ORCHID DISEASES AND PEST

CARE AND TREATMENT

Root Rot

Root rot is one of the most common problems for indoor or potted plants. It is particularly problematic for epiphytic orchids that often receive more moisture and less airflow than they are used to. Commonly caused by overwatering or inadequate drainage, this fungal disease remains hidden beneath the soil until you notice signs of struggle above the soil.

Although root rot is typically caused by incorrect care or conditions, fungi (typically Rhizoctonia in orchids) are the true culprits. They are attracted to the moist and poorly aerated conditions caused by dense soil or overwatering, forming in the moisture to attack the roots of your favorite orchids.

Unfortunately, root rot is also tough to diagnose, especially in the early stages. The leaves begin to yellow or wilt, which is often believed to be caused by underwatering. However, the real damage occurs at the root level, where roots become mushy and turn brown or black.

If you discover any mushy or discolored roots, trim the diseased roots back to healthy tissue, ensuring all infected parts are removed. If even a little section is left behind, the fungus responsible for root rot will continue to spread. Ensure you disinfect your shears when you're done and repot into fresh orchid bark.

Brown Rot

Brown rot (caused by Erwinia bacterial species) is a problem for many plants but is a particularly prevalent disease in orchids. This disease spreads incredibly quickly, especially in high humidity and warm temperatures. In moth orchids, it can take over the entire plant within a few days, becoming incredibly difficult to treat.

Erwinia attacks various parts of the orchid but is mostly present on the leaves. Initially, you'll see water-soaked spots on leaves that quickly turn brown or black. In vanda orchids, the spots will start translucent before changing color; in other orchids, they may become reddish.

These lesions expand rapidly, emitting a foul smell that indicates a disease problem. It must be tackled immediately, as rot can engulf the plant in days, becoming almost impossible to treat.

When you spot signs of brown rot, isolate the affected orchid immediately to prevent spread. Use sterilized shears to remove all infected tissue, leaving only healthy tissue behind. Sterilizing your tools between cuts is critical to prevent the spread of the bacteria to healthy parts of the plant.

Black Rot

Black rot is a damaging disease that spreads quickly from plant to plant, especially in wet and enclosed environments. It can infect all parts of the plant, including roots and bulbs, but it usually starts on the leaves first.

Black rot often starts on the undersides of orchid leaves, with small water-soaked spots. These spots gradually darken to a black or purplish color, indicating a black rot problem. As the infection spreads, these spots grow and merge to cover entire leaves.

This disease thrives in wet conditions, whether caused by damp soil or wet surfaces around your orchids. Unfortunately, due to the rapid spread of the issue (not only on the plant but to other plants), it's best to discard severely affected plants to keep the rest of your orchids safe.

If your orchid is rare, you can try a few treatment options. Start by removing any visibly infected parts of the plant. Don't forget to check below the soil if the problem has spread further. Fungicides targeting oomycetes can also be used to tackle the spread and any remaining traces.

Like most diseases, preventative measures involve monitoring the environment around your orchids. Overwatering, overhead watering, or generally keeping the orchids in damp environments should be avoided. Also, improve air circulation around your plants to prevent the spread of potential problems.

Fusarium Wilt

Like the previous diseases, Fusarium wilt thrives in the warm and humid conditions that orchids love. It functions slightly differently, though, infiltrating the vascular system of the plant and blocking water and nutrient flow. This leads to a slow but often deadly decline in health over several weeks.

The symptoms are more subtle, making early detection tough. The first thing to look out for is slightly yellow leaves and a general lack of growth. But the best way to diagnose the problem is to look at the stems. When cut open, you should see a purple discoloration due to the fungus inside the vascular system.

If you look into the stem and see the purple discoloration, it's best to discard the plant. Treatment is tough when the infection has spread so severely, and discarding the plant will protect any other plants near your orchid from damage.

If you suspect Fusarium and there is no purple discoloration yet, pruning and drenches like thiophanate methyl can control the issue. Always follow the instructions closely and disinfect any tools between uses to prevent spread.

Preventative measures are your best line of defense. Ensure the potting medium drains well and the container has enough drainage holes to prevent waterlogging. Also, quarantine new orchids as Fusarium often travels in from new plants.

Anthracnose

Close-up of an orchid affected by Anthracnose. Orchid leaves and stems affected by anthracnose display distinct symptoms, featuring dark, water-soaked lesions with irregular margins. The leaves are slightly discolored, pale green and yellowish.

