



Canadian Food
Inspection Agency

Agence canadienne
d'inspection des aliments

Emerald Ash Borer Surveys Conducted by the CFIA

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Plant Health Survey Unit, CFIA

February 16, 2011

Edmonton, AB



2002



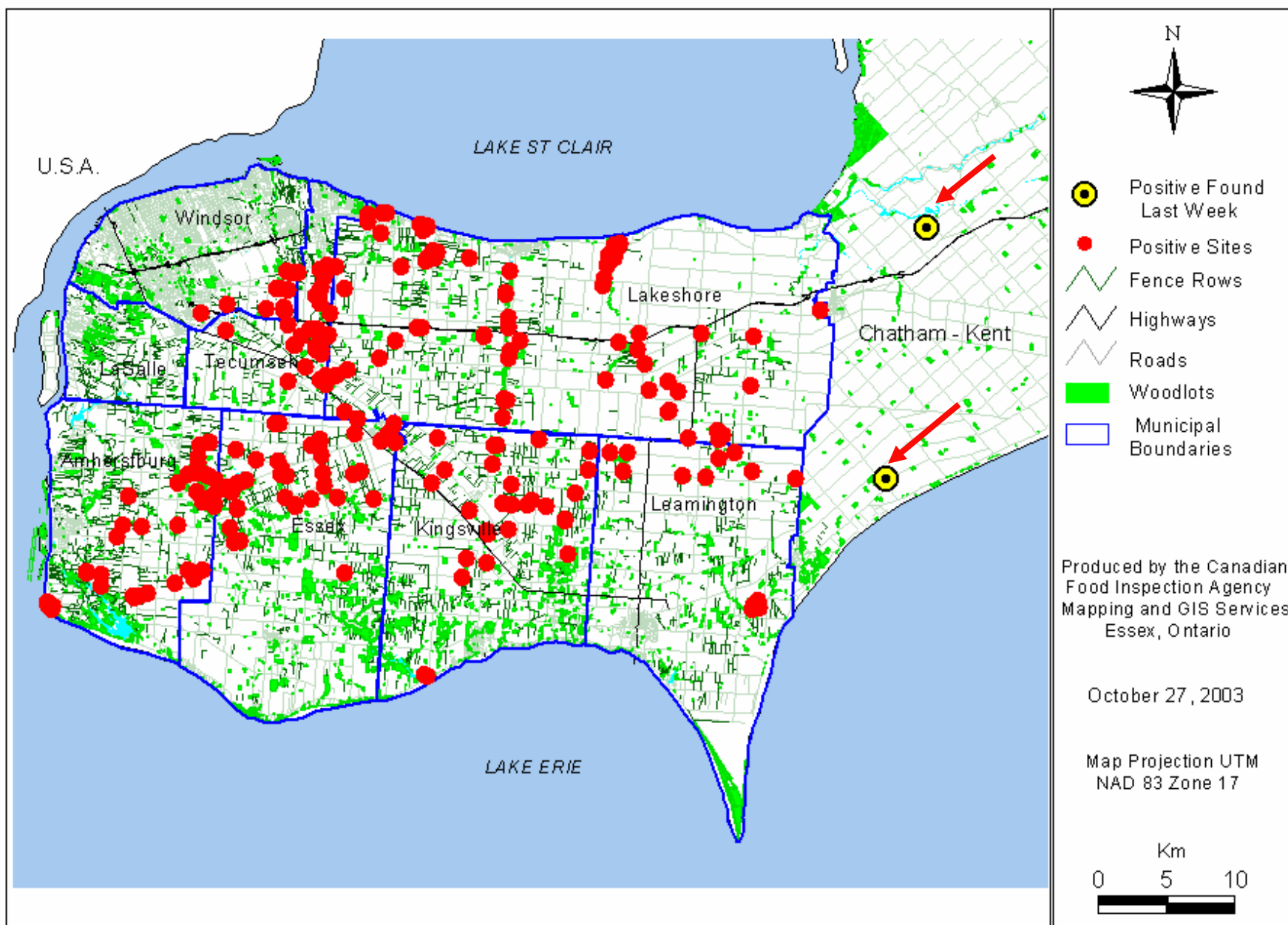
- California Ave, Windsor, ON
- Signs/symptoms evident
- Crown dieback, epicormic shoots, EAB galleries





