Ornamental Pest and Disease Update

Borers of Ash

by Frank A. Hale, Professor of Entomology

Ash trees are common in Tennessee and have been used extensively in commercial and residential plantings. Unfortunately, this pest is very susceptible to wood-boring insects. One exotic flatheaded borer that fortunately has not made its way to Tennessee yet is the emerald ash borer (EAB) (Figure 1). The EAB has the potential to decimate ash in North America. It has been found as nearby as southwestern Ohio (Cincinnati area) and it is only a matter of time before it reaches Kentucky and Tennessee. In Kentucky, they have established an EAB hotline at (866) 322-4512 their residents can call if they find a suspected EAB infestation. There is also an EAB web page at http://pest.ca.uky.edu/EXT/EAB/welcome.html where you can find extensive information on EAB.

Figure 1. Emerald ash borer.

Currently, ash trees planted in the landscape are often attacked by native borers. The most damaging of these are the clearwing borers (Lepidoptera: Sesiidae). The ash borer (=lilac borer) attacks ash, lilac, fringetree (Figures 2&3), privet, and mountain-ash in the spring while the banded ash clearwing attacks ash in mid-summer through the fall. These clearwing borers have a one year life cycle and are more successful when attacking stressed trees. Reasons for stress include lack of root space, high temperatures, poor drainage, and lack of sufficient water. These conditions can often occur in plantings such as in parking lot islands and between the sidewalk and the curb.


Figure 2. Ash borer and empty pupa on fringetree.


Figure 3. Ash borer damage to fringetree.

The banded ash clearwing larvae are full grown and pushing lots of their woody frass out of exit holes in the trunk (Figure 4). The frass can be seen now piled up at the base of the tree (Figure 5). Heavily infested trees will show other signs of decline such as a thinning canopy and cracks in the trunk. After several years of borer damage, the tree will probably be severely damaged and continue to decline and not recover.

Figure 4. Ash clearwing borer damage in July on ash.

Figure 5. Frass at base of ash tree in July from ash clearwing borer.

Protective bark sprays should be made in mid-April and mid-June of bifenthrin (Onyx) or permethrin (Astro) on lilac, fringetree, mountain-ash or privet for the spring emerging ash borer in the landscape. Since ash trees are attacked by both the ash borer and the banded ash clearwing, the protective insecticide sprays should be made in mid-April and mid-July. In the commercial nursery, chlorpyrifos (Dursban), permethrin (Perm-Up), and bifenthrin (Onyx Pro) can be used.

A Perfect Storm, 2007 (Dieback of Yew, Cryptomeria and assorted conifers)
Alan Windham, Professor, Plant Pathology

This has been a trying year so far for the TN Green Industry. Winter months were drier than normal in most locations. The dry weather continued into Spring as evidenced by NOAA (Figure 1.), and coincided with the Easter freeze which was unprecedented in recent history. This combination of a drought, warm weather, a freeze that was followed by severe drought, caused widespread damage.

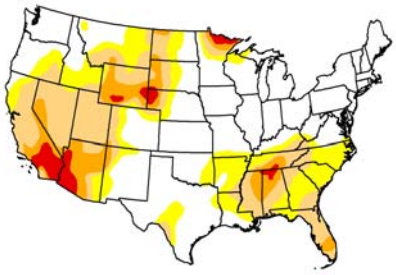

Figure 1. Drought severity, week of April 10, 2007. http://drought.unl.edu/dm/archive.html

While damage to evergreen trees and shrubs was not as visible at first, it is currently quite visible in many landscape locations throughout the state. In Middle Tennessee, dieback on yew is quite common (Figure 2). On a three mile drive along Old Hickory Blvd in South Nashville on Friday afternoon, almost every subdivision entrance had yew showing moderate to severe dieback. Several of the plantings that I stopped by to photograph had several things

in common. First, there was no irrigation at most of the plantings showing severe damage. Second, there was no bark splitting on branches or main stems (except for one that had been hit by a motorist) as I have observed in other plant species. Third, the damage was randomly scattered throughout the canopy of most plants. Fourth, I could see no correlation between sheared or pruned and unpruned plants. Fifth, some of the plants were mulched, others were not. Sixth, no fungal fruiting bodies or wood boring insects were observed on any of the damaged plants.

Figure 2. Dieback on yew in a landscape planting; no irrigation.

Dieback on other plant species has been observed. Home owners, grounds managers and growers have noted dieback on arborvitae, cryptomeria and other species. I have noticed dieback on cryptomeria before, but have never associated a fungal pathogen with this problem (Figure 3). Dirr in his 'Manual of Woody Landscape Plants' notes this dieback as a problem of cryptomeria in the Southeast.

Figure 3. Tip dieback on cryptomeria. No plant pathogen has been associated with this problem.

So what is to be done at this point? In some cases, plants are totaled and should be removed and replaced when conditions are more favorable for planting. In other cases, dead shoots can be removed and with a year or two of corrective pruning, things should be back to normal. If possible, plants need to be irrigated when dry conditions occur. Here's hoping that the rest of 2007 and 2008 is more normal on the climatological front.

Questions and/or comments about this information can be sent to: awindha1@utk.edu