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Last Issue for 2009

This is the last issue of the Home, Yard, and Garden Pest Newsletter for 2009. The transition from a fee-based, internet and printed, professionally edited and designed newsletter through the Ag. Publications group to a free access, internet only, in-house edited and designed newsletter through the IPM group at the University of Illinois was successfully accomplished. Despite prior planning and preparations, some adjustments had to be made along the way, which we realize caused some concern and problems among our readers. We appreciate your patience and understanding.

We have progressed from a newsletter whose subscription base had dropped to something unsustainable to a healthy readership. Perhaps the number of subscriptions did not represent the readership, but that was all that we had to evaluate. We plan on starting the 2010 issues in April. As always, we are open to your suggestions on ways to improve the newsletter.--*Phil Nixon*

Emerald Ash Borer

The Illinois trapping results for emerald ash borer have been compiled by the Illinois Department of Agriculture in cooperation with USDA APHIS. The large, purple traps were used again this

year. The only catches of emerald ash borer were within the quarantined area of the state. Although these traps are not sensitive enough to pick up all early infestations, they should detect any large infestations. In all, there were no detections of emerald ash borer in Illinois outside of the state quarantined area, whether by trap or other means.

New emerald ash borer infestations were found by trap and other means during 2009 in the following Cook County communities: Bartlett, Flossmoor, Hanover Park, Lansing, Morton Grove, Palatine, Park Ridge, Rosemont, Schaumburg, Schiller Park, and LaGrange. New infestations were detected in Hinckley, Mayfield, and Sycamore in DeKalb County. New infestations found in DuPage County included: Addison, Glen Ellyn, Itasca, and Lombard. Kane County had new 2009 finds in Elgin, Hampshire, Virgil, and West Dundee. There were new finds in the Lake County communities of Lake Forest, Buffalo Grove, Arlington Heights, and Barrington Hills. New infestations were also detected in Lake in the Hills, Marengo, and Woodstock in McHenry County, Normal in McLean County, and Peotone Township and Frankfort in Will County.

Parasitic wasps were released in Evanston and Chicago to control emerald ash borer. The egg parasite, *Oobius agrili*, was released in both

locations. The larval endoparasitoid, *Tetrastichus planipennisi*, was also released in Chicago. It is too early for any results from the releases. These species were released in Michigan in 2008, and very small numbers of progeny were subsequently located.

New information is frequently added to the Illinois Department of Agriculture emerald ash borer website at: <http://www.IllinoisEAB.com>. Nationally, an excellent, active site is www.emeraldashborer.info. --Phil Nixon

Yellowed Spruce

Each year at the Plant Clinic we receive a few samples and calls concerning spruces with bright yellow needles. In most cases it is the two or three-year old needles that are yellow, while younger needles are green and apparently healthy. Sometimes the affected needles exhibit yellow banding, but usually entire needles are bright yellow. The image shows a typical sample of this condition.

Being a plant pathologist by training, I tend to assay for foliar pathogens first. The possibilities include *Rhizosphaera* needle cast (issue #2, 2009), *Stigmina* (issue #4, 2009), *Lirula* needle cast (issue #3, 2007), and a little understood disease called SNEED (spruce needle drop). None of these pathogens has been found associated with the bright yellow spruce needles pictured. In fact, I have not associated any fungus with these needles.

Could insects or mites cause these symptoms? Spruce spidermites (issue #1, 2009) may cause the foliage to

appear light green from a distance and white-speckled at close range. I have not seen mites or insects associated with this yellowed foliage.

It is a known fact that evergreens drop older needles. Could this be fall needle drop? Although we may see white pines with intense yellowing and drop of two or three-year old needles, that has not been the case with spruces. They typically hold needles for 5-7 years, giving them the dense, attractive appearance we enjoy. Of course, they will not hold needles forever, but inner needles are dropped without turning bright yellow.

Nutrient stress seems to be the general consensus as the cause of this yellowing. One of my colleagues at the Ohio State University said that the symptoms are indicative of a nutritional deficiency, but are not typical of a specific nutrient. I agree. According to Sinclair and Lyon, in *Diseases of Trees and Shrubs, 2nd edition*, potassium deficiency causes yellowing of older needles and magnesium deficiency can cause premature needle drop. Other sources suggest nitrogen deficiency might cause needle yellowing.

The problem may or may not be an actual lack of nutrients in the soil. Many factors might be limiting nutrient movement to these needles. Root rot, root compaction, waterlogged soil, drainage problems, deep planting, girdling roots, transplant shock, or even high soil pH could be involved. Obviously, the "root" of the problem will vary with each situation. Keep in mind though, injured or rotted roots will not absorb many nutrients.

The first step to management of spruces with these symptoms is to rule out needle pathogens and mites/insects. Next, investigate the condition of roots to determine whether or not that is the main problem. Look at the trunk at this time too, since injuries there could limit water and nutrient movement. If all seems in order, start looking into the nutrient possibilities.

Soil samples from the root area of the tree could be submitted to a soil testing company and assayed for macronutrients and pH. That might be a relatively inexpensive way to establish the need for fertility and to get some

recommendations on what is needed. If you suspect salt damage, ask for a soluble salt test at the same time. Foliage can be tested for nutrients as well, but cost should be considered. Foliar sampling is best if done during the growing season and according to the instructions of the testing lab. Usually tip cuttings are requested, but in this case, older tissue might be more useful.

If you have experienced the spruce problem described above, you live in Illinois, and you are willing to share your ultimate diagnosis, drop me a note. My e-mail address is npataky@illinois.edu.--*Nancy Pataky*

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