After determining that earwigs are indeed responsible for the damage in question, you should decide whether or not to reduce their numbers.

If their damage isn't significant, or you can tolerate a few holes, or a little nibbling here and there, do nothing.

Prevent Earwigs

Usually the damage to plants caused by earwigs is minor, unless their populations are high. As earwigs hide in cool, moist places during the day and feed at night, good house-keeping practices in the yard and garden can go a long way in reducing populations of earwigs. Here a few simple tips for prevention.

- Clean up garden debris and organic mulches, especially around foundations, since these moist areas serve as daytime hiding spots for earwigs.
- Prune tree suckers, and remove dead branches.
- Spread dry gravel as mulch next to foundations.
- Earwigs are attracted to lights, so eliminate or reduce lighting around foundations.
- Remove leaf litter, large stones, dead wood, wood piles, and mulches.
- Keep shrubs neatly trimmed to allow for light penetration and air circulation, especially near the base of the shrub.
- Discourage and reduce entry into buildings by caulking and repairing cracks and crevices, and checking door thresholds, windows, and screens, for a tight fit.

Organic controls

Although you may be disgusted by earwigs, remember they are considered beneficial insects so they should only be treated as pests when their damage becomes excessive. Here are some helpful tips to control earwig populations already established in your yard or garden:



- Earwigs have many natural enemies; birds, chickens, bats, and ducks. They are also parasitized by a Tachinid fly.
- Homemade trapping mechanisms are most effective, and can be achieved with various methods that provide a dark, damp hiding place. Be sure to empty your traps every

morning, and dispose of the earwigs by putting them in a sealed plastic bag before placing them in the garbage.

- Make traps from rolled-up newspapers, cardboard tubing or cardboard filled with straw or crumpled newspapers. Tape shut at one end, and then dampen slightly. Place them near plants in the late afternoon or evening, and empty or replace them in the morning.

- You can also make a trap by filling a flowerpot with damp crumpled paper. Turn it upside down, propping one edge up with a stick. Earwigs will crawl into the newspaper to hide.

- Recycle an old, leaky hose by cutting into lengths of about a foot. Scattering a few around the garden. Each morning, immerse the hose in hot soapy water to extract the earwigs, and place it back in the garden.

- Cardboard boxes (as simple as a cereal box or a shoe box) are easy traps to make. Turn them open side down, or cut holes in the sides with the lids intact. Dampen and place them near plants. Simply throw away, or empty and reuse them, until they are no longer functional.

- Fill tuna cans with 1/4 inch of oil, and sink them into the ground near plants. Empty them every day. Be careful using this type of trap as the smell of oil may also attract other pests like raccoons, dogs, cats, etc. Like slugs, earwigs are also attracted by beer, so it can be substituted for the oil.



- Sprinkle a 2-inch-wide circle of diatomaceous earth around beds, or at the base of plants; reapply after a heavy rain or irrigation.

- Place a cloth beneath an infested plant and shake or tap the branches. The earwigs should fall onto the cloth and then can be disposed of.

- Place a sticky barrier, such as Tanglefoot, sticky tape or even petroleum jelly, at the base of woody plants. Earwigs are crawlers and they'll get stuck before they can get up the tree.

- If found indoors, remove by vacuuming. They will produce a very strong odor if crushed.

- Boric Acid Trap. Use one or more small cardboard boxes. Punch 1/4 inch holes in the sides near the bottom and bait it with a small amount of oatmeal or bran laced with some boric acid. Place the box outside in the garden and lay a board on top to protect it from getting wet from the rain. The earwigs will eat the bait and eventually die. It may take a week for them to die, so be patient.

- Be creative. Create your own trap, just keep in mind that earwigs prefer moist, tight, dark places. Keep trapping until you don't catch any more earwigs.

Chemical Controls

If earwig populations are large or persistent, outdoor chemical treatment may be needed. Usually, outdoor treatment coupled with indoor hand removal will eliminate the problem. Insecticide



dusts in voids and spaces around doors and walls, that you cannot effectively caulk, will at least kill earwigs as they try to enter your home.

