Vegetable Garden Pests

The pests in our gardens are the ones that eat the plants we are trying to grow. They are herbivores. They tend to have chewing mouthparts and can smell the pheromones weak plants put out when they are stressed. Keeping your plants healthy will reduce the risk of seeing many of these pests. Solutions listed are the most non-toxic methods.

Aphids

	class	
	order	Aphididae
	family	


Description: Very small, usually light green but can be many different colors (gray, yellow, white) and live in colonies. They pierce and drain plants of their juices. Look for them on new growth, they like the soft leaves! They hide from predators and rain, look for them on the underside of leaves.

Found on: artichokes, arugula, beets, bok choy, broccoli, Brussels sprouts, cabbage, cauliflower, collard greens, corn, kale, kohlrabi, lettuce, mustard greens, radishes, spinach, turnips

Remedies: row covers, blast with hose, encourage beneficial insects, insecticidal soap

Cabbage Maggot

	class	
	order	Diptera
	family	

Description: Cabbage maggot adults are true flies, slightly smaller than the common housefly. The flies themselves, which are gray and long-legged, are seldom seen by the home gardener. The larvae are white and legless, tapered towards the head and have a pair of black mouth hooks which curve downward for rasping. They feed mostly on the roots of plants. The pupae are reddish or tan capsules resembling grains of wheat in the soil near the plant. Plants look stunted, wilty and turn color. Roots are riddled with tunnels with maggots inside.

Found on: arugula, bok choy, broccoli, Brussels sprouts, cabbage, cauliflower, collard greens, kale, kohlrabi, mustard greens, radishes, turnips

Remedies: row covers, plant polycultures, rotate crops, weed, tar paper, encourage beneficials, beneficial nematodes

Cabbage Moth or Cabbage Looper

class | *order* | Noctuidae *family*

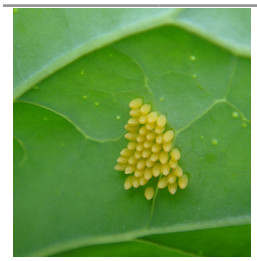

Description: The cabbage looper is a light green caterpillar, about 1½" long, with a thin white line along each side of the body. An absence of legs in the mid-portion of the body results in the larvae moving with a "looping" or "inching" motion. Cabbage loopers feed for two to four weeks, usually on the lower portion of the plant, munching appears on the edges and sometimes middle of the leaves. They are extremely hard to see.

Found on: cabbages, lettuce, artichokes

Remedies: row covers, weed, sanitize, hand remove pests, encourage beneficials

Cabbageworm or Cabbage Butterfly

class | *order* | Pieridae *family*



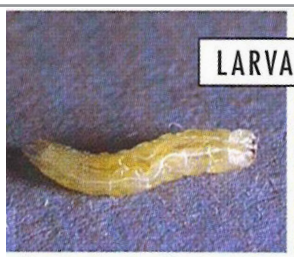

Description: The "worm" of the butterfly is green and about 1¼" in length. This caterpillar/larvae has a thin yellow dorsal line (sometimes faint or absent) and body is covered with short, fine hair. The adult butterflies are yellowish white with two big black spots on inside of wings. They leave large, irregular holes on edges and middle of leaves. Larvae leave tunnels in heads of cruciferous vegetables.

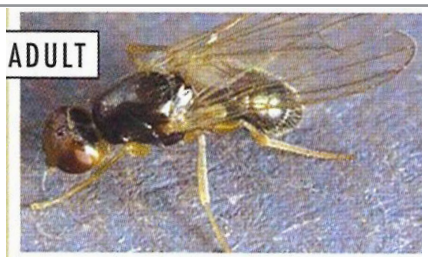
Found on: artichokes, broccoli, Brussels sprouts, cabbages, cauliflower, lettuces

Remedies: row covers, plant polycultures, weed, sanitize, hand remove

Carrot Rust Fly (carrot maggots)

class | Diptera *order* | *family*





Description: These larvae tunnel into the roots of vegetables. They get up to ½" long, have slender bodies and are light yellow. They occur between early summer and fall having three generations in that time period. Since there is no great remedy, prevention is key. Use cultivars that are less susceptible. Females are poor flyers and fly low to the ground. Plant in raised beds.

