



## Spring/Summer 2009

The following Forest Health Update describes conditions affecting Ontario's forests in the OMNR Districts of Aylmer and Guelph. This report has been prepared by Eric Cleland, Forest Health Technical Specialist with the Ontario Ministry of Natural Resources.

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forwarded from Taylor Scarr,  
Provincial Forest Entomologist

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## Ontario's Forest Health Program

The annual forest health monitoring program conducted by the Canadian Forest Service (CFS) and the Ministry of Natural Resources (MNR) is well underway for 2009, with a few changes to personnel. This program conducts ground and aerial surveys for forest insects, diseases, and abiotic events such as extreme weather.

The surveys are integrated with a research program led by Dr. Krista Ryall of the CFS that includes pest impacts, biology and ecology, and detection, survey and control methods. This year's program continues the transition of MNR field staff conducting more of the field monitoring, while the CFS staff are focussing more on the research and methods development portions of the partnership.

This program, which began in the 1930s with federal staff conducting the surveys, has continued to evolve in recent years. For 2009, most of the field staff conducting the surveys will be MNR forest health technicians. Disease identification will be done by the Ontario Forest Research Institute. The CFS will continue to provide insect identification and lead research projects.

The forest health technicians are stationed across the province and cover specific areas, usually about two districts in size. The technicians will be conducting and reporting on the forest insect, disease, and abiotic events. They provide periodic electronic updates on forest health events in their work area – so please contact them if you wish to be added to their distribution list. The field program is coordinated by Dan Rowlinson [dan.rowlinson@ontario.ca](mailto:dan.rowlinson@ontario.ca) (705) 945-5737. Additional field staff are expected to join the program shortly.

MNR districts and the Natural Resource Information Centre (NRIC) are usually the first place for public queries related to forest insects and diseases. Where questions or concerns require some additional expertise, the district or NRIC can contact the local forest health technician. MNR districts and partners can assist the local technician by alerting them to what they or others are seeing in a particular area. A second option is to contact Richard Wilson, Forest Program Pathologist, [richard.wilson@ontario.ca](mailto:richard.wilson@ontario.ca) (705) 541-5106 for disease questions or concerns, and Taylor Scarr, Provincial Forest Entomologist, [taylor.scarr@ontario.ca](mailto:taylor.scarr@ontario.ca) (705) 945-5723 for insect questions or concerns.

## Gypsy Moth – *Lymantria dispar*

The Gypsy Moth is a notorious mid-season defoliator that has been causing increasing levels of moderate to severe defoliation on a variety of hosts over the course of the past five years. In 2008, a peak 39,476 hectares of this defoliation was recorded by Forest Health staff across Ontario. Aerial reconnaissance in 2009 revealed a significant collapse in area of defoliation in Aylmer and Guelph Districts; 181 hectares of moderate to severe defoliation primarily in the City of Sarnia, Lambton County and Short Hills Provincial Park in the Niagara Region. An additional 3,192 hectares of light defoliation was recorded across Aylmer and Guelph Districts, the bulk of which was noted in the Dunnville area, Haldimand County and Pinery Provincial Park in Lambton County.



**Photo 1. - Gypsy Moth larvae**

The consistent cool, wet conditions experienced throughout southwestern Ontario this spring and summer have contributed significantly to the prevalence of the *Entomophaga maimaiga* fungus which has been predominantly responsible for the high levels of larval mortality being recorded across the province. This bodes well for a further reduction in population levels as few larvae survived pupation to the adult stage. For further information regarding the Gypsy Moth see: <http://cfs.nrcan.gc.ca/factsheets/gypsy-moth>



## Fall Cankerworm – *Alsophila pometaria*

The Fall Cankerworm is a native species of looper that feeds on a number of hardwood tree and shrub species. In 2009, this early defoliator caused approximately 550 hectares of moderate to severe defoliation in Charlotteville and South Walsingham townships in Norfolk County, Aylmer District. Defoliation was recorded on Red Oak, Black Oak, Red Maple, White Ash, Black Walnut, Basswood, Bitternut Hickory and numerous understory species.



Photo 3. – Typical feeding damage by *A. pometaria*



Photo 2. – Defoliation by Fall Cankerworm



Photo 4. - Egg mass of Fall Cankerworm

The Fall Cankerworm larvae hatch at bud break and begin feeding on the unfolding leaves. The larvae are a messy feeder, devouring the leaves of the host leaving behind only the midrib. Four to five weeks after hatch the larvae will enter the soil to pupate. In the fall after mating, the wingless females crawl up the trunks of the trees to lay masses of approximately 100 eggs on the small twigs. In urban and single-tree situations landowners can band the trunk of tree with a sticky substance such as Tanglefoot to stop the female moths from climbing the tree and laying eggs.

