



Canadian Food
Inspection Agency

Agence canadienne
d'inspection des aliments

Plant Protection Survey Report

2009

PREFACE

Pest surveys are required to maintain claims of "pest-free" status of an area, to detect new populations of quarantine pests, and to delimit populations of quarantine pests with limited distributions in Canada. Pest surveys are also an integral part of control and eradication programs. Surveys provide information in support of all regulatory programs: import, export, and domestic. In all cases, reliable and accurate pest distribution data provides the basis for sound regulatory decisions.

The Plant Health Surveillance Unit is responsible for planning, coordinating, and administering the national survey program. The survey unit also plays a lead role in the design of new surveys and is responsible for the refinement of ongoing survey techniques and tools as new methodologies develop. Other areas of work include the development of information systems to collect, organize, and store survey data and mapping of regulated pest distributions.

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FOREST PEST SURVEYS

Asian longhorned beetle (*Anoplophora glabripennis*)

Eradication Program in Toronto-Vaughan, Ontario

The Asian longhorned beetle (ALHB) is an invasive insect that attacks and kills a wide variety of deciduous tree species. This beetle was detected for the first time in Canada in September of 2003. The infestation occurred in an area along the municipal border between the cities of Vaughan and Toronto, Ontario. An eradication program was launched in November of 2003 by the CFIA in cooperation with municipal, regional and provincial agencies as well as Natural Resources Canada-Canadian Forest Service (NRCan-CFS). Currently, there is no attractant or lure available that could be used to detect adult populations of the Asian longhorned beetle. The only technique available to detect its presence is to search either for adults during the flight period or for visible signs and symptoms of its attack on trees. Details on the progress of the eradication program can be found at the CFIA Forestry page at: www.inspection.gc.ca/english/plaveg/for/fore.shtml.

High Risk Detection Grid Surveys

In addition to the intensive detection work within the Ministerial Order eradication area, the CFIA conducted systematic detection grid surveys at a number of larger municipalities across Canada. The survey methodology was developed in collaboration with NRCan-CFS.

This approach was designed to ensure a high probability of detecting the presence of an advanced infestation at each grid point. A triangular grid consisting of contiguous survey points was placed over each of the target cities. Host material present at each site is inspected for signs of ALHB infestation. No signs or symptoms of *A. glabripennis* were observed during these surveys.

Municipalities in the 2009 ALHB Detection Grid Survey included:

- Ontario: Ottawa, Kitchener-Waterloo, London, Markham
- Quebec: Montreal, Longueuil, Quebec
- Nova Scotia: Bridgewater, Country Harbour, Debert, Halifax, Kentville, Pictou, Port Hawkesbury, Sydney, Truro
- New Brunswick: Fredericton, Grand Falls, Moncton, Woodstock
- Prince Edward Island: Charlottetown, Summerside
- Newfoundland & Labrador: St. John's
- British Columbia: Vancouver, Richmond

Emerald Ash Borer (*Agrilus planipennis*)

The emerald ash borer (EAB) is an introduced metallic wood boring beetle which attacks and kills living ash (*Fraxinus* spp.) trees. This exotic insect pest was positively identified for the first time in North America in the summer of 2002. Early detection is essential to mitigate the spread of this pest to non-infested areas. In 2009, a number of strategies were employed for Emerald Ash Borer detection in Canada including; scouting for broad scale ash decline, trapping using green prism traps baited with a green leaf volatile, visual inspection of high risk sites, aerial surveys and biosurveillance utilizing the native wasp *Cerceris fumipennis* (Hymenoptera: Crabronidae).

In addition to areas showing broad-scale ash decline, the high risk detection surveys targeted sites where the pest is most likely to have been introduced through human activities such as campgrounds, firewood dealers, importers of ash material, truck stops, urban areas recently planted with host material, sawmills, ports and industrial areas.

Background information on the pest and regulatory updates can be found on the CFIA Forestry page at: www.inspection.gc.ca/english/plaveg/for/fore.shtml

Ontario

In collaboration with the Ontario Ministry of Natural Resources (OMNR), visual detection surveys were conducted at 1028 high risk sites across Ontario in 2009. New municipal records for EAB included sites in the city of Hamilton and the Regional Municipality of Niagara.

- Survey Map for *A. planipennis*, Ontario

Quebec

Ash trees in the vicinity of 112 high risk sites were surveyed across Quebec in 2009. These included locations such as highway stops, landfills, importers, industrial parks, campgrounds, nurseries, firewood companies, sawmills, wood transporters, as well as follow-up to calls from the public. Some sites were also selected from information gathered from helicopter aerial surveys for ash decline. Aerial surveys focused on the south shore of Montreal in urban and wooded areas. No new EAB positive sites were found outside the regulated area. In the fall of 2009, the Ministère de ressources naturelles et de la Faune du Québec (MRNFQ) conducted a visual survey in conjunction with CFIA inspectors in the regulated area near Carignan and recorded 189 new infested trees.

- Survey Map for *A. planipennis*, Quebec

Atlantic Canada

Surveys were conducted at high risk sites in all four Atlantic provinces as listed below. No signs or symptoms of *A. planipennis* were observed during the survey.

Nova Scotia - 23 sites were surveyed in the Halifax Regional Municipality area.

New Brunswick - 26 sites

Prince Edward Island - 10 sites

Newfoundland and Labrador - 2 sites surveyed in the St. John's area.

- Survey Map for *A. planipennis*, New Brunswick
- Survey Map for *A. planipennis*, Nova Scotia
- Survey Map for *A. planipennis*, Prince Edward Island

Western Canada

CFIA inspected high risk sites throughout the four western Provinces in 2009 as listed below. No signs or symptoms of *A. planipennis* were detected.

Manitoba – 28 sites near the municipalities of Brandon and Winnipeg

Saskatchewan – 25 sites throughout the Province

Alberta – 13 sites near Edmonton and Red Deer

British Columbia – 60 sites on Vancouver Island, the Lower Mainland, and the BC Interior.

- Survey Map for *A. planipennis*, Alberta
- Survey Map for *A. planipennis*, British Columbia
- Survey Map for *A. planipennis*, Manitoba
- Survey Map for *A. planipennis*, Saskatchewan

European Woodwasp (*Sirex noctilio*)

The European woodwasp, *Sirex noctilio*, feeds on many species of pine and is a serious pest of plantations in Australia, South America and South Africa. On July 5, 2005, the first established population of the European woodwasp was reported in Fulton, New York. In 2005, in response to additional finds near the initial discovery in Fulton, NRCan-CFS, the OMNR and the CFIA established a trapping survey along the Canada-United States border extending west from Cornwall to Prince Edward County south of Belleville, Ontario. Surveys have continued throughout Ontario, Quebec and the Atlantic provinces since 2006. These surveys were initiated to support decisions on the regulatory status of this insect. *Sirex noctilio* has been found throughout the breadth of southern Ontario from Cornwall to Windsor and in Lachute, Quebec (see the 2006 to 2008 versions of this report for more detail on distribution records).

Trapping is conducted from early July until mid-October and involves the placement of two, 12-unit Lindgren funnel traps per site. Traps are baited with ultra high release lures containing 70% alpha-pinene (75% + enantiomer and 25% - enantiomer), plus 30% beta-pinene and checked every two weeks.

Ontario

In 2009 a collaborative survey contract between CFIA and OMNR was established as a follow up to the finds of *S. noctilio* in Ontario in the previous three years.

Traps were deployed at 82 locations within Ontario, extending from Sault Ste. Marie to Mattawa, also covering sections of Kirkland Lake, Wawa and Thunder Bay. This survey focused on high risk Scots pine, Red pine and Eastern white pine stands (unmanaged, overstocked, with low or mild level stress) in counties and regional municipalities north of the known distribution of *S. noctilio*. No *S. noctilio* adults were captured during this survey.

- Survey Map for *S. noctilio*, Ontario

Quebec

The CFIA trapped 106 pine stands throughout southern Quebec and the MRNFQ trapped an additional 50 sites. Most stands were 15 years of age or older and were primarily Scots pine. A few Red pine and some Jack pine stands were also surveyed. *Sirex noctilio* was found in two new sites in 2009 near the towns of Bromptonville and Compton in the Eastern Townships.