Found on: carrots, parsnips

Remedies: row covers, plant polycultures, rotate crops, tar paper, beneficial nematodes

Cutworms

class | *order* | Noctuidae *family*



Description: These are grubs (or caterpillars) that eat all parts of plants, then it turns into a moth. Their name comes from the way they tend to cut down plants at the base. They eat a variety of food crops. Often mistaken for crane fly larvae. The major difference is cutworms have distinct legs on their underside; crane fly larvae do not have any legs. The crane fly larvae feed mostly on grasses and are commonly found in lawns. Once cutworms reach 1" long, there is no effective treatment. Remove by hand.

Found on: artichokes, arugula, beets, bok choy, broccoli, Brussels sprouts, cabbages, cauliflower, kale, lettuces, mustard greens, potatoes, radishes, turnips

Remedies: row covers, cutworm collars, beneficial nematodes

Earwigs

Dermaptera *class* | *order* | *family*

Description: There is no mistaking this class of insects. They have distinct pincers at their rear end. Nocturnal, these animals feed on a variety of plants and animals. They seek warm, moist shelter during the day and come out to feed at night. A few is fine, in droves they can cause damage.

Found on: artichokes, beets, cabbages, chard, corn, lettuces, spinach

Remedies: row covers, traps, diatomaceous earth

Flea Beetles

class | *order* | Coleoptera *family*


Description: They eat tiny holes in the leaves of many vegetable plants. Looks like leaves that have been peppered with fine shot. All flea beetles are tiny creatures (adults are 1/16"); adults are dark in color and jump like fleas. When plants are disturbed the tiny black insects jump away. Heavily damaged plants may be wilted or stunted. If you see flea beetles, you can be sure their larvae will be in the soil munching on the roots.

Found on: artichokes, arugula, bok choy, broccoli, Brussels sprouts, cabbages, cauliflower, collard greens, kale, kohlrabi, lettuces, mustard greens, radishes, turnips

Remedies: row covers, plant polycultures, encourage beneficials, insecticidal soaps, beneficial nematodes, diatomaceous earth

Leafminer

class | *order* | Agromyzidae *family*


Description: Maggot larvae of the leafminer fly, often having three generations in a growing season, are small and white, eating in between the thin layers of leaves. Often turn the leaves they are feeding on pale green or white. They overwinter in the soil.

Found on: artichokes, beets, lettuces, spinach

Remedies: row covers, plant polycultures, weed, encourage beneficials

Slugs and Snails

class | *order* | Stylommatophora *family*


Description: These animals prefer dark and damp conditions, leave a trail of slime and tend to feed at night or cold, rainy days. During the day they hide under leaves and debris, usually near their food source. There is only one distinction between the two major kinds of slugs you'll find in western Washington. One is semi-beneficial and one is a pest, along with all of the snail species.

Pacific banana slugs (Ariolimax columbianus) are our native slugs, which usually feed on grasses and weeds. Often bright yellow, they may also be dark yellow, green, brown or have black spots which make them look like a very ripe banana. Their counterpart, the damaging, irritating, Asian slug is what nibbles on our prized plants.

Found on: just about everything except garlic and onions

Remedies: row covers, hand remove, beer traps, copper tape, diatomaceous earth

Spit Bugs (Cuckoo Spit/Froghopper)

class | *order* | Cercopidae *family*

Description: The immature nymphs of these spit bugs feed on the stems of plants in late spring through summer (they really love lavender). They are usually light green or yellow, found alone or a couple per spittle. They surround themselves with a white frothy liquid called cuckoo spit. Eggs are laid in rows. Adults can fly/hop. Little harm is done to the plant if there aren't too many infesting it, so insecticide treatment is not required, though you can squish them by hand or spray soapy water at them.