Prevent and manage anthracnose in orchids by addressing environmental conditions and using fungicides.

Anthracnose is a fungal disease primarily affecting orchid leaves. Usually caused by the species Colletotrichum and Glomerella spp., it is one of the easier diseases to identify as it affects the plant above the soil rather than below.

Signs of anthracnose generally start at the tips and edges of the leaves and move inwards as the disease progresses. The tips of the leaves will begin to turn brown, developing patchy discoloration that can sometimes turn gray. The margin between diseased and healthy tissue is quite clear, slowly spreading to take over entire leaves and stems.

To manage anthracnose, think about preventive measures first. This won't resolve a problem but may prevent the spread while you try to treat the plant.

Anthracnose spreads quickly in warm temperatures, high humidity, and low light. Managing these conditions (without compromising the health of your orchids) can stop a minor problem from becoming a major one.

If you notice symptoms of anthracnose, isolate the affected plant immediately. Remove infected leaves and treat them with fungicide like thiophanate methyl. You can also alternate between systemic and protective fungicides for severe issues, preventing anthracnose from returning and taking over again.

Leaf Spot

Close-up of orchids affected by Leaf Spot. The leaves are oblong, with slightly narrowed tips, bright green, with a yellowish tint. The leaves have many irregular small round spots of white with a purple-black halo.

Combat leaf spot in orchids through isolation, pruning, sterilization, and preventive measures like proper airflow.

There are various types of leaf spots in orchids, including Septoria, Cercospora, and one of the most common, Phyllosticta. Again, the disease largely impacts the foliage where (as evident in the name) leaves develop tiny spots that slowly enlarge to discolor the entire leaf.

The exact symptoms of leaf spot vary depending on the pathogen, but all result in spotty discoloration in the leaves. Septoria typically causes small yellow spots with an irregular shape. Cercospora spots also start out yellow and eventually turn purple or black. Phyllosticta is known for causing oval-shaped spots that quickly become dark brown or black and slightly raised. These spots can merge and spread regardless of the type, leading to significant leaf damage if left untreated. Like many plant diseases, leaf spots are usually spread through water or contaminated tools. They infect the plant by penetrating the leaf tissue, causing the characteristic lesions and spreading from there. If leaf spot is identified, follow the same steps as for anthracnose, with isolation as the starting point. Prune all the infected tissue and sterilize your tools as you go. If you don't, you may spread the issue further. In severe cases, fungicides can be helpful but don't always resolve the problem. If it spread rapidly, it's usually best to discard the plant and start again. Just make sure you clean the area where the orchid was thoroughly to prevent spread and follow preventative measures going forward.

To prevent leaf spot, avoid wetting the foliage or keeping the container in a damp area, especially in cooler weather. Remove debris around the plant, and don't overcrowd your containers to promote airflow.

Botrytis

Close-up of an orchid flower affected by Botrytis on a black background. The flower has white petals, sepals and a labellum with greenish tints. The petals have brown, water-soaked spots. Thriving in cool, humid spaces, botrytis targets orchid flowers, causing brown spots and mold.

Botrytis differs in that it prefers cooler environments but still loves high humidity. It is most likely to spread where there is little air circulation, like in smaller and crowded greenhouses. Botrytis is known for attacking the delicate flowers of orchids, but it can also affect leaves and stems. The symptoms of botrytis blight are most noticeable on the flower petals. Infected flowers display small brown to black spots, which can rapidly enlarge and cover the entire flower. In high humidity, you may also see a gray mold on the affected areas – the spore-producing structures of the fungus.

Botrytis treatment starts with something tough for orchid lovers to do – removing the flowers. Since the petals are the primary target, you need to remove these structures to stop the problem from spreading. After pruning any visible areas of damage, use a protectant fungicide to limit the chances of spreading. If even a slight problem remains, it will eventually spread to take over the entire plant again. Always follow the instructions closely, as treatment can differ from product to product. Regular inspections, especially during cooler weather, are important for follow-up treatments.

To prevent botrytis (at least as much as you can control), follow the same good garden hygiene practices mentioned previously. Another helpful strategy is removing dead or dying flowers as soon as you spot them, as these can become quick targets for infection.

Mosaic Virus

Close-up of an orchid leaf affected by mosaic virus. The leaf is oblong, oval, yellowish in color. The leaf is covered with irregular patterns of brown streaking and mottling.