- Survey Map for *S. noctilio*, Quebec

Atlantic Canada

Many of the *Sirex* survey sites were those that had been previously selected for Pine Shoot Beetle surveys as the host conditions are favourable for the establishment of both species. These included abandoned Scots pine plantations in stands near mills that sources pine from areas of Canada and the United States (US) where *S. noctilio* is known to occur. Twenty-three sites were surveyed in each of Nova Scotia and New Brunswick in 2009. No *S. noctilio* were detected during these surveys.

- Survey Map for *S. noctilio*, New Brunswick
- Survey Map for *S. noctilio*, Nova Scotia

Western Canada

In British Columbia, the *S. noctilio* survey was part of the IAS Forest trapping survey. In Alberta, the StopDED organization was contracted to carry out the survey throughout the province. In Saskatchewan and Manitoba, 25 sites and 17 sites respectively, were surveyed. No *S. noctilio* were detected during these surveys.

- Survey Map for *S. noctilio*, Manitoba
- Survey Map for *S. noctilio*, Saskatchewan

Pine Shoot Beetle (*Tomicus piniperda*)

Pine shoot beetle (PSB), *Tomicus piniperda*, native to Asia, northern Africa, and Europe was first found in North America in 1992 in Ohio, US. A serious pest of pines (*Pinus* spp.), the beetle attacks new shoots, stunting the growth of the tree. The pest, which is believed to have been introduced through solid wood packing material, has since been detected in the Great Lakes region of Canada and throughout the northeastern US. This survey is being conducted in support of D-94-22 Plant Protection Requirements on Pine Plants and Pine Materials to Prevent the Entry and Spread of Pine Shoot Beetle and various other policies and programs aimed at preventing the spread of PSB from infested areas within Canada and the US.

Both a trapping and a visual inspection component are included in this survey. The survey uses 12-funnel Lindgren funnel traps baited with the Enhanced *Tomicus* lure from Contech. In most cases three traps are placed at each site. Visual surveys for signs and symptoms of PSB are conducted during the latter trap visits.

New Brunswick

In New Brunswick, surveys are conducted near sites that have a high risk of introduction from North American sources such as sawmills, that import pine logs from the US, or in pine stands along major transportation corridors. In 2009, traps were set at 29 sites throughout the province. All samples submitted for identification were negative for *T. piniperda*.

- Survey Map for *T. piniperda*, New Brunswick

Nova Scotia

In 2009, this survey was completed in cooperation with the staff at the Nova Scotia Department of Natural Resources. There were 18 sites with three traps at each location. All samples submitted for identification were negative for *T. piniperda*.

- Survey Map for *T. piniperda*, Nova Scotia

Ontario

In 2009, trapping for PSB was conducted by the OMNR to delimit the distribution of *T. piniperda* in northern Ontario and determine infestation status. A total of 63 sites were targeted in northern Ontario. There were detections of *T. piniperda* outside of the established regulated area in the Districts of Algoma, Sudbury and Nipissing, the Counties of Lanark, Leeds and Grenville and Renfrew, the city of Ottawa and Greater Sudbury.

- Survey Map for *T. piniperda*, Ontario

Quebec

A total of 181 traps were placed in Quebec in 2009. The survey included 75 sites in 46 municipalities. Adult *T. piniperda* were captured in 20 sites in 14 new (non-regulated) municipalities as listed below. Numbers in parentheses after each municipality name indicate the number of positive sites in each.

Regional county municipality (RCM) Jacques Cartier : Lac-Beauport (1)
RCM Joliette : Notre-Dame des Prairies (1), St-Thomas (4), Crabtree (1), Joliette (1), St-Charles-Borromee (1)
RCM Maskinonge : Maskinonge (1), St-Boniface (1)
RCM Montcalm : Ste-Julienne (1)
RCM Portneuf : Cap-Sante (2), Deschambault (1), Ste-Christine-d'Auvergne (1)
Trois-Rivieres (3)
St-Augustin (1)

- Survey Map for *T. piniperda*, Quebec

Invasive Alien Forest Insect Surveys

The Invasive Alien Forest Insect Surveys are pathway based surveys designed to detect a broad range of wood borer and bark beetles. The surveys focus on urban areas where the risk of invasive alien insects moved with international wood packaging and dunnage is greatest. There are two components to this survey. The first is a semiochemical trapping program and the second consists of rearing insects collected from declining trees in urban environments.

For the trapping component of the survey, Lindgren traps (12-funnel) were placed at each site and each trap was baited with either, i) ultra-high release ethanol + ultra-high release alpha-pinene, ii) ultra-high release ethanol, or iii) ConTech® 'Exotic Bark Beetle' lure (2-methyl-3-buten-2-ol, cis-verbenol, racemic ipsdienol). Each lure type was replicated three times at each site for a total of nine traps per site. Traps are placed in March and collected in November. There were two lure changes during the trapping season one in June and another in September.

The rearing survey compliments the trapping surveys for species or groups of insects that do not readily respond to commercially available semiochemicals, particularly insect borers of hardwoods. The rearing survey consists of obtaining two log sections from a tree that is targeted for removal by a city's hazard tree removal program. Trees are selected for sampling based on a pre-determined set of criteria based on signs of decline. Logs are placed in a custom designed rearing facility for up to two years under climate-controlled conditions. Emerging insects are regularly collected from the bolts and submitted to the CFIA Entomology lab in Ottawa for identification. Rearing facilities are located in the cities of North Vancouver, Toronto, Montreal and Dartmouth.

For additional information concerning the rearing survey, contact Robert Favrin, National Manager, Plant Health Surveillance Unit (robert.favrin@inspection.gc.ca).

Ontario

In 2009, the semiochemical trapping component of the survey was carried out in the cities of Windsor, St. Thomas, Ingersoll, Kitchener, Waterloo, Oakville, Mississauga, Brampton, Newmarket, Aurora, Whitby and Oshawa using the methodology described above. A total of 144 traps were deployed at 16 sites in the targeted cities. *Tomicus piniperda* and *Sirex noctilio* were captured in a number of traps established in south western Ontario. A single *Agrilus planipennis* adult was captured in a trap baited with UHR Ethanol in Windsor, Ontario.

- Survey Map for the Invasive Alien Forest Insects, Ontario

Atlantic Canada

Nova Scotia – 11 sites (90 traps). Industrial areas in Dartmouth, Halifax, Debert, Hantsport, and Bridgewater were selected. Three sites located in Dartmouth and Halifax were positive for brown spruce longhorn beetle (BSLB), *Tetropium fuscum*. There were 5 adults collected in Burnside and 11 collected in Clayton Park.

- Survey Map for the Invasive Alien Forest Insects, Nova Scotia

New Brunswick – 5 sites (45 traps). The three sites in Saint John were located at the Irving Nature Park, Rockwood Park, and Canaport Liquified Natural Gas Terminal. The two sites in St. Stephen were located at the port of Bayside and the international landfill at Lawrence Station.

- Survey Map for the Invasive Alien Forest Insects, New Brunswick

Newfoundland and Labrador – 3 sites (27 traps). The three sites targeted were the regional landfill in St. John's, and industrial park areas in Mount Pearl, and St. John's.

- Survey Map for the Invasive Alien Forest Insects, Newfoundland and Labrador

Quebec

The 15 sites selected for this survey focused on 9 forested areas near industrial centres and ports as well as 6 sites near landfills. Ninety-five traps were deployed in the following 15 municipalities (12 RCM's): Oka (Deux-Montagnes), Ste-Anne-de-Bellevue, Montreal-Est (Montreal), Pierrefonds (Montreal), Montreal (Montreal), Becancour (Becancour), Sorel-Tracy (Pierre-de-Saurel), Boucherville, Sherbrooke (Sherbrooke), St-Bruno-de-Montarville (St-Bruno-de-Montarville), Pont-Rouge (Portneuf), St-Augustin, Ste-Marie-de-Beauce (La nouvelle Beauce), St-Lambert-de-Lauzon (La nouvelle Beauce) and St-Flavien (Lotbiniere).