Found on: beans, corn, peas, strawberries (plus ornamental plants, grasses and weeds)

Remedies: row covers, hand remove, blast with hose

Wireworms

class *order* Elateridae *family*

Description: Grow up to 1 inch long and have rather stiff and shiny, brownish-orange bodies with three pair of short legs at the head end. They are the larval stage of click beetles. This animal can live 2–6 years. There are several species of which not a lot is known about them. The larvae/grubs eat plant roots and can be an agricultural pest. Some adults eat other invertebrates, some eat plants.

Found on: corn, potatoes, onion bulbs, most vegetables

Remedies: row covers, hand removal, chickens, beneficial nematodes

Beneficial Insects

Beneficial, or harmless, insects are ones we want to keep around for a healthy garden, which is part of a healthy ecosystem. These insects tend to have biting mouthparts, or are pollinators with long tongues like a hummingbird. The ones with the biting mouthparts are great to have in your garden as they are not feeding on your plants, but feeding on the other insects attacking your plants; they are carnivores (or specifically, insectivores).

Assassin Bug

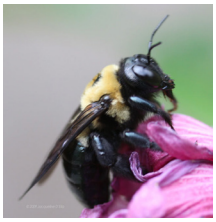
The aptly named vicious-looking bug is about an inch long, usually dark brown, slow moving and is a member of the stink bug family—so watch out! They emit an odor when they feel threatened and can inflict a painful bite if captured. Their large, curving beak (that you can see from the side) is perfect for eating up flies, mosquitoes and large caterpillars.

Bald-Faced Hornet

Larger than yellow jackets (3/4-1" in length), they are mostly black with a white face and markings. They build large paper nests that can get up to 14" in diameter and 24" long. They can sting but they eat many pests and sometimes pollinators.

Bumble & Honey Bees

These fuzzy insects will pollinate your flowers, some of your vegetables and other plants and are a very important species outside of your garden.



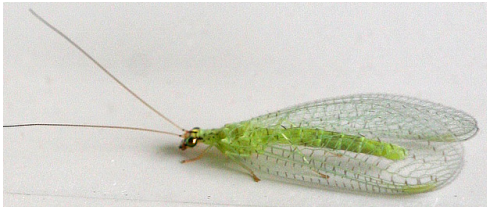
Centipedes

Usually amber in color, 1-2" long, they are fast and prey on ground pests in your garden. Since they do not develop wings, they must hunt grubs and slugs. Their bite can be painful, but if you wear gloves and you have nothing to worry about!

Green Lacewing

With interesting eggs, a voracious larval stage, the green lacewing will devour your garden's aphids. They grow up to develop a beautiful set of lacy wings, hence their name.





Ground Beetles

Beetles are one of the most robust creatures on earth; these little tanks will munch on your pests both as larvae and as adults. Their larvae/grubs will look different from the herbivorous grubs as they will have distinct biting mouth parts.

Hoverfly

The small larvae of this species are insect eaters, devouring aphids. As an adult, they can hover and feed on nectar while pollinating flowers (mimicking a stinging bee or wasp).

Lady Bug (aka lady bird beetle)

The most famous predacious insect in our gardens are these beauties. Like most growing teenagers, they eat the most aphids just before they molt into an adult.

Mason Bee (aka Orchard Mason Bees)

Our only truly native bee, these small fly-looking bees emerge for only a few short weeks in early spring to pollinate our rhododendrons and orchard trees and whatever else they can find. This docile bee has won the hearts of many and now people try to attract them by providing them their unique homes, often called Mason Bee Boxes. You can buy them at garden centers.


Millipedes

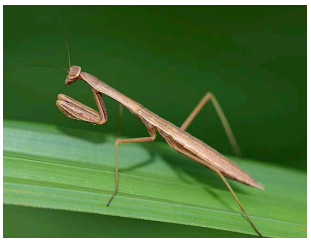
Neither kind of millipede found in the Pacific Northwest will bite you, as they only have weak mouthparts meant for eating soft, decaying plant matter. These decomposers help cycle nutrients in your garden.