Cymbidium mosaic virus, spread by sap or contaminated tools, causes irreversible damage in orchids. Many damaging viruses can tackle orchids, but cymbidium mosaic virus is one of the most common. It is spread by plant sap – often when you unsuspectingly use infected tools on your orchids. Viruses can also be spread through plant debris or in crowded environments where leaves touch one another.

Unlike fungal or bacterial diseases, viral infections are not treatable once established. That's why acting as soon as you spot any symptoms is vital to keep the rest of your plants safe. Symptoms include a distinctive mottling or 'mosaic' pattern on the leaves – hence the name. This pattern starts yellow or light green, typically darkening depending on the viral strain. In some cases, leaves may become distorted or strangely textured. It can also spread to the flowers that eventually streak or break, ruining their intricate and delicate look.

Unfortunately, there are no treatments for viral infections in orchids. Ultimately, it's best to dispose of the plant and focus on implementing preventative measures to avoid future infections. Always use sterilized tools when cutting or handling plants, especially when moving between different orchids or from previously damaged plants to healthy ones. Avoid sap contact between plants, as even a small amount of infected sap can transmit the virus. Isolating new plants can also help prevent the introduction of the virus from outside sources.

Final Thoughts

Diseases are tough on orchid owners and usually result in the early death of your plant if not handled quickly. That's why it's best to implement preventative measures to avoid seeing any of these problems in the first place.

Insects

Mealybugs

If you see a white blob of cotton sticking onto the stem or leaf of your orchid, you've got yourself a mealybug problem! They are small, soft-bodied insects with a waxy texture that feed on the sap of orchids, weakening the plant and causing yellowing leaves. These pests are like slow poisons; they do not have an immediate effect, but they eventually kill your plant. But you can easily spot them and bid them farewell! Here's what you do.

Wipe down the leaves, stems, and infected parts with a cotton swab dipped in rubbing alcohol or neem oil spray. If this hasn't occurred yet, deter mealybug infestations by ensuring proper air circulation and avoiding overwatering.

2. Aphids

Most Common Orchid Pests 2

Being less than an eighth of an inch, aphids can fly right under the radar and can secretly wreak havoc on your orchid plant! To the keen eye, they are tiny, pear-shaped pests that usually come in green or black.

They attack new plant growth by sucking its sap and secretes sticky honeydew that, in turn, attracts mold and ants. If you spot a single aphid, manually pick it out instantly before it multiplies into clusters and colonies! Look for new growth and use a strong water spray to dislodge them or apply neem oil. And check out our detailed guide to get rid of mealybugs.

3. Mites

spider mites on orchid leaves

Mites are arachnids and not insects, but they are just as pesky as the other common orchid pests on this list and are super unhealthy for your precious blooms. They are too tiny to discover with the naked eye, but if you find reddish-brown streaks on the leaf's undersides, that's the warning bell. Another way of detecting mites is to find fine webbing around the plant. Mites damage the plant by sucking out the cell contents, leading to speckled or bronzed leaves.

Mites thrive in dry and arid conditions—so ensure the setting is inhospitable to keep them at bay! Start with high humidity levels to prevent mite attacks. However, to treat pre-existing infestation, clean the plant thoroughly with mild horticultural oil or insecticidal soap.

4. Thrips

Thrips on orchid plant

Thrips are small, slender, yellowish-brown insects that destroy orchids by sucking out cellular plant matter. They love feeding on the flower buds but can also spread to the foliage. The telltale signs of thrips are silvery scars on leaves or buds that won't open at all.

Thrips are one of the most elusive pests to deal with. They are small and mobile and spend most of their lives in the soil. Some common solutions are regular preventive inspection, sticky traps, and insecticidal soap.