Seven adults of *Tomicus piniperda* were captured near Oka (6) and Sherbrooke (1). These finds occurred in areas previously regulated for *T. piniperda* and do not expand the known distribution. *Xyleborinus alni* was detected in a trap near Sherbrooke. To our knowledge, this

is the first time this insect has been reported in Quebec. It is not considered a pest of quarantine significance.

Log collection for the rearing continues in various boroughs in city of Montreal. The following genera were collected: *Fraxinus*, *Acer*, *Ostrya*, *Quercus*, *Tilia*, *Betula*, *Gleditsia*, *Abies* and *Ulmus*. No new records of exotic insects were recorded.

- Survey Map for the Invasive Alien Forest Insects, Quebec

Western Canada

In British Columbia, eighteen sites were surveyed including 3 sites on Vancouver Island, 10 in the Lower Mainland, and 5 sites in the BC interior. A total of 162 Lindgren funnel traps were deployed using the methods described above. An interception of 1 adult beetle of *Scolytus jacobsoni* was detected at the Vernon landfill. This was the first known detection of this species in North America. StopDED, Alberta Sustainable Resource Development and various municipalities in Alberta collaborated with CFIA to carry out the survey throughout the province. No new invasive forest pest species were detected during this survey.

- Survey Map for the Invasive Alien Forest Insects, Alberta
- Survey Map for the Invasive Alien Forest Insects, British Columbia

The insect rearing component for the 2009 survey consisted of log samples from trees originating from North Vancouver urban forests. Partnership with the District of North Vancouver for sourcing and falling trees has been beneficial towards early detection IAS work.

European Gypsy Moth (*Lymantria dispar dispar*)

A French naturalist brought the gypsy moth to the US (Massachusetts) in 1869 for experiments. During his studies some of the caterpillars escaped into his garden and the nearby woods. This initial small population quickly became a very serious pest. All levels of government became involved in a co-operative control effort and within a few years the insect was almost eradicated. At that point, with the threat no longer obvious, the program was ended. Left alone, the gypsy moth very quickly became established throughout the north-eastern quarter of the US. The first reported find in Canada occurred in Quebec in 1924 and then in New Brunswick in 1936, in both instances the pest was eradicated. However, the gypsy moth became firmly established in Quebec in the 1960's and quickly spread into eastern Ontario. Today, gypsy moth is established in southern Ontario, southern Quebec, south-western New Brunswick and south western Nova Scotia. Adult male monitoring surveys are conducted annually in non-regulated areas of Canada using Delta trap baited with + disparlure pheromone. Surveys are also conducted to verify eradication of the insect in areas where eradication programs have been undertaken. Two systems of trapping are used: a) detection trapping to determine the presence in an area currently free from *L. dispar dispar* and b) delimitation trapping to determine the extent of a population.

Nova Scotia

Trapping occurred at 198 sites in non-regulated areas of eastern Nova Scotia. There were 62 traps positive for gypsy moth with a total of 286 moths. Visual surveys occurred at 16 sites where 5 or more moths were collected. One egg mass was found in Mount William and one egg mass as well as gypsy moth larval skins and pupa were found in River John. Both sites are located in Pictou County.

This is the third year that additional life stages of gypsy moth have been identified in the River John area. In 2007, there were 4 egg masses found and in 2008 there were 2. There were also 2 egg masses found in Eureka, Pictou County in 2008.

- Survey Map for *L. dispar dispar*, Nova Scotia

Prince Edward Island

Trapping occurred in areas outside the city of Charlottetown which is regulated for gypsy moth at 428 sites. There were 171 positive traps for gypsy moth with a total of 747 moths collected. Visual surveys occurred at 44 sites where 5 or more moths were collected. Three egg masses were found in Winsloe within meters of the northern boundary of the regulated area of Charlottetown.

- Survey Map for *L. dispar dispar*, Prince Edward Island

New Brunswick

Trapping occurred in east and northern areas where gypsy moth is not regulated at 183 sites. There were 68 positive traps for gypsy moth with a total of 220 moths collected. Visual surveys occurred at 18 sites where 5 or more moths were collected. No additional life stages of gypsy moth were found.

- Survey Map for *L. dispar dispar*, New Brunswick

Newfoundland and Labrador

Trapping occurred throughout Newfoundland and in Goose Bay, Labrador at 347 sites. There was one positive trap with one gypsy moth collected. No additional life stages of gypsy moth were found at the site.

- Survey Map for *L. dispar dispar*, Newfoundland and Labrador

Quebec

Surveys for *L. dispar dispar* were not conducted by CFIA staff in 2009. According to provincial surveillance information, the overall gypsy moth distribution has not changed significantly in Quebec in a number of years, with little-to-no defoliation observed in the past

several years except in a few isolated locations in southern Quebec, all within the regulated area.

Ontario

According to the aerial survey information gathered by NRCan-CFS and the OMNR, there was a decrease in the total area of moderate-to-severe defoliation caused by the gypsy moth in 2009 (385 ha) when compared to 2008 (39,476 ha), 2007 (31,094 ha), 2006 (10,309 ha) and 2005 (1,242 ha). This defoliation occurred around Midhurst, Guelph and Aylmer. Light defoliation (3,253 ha) was also widespread in these areas. Further information on specific areas of defoliation can be obtained from NRCan-CFS in Sault Ste. Marie, Ontario.

In 2009, the CFIA placed delta traps at 172 sites in the Thunder Bay area in a linear arrangement along transportation corridors. There were a total of 87 adult moth captures at 54 sites, with a maximum capture of 8 moths at a single site.

- Survey Map for *L. dispar dispar*, Ontario

Western Canada

Annual detection and delimitation surveys are conducted for gypsy moth in all four western Canada provinces by CFIA, provincial, municipal and other government partners.

In Manitoba, a total of 681 traps were placed by CFIA, the city of Winnipeg, and the Province (Manitoba Conservation). There were 6 sites positive for *Lymantria dispar dispar* with a total of 10 moths captured. All of the sites were within the city of Winnipeg; 1 moth near St. Germaine, 2 moths in 1 trap south of the Winnipeg airport, 1 moth around North Main St., 1 moth near Conestoga Park, 4 moths near Parkville Bay, and one moth near Wellington crescent were detected.

In Saskatchewan, a total of 615 traps were set by CFIA, the city of Regina, and the city of Saskatoon with 1 trap being positive for *Lymantria dispar dispar*. One male moth was trapped near Moose Jaw.

In Alberta, a total of 756 traps were deployed by CFIA, Parks Canada, Alberta Parks, the Province of Alberta (ASRD), and municipal staff from Edmonton and Calgary. Five traps in Alberta were found positive for *Lymantria dispar dispar*. Edmonton, Calgary and Lethbridge each had one gypsy moth captured in one trap. As part of a delimitation survey, one moth in one trap and two in another trap were found in Medicine Hat.

In British Columbia, a total of 4821 traps were set out by CFIA, BC Ministry of Forests and municipal partners resulting in 30 male moths being captured in 23 traps at 11 locations. In the Lower Mainland/Fraser Valley positive traps (moths) were located in Vancouver 1(1), North Vancouver 2(2), Richmond 6(10), Langley 1(1), South Surrey/Whiterock 4(5), Abbotsford 2(2) and Harrison Hot Springs 3(5). Follow up visual searches at Harrison Hot Springs revealed 3 egg masses (1 new and viable, 2 from a previous year) in a commercial Hazelnut orchard and 7 egg masses in Richmond. On Vancouver Island, 3 positive traps with 1 moth each were

collected from Comox, Shawnigan Lake and Duncan. In addition, one moth was detected from the interior of the province near Nelson.

All moths submitted in the BC, AB, SK, NL, and MB were subjected to DNA analysis to determine possible Asian biotype. All moths but one were found to be of a genotype well known within the North American populations. One moth found near a recreation site/campground (Chemainus) was determined by molecular methods to be of an Asian Biotype.

- Survey Map for *L. dispar dispar*, Alberta
- Survey Map for *L. dispar dispar*, British Columbia
- Survey Map for *L. dispar dispar*, Manitoba
- Survey Map for *L. dispar dispar*, Saskatchewan

Asian Gypsy Moth (*Lymantria dispar asiatica* or *Lymantria dispar japonica*)

Asian gypsy moth (AGM) has been introduced into North America on several occasions, but eradication programs have prevented populations from establishing. With its broad host range, larger size and capability to disperse great distances, this insect could cause substantial economic and ecological losses if populations successfully establish in Canada. This survey is being conducted in support of policies D-95-03, D-96-19, D-98-08 and D-02-12.