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Detected EAB Positive Sites as of October 27, 2003

Canada

2003



**Green leaf volatiles & standard
black Lindgren funnel trap**



**Japanese beetle trap &
JB floral scent lure**



2004



- Panel trap
- No lure



- Too slow



Trap trees



- US only
- Girdled in spring
- Felled/peeled
- Not used by CFIA
- Liability, time & disposal
- Later abandoned by US**

Photo: Pennsylvania Department of Conservation and Natural Resources



Ground Surveys - Visual



2002 → present



Signs and Symptoms



Symptom – crown dieback/chlorosis

Flagging – dieback
of single branch



Thinning and
chlorosis (yellowing)
of crown



Crown dieback



Dead branches and
epicormic shoots



Photos from Lyons et al 2007



Symptom – epicormic shoots

newly
sprouted



beginning to
elongate



originating from
roots



originating from
bole



Photos from Lyons et al 2007



Symptoms

Bark staining



Bark stain and swelling cut away revealing gallery

Photos from Lyons et al 2007



Signs



Photos from Lyons et al 2007

Bark crack



Bark crack
revealing gallery



Other Signs & Symptoms

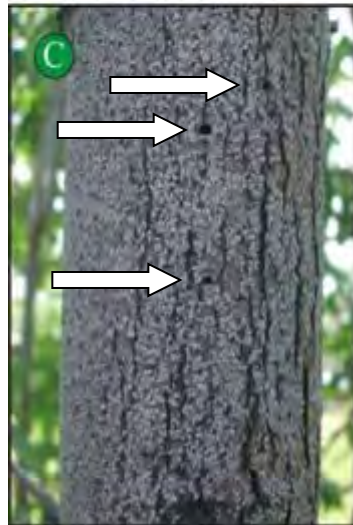
Woodpecker
feeding



Squirrel feeding



Oystershell
scale



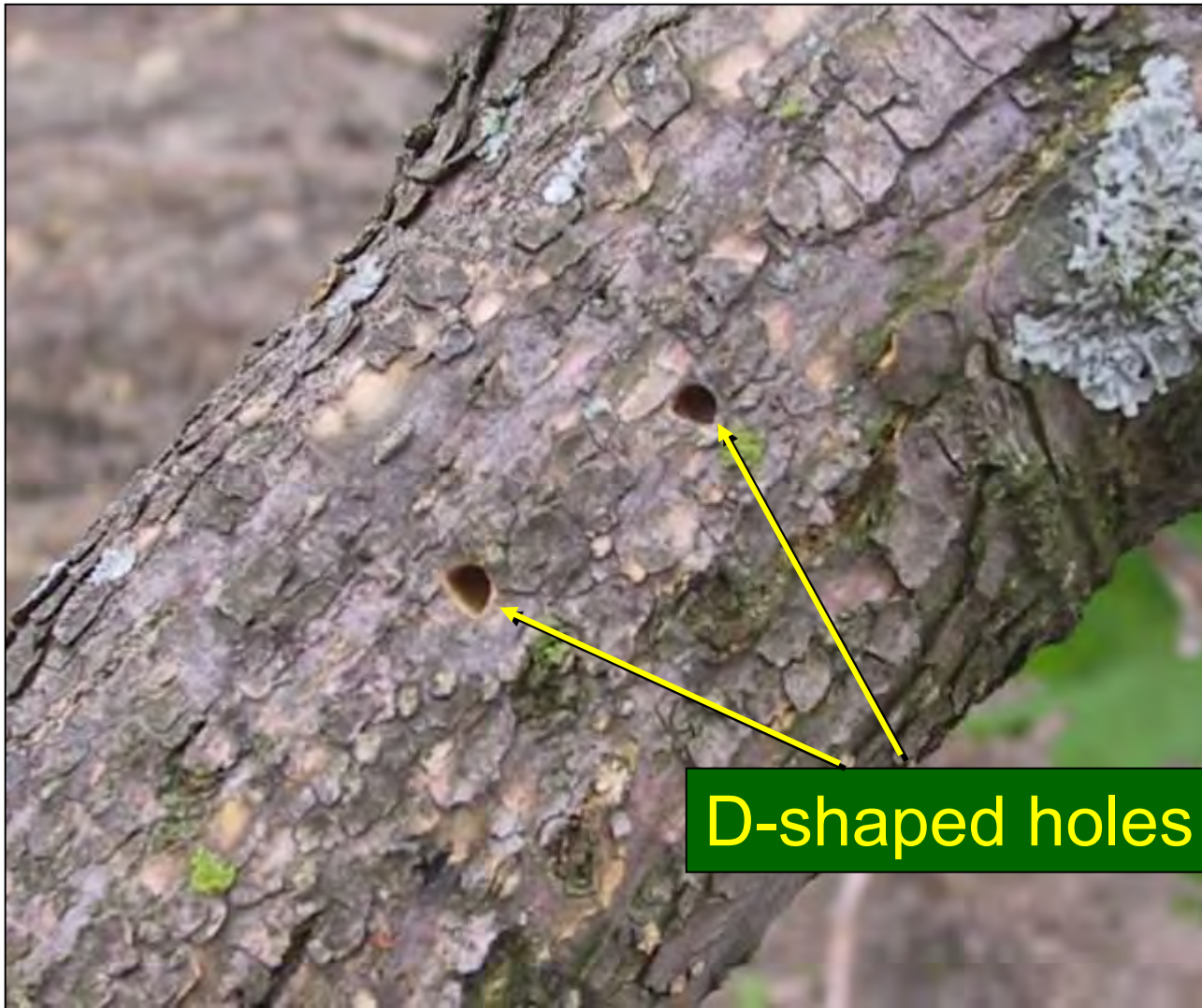
Overabundant
seed crop



Photos from Lyons et al 2007



Sign – exit holes



D-shaped holes



MM
CM

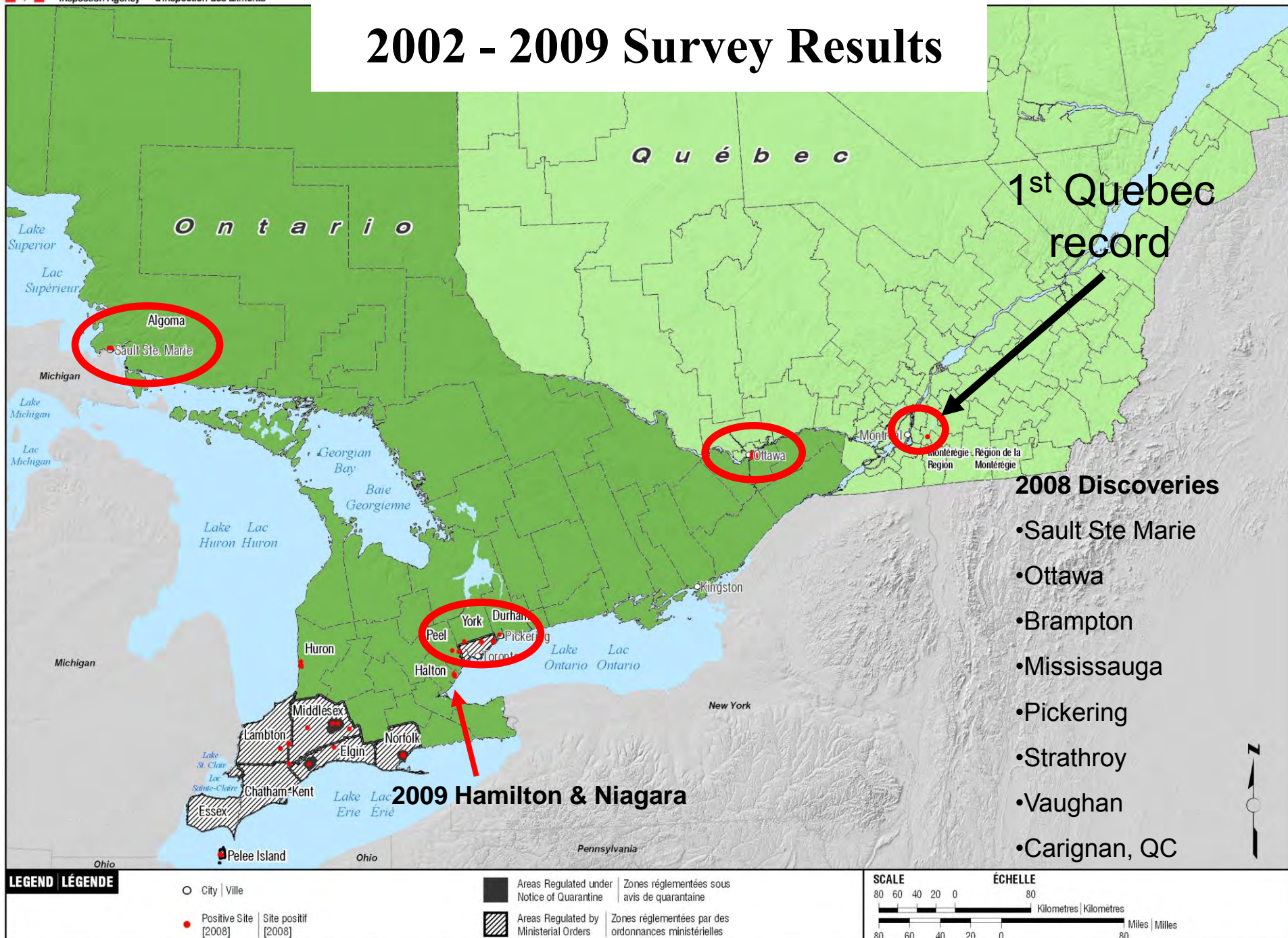
1

2

3



2002 - 2009 Survey Results



2010



Glue on outside of trap

(Z)-3-hexenol lure

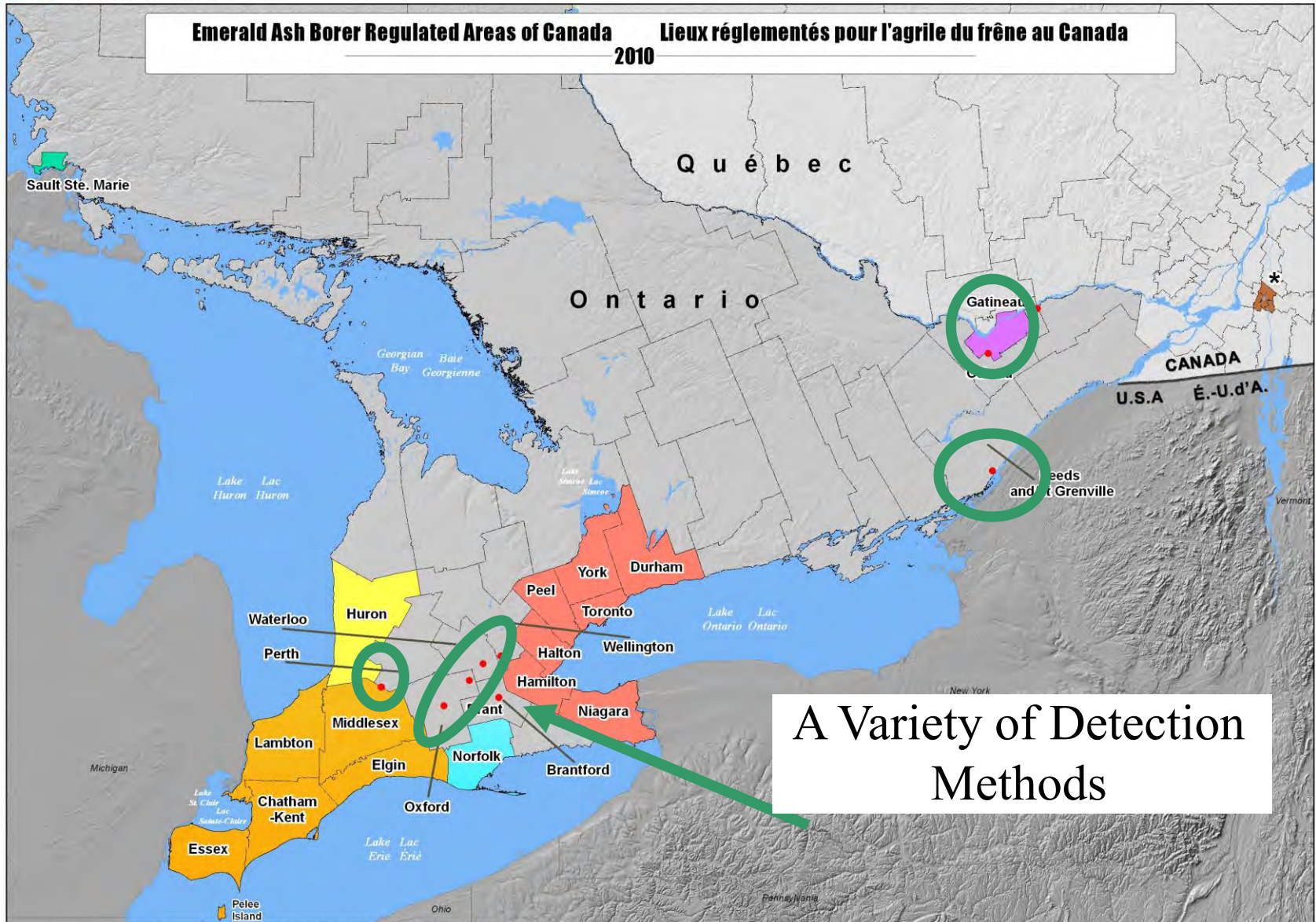
- a.k.a. green leaf volatile
- smells like a generic deciduous leaf (i.e. does not smell specifically like ash)