However, most spraying should be done outside the house, to provide a barrier. Chemicals such as deltamethrin, cyfluthrin, lambda-cyhalothrin, cypermethrin, sumithrin or tralomethrin may be used in such perimeter areas and must be applied according to label directions. Many of these chemicals are available in homeowner formulations, but be sure to read the label before using them.

Outdoor perimeter spraying should be started during early summer. Special attention should be paid to the areas most frequented by earwigs, including building foundations, areas along fences and walks, around trees and utility poles, and around wood piles and rocks.

In mulched areas, consider using insecticide granules or liquid sprays. Buy products that are listed for the areas you want to treat, and have earwigs on their label. Make sure you get the granules, or spray, down into the mulch to reach where earwigs live and feed.

Pesticide sprays and powders can safely be applied (as directed on the label) to ornamental plants and vegetables. Do not apply insecticides directly on any flowers, because they may be very poisonous to bees.

Set out baited pesticide products in small piles of pellets as bait stations, covering each pile securely with a board, shingle, or weighted foil plate to protect children and pets from exposure. Covering the bait stations also makes them more attractive to earwigs. Place bait stations in target areas where earwigs are noticed.

The best time to apply insecticides is during warm, dry weather when the earwigs are young, in June or early July. Applications should be done during the evening so that residues are fresh when the earwigs become active. Do not water areas you've treated for at least two nights after application.

Caution! Keep children and pets away from baits. Do not use baits inside your home. Be very careful with chemical sprays and dusts; organic pesticides included.

Diatomaceous earth, a fine powder also known as silicon dioxide, is made up of crushed microscopic marine fossils. It can be applied indoors or outdoors and remains active until it is washed away. As insects crawl over the powder, their outer "skin" is scratched, causing them to dehydrate and die. This product is non-toxic to humans and pets, but be careful not to inhale the dust when applying it.

Indoor spot treatments with a residual spray can be done along baseboards, drainpipes, and under the edges of carpets and surrounding rugs.

Insecticidal soaps can also be effective when used where they will contact earwigs directly. You may need to repeat applications at regular intervals. Always check the label directions for how often to apply.

Remember that insecticide treatments will only provide temporary control. Removing, reducing or drying the places



earwigs like to live will provide the best long term control.

Warning

Pesticides are poisonous. Read and follow directions and safety precautions on labels. Handle pesticides carefully, and store them in their original labeled containers: out of the reach of children, pets, and livestock. Dispose of empty containers right away, in a safe manner and place.



Good Bug or Bad Bug?

While it might be a catchy title, "good bug" and "bad bug" are misnomers. Every insect and organism has an important role to play in our ecology. So, in a natural sense, every bug is good.



However, once we introduce our human perspective, the distinctions of "good" and "bad" depend on how insects help us achieve our goals for a healthy landscape. What we consider a "pest" to be eliminated, might be an important food source for another creature, or it may feed on other, even less desirable insects.

Good Bugs are insects that promote the health of the landscape (Examples: honey bee, earthworm). Some beneficial insects are natural enemies of other insects (example: predators such as Praying Mantis, parasites such as Encarsia Formosa). Beneficial insects are occasionally used for biological insect control.

Example: Good? or Bad? Honeybees are widely considered beneficial insects because they pollinate flowers and produce honey. However, their stings can be deadly to some humans and animals.

For this reason, some people might say honeybees are "good bugs," and some might consider honeybees "bad bugs."

How do Earwigs fit into this scenario?

Does their contribution to recycling, elimination of many unwanted pests, and help in pollination, outweigh their negative qualities, such as eating an occasional plant, scaring the daylights out of both children and adults, or simply having a bad image?



More Resources:

<http://ipm.ucanr.edu/PMG/PESTNOTES/pn74102.html>

<http://utahpests.usu.edu/IPM/hm/fruits/fruit-insect-disease/earwigs/>

<http://ucanr.edu/sites/MarinMG/files/116862.pdf>

<https://extension.usu.edu/files/publications/factsheet/earwig-orn.pdf>

<https://www.unce.unr.edu/publications/files/ho/2001/fs0141.pdf>