Asian gypsy moth is defined for regulatory purposes as those gypsy moth subspecies of *Lymantria dispar* capable of sustained directed flight whereas, European gypsy moth are those not capable of flight. The AGM trapping survey targets high risk sites of potential introduction linked to the vessel and container pathways.

Quebec

Trapping for AGM was conducted near maritime ports, warehouses that receive material from off-continent and near railroad yards. Eight sites were included in the 2009 survey in the city of Longueuil, Boucherville and Montreal, and the RCM's of Sept-Rivieres and Manicouagan. DNA analyses from a sub-sampled portion of the moths captured did not indicate that they were of the Asian biotypes.

- Survey Map for *L. dispar asiatica* or *japonica*, Quebec

Ontario

Within Ontario, trapping was conducted for the gypsy moth Asian biotype at a total of 41 sites, including; international ports and terminals, storage yards, terminals and industrial zones. *Lymantria dispar asiatica* or *L. dispar japonica* was not detected during this survey.

- Survey Map for *L. dispar asiatica* or *japonica*, Ontario

Atlantic Canada

Surveys were conducted in all four Atlantic Provinces as listed below. All moths were found to be of genotypes currently known within the North American populations.

Nova Scotia – Eighteen sites in Goldboro (1), Point Edward (1), Point Tupper (1), Port Hawkesbury (1), Storemont (1), Sydney (1), Yarmouth (2), Shelburne (1), and Halifax (9)

- Survey Map for *L. dispar asiatica* or *japonica*, Nova Scotia

Prince Edward Island – Ten sites in Borden-Carleton (2), Charlottetown (2), Georgetown (1), Souris (1), Stratford (1), Summerside (2), and West Royalty (1)

- Survey Map for *L. dispar asiatica* or *japonica*, Prince Edward Island

New Brunswick – Nine sites in Bathurst (1), Belledune (1), Saint John (4), Paquetville (1), St. Stephen (1), and Tracadie-Sheila (1)

- Survey Map for *L. dispar asiatica* or *japonica*, New Brunswick

Newfoundland and Labrador – The one moth collected in the North American Gypsy Moth Survey was submitted.

Western Canada

In British Columbia, Alberta, Saskatchewan and Manitoba, 181 traps, 10 traps, 20 traps and 28 traps were placed respectively, at high risk potential introduction sites. All AGM traps except in the Prince Rupert area (41) were co-located with pink gypsy moth (*L. mathura*) traps and separated by a minimum of 15 meters to prevent any antagonistic effects. All traps (Delta trap baited with + disparlure) placed for AGM were negative however all moths caught in the Western area Gypsy Moth survey are subject to DNA analysis and 1 moth in this survey on Vancouver Island near the town of Chemainus was positive for AGM. It is speculated that the larva of this moth may have ballooned off an infested ship while at either the port of Chemainus or another nearby port or anchorage.

- Survey Map for *L. dispar asiatica* or *japonica*, Alberta
- Survey Map for *L. dispar asiatica* or *japonica*, British Columbia
- Survey Map for *L. dispar asiatica* or *japonica*, Saskatchewan
- Survey Map for *L. dispar asiatica* or *japonica*, Manitoba

Pink Gypsy Moth (*Lymantria mathura*)

Pink gypsy moth (PGM), *Lymantria mathura* is considered a potential threat to North American forests. PGM is a serious defoliator of a wide variety of hardwood trees including *Quercus*. It is known to have an Asian distribution from Russia to India. Recent general

surveillance intelligence indicates heavy populations of PGM in Japan and Russia. In 2008, PGM egg masses were intercepted on vessels entering North America on several occasions. PGM could cause substantial economic and ecological losses if populations successfully establish in Canada. This survey targets the vessel and container pathway and is designed for early detection of PGM should populations reach Canadian shores under the current increased population pressures.

Ontario

In 2009, traps were deployed at a total of 41 sites across Ontario. Site types included international ports and terminals, storage yards and industrial zones. *Lymantria mathura* was not detected during this survey.

- Survey Map for *L. mathura*, Ontario

Quebec

PGM trapping was conducted at the same sites as those targeted for Asian gypsy moth plus an additional site receiving material from Asia in the Quebec City region. In total, nine sites were surveyed in the following municipalities and RCM's: Levis, Longueuil, Boucherville, Montreal, Sept-Rivieres and Manicouagan. *Lymantria mathura* was not detected in this survey.

- Survey Map for *L. mathura*, Quebec

Atlantic Canada

Nova Scotia – Eighteen sites in Goldboro (1), Point Edward (1), Point Tupper (1), Port Hawkesbury (1), Storemont (1), Sydney (1), Yarmouth (2), Shelburne (1), and Halifax (9)

- Survey Map for *L. mathura*, Nova Scotia

Prince Edward Island – Ten sites in Borden-Carleton (2), Charlottetown (2), Georgetown (1), Souris (1), Stratford (1), Summerside (2), and West Royalty (1)

- Survey Map for *L. mathura*, Prince Edward Island

New Brunswick – Nine sites in Bathurst (1), Belledune (1), Saint John (4), Paquetville (1), St. Stephen (1), and Tracadie-Sheila (1)

- Survey Map for *L. mathura*, New Brunswick

Newfoundland and Labrador – Ten sites in Argentia (1), Arnold's Cove (1), Clarenville (1), Corner Brook (1), Mount Pearl (1), St. John's (3), and Botwood (1).

- Survey Map for *L. mathura*, Newfoundland and Labrador

Western Canada

In British Columbia, Alberta, Saskatchewan and Manitoba, 149 traps, 10 traps, 20 traps and 28 traps were placed respectively, at high risk potential introduction sites. There were no detections of *L. mathura* in 2009.

- Survey Map for *L. mathura*, Alberta
- Survey Map for *L. mathura*, British Columbia
- Survey Map for *L. mathura*, Manitoba
- Survey Map for *L. mathura*, Saskatchewan

Brown Spruce Longhorn Beetle (*Tetropium fuscum*)

The brown spruce longhorn beetle (BSLB), *Tetropium fuscum*, an introduced wood boring pest, is native to north and central Europe and Japan, where it uses stressed and dying conifers as hosts, most notably Norway spruce (*Picea abies*). In 1999, the beetle was detected in Point Pleasant Park, Halifax, Nova Scotia, and subsequent investigations confirmed that beetles collected in the park as early as 1990 were, in fact, *Tetropium fuscum*. Studies conducted by NRCan-CFS since 1999 indicate that the wood-boring beetle is killing healthy spruce trees by feeding on the cambium and phloem and eventually girdling the tree. BSLB is considered to be a pest of quarantine significance in Canada.

In 2009, the detection survey for BSLB continued to include extensive trapping in eastern Canada. The CFIA carried out this survey to determine the extent of the beetle's distribution within Nova Scotia and confirmed that it had not spread to other provinces. All traps were baited with a combination of two ultra-high-release host-volatile lures and a BSLB pheromone lure developed by NRCan-CFS.

Quebec, New Brunswick, Prince Edward Island, and Newfoundland

In Quebec, New Brunswick, Prince Edward Island, and Newfoundland, trapping occurred at two types of sites. Priority sites such as sawmills, pulp mills, campgrounds and ports had three traps per site. General forested areas had one trap per site (Table 1).

- Survey Map for *T. fuscum*, Eastern Canada

Nova Scotia

In Nova Scotia, staff from the Nova Scotia Department of Natural Resources and NRCan-CFS assisted CFIA with the trapping effort that occurred primarily at priority and general forested sites. In addition, intensive trapping grids of about 25 traps were established at 16 sites (Table 1). Four were inside the Brown Spruce Longhorn Beetle Containment Area (CA) and 12 outside. All intensive trapping sites were established at sites where BSLB had been detected in previous years. NRCan-CFS continued to maintain 17 research plots inside and outside the

Containment Area. Each research site included an array of three traps. All of these research plots were established at locations where BSLB had previously been detected.

