

Bugs and diseases...the season is upon us.

By Charlie Mosse, April 2023

The bugs are a bit behind schedule with all of the rain and the earlier cold weather. But now that the weather is milder, game on. I have seen a few bugs but mostly on plants grown in greenhouses or greenhouse-like conditions such as propagation boxes, aka plastic storage bins. Insects do not mind the rain so much but really like the warmer weather. In an earlier article the concept of "degree days" was presented. This is the accumulation of warmer hours over a short enough period of time that eggs start hatching and dormant pupae start maturing. Also, with all of the wet humid weather, diseases like mildew and the infamous juniper blights and pine needle cast will begin to be seen. With the increase in temps, if spores are present, they will also start to germinate. So, keep an eye out now.

Aphids are just starting but these are easy to deal with. They do propagate sexually and asexually so they can come back quickly especially as the weather gets nicer. Just blast them off with a strong fan spray with a hose, repeat every week this time of year, more often mid-April through most of the summer. Insecticidal soaps work well for control.

Mealy bugs, white fly and scale will not be an issue just yet but might be present if you had them on plants last year. Mealy bugs and white fly are easy to control and will not be a problem as long you watch out for them. Physical removal of small numbers with a cotton ball and isopropyl alcohol works well. Ignoring tree inspections for months can lead to serious infestations, especially in the upcoming long warm San Diego season.

Scale is easy to spot except for juniper scale. They are white-ish in color but very tiny and can reside almost out of sight down in the recessed areas of juniper foliage, especially in juvenile growth. On juniper scale type growth, the little specks are easier to see. Most other insect scale are easy to see. Early on, removal with the cotton ball and alcohol also works for them. The scale itself is hard to kill, but the scale crawlers that leave the scale structure are as easy to kill as aphids, because they are soft bodied and start sucking quickly upon release. Blasting with water helps here as well to remove the crawlers, not the scale. Fortunately, initial scale infestations are slow to get going under normal yard conditions but once on a roll, can cover lots of stems. Following the above mentioned practices will, at times, prevent having to spray chemicals.

Spider mites are the bane of our existence in the plant world and can be particularly problematic for us. Hatching and spreading this time of year is not primetime for them, but it is a good practice to always keep an eye out for them. Get a notepad paper, white (or yellow) and tap branches over the paper. If the specs move, most likely they are mites. Get the hose and use the fan spray at full pressure. If the branches wiggle and wave, then hold them one at a time with your hand. The spray will be a lot more effective in removing the mites. Wait 7-10 days and do it again. I was taught by a conifer grower to hose of all conifers once a week, anyway, to keep mites at bay. It worked great in the nursery. That reduced our spraying by 75%. Summer was always a tough time to control mites. If hosing spraying plants fails, then you will need to spray pesticides, especially during hot weather and even more so in hot, dry weather. 80 degrees plus seems to please mites, the warmer the better.

Chemical remedies are easy to find, such as Horticultural oil, pyrethrin, insecticidal soaps, natural predators (see Arbico Organics), Spinosad and some systemics. The key is to knock down the infestation

before it gets out of control, then do follow-up sprays as needed. Thorough coverage from all angles is very necessary especially for mites.

Photos of these insects are available on the internet and are excellent. Look up each one by visiting several sites to get a good idea of what to look for.

The next issue is with diseases, three of which we see regularly----juniper blight on Shimpaku junipers, pine needle cast on Japanese Black Pines and mildew on Crepe Myrtle. These can be a headache.

Older varieties of Crepe Myrtles get mildew on the flower buds and then it spreads to the leaves. Newer varieties are more resistant. Hosing them off in the morning is helpful but mildew can become tenacious. If so, copper, oils or both will work nicely. If a small infection, wipe with alcohol.

Pine needle cast, aka dothistroma, can be a problem. It is controllable with diligence but it is much easier to prevent the infection. Spores are active spring through summer when temps are favorable. Fog, dew, rain and evening overhead watering will promote spore germination. Prevention is best. Forceful spraying of water in the morning or early afternoon is helpful to wash off spores. When done spraying, jostle the plant to remove much of the water. If the pine is not too dense then air circulation can dry the remaining water. Some people prefer not to do any foliar washing. This is OK but note that it takes hours of water/moisture exposure to promote spore germination.

The best control for pine needle cast is spraying with the fungicides...copper or daconil (chlorothalonil is the chemical). Spray when the candles are elongating and when the needles just begin to poke out. One application should be fine, but if you have had an infection before, spray again in about 10 days. Spray again in early summer when needles have hardened off. If a tree is infected, symptoms of browning needles will show up in late summer and fall. Needles eventually become brown on the top half and remain green on the lower half.

There are many types of juniper blight. One never knows exactly which one until it is properly identified in a lab. The one we are most concerned with is the juniper needle tip blight Phomopsis. It has consistent symptoms so we are pretty sure we know it is Phomopsis.

This is the time of year when spores are active and ready to germinate. Moist conditions, like we have had, is good for the spores. Temps have been a bit low, but lately have overall been better for germination. Best temp range is from 60-80 degrees. Overly dense foliage is also a problem so proper thinning is needed create good air circulation to help dry the foliage better. The fungus attacks new growth in the spring, or whenever present, during the right conditions. Infected young tips turn brown. The browning continues down the branch tip about a 1/2". Another telltale sign is that back-budding is profuse and needs to be thinned a bit. If not controlled, the blight can get on the back buds too. This will eventually kill the plant. Remove the dead tips and spray with copper or mancozeb and again in about 10 days. Mancozeb is hard to get in California. So, Daconil can be used as a substitute and copper is also very effective for this blight.

I have found that it is very beneficial to read about these issues online by reading information from several sites for each problem. This will give you a good base of information. You will see that most of the information about needle cast and juniper tip blight are from wetter areas like the pacific northwest, mid-west, east coast and the south. Therefore, it is almost impossible to see examples of Japanese

Black Pines with dothistroma and juniper tip blight on shimpaku. Note that some varieties of pine and juniper are resistant to these diseases.

Like all pesticide programs, it is good to use non-toxic measures first. If that fails, then alternate all controls you use which will prevent or at least slow the building of resistance of any pest or disease.

We have many members in the club who can help. Photos on your phone brought to a meeting or posted on FaceBook on the SDBC group will help get you an answer.