

Problem Diagnosis Examples

Below are the details from the article titled Diagnosing Landscape/Garden Problems. I recommend reading that article first to put the information below in context.

If you see **chewed leaf edges or chewed holes in leaves**, think insect with chewing mouth parts. In some cases there may be frass. A common example of these would be a tomato hornworm which eats tomato leaves and drops pellets of poop on the lower leaves. You can hand pick and squash the hornworm or toss it to the birds. You might also see a neatly cut hole or half-moon. This could be a leaf cutter bee. Leaf cutter bees do minimal damage so you don't need to treat for them.

Leaves with spots or tunnels might indicate spider mites or leaf miners. Look for an insect with sucking mouth-parts. Spider mites prefer dry hot weather. They suck out the chlorophyll creating little light spots that look like dust in leaves. They develop networks of webs under the leaf which you can see with a magnifying glass. You can also tap the leaf over a piece of white paper and you'll see little tiny dots, the mites. A hard spray of water on leaf undersides will remove them. Leaf miners dig little tunnels through a leaf. They don't require treatment and that's good because you can't easily get to them in their tunnels!

Leaves with spots might also indicate herbicide damage (spray drift). With herbicide damage the spots are of equal size and may have a border where there's no spots.

Curled twisted leaves could be herbicide damage as well. The weed killer in Weed-n-Feed can volatilize (turn into a gas) and nearby plant leaves may curl and twist. Or maybe if you open up the leaves you'll find aphids inside! Aphids prefer tender new growth. Unnatural growth which may be created by overwatering or applying fertilizer. They can be treated by knocking them off with a hard spray of water. It takes them a long time to crawl back to the new growth. Blackened curled leaves might also be anthracnose disease. Knowing the host (sycamore) and whether the spring was wetter than normal is part of the diagnosis process for anthracnose.

Emergence holes can be seen on twigs and can be caused by something like a beetle or borer. The insect lays eggs in cracks for example and the larva emerges from the holes. By the time you see the hole, the larva is gone – no treatment necessary.

Brown leaf edges can be caused by a number of things such as salt damage or lack of water. Salt damage could be natural like salty soil or man-made such as the use of salt in the winter to melt ice or over-manured soil.

Needle drop may be natural like the drop of interior needles on conifers or it might indicate lack of water if new growth tips are browning and dropping.

Wilt is the hardest to diagnose because both over and under watering can cause plant leaves to wilt. Feel the soil to see which is happening. But a more serious condition can cause wilt – that is a plugged plant vascular (circulation) system. The disease verticillium wilt found on tomatoes and trees is fatal. The visible symptom besides the wilt may be dieback of affected branches.

Dieback conditions often represent a problem with the roots especially if the dieback is not even across a tree canopy, but is on one side. Look for trenching, soil compaction, or verticillium wilt if dieback

occurs. One of the problems in diagnosing a dieback problem is while it may be something occurring with the roots, the plant is sending out stress signals and insects will show up. You see the insects and not the root problem. This also happens with disease problems because the primary disease is followed by secondary feeders. Depending on when you look at the problem there may only be secondary feeders there.

Frass can be something like fine wood shavings or it might be the hornworm poop pellets. On a tree frass indicates a boring (not dull) insect. Sometimes a paperclip poked into the hole is the best treatment.

Deformed petals with sticky edges and sweat droplets on the outside of a bud might indicate a minute insect called thrips. If you see the sweat droplets, use a hard spray of water. Blue sticky traps can also be used with thrips, but sticky traps catch many insects both good and bad. Monocultures of roses or daylilies attract thrips.

Burnt looking branches in spring might be fireblight or could be just frost damage. Fireblight is a contagious (to plants) disease that can be spread by pruning shears. Plants in the rose family are susceptible. You can prune out the damage, but you need to clean your pruners between each cut (or bush, if you're willing to lose one) with a spray/dip of rubbing alcohol or a diluted bleach solution. You need to cut about an inch or more beyond the dead part into live plant tissue because the disease precedes the burnt part.

Slimy, rust colored, sometimes smelly secretions that run down the tree may be slime flux bacterial disease. I've seen this on aspens in High Desert. The bacteria enters through a cut or split such as the cuts in tree bark from weed whackers or freeze damage like Southwest injury. The bacteria rot the wood. Once infected there is nothing you can do for the tree, but it takes a long time for the tree to die so you can just get used to the slime. Washing the slime off means you'll need to remove anything that the slime touches because the bacteria is in the wash water, on leaves, and in the soil at that point.

Fungi like white powdery mildew are obvious to the touch as are rusts which are rust colored. Fungi like humidity, shade, and calm winds. Improve the environment and the fungi won't appear. So reduce your watering, allow the area to drain well, open up the area to sun if you can, and improve the air circulation. To do this you may need to move the plant.

If **leaves appear sticky and sooty**, look for aphids. Aphids poop honeydew, a sticky substance, which ants like to eat and which also forms a black sooty mold. The aphids and the ants have a great friendship. Washing the leaves with a hard spray of water removes the honeydew and the mold as well as the aphids.

While any of these problems may be present the best defense is a good offense – keep your plants healthy and they won't be susceptible to insects and diseases.