- Survey Map for *T. fuscum*, Central Nova Scotia

There were 19 new positive locations outside of the current CA in the counties of Halifax, Hants, Colchester, Kings, Lunenburg, and Victoria. This is the first time BSLB has been detected in the counties of Lunenburg, Victoria, and Kings. There are now a total of 46 sites where BSLB has been detected outside the BSLB Containment Area.

- Map for *T. fuscum*, Positive Sites Outside the Containment Area (2006-2009)

Table 1. 2009 BSLB Detection Survey Summary

Province	Intensive Trapping Sites	CFS Research Plots	Priority Sites	General Forested Sites	Total Sites	Total Traps	Number of BSLB Positive Sites	Number of BSLB
Nova Scotia (inside containment area)	4	7	0	3	14	124	12	691
Nova Scotia (outside containment area)	12	10	26	463	511	871	35	123
New Brunswick	-	-	28	128	157	215	0	0
Prince Edward Island	-	-	5	27	32	42	0	0
Newfoundland and Labrador	-	-	4	16	20	28	0	0
Quebec	-	-	13	49	62	88	0	0
Totals	-	-	76	686	796	1368	47	814

Hemlock Woolly Adelgid (*Adelges tsugae*)

The hemlock woolly adelgid (HWA), *Adelges tsugae* is a destructive pest of susceptible species of hemlock, *Tsuga* spp. and is native to India, Japan, Taiwan, and China. In 1919, HWA was first reported in North America in British Columbia and can now be found in the western American states of Alaska, Washington, Oregon, and California affecting both western hemlock, *T. heterophylla* and mountain hemlock, *T. mertensiana*. Damage on these two species is usually minor. HWA was first identified in the eastern US in Virginia in 1951. Since this time it has rapidly spread throughout many hemlocks stands in the eastern US and is now present from Georgia north to Maine. In the eastern US, HWA has resulted in significant mortality of both eastern hemlock, *T. canadensis* and Carolina hemlock, *T. caroliniana*. HWA threatens the existence of these two species in many locations.

This survey is being conducted in support of plant health policy directive D-07-05, Phytosanitary requirements to prevent the introduction and spread of the hemlock woolly adelgid (*Adelges tsugae* Annand) from the US and within Canada. This visual survey is aimed at early detection of the pest in areas where it is not known to occur.

In 2009, visual surveys were conducted in and around importing nurseries and in hemlock forest stands in New Brunswick (3 sites), Quebec (30 sites) and in Ontario (19 sites). No signs of *A. tsugae* were observed during these surveys.

- Survey Map for *A. tsugae*, Ontario
- Survey Map for *A. tsugae*, Quebec

INVASIVE ALIEN PLANT SURVEYS

Woolly Cupgrass (*Eriochloa villosa*)

Woolly cupgrass, *Eriochloa villosa*, is an annual plant of the family Poaceae. Native to temperate Asia, it was introduced to the US in the 1940's, apparently from ship's ballast. There are fifteen species of the *Eriochloa* genus in Central and North America, but most are located in the southwestern part of the central US. The genus has a limited forage value and many species are considered weedy. In the US, woolly cupgrass is present in cultivated fields of many states and is well adapted to corn-corn and corn-soybean rotation. The control of woolly cupgrass can be very difficult and expensive. It is very prolific and tolerant to many herbicides.

In 2000, this weed (*E. villosa*) was first discovered in an experimental test plot close to St-Hyacinthe, Quebec. Woolly cupgrass has been confirmed in three new sites in 2007 and 2008 in the region southeast of Montreal. These are the only known infested sites in Canada. In Quebec, in 2003 and again in 2004, seeds of woolly cupgrass were detected in single lots of imported seed of Japanese millet. In July 2005, woolly cupgrass was added to the list of "Prohibited noxious weed seeds" of the Weed Seed Order of the Seeds Act.

Surveys for *E. villosa* are conducted through visual inspections in fields close to the positive sites and in the fields representing a risk of contamination (e.g. machinery movement).

Quebec

The 2009 survey was conducted in and around fields where *E. villosa* was found in the past or were associated with potentially contaminated imported lots. Fields containing crops for variety trials and experimental plots were also included. In total, 10 farms and 166 fields were included in the survey, representing 1453 acres. *Eriochloa villosa* was detected in 4 fields of soybean and corn in the municipality of St-Denis-sur-Richelieu, where it was not previously recorded. Two other fields were found to be infested with *E. villosa* on farms where the plant was previously detected.

- Survey Map for *E. villosa*, Quebec

Jointed Goatgrass (*Aegilops cylindrica*)

Jointed goatgrass is a winter annual grass native to southern Europe and Russia. It was most likely introduced into North America as a contaminant in wheat seed. The earliest record is from a specimen that was collected in Centerville, Delaware in 1870. Jointed goatgrass lowers crop yields through direct competition, reduces harvesting efficiency and lowers crop quality by contaminating harvested grain. In the US, it costs producers an estimated \$150 million/yr. This weed is now widely distributed throughout the US. It infests more than 5 million acres of winter wheat in the western US and continues to spread.

In Canada, jointed goatgrass was first detected near Port Colborne, Ontario in 2006. Jointed Goatgrass poses a serious threat to winter wheat production.

Ontario

Although a formal survey was not conducted for *A. cylindrica* in 2009, sites located in Wainfleet and Port Colborne, Ontario where *A. cylindrica* was previously detected, were again visited. Plants were hand pulled at these locations in an effort to reduce seed production in an effort to eliminate these populations.

HORTICULTURE PEST SURVEYS

National Detection Survey for *Phytophthora ramorum*

Phytophthora ramorum is a fungus-like plant pathogen that causes a disease known as Ramorum Blight and Leafdrop on a wide variety of nursery plants. It has also been associated with a disease of oak, known as "Sudden Oak Death," that was first observed in coastal California in the mid-1990's and now occurs as far north as southern Oregon.

The CFIA conducts annual surveys for *P. ramorum* and has in the past detected the presence of the organism on plants in a number of retail/wholesale nurseries in the southern coastal area of British Columbia. When *P. ramorum* is found, the nursery site is placed under quarantine and all infected plant material is destroyed. Extensive surveys and trace forward and trace back activities are then conducted to ensure the organism has been eliminated.

The National *P. ramorum* survey is conducted from May to September with the majority of the inspection conducted during the spring months. The survey covers from 30% to 100% of the production and wholesale nurseries in a province, depending on the size of the industry in each province. At each of these sites, all blocks of host material are inspected and composite samples collected from within any block showing suspect plants. A sample consists of a composite of 7-10 symptomatic plant parts (leaves or stems) collected from one host genus in a block at a production site. There may be more than one sample per genus per block depending on the amount and diversity of symptoms observed.

Quebec

In 2009, 37 nursery sites in 32 municipalities were surveyed for *P. ramorum*. The majority of targeted facilities were importers but some public parks and gardens were also included. One hundred and thirty nine samples were collected and all were negative for *P. ramorum*.

- Survey Map for *P. ramorum*, Quebec

Ontario

A total of 95 sites were surveyed in Ontario in 2009 with approximately 631 samples collected from 49 nursery production facilities. All samples were negative for *P. ramorum*.

- Survey Map for *P. ramorum*, Ontario

Atlantic Canada

Sites in Atlantic Canada were production nurseries, retail nurseries and garden centres.

Nova Scotia – 14 sites

- Survey Map for *P. ramorum*, Nova Scotia

Prince Edward Island – 10 sites

- Survey Map for *P. ramorum*, Prince Edward Island

New Brunswick – 13 sites

- Survey Map for *P. ramorum*, New Brunswick

Newfoundland and Labrador – 3 sites

- Survey Map for *P. ramorum*, Newfoundland and Labrador

British Columbia

The 2009 National Nursery Survey consisted of 57 nurseries and 73 sampling sites that were surveyed for *P. ramorum*. Of the 7,030 samples taken, 3 nurseries were positive for *P. ramorum*.

- Survey Map for *P. ramorum*, British Columbia

Grapevine Phytoplasmas (Bois noir and Flavescence doree)

Importation of grapevines into Canada from countries other than the US is controlled through the certification of exporting nurseries. The program is designed to prevent the introduction of a number of serious quarantine viruses and phytoplasmas of grapevine not known to occur in Canada. Under this importation program, tests are carried out both in France, in Germany and in Canada against quarantine viruses/pests of Canada, prior to the approval for the importation of any variety and rootstock. At present only specific grapevine varieties and rootstock from France and Germany are approved for importation into Canada under this program.

