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To Date

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2 pages from Mario Lanthier

The "56th Annual Meeting" of the Entomological Society of Alberta was held November 7 and 8 in Edmonton. It was attended by 100 persons.

Most presentations focused on field crops such as canola, cabbage and wheat.

I was invited to present on the 2005 survey of IPM practices in Canadian nurseries, a project sponsored by the Canadian Nursery Landscape Association.

Urban forest issues in Alberta
by Chris Saunders, City of Edmonton

Pine beetles are causing tree losses in Grande Prairie (North-West Alberta).

- The City tree inventory includes 495 pines, or 3.5% of all trees. 65 pines were killed in 2008 by mountain pine beetle. Pines affected include lodgepole, Scots, jack.

In Edmonton, 15,827 ash trees have died since 2000.

- Tree death is caused by a combination of drought stress, plus leaf damage by cottony psyllids, plus trunk damage by the ash bark beetle (becoming more prevalent).
- On-going data indicates the ground water levels are still low compared to historical.

There is a need to diversity the tree inventory.

- Current street tree inventory is 90% *Fraxinus* and *Ulmus*. Introduction in the City of any serious pest of elm or ash would cause major devastation.
- The Parks Department is testing other genera, including *Gleditsia*, *Acer*, *Prunus*.

Cottony psyllids on Fraxinus in Alberta

by Ken Fry, Olds College

Cottony psyllids cause leaf curl. High insect numbers can disfigure a tree.

- *Psyllopsis discrepans* was noted in Edmonton around 2000. It is now in Calgary.
- Research has been done to clarify the life cycle and possible spraying in backyards.
- Note from Mario: this insect is not present in British Columbia.

Susceptible Fraxinus hosts are black ash, mandschurian ash, and cultivars.

- On black ash, a *low* number of insects still results in *high* visible damage.
- On mandschurian ash, a *high* number of insects still results in *low* visible damage.
- There is no preference for tree size. Highest damage is on the first spring leaves.
- Important: there is no infestation of green ash (*F. pennsylvanica*). In the lab, insects placed on green ash branches cause no visible feeding or leaf damage.

Cottony psyllids have been associated with massive tree losses in Edmonton.

- Trees died after multiple drought years combined with psyllid damage.
- Most losses were black ash (10582 dead trees on a total of 15827 dead *Fraxinus*).
- From 2000 to 2008, dead trees include 89% of the black ash inventory, 45% of the mandschurian inventory, and 3% of the green ash inventory.

In Edmonton, the insect has 2 generations per year.

- Eggs overwinter on shoots at the bottom of lateral and terminal buds. Eggs hatch in late April or early May before bud break.
- After leaf flush, the young nymphs begin feeding on cell contents on the leaf underside. The feeding causes leaf sides to curl under and form a pseudo gall.
- The second generation eggs hatch in late June through early July. Second generation adults mate and lay eggs in September through October.

Developing tools to detect Emerald ash borer

by T.M. Poland, USDA Forest Service, Michigan

Emerald ash borer has killed 20 million ash trees in the core infested areas.

- *Agrilus planipennis* was first reported in Detroit in 2002. Since then, it has spread to Ohio, Maryland, Indiana, Illinois, Pennsylvania, Ontario, also Quebec in 2008.
- Research has confirmed the best monitoring trap is purple colour, multi-component, 10 feet tall, baited with a pheromone blend or a bark blend.

Current research is examining pesticide efficacy.

- Ebamectin benzoate has consistently given the best results with near 100% efficacy. (Note from Mario: this product not yet registered in Canada but is scheduled for testing).