



## Weather Damage

Temperatures were very extreme in May throughout southern Ontario with a storm occurring through several days beginning May 8<sup>th</sup>. In each district the situation differed slightly but in Markdale in Grey County temperatures had reached a balmy 23.5 degrees Celsius on May 5<sup>th</sup> and then by the 8<sup>th</sup>, freezing temperatures occurred for 4 nights with temperatures dropping to -4.5 degrees Celsius on the 10<sup>th</sup>. Within a few days temperatures were reaching the upper 20's and were actually as high as 30 degrees on the 25<sup>th</sup>.

These freezing temperatures at leaf-break, resulted in many species of trees receiving frost damage to tender shoots, which then dropped and were later refoliated.

Butternut, sugar maple and balsam fir were some species that were damaged in low lying areas of the former Holland Twp. Through the Lily Oak area, white elm trees of all ages were affected for several blocks in Holland Twp, Grey County, Midhurst District.



Figure 1 Damage foliage on north western exposures

## 2010 Forest Health Update

### Midhurst - Aurora

The following forest health update describes conditions affecting Ontario's forests in the Midhurst - Aurora districts throughout the summer of 2010. This report has been prepared by myself, Ontario Ministry of Natural Resources Forest Health Specialist, Susan McGowan.

As many of you know, I am replacing Patrick Hodge in Midhurst - Aurora, who is now covering this position in Peterborough - Bancroft. Please contact me if you have any questions about forest health in this area. And stay tuned for the January update which will cover autumn work such as beech bark disease, fomes root rot, forest tent caterpillar egg band surveys and emerald ash borer branch sampling.

In Figures 1 and 2 weather damage affecting hardwoods with north western exposures is shown from the former Sydenham Township, Grey County, Midhurst District.

Due to high temperatures of up to 30 degrees Celsius by the 25<sup>th</sup> of May, many trees suffered scorch on the young tender leaves. Aerial surveys carried out in mid June revealed weather related damage throughout Midhurst and Aurora districts on 98,800 hectares.

As a result the crowns of hardwood trees were thin and browned throughout the growing season and the fall colours were less significant and leaf drop occurred early.



Figure 2 Affected foliage on north west side of tree, full green foliage on the sheltered south side.

## **Forest Tent Caterpillar, *Malacosoma disstria* Hbn.**

Just as people were beginning to understand the weather phenomena, it was obvious that populations of forest tent caterpillar were

exploding, taking everyone by surprise. Aerial surveys were carried out mid June mapping 60,400 hectares of moderate to severe damage in southern Ontario.

The defoliation extended in pockets from Albemarle Twp., down to south of Mildmay, Carrick Twp., Bruce County, Midhurst District, down into Huron County, Guelph District, through Grey County and into Simcoe County, excluding Dufferin County, Midhurst District.

Ground checks were carried out revealing that hosts included sugar maple, beech, basswood, poplar, white ash, and white birch. Egg band surveys will be carried out by the forest health staff in December to determine populations for 2011.

The last outbreak of forest tent caterpillar in Midhurst District occurred in Grey County in 2001 when infestations ranged from 55,000 hectares with a collapse in 2004 to 2000 hectares defoliated.



Figure 3 Forest tent caterpillar defoliation an Ash.

## Butternut Insects, *Acrobasis* spp.

Barb Boysen, Rose Fleugal and Madelaine Danby, all key players in the butternut recovery program in Ontario identified suitable butternut trees for cloning throughout the Midhurst and Aurora districts in 2009. These scions were sent to the Ferguson Forestry Centre in Kemptville, were grafted to walnut stock over the winter and were developing in the greenhouse along with grafts from eastern Ontario. In May damage from several insects became apparent and through lab identifications it was determined that leaf tiers, *Acrobasis* spp. had overwintered on the scions from Midhurst District.



Figure 4 Butternut bud, mined at the base, showing frass and webbing in silhouette.

*Acrobasis stigmella* begins to mine the tender bud destroying it and turning it black, Figure 4. *Acrobasis juglandis* creates a tube and defoliates newly emerged leaves. *Cercopidae* sp., a spittle bug punctures the tissues and sucks fluids from the buds, Figure 5 and stems, Figure 6.



Figure 5 Spittle mass of *Cercopidae* sp on butternut bud.

In the greenhouse surroundings Butternut Recovery Technician Rose Fleguel, was able to control populations with most stems thriving.



Figure 6 Spittle mass of *Cercopidae* sp on butternut stem.

## Septoria leaf spot, *Septoria musiva*; Poplar Hemlock Rust, *Melampsora abietis-* *canadensis*

Poplars throughout the Midhurst and Aurora districts were showing the signs of leaf spot and rust this summer. These fungal pathogens have been prevalent over the past three years with the increase of rain, and cooler temperatures overall. As the season wore on only the leaves at the top of trees were left, being the farthest away from spores overwintering on the ground from last year's infected leaves, Figure 7.



Figure 7 Balsam poplar affected with leaf spot and rust.

## Tar Spot, *Rhytisma acerinum*

Tar spot was severe in Southampton, Bruce County, Midhurst District in 2010, with other towns such as Port Elgin being affected to a lesser degree. This is predominantly an urban condition in Midhurst as a common host is Norway maple, which in our area is a planted species and is not often growing on the rural landscape.

The spots which are fungal growths, overwinter in the leaf litter and infect young leaves in the spring. By August leaves had been consumed and were brown and falling. Many street trees in Southampton are Norway maple and this damage left a great impact on crown cover, illustrated in Figures 8 and 9. Raking and disposing of leaves helps to reduce further the spread of the disease in the following year.



Figure 8 Norway maple heavily affected with tar spot.



Figure 9 Fallen Norway maple leaves in early August.

*Region:* Southern

*Work Area:* Midhurst and Aurora Districts

*Forest Health Technician:* Susan McGowan

*Contact Information:* Office: 519-376-2352 or Email: [susan.mcgowan@ontario.ca](mailto:susan.mcgowan@ontario.ca)



## Beautiful Views of the Bruce Peninsula.

Please pass this update on to anyone I have missed who may be interested in receiving it.

Thanks to everyone who has made my transition to the Midhurst – Aurora districts go so smoothly.

*Susan McGowan*

Forest Health Technical Specialist  
Midhurst - Aurora Districts

Ontario Ministry of Natural Resources  
1450 7th Avenue East  
Owen Sound, Ontario N4K 2Z1

Tel: 519-376-2352

Cell: 519-375-0910

Fax: 519-372-3305

[susan.mcgowan@ontario.ca](mailto:susan.mcgowan@ontario.ca)