Following a review of the export program in France, it was deemed necessary to conduct this survey in Canada to provide further assurance that imported material is free of the phytoplasmas Flavescence doree and Bois noir. The survey focused on vineyards that had been planted with imported vines from France and Germany in the past 5 years. Only plants exhibiting symptoms of possible phytoplasma infection were sampled for testing.

Ontario

A total of 89 sites were surveyed in Niagara for Grapevine Phytoplasmas in 2009. All of the target sites contained vines imported from France and/or Germany prior to 2007 or sites containing material associated with previous Bois noir positives. A total of 233 leaf samples were collected from Ontario vineyards, including 49 leaf samples taken from weed hosts within 50 meters of where previously positive Bois noir vines were located. Bois noir and Flavescence doree were not detected during this survey.

British Columbia

CFIA selected and surveyed 18 sites in the Okanagan Valley including the site where the 2006 positive was found and the 2 other related eradication sites. The remainder of the sites are in a close proximity to the 3 sites that have received untreated material in 2006, from France. No phytoplasma symptoms were detected; therefore, no samples were collected from any sites.

Plum Pox Virus

For information on the PPV program visit the CFIA PPV page at the link below. Details on the surveys can be found in the Survey Updates section at the bottom of the PPV page:

www.inspection.gc.ca/plants/plant-protection/diseases/plum-pox-virus/eng/1323888514908/1323889333540

Oriental Fruit Moth (*Grapholita molesta*)

British Columbia

Native to China and Korea, where the peach tree is also native, the Oriental fruit moth, *Grapholita molesta* has spread to many temperate fruit-growing areas of the world during the

first thirty years of the 20th century. The means of spread between countries was almost certainly as cocoons on dormant fruit-tree nursery stock, but spread within each country also occurred with infested fruit. This insect was first reported in the USA in 1916 and it rapidly spread throughout that country. It was first reported in Ontario in 1925. Today, the only commercial peach-growing area of North America which is free of the pest is the province of British Columbia. A small population was detected in 1957 and eradicated at great expense. Annual surveys since 1957 have been negative for this pest. Annual pheromone trapping surveys for *G. molesta* are carried out in British Columbia using wing or delta traps with a baited flexlure pheromone dispenser. The principle area of commercial stone fruit production in B.C. is the Okanagan Valley which is where the majority of trapping takes place.

A total of 196 sites (Okanagan Valley 110 traps, Vancouver Island 46 traps, Lower Mainland and Fraser Valley 40 traps) were trapped in 2009 with no *G. molesta* being detected.

- Survey Map for *G. molesta*, British Columbia

Japanese Beetle (*Popillia japonica*)

Japanese beetle (JB), *Popillia japonica*, is native to the main islands of Japan and was first discovered in North America in 1916 in a nursery near Riverton, New Jersey (US). The first beetle found in Canada was in a tourist's car, arriving in Yarmouth, Nova Scotia by ferry from Maine, in 1939. During that same year three additional adults were again captured at Yarmouth and three more at Lacolle in southern Quebec. Treatment programs have been unable to completely eliminate this pest from Canada and currently there are populations established in Ontario, Quebec and Nova Scotia. Additionally, the pest is distributed throughout the eastern US. This species of beetle affects more than 300 plant species, including some economically important commodity plants such as fruit trees, ornamental shrubs and roses, field crops, turf grasses, and sod. The larvae feed on roots and are a major pest of turfgrass on golf courses, recreational and industrial parks, school grounds and home lawns. The adults feed above ground on foliage, flowers and fruits.

This survey is being conducted in support of policies and programs related to the plant health policy directive D-96-15 "Phytosanitary Requirements to Prevent the Spread of Japanese Beetle, *Popillia japonica* in Canada and the United States". The survey is conducted in order to clarify the distribution of *P. japonica* for regulatory purposes. Specifically designed JB traps baited with a pheromone and food lure are used for this survey.

British Columbia

Five hundred and seventy five JB traps were placed from Prince George south to the US border in 2009 by CFIA staff. Traps were placed in turf or gardens where JB hosts plants were grown. Airport and golf course focused trapping was of high priority in 2009. Japanese beetle was not detected in British Columbia in 2009.

- Survey Map for *P. japonica*, British Columbia

Newfoundland and Labrador

Surveys were conducted at 54 sites in the province. Two adult JB were collected from 1 trap in the city of St. John's in August. The trap was set in the down town area of the city and was not in close proximity to either of the 2 sites where JB was detected in 2007. The additional traps set late in the season at the site were negative.

- Survey Map for *P. japonica*, Newfoundland and Labrador

Chrysanthemum White Rust (*Puccinia horiana*)

Chrysanthemum white rust (CWR), *Puccinia horiana* is a fungal disease of chrysanthemum. It was first reported from China and Japan in 1895. It spread to all far east countries in the early 1900's, from there it spread to South Africa and Europe in the 1960's. It has since spread throughout Europe and has reached South America, Australia, New Zealand and Mexico. Localized introductions have occurred in US and Canada. The introduction and spread of CWR could lead to serious losses. The disease can spread rapidly throughout a greenhouse causing complete crop failure. Intensive management and continuous control measures are required where the disease is present. There is evidence that CWR develops tolerance to certain pesticides used to control the disease. The introduction of the disease could also result in the loss of export markets for chrysanthemums. New introductions are subject to CFIA's eradication plan and are followed up with visual surveys around affected facilities.

British Columbia

The 2009 survey consisted of a second year follow up to a 2007 positive in a Chilliwack, BC greenhouse. During the course of this survey there were no infested plants found in 2009 and this previously infested greenhouse is now considered free from CWR.

Blueberry Maggot (*Rhagoletis mendax*)

Blueberry maggot, *Rhagoletis mendax* is native to eastern North America including New Brunswick, Nova Scotia, Prince Edward Island and the northeastern States; it was found in southwest Ontario in 1993 and in southern Quebec in the fall of 1996.

It is a destructive insect of lowbush and highbush blueberry fruits by feeding activity of the larval stage. The introduction and establishment of the blueberry maggot could jeopardize the commercial blueberry industry in some uninfested areas such as Newfoundland, British-Columbia and Lac St-Jean, QC. Spread in nature is possible by suitable wild hosts as huckleberry (*Gaylussacia* spp), mountain cranberry (*Vaccinium vitis-idea*), wintergreen (*Gaultheria procumbens*), etc.

CFIA annually surveys by trapping adults with ammonium carbonate-baited sticky traps and by sampling fruit for larvae. These surveys support claims of pest free zones and justify

requirements for importation and domestic movement of regulated commodities (Plant Protection Policy Directive D-02-04).

Newfoundland and Labrador

Detection trapping was conducted at 14 sites with 42 traps where lowbush blueberries are commercially harvested in Newfoundland. No blueberry maggot adults were detected.

- Survey Map for *R. mendax*, Newfoundland and Labrador

British Columbia

The Fraser Valley is the major production area of commercial blueberries in B.C. A number of farms are also located on southern Vancouver Island. The production area is surveyed on a three year rotation cycle with one third surveyed in any given year. In this way, the total production area is surveyed after three years. In 2009, 25 sites (with multiple traps depending on the size) were trapped in the Lower Mainland/Fraser Valley with 10 sites surveyed on Vancouver Island. No *R. mendax* flies were detected in British Columbia in 2009.

- Survey Map for *R. mendax*, British Columbia

Quebec

In 2009, blueberry maggot surveys were conducted in 83 highbush plantations, 30 sites where *Vaccinium* naturally occurs as well as another 22 managed lowbush production areas. In total, 472 traps were placed at 135 sites in 21 RCM's outside of the regulated areas: Matawini, Les Jardins de Napierville, Deux-Montagnes, Roussillon, Acton, Brome-Missisquoi, Coaticook, Drummond, La Haute-Yamaska, Les Maskoutains, La Vallée-du-Richelieu, Maskinonge, Memphremagog, Rouville, Trois-Rivières, Le Haut-Richelieu, Mekinac, La Haute Côte-Nord, Domaine du Roy, Maria-Chapdelaine and Montmagny. *Rhagoletis mendax* was found in the following municipalities: Farnham, Granby, Saint-Alexandre and Saint-Damase.

