

Figure 1. Recently planted drought stricken maple tree



Forest Health Update - July 18, 2005.

The following forest health update describes conditions affecting Ontario forests in the Ontario Ministry of Natural Resources districts of Aurora and Midhurst. These two districts, more or less, cover the counties of Bruce, Grey, Dufferin and Simcoe and the regional municipalities of Halton, Peel, York and Durham. This report has been prepared by Hugh Evans of the Canadian Forest Service.

The weather has been particularly dry as well as hot during the past few weeks through much of the area. Drought conditions are not yet evident on trees except for neglected newly planted trees. Tree damage due to drought is not always manifested immediately. Trees can show symptoms later and they are of course predisposed to other damaging agents. A good indicator is the lawn but grass will rebound following a dry spell whereas trees do not. The pictured tree would have benefited from an earlier watering (Figure 1).

There were few reports and little damage from **gypsy moth**, *Lymantria dispar* this year, that is until Peter Lyons, urban forest ecologist for Mississauga, reported an infestation. Although the area of damage was confined to a few hectares, the damage was intense and the large number of larvae produce massive numbers of pupae (Figure 2), adults and eggs. When this site was visited on July 8th, all four life stages could be found. Most of the defoliation was on white and red oak. Lower numbers occurred in the surrounding area.



Figure 2. Massed pupae on white oak tree in infested area of Mississauga



A perennial pest of juvenile white pine plantations is the **white pine weevil**, *Pissodes strobi*. Current damage appeared a couple of weeks ago and is common through the area. The insect almost always attacks the leader and destroys up to three years of growth. This pest that can be controlled by sanitization. The affected leaders can be clipped and destroyed but this must be done before the grubs emerge (Figure 3).



Figure 3. Early stage of affected leader (left) and later stage after browning of tip (right).

The **balsam fir sawfly**, *Neodiprion abietis*, a pest of balsam fir has been observed in the Wasaga Beach area of Simcoe County and from Port Elgin to Sauble Falls in Bruce County. Similar areas were affected in 2004. Damaged trees take on a distinct reddish hue which is the remainder of the needles after larval feeding.

Larvae of the **yellowheaded spruce sawfly**, *Pikonema alaskensis* can do extensive damage to ornamental, shelterbelt or ornamental spruce trees (Figure 4). Damage is most common when the trees are young. Particularly heavy feeding damage was noted on hedgerow plantings along highways in the Aurora area earlier in the month (Figure 5).



Figure 4. Larvae of yellowheaded spruce sawfly



Figure 5. Yellowheaded sawfly defoliation



The **elm spanworm**, *Ennomos subsignaria* recurred in much of the same area that was infested in 2004. Last year it was found in conjunction with another pest, the lesser **maple spanworm**, *Itame pustularia*. This latter insect was absent this year but large numbers of elm spanworm nonetheless caused moderate to severe defoliation through some areas of the Greenock swamp in the south part of Bruce County. A number of hosts were affected including ash, elm, basswood and both red and silver maple.



Figure 6. Elm spanworm larvae festooned on ash leaves.

Redheaded pine sawfly, *Neodiprion lecontei* populations are alive and healthy at CFB Borden. Numerous freshly hatched larvae were observed on July 7th and damage was already evident (Figure 7). This area was also heavily affected in 2004. This is the only known area of occurrence of the pest.



Figure 7. Early damage to red pine by the redheaded pine sawfly

In Grey County the **pine false webworm**, *Acantholyda erythrocephala* continues to cause significant defoliation. Early surveys indicate that the pest has again caused severe damage in a number of pine plantations (Figure 8). Although a pest of all pine, white pine seems to be the favoured host in Grey County. Numbers appear to have been reduced in Simcoe County.

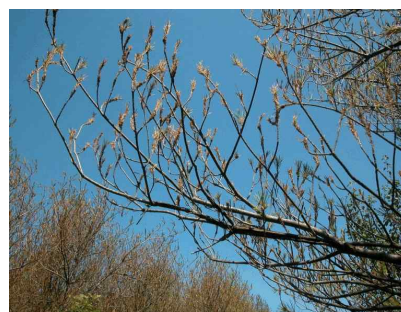


Figure 8. Pine false webworm defoliation of white pine

Damage from the **oakslug sawfly**, *Caliroa fasciata* was common on red oak throughout the area this year. The tiny caterpillars feed on the underside of the foliage and skeletonize the leaf. In most instances the damage was light however heavy defoliation of saplings occurred occasionally.

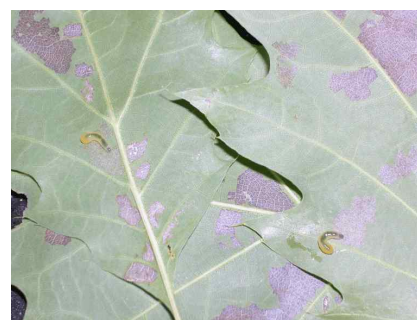


Figure 9. Oakslug sawfly larvae on red oak



There have been no occurrences of **forest tent caterpillar**, *Malacosoma disstria* this year however a blight on the rural landscape at this time of the year is dead and dying elms as a result of **Dutch elm disease**, *Ophiostoma ulmi*. It continues to cause widespread tree mortality across the area. The disease first swept through southern Ontario several decades ago and is now in a second wave of attack. The attacks occur mostly on second growth elms (Figure 10) but mature elms that survived the first wave are also susceptible to attack (Figure 11).

The disease is spread by the **native elm bark beetle**, *Hylurgopinus rufipes* and the **smaller European elm bark beetle**, *Scollytus multistriatus* which act as vectors for the fungus.

There does not appear to be anything on the horizon that will be effective at controlling Dutch elm disease in its natural setting. There are a number of guides for the management of the disease, however most of these guides are for individual urban or landscape trees. There are a number of practical measures that one can take to alleviate the damage caused by Dutch elm disease. One of the simplest methods is the sanitation of affected trees to prevent the development of the beetles and hence reduce the spread of the fungus. A good reference for management can be found here

http://na.fs.fed.us/spfo/pubs/howtos/ht_ded/ht_ded.htm



Figure 11. Juvenile elm with Dutch elm disease



Figure 12. Isolated healthy elm tree.