Hung from branch

Across Canada



2010 Survey Results



LEGEND | LÉGENDE



Areas Regulated by Ministerial Orders

Positive site outside of a regulated area

Lieux réglementés par des arrêtés ministériels

site positif à l'extérieur d'une zone réglementée

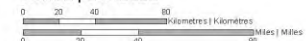
★ Carignan, Saint-Mathias-sur-Richelieu, Chambly, Richelieu and/et Saint-Basile-le-Grand.

Produced by the Canadian Food Inspection Agency, Mapping and GIS Services, London, Ontario.
Map Projection UTM NAD 83 Zone 17

Yr/An
2010 09

Produit par l'Agence canadienne d'inspection des aliments, Cartographie et services SIG, London, Ontario.
Projection cartographique UTM NAD 83 Zone 17

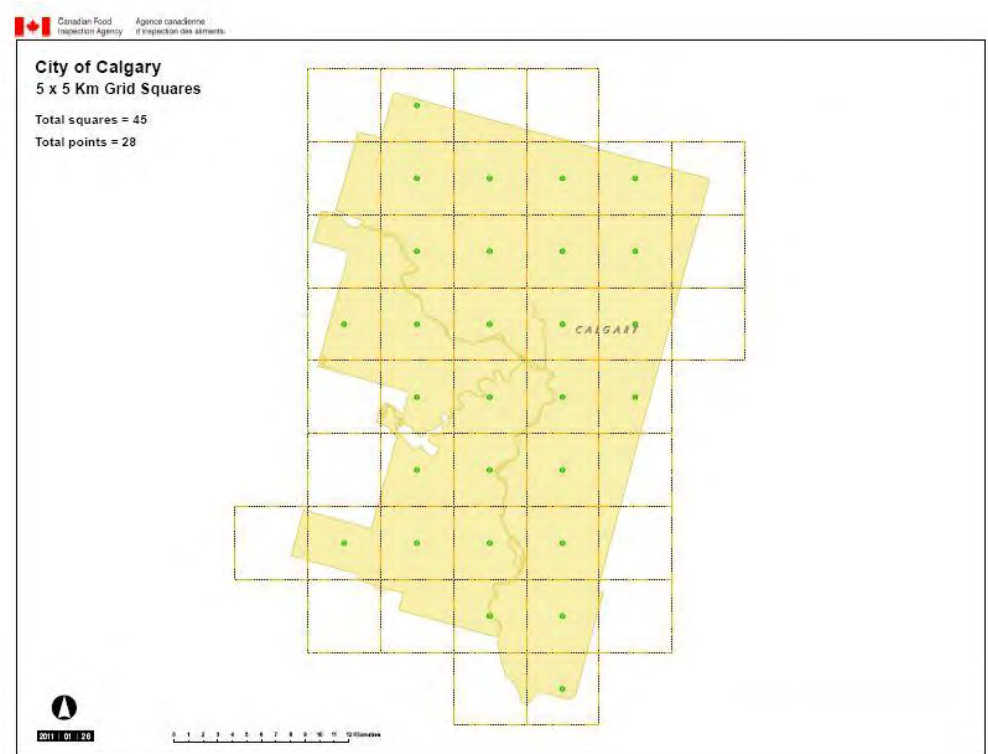
SCALE | ÉCHELLE



2011



Photo: Hugh Evans, CFS



- Research, 2010 trap catches, recommended by CDN EAB Science Committee
- Grid
- No silver bullet
- Ash decline scouting, visual ground survey

Branch Sampling

- Disposal issues
 - No infrastructure
- OSH concerns
 - Not trained
- Time constraints
- CFIA inspectors have trap deployment experience from other plant health surveys.
- Not used by CFIA
 - But supported by CFIA
 - Very applicable for urban foresters

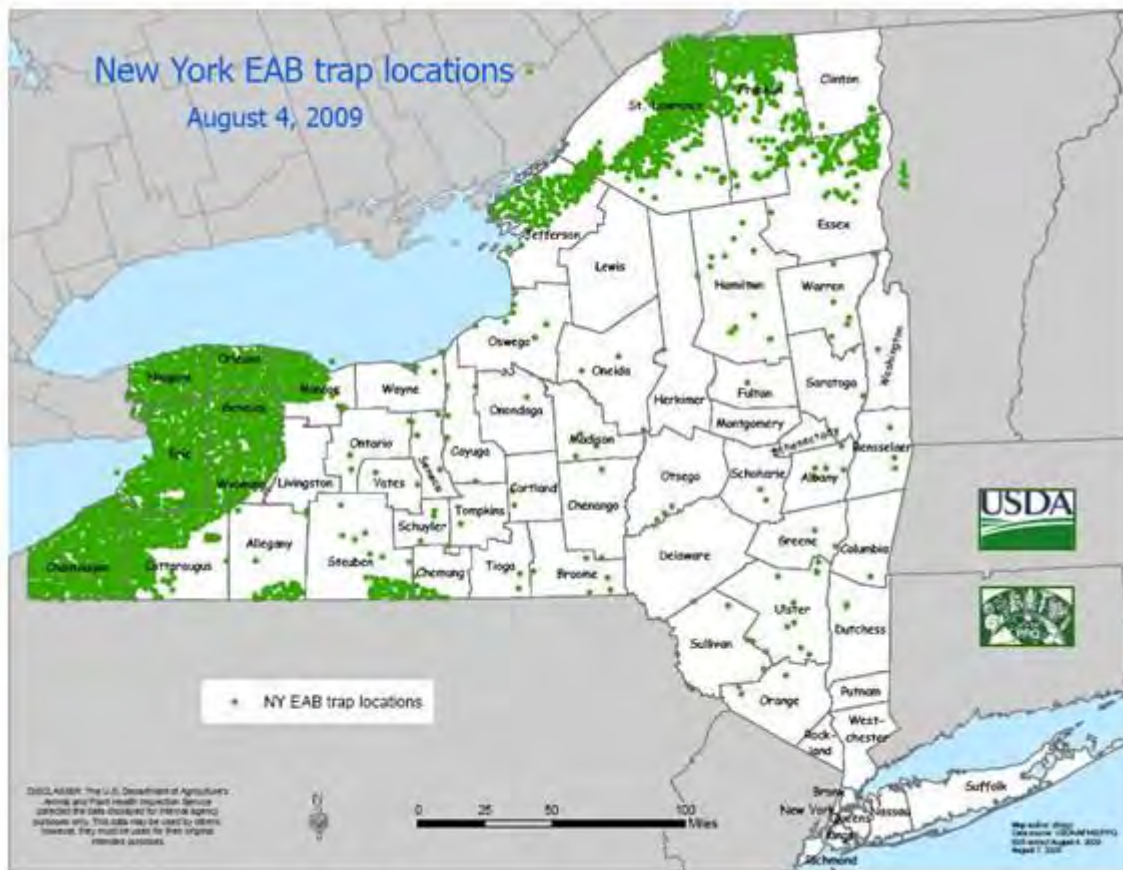


Photo: Krista Ryall, Jeff Fidgen, Jean Turgeon, CFS

Jeff: Tech transfer in Edmonton & Calgary (March)



US EAB Surveys



Canada's Reasons for Not Using Manuka/Phoebe

- (Z)-3-hexenol effective
- manuka/phoebe oil is a blend of products, can vary
- supply issues

purple prism trap
lure: Manuka/phoebe oil

Aerial Survey – Ash Decline

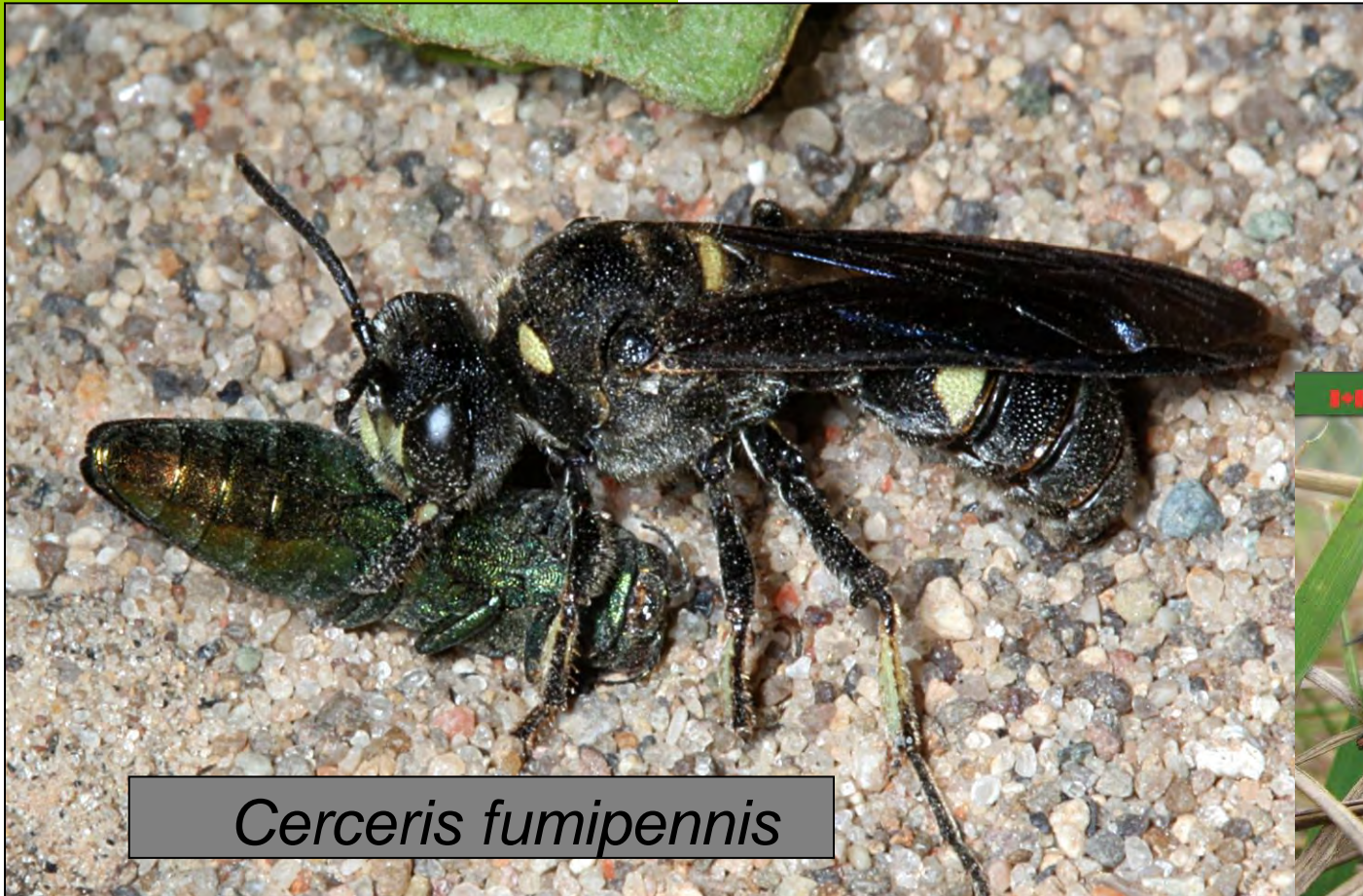
- 2008 Toronto
 - OMNR
 - CFS
 - CFIA
- 2009 & 10
 - Quebec
 - Manitoba
 - New Brunswick
- Does not detect EAB



Biosurveillance

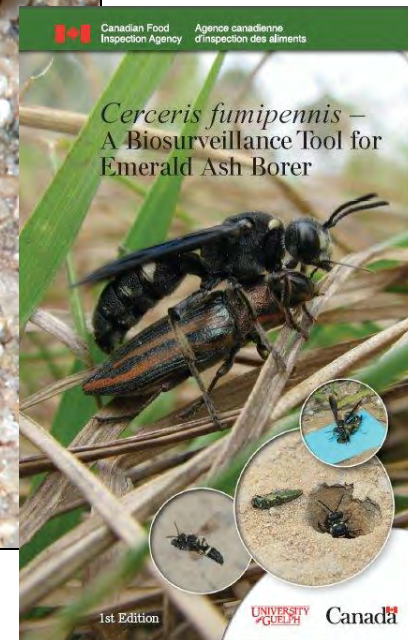
Philip Careless – M.Sc. (Guelph)

- Steve Marshall (Guelph)
- Bruce Gill (CFIA)



Cerceris fumipennis

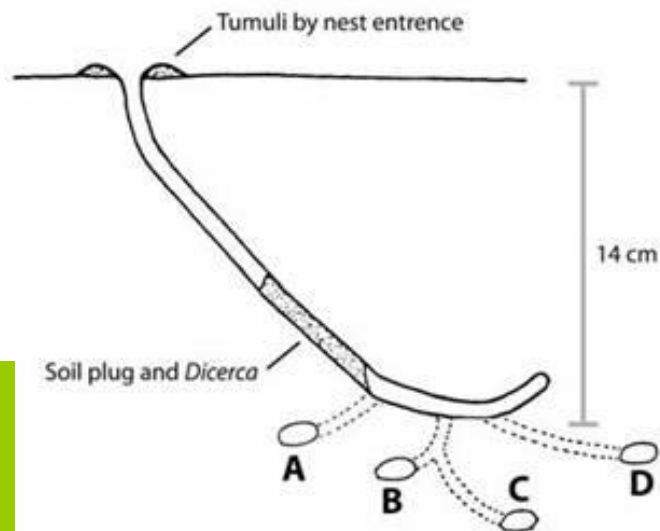
All photos by Phil Careless







- Campgrounds
- Baseball diamonds
- Gravel fields
- Parking lots
- Roadsides



PD Careless



Citizen Scientists or Wasp Watchers

- Developed in US
- Public outreach tool
- Adopt colonies
- US TV, newspapers



2011 Ottawa Pilot Project

- ↑ public awareness of EAB
- Piggyback firewood awareness

Joe Heller ©2001
GREENBAY PRESS, GAZ.

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