## Cherry Scallopshell Moth – *Hydria prunivorata*

This summer a primary defoliator of *Prunus* species in Ontario, the Cherry Scallopshell moth (aka Cherry Nesting Geometer) was recorded causing damage to several woodlots in Elgin and Norfolk Counties within Aylmer District. The damage was spread across several properties totalling 137 hectares of severe defoliation, mainly affecting *Prunus serotina*, Black Cherry.



**Photo 6. - Typical discolouration of Black Cherry damaged by *H. prunivorata***



**Photo 5. – Cherry Scallopshell Moth larvae**

The Cherry Scallopshell moth overwinters in the pupal stage within the forest litter. Moth emergence is usually during the month of June in Ontario, with eggs laid shortly thereafter in tiered masses on the underside of the host tree's leaves. The newly-hatched larvae feed in groups by tying leaves together; their feeding damage leaving the foliage a characteristic brick red colour (See Photo # 6). After feeding is complete, the larvae return to the ground to pupate and overwinter.

Landowners with woodlots exposed to Cherry Scallopshell moth damage should monitor their Cherry sp. for a secondary pest known as the Peach Bark Beetle, *Phloeotribus liminaris*. This bark beetle infests hosts in the *Prunus* genus enduring stress which may be caused by drought, harvesting damage or severe defoliation.

For more information on the Peach Bark Beetle visit:

<http://www.dnr.state.wi.us/forestry/Fh/PDF/BlackCherryPest2.pdf>





## **Emerald Ash Borer – *Agrilus planipennis***

The Emerald Ash Borer (EAB) continues to cause dieback and mortality of Ash species across Ontario. In the past year, several infestations have been discovered in new areas of the province including: Sault Ste. Marie, Vaughn, Ottawa, Huron County, the Region of Durham, Hamilton, and most recently the City of Welland in Niagara Region. The Canadian Food Inspection Agency (CFIA) remains the lead contact agency for the detection and regulation of this exotic pest.

**Photo 6. - USDA Forest Service**

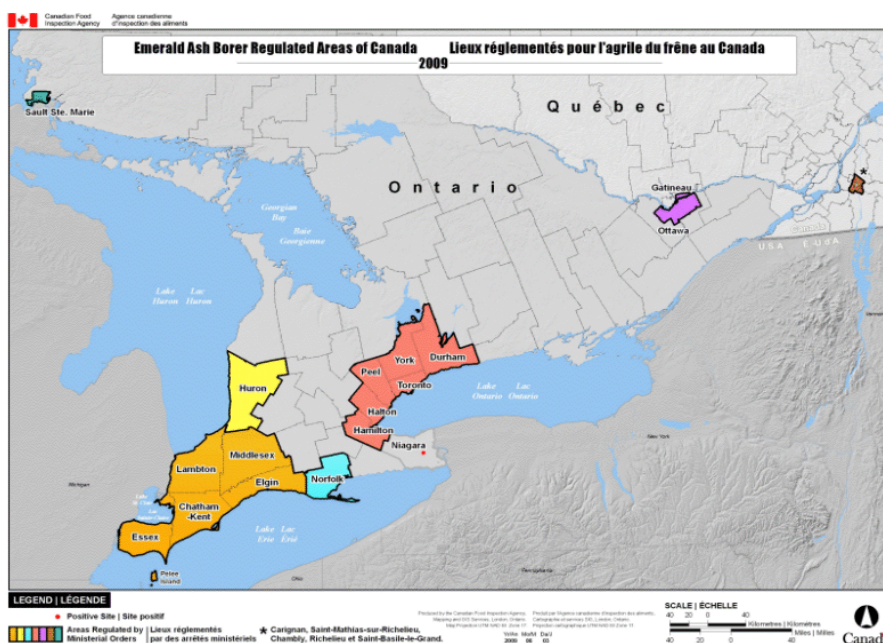
The Ontario Ministry of Natural Resources is working in partnership with the Canadian Forest Service and the Canadian Food Inspection Agency to develop advanced techniques for detecting EAB at low population levels. Research is also being conducted on effective luring and trapping methodologies, bio-surveillance utilizing native wasp species as well as post-EAB disturbance vegetation response.

The OMNR Forest Health Unit will continue to monitor for Emerald Ash Borer in Ontario. Landowners are asked to assist in monitoring their woodlands by looking for signs of infestation. The typical signs of infestation include:

- D-shaped exit holes 3.5 mm in diameter
- S – shaped larval galleries underneath the bark
- Cracking and swelling of younger bark
- Epicormic branching from the main bole and branches
- Thinning crowns and yellow foliage

For more information on the Emerald Ash Borer please contact the Canadian Food Inspection Agency:

**1 -866-463-6017 or [www.inspection.gc.ca](http://www.inspection.gc.ca)**



**Map 1. - Courtesy the Canadian Food Inspection Agency**