Parasitic Wasp

These small wasps usually go unnoticed. They do not sting people or pets, but instead females use their long stingers to lay eggs in pesky caterpillars. Once the eggs hatch, the caterpillar is their first meal. Adults also feed on caterpillars. Different species may attack aphids, whiteflies, butterflies or moths, including cabbage loopers and hornworms.

Preying Mantis (or Mantids)

Fun to watch as they search for and capture prey. Most of our native mantids are found in grassy areas. You can purchase egg cases from garden centers. They provide constant hunting of spiders, grasshoppers and anything else they can catch.



Rove Beetle

This odd looking beetle in its adult stage looks like a cross between a beetle and an ant. It has no visible wings to cover its segmented abdomen. These are wonderful predators to have in the garden. They can be confused with blister beetles, which we find here in our forests, so always handle with care.

Larva

Adult

Tachinid Fly

Similar to a housefly, tachinid flies up to ½" in length and may be brown, gray, or black. Some species are very hairy. Adults feed on nectar, but their larvae are parasitic, feeding on caterpillars such as cutworms, tent caterpillars, cabbage loopers and gypsy moth larvae.

Yellow Jacket & Paper Wasps

Classic bright yellow and black coloration, these wasps prey on caterpillars, flies and grubs. Yes, they can sting, but their benefits can outweigh their reputation.

Diseases

There are many diseases that could affect your plants. The likelihood of that happening is similar to a human gaining an infection. Three things must happen simultaneously, 1) the pathogen must be present, 2) there must be a susceptible host plant and 3) the environmental conditions must be favorable. Diseases are often hard to tell apart, but around here most are fungus/mildew/rot related.

Prevention is key:

- Keep plants aerated
- Avoid overcrowding and overwatering
- It is better to water in the morning/day than at night
- Remove debris around the plant, close to the soil

Once disease has set in, the solutions are all pretty much the same:

- Remove infected areas and place in trash
- Add organic matter to the soil (i.e. worm compost, regular compost, etc.) which will help the plant fight the disease
- Try not to transfer the disease on your gloves or pant legs
- Water the ground, not the plant (to eliminate spreading the disease)
- Thin plants or allow for more air flow/increase drainage
- Rotate crops
- Plant resistant cultivars

This list is to help guide you to the problems most common in our area, for specific plants. From there, you can look up remedies that suit your style (i.e. non-toxic remedies, chemical, organic safe methods, etc.) If more than one disease is listed for a bullet, they share common symptoms and treatments. Plants are listed in alphabetical order by Family.

Amaranthaceae/Chenopods

Beets, Chard, Spinach

- Downy Mildew
- Root rot, fusarium wilt

Amaryllidaceae (alliums)

Garlic, Leeks, Onions, Scallions, Shallots

- Onion smut
- Black mold
- White rot, white mold
- Fusarium basal rot
- Rust

Apiaceae

Carrots, Parsnips

- Bacterial soft rot

Asters

Artichokes, Chicory, Endive, Escarole, Lettuces and Sunflowers

- Powdery mildew
- Bottom rot
- Anthracnose leaf-spot fungus
- Gray mold, botrytis
- Verticillium wilt

Brassicas (cruciferous vegetables)

Arugula, Bok Choy, Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Chinese Cabbage, Collard Greens, Kale, Kohlrabi, Mustard Greens, Radishes, Rutabagas, Turnips

- Cabbage yellow, fusarium wilt
- Clubroot

Cucurbits (gourds)

Cucumbers, Melons, Pumpkins, Summer Squash, Winter Squash, Watermelon, Zucchini

- Downy mildew
- Powdery mildew
- Southern blight, white mold, stemp canker, soft rot, crown rot
- Fusarium wilt

Faboids (legumes)

Fava Beans, Green Beans, Lima Beans, Peas, Soybeans

- Bacterial blight, common blight, halo blight
- Mosaic virus

Poaceae (true grasses)

Corn

- Smut

Solanums (nightshades)

Eggplant, Peppers, Potatoes, Tomatillo, Tomatoes

- Alternaria blight, early blight
- Late blight
- Damping off
- Leaf-spot fungus
- Fusarium wilt, verticillium wilt
- Phytophthora blight
- Bacterial ring rot