5. Cockroaches

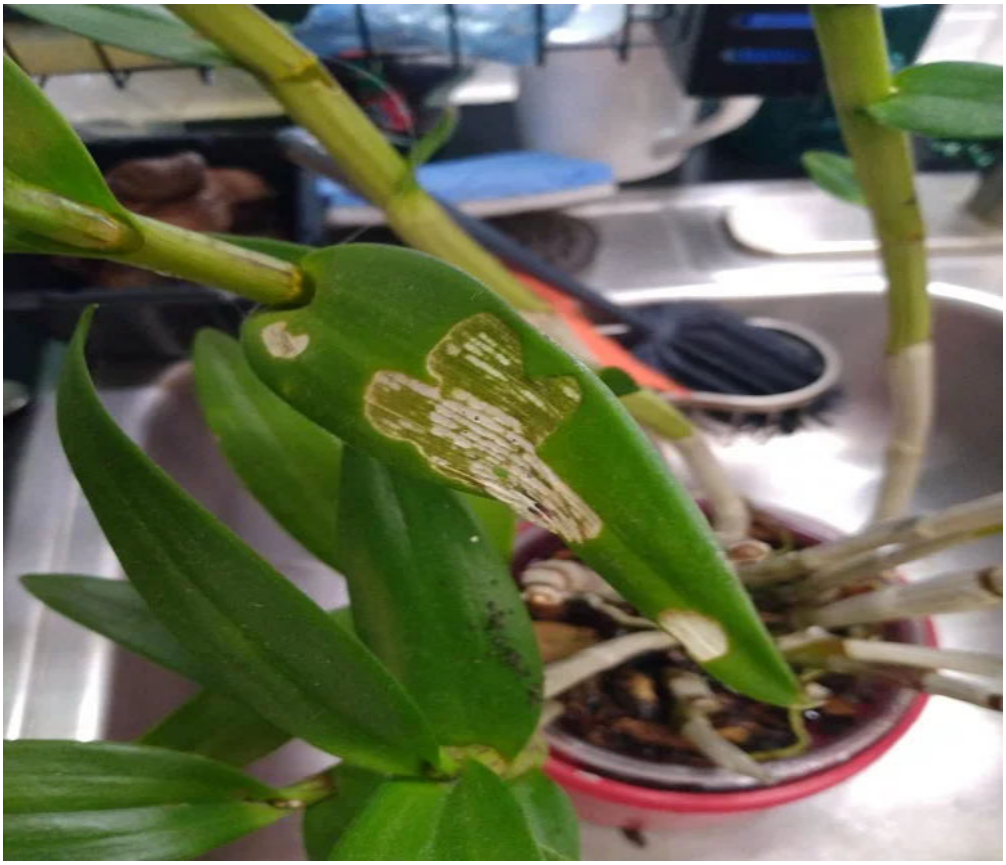
Cockroaches need no introduction! But it may surprise you that they love orchids as much as you do! They are drawn to orchids for shelter and food but damage the roots and leaves in this process. Luckily, dealing with a roach problem is not all that hard.

Start by keeping your growing spot clean and free of debris. If roaches still hang around, place bait traps around the plants or use diatomaceous earth (DE) to remove them.

6. Caterpillars

While butterflies and moths are signs of a healthy, biodiverse ecosystem, orchids aren't the biggest fans of caterpillars! These pretty winged insects lay their eggs on the leafy undersides of orchids. These become fleshy caterpillars that chew through leaves and flowers and leave nothing of the plant to survive. Prevent caterpillars by checking your orchids regularly, especially the underside of leaves. If you spot them, handpick the caterpillars off the plant or use a biological insecticide like bacillus thuringiensis (Bt).

7. Snails and Slugs



Snails and slugs are slimy mollusks that leave behind silvery, sticky trails as they crawl. They might be slow, but they will tear through your orchid leaves and roots at an exponential pace, causing immense harm to the plant's structure and growth.

Chemical baits, ash, and DE can be scattered around your orchids to trap and kill these pests. A cool way to keep snails and slugs away is to put small containers filled with beer in your gardening space; these pests drown in it. After treating your orchids for pests, follow these steps to ensure they stay healthy and bloom well.

8. Scale Insects

Last on the list is the orchid's arch nemesis—scale insects! These tiny, flat, oval-shaped bugs often appear as small bumps on orchid stems and leaves. Like many other common orchid pests, they suck the sap from the plant, causing wilting, yellowing, and overall weakness. To prevent scale insects from occupying your orchid, regularly clean it and provide good airflow.

And if they have already taken over, use horticultural oil or alcohol to remove them. Follow these steps to prevent or treat the most common pests that threaten the health of your beautiful orchid. And once you have these out of the way, here's what you do with orchids after they bloom!

Treatment products

There are many products on the market today that can treat pests and diseases for orchids. You can either use natural products or man-made chemicals to treat your orchids depending on your preference. Talk with your local grower to see what product they use and do your research to find out what is best for you. Remember, these are your orchids. As we move into summertime the humidity will rise, the sun will be out longer and it may rain for days. If you are repotting, be proactive and pretreat your plants while you are repotting. You will be glad that you did!