- Survey Map for *R. mendax*, Quebec

Ontario

In Ontario, trapping and fruit sampling for *R. mendax* was conducted at 50 sites in 2009. Positive samples were collected from a new positive commercial site located in the Town of Pelham, Niagara. Positive samples were also collected from two previously positive commercial sites located in West Elgin, Elgin County and at the Wainfleet Bog, Wainfleet Township, Niagara.

- Survey Map for *R. mendax*, Ontario

Apple Maggot (*Rhagoletis pomonella*)

The apple maggot, *Rhagoletis pomonella*, is indigenous to North America and has been a serious pest of apples in Canada for over 100 years. The first official record of the pest was at Aldolphustown, Ontario in 1896. By 1905 the insect had extended its range to Como and St. Hilaire, Quebec. A few years later it was found near Digby, Nova Scotia. It is now widespread throughout eastern Canada, with the exception of Newfoundland. In 2005 it was detected for the first time in Edmonton, Alberta. Until 2006, British Columbia was the only major apple producing area in North America that was considered free of *R. pomonella*. That year it was found for the first time in the Fraser Valley and on southern Vancouver Island. An annual survey has occurred for many years in British Columbia to support claims of pest freedom and justify import restrictions under Policy Directive D-00-07. The CFIA survey targets high-risk sites, fruit stands, organic growers and abandoned urban high risk areas. In addition, increased trapping along the Canada-US border is carried out to detect the potential spread of populations in adjacent areas south of the border. Apple maggot traps used in this survey are sticky plasticized red spheres baited with ammonium carbonate. These survey efforts are supported by the BC Provincial Ministry of Agriculture through commercial orchards surveys.

British Columbia

In 2009, the survey focused on detection activities within and around the perimeter of the commercial fruit growing regions in the interior of the province which is geographically separated by a mountain range from the coastal area that is now deemed to be infested. A total of 426 traps were set with no detections of *R. pomonella*.

- Survey Map for *R. pomonella*, British Columbia

Spotted Wing Drosophila (*Drosophila suzukii*)

Drosophila suzukii was first detected in Canada in 2009 in a Port Coquitlam, BC light trap monitoring station. Follow up trap (Contech Fruit fly traps baited with yeast formulation) placement in a few urban areas of the Lower Mainland of BC also detected *D. suzukii*. Positives were in Kitsilano, Burnaby, and other areas of Port Coquitlam. This pest was also reared from fruits of blackberry, raspberry, blueberry, *Cornus kousa*, *Prunus laurocerus* and plum from Port Coquitlam. One fly was also detected in the Okanagan near Kelowna. Additional follow up surveys by BC Ministry of Agriculture and Lands reported positives in the BC Fraser Valley.

GRAINS AND FIELD CROPS PEST SURVEYS

Soybean Cyst Nematode (*Heterodera glycines*)

This nematode was first reported from Japan in 1916. In North America, the first observation was in the US in 1954 and in Canada, introduction was noted in 1987 in Ontario. The only

major economic crop severely affected is soybean; damage is done by the feeding activity of the nematode in the root system which can reduce the field crop up to 20% as shown by studies in Ontario. Over 1,100 species of plants are reported as potential hosts for *Heterodera glycines*.

The nematode is completely sedentary except for a small amount of movement by the juveniles and adults males; the pest is carried by the farm machinery, any equipment contaminated with soil, birds and wind. The CFIA surveys by taking soil samples in soybean fields for detection of cysts.

Ontario

Soil samples were collected from 42 sites in central and eastern Ontario, focussing on counties not regulated for *H. glycines*. In 2009, *H. glycines* was detected for the first time in Victoria County. This follows the 2008 finds in the counties of Prescott-Russell and Stormont.

- Survey Map for *H. glycines*, Ontario

Quebec

In 2009, soil sampling targeted fields in which soybean is grown year after year. A total of 253 samples were collected from 27 RCM's: Collines de l'Outaouais, Papineau, Argenteuil, Deux-Montagnes, Vaudreuil, Les Jardins de Napierville, Therese de Blainville, Beauharnois-Salaberry, Rouville, Acton, Pierre de Saurel, Vallee du Richelieu, Drummond, Maskinonge, Laval, Joliette, Portneuf, Montmagny, Becancour, Les Chenaux, Arthabasca, Nicolet-Yamaska, Lotbiniere, Kamouraska, L'Erable, Bellechasse and Montcalm. All samples tested negative for *H. glycines*.

- Survey Map for *H. glycines*, Quebec

Manitoba

In 2009 the CFIA surveyed 25 fields (8 in Brandon and 17 in Winnipeg) producing soybeans in Manitoba for the presence of soybean cyst nematode (SCN). Soil samples were taken according to the national SCN survey protocol and submitted to the nematology lab in Ottawa for testing. On April 9, 2010 CFIA was notified of a suspect positive sample. Recovered one cyst of the soybean cyst nematode (*Heterodera glycines*) in one sample (bag # 0019) out of 20 samples. The sample was taken from a field in the Rural Municipality of South Norfolk, approximately 100 km from the US/Canada border. Manitoba soybean production primarily occurs in the Red River Valley, which flows through the production areas of Minnesota and North Dakota. *H. glycines* has been reported from counties in these States adjacent to the Red River approximately 300 km south of the Canadian border. However this field site in Manitoba is at least 30 miles west of any area that has been flooded by the Red River - e.g. 1997 most recent. Seed for the 2008 crop originated as Breeder Seed and was grown in Quebec in 2007. The same line was grown in variety trials in MB in 2008 at 6 locations - Arborg,

Stonewall, Homewood, Morris, Portage la Prairie and St. Adolphe. It is not known if the pest was introduced via seed, used farm equipment or through another route.

- Survey Map for *H. glycines*, Manitoba

POTATO PEST SURVEYS

Potato Wart (*Synchytrium endobioticum*)

The presence of potato wart, caused by *Synchytrium endobioticum*, was first detected in one field of 31.2 ha in Prince Edward Island in October 2000. Subsequently, as part of province wide surveillance activities, potato wart was detected in 5 fields totalling 42.2 ha in 2002, 4 fields totalling 31.6 ha in 2004 and 1 field of 18.2ha in 2007. Containment and surveillance measures have been, and continue, to be in place to prevent further spread. As part of the continued efforts to contain and eradicate potato wart while maintaining market access, CFIA continues to implement a risk based long-term management plan which outlines the ongoing surveillance to be carried out on the various “categories” of potato wart associated fields. In fiscal year 2009/2010, a total of 248 fields, 2029.2 ha, were post harvest inspected for the presence of potato wart symptoms. CFIA did not identify any new potato wart positive fields in 2009 and continues to maintain restrictions on approximately 310 PEI fields.

Potato Cyst Nematode (*Globodera rostochiensis*, *G. pallida*)

Soil sampling is conducted each year across Canada to monitor this pest. For information on this pest visit the CFIA Golden Nematode page at the link below:

www.inspection.gc.ca/english/plaveg/pestrava/gloros/glorose.shtml

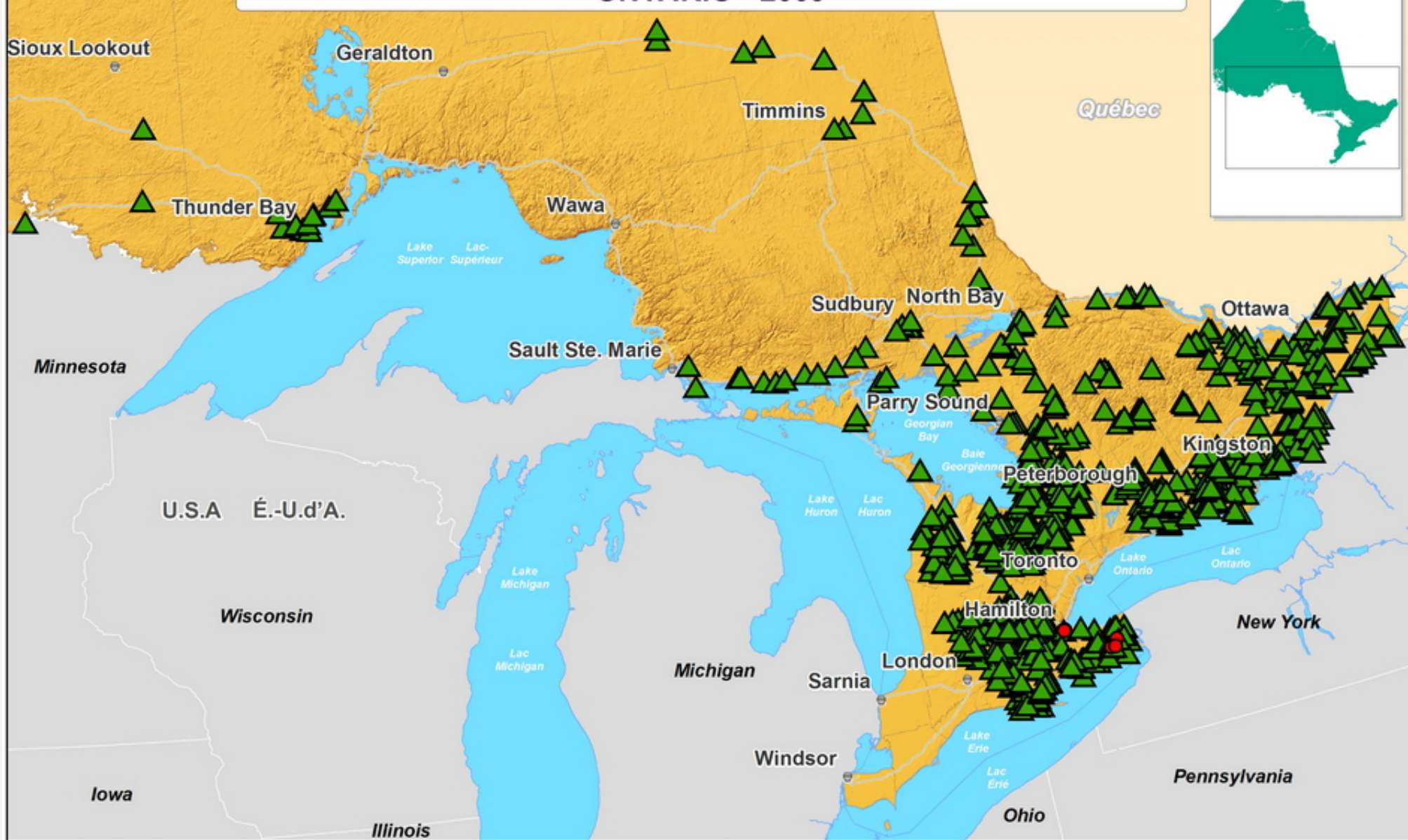
APPENDIX 1 – SURVEY MAPS



Emerald Ash Borer | Agrile du frêne

Agrilus planipennis

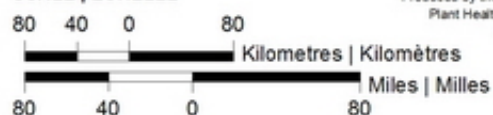
ONTARIO - 2009



LEGEND | LÉGENDE

- Positive Site | Site positif
- ▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



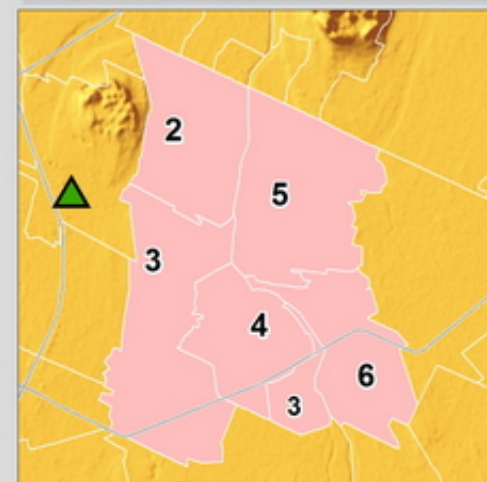
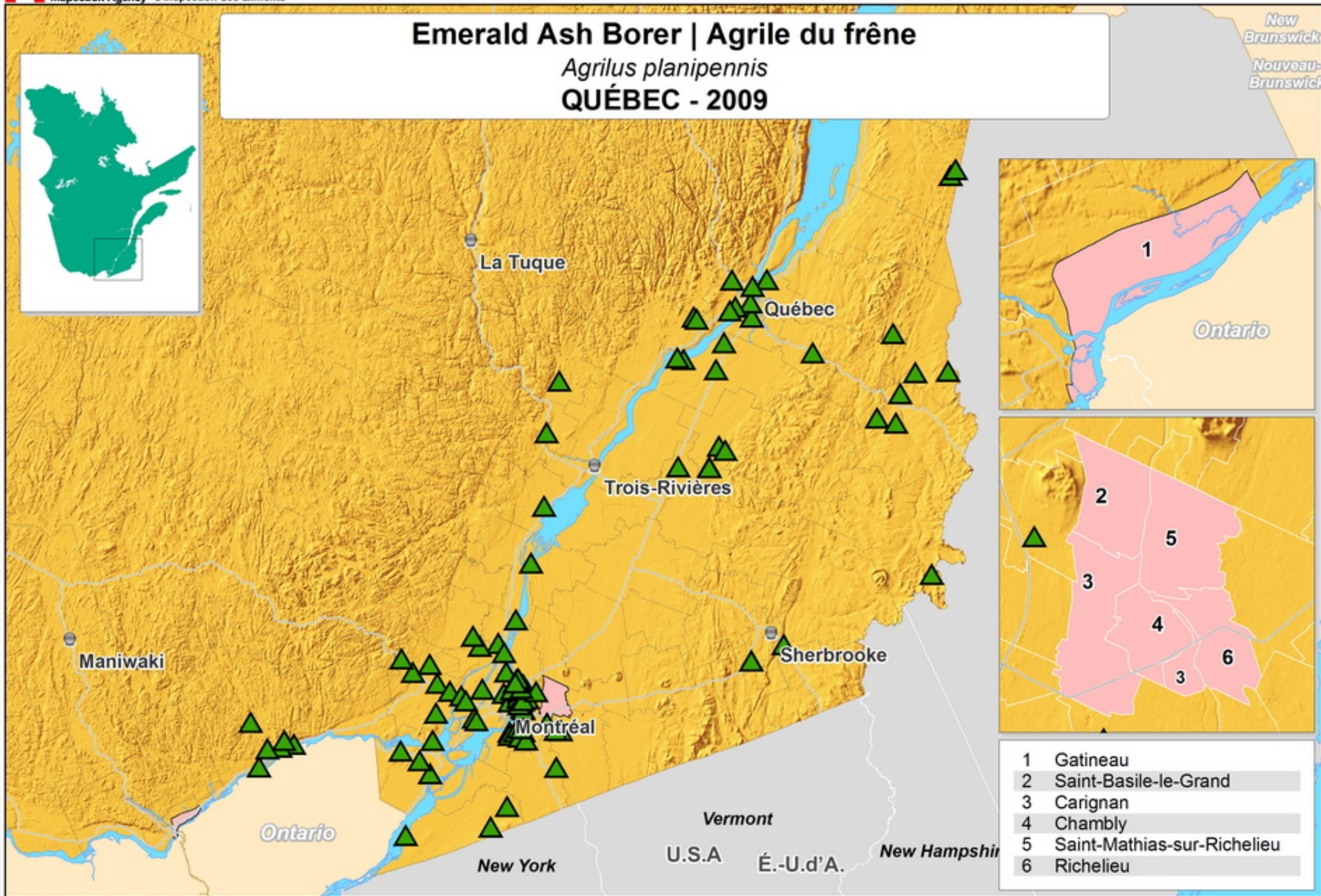
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
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Emerald Ash Borer | Agrile du frêne

Agrilus planipennis

QUÉBEC - 2009

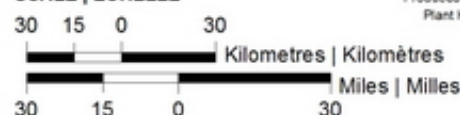


