

NEW INSECT AND MITE PESTS OF CONIFERS

Just when you thought you had seen it all, some new pests of conifers have arrived on the scene! Judging by the number of calls we have already gotten, some of you have already noticed these new "guests". The most worrisome is an eriophyid mite found on Douglas-fir, and possibly Noble and Grand fir as well, sometimes in extremely large numbers.

Eriophyids (pronounced "air-e-o-phi-ids") are very tiny worm-like, plant-feeding mites. They are known by several common names, depending on species - "gall mites", "bud mites", "sheath mites", or "leaf vagrants". The eriophyid we see in Douglas-fir is one of the "leaf vagrant" types because it spends its life wandering around the surfaces of needles and shoots, often in large numbers. Most eriophyids seek some form of shelter such as galls, buds, or the sheaths at needle bases. We believe this mite belongs to the genus *Epitrimerus* which has been reported as a pest in Finland of plantation-grown Norway spruce. The damage we see so far in Douglas-fir is very distinct. Last year's needles (1 year old) takes on an olive-green coloration, eventually these needles will be cast. In some cases this looks very much like the Swiss Needle Cast disease. We do not yet have good information on control of this mite. Endosulfan (Thiodan) has proved effective for control of other eriophyid mites but it is much too early to tell if it will be effective here. One caution, endosulfan is very hard on predators, so if this material is used you will surely disrupt any benefit you might be getting from natural biological control agents.

Coneworms (*Dioryctria*) are not a new pest of conifers but they are showing up in new places and in much greater numbers than is usual. These moths are usually pests of seedcone orchards where they burrow into cones and affect seed yields. What's unusual is that we are seeing them infesting stems in small plantation-grown Christmas trees. Reports have indicated that they may enter through natural wounds or pruning scars. Affected stems will die and, if these are leaders, will deform the tree. We suspect that the increased activity of coneworms is related to the drought over the last couple of years. Hopefully, when we return to more average rainfall, the coneworm problem will fade away. Coneworms can be effectively controlled with fenvalerate (Pydrin), but be warned that fenvalerate applications have been associated with spider mite outbreaks in other crops.

Finally, as if the last two were not enough, we have a new spider mite infesting arborvitae. Fortunately, this mite behaves much like spruce spider mite and control recommendations will remain the same for the time being. Its scientific name is *Eotetranychus libocedri* for all you budding acarologists. This new mite is reported to feed exclusively on "cupressaceous" (cedar, and relatives) evergreens.

New pests can suddenly appear for a variety of reasons; changes in cultural practices (new chemical use, new irrigation practices, etc.) or climate (unusually dry, wet, cold, or hot weather) are the two most likely factors involved. Be alert for unusual damage symptoms, or common pests showing up in unusual places, and report these finds to your county extension agent or to us, here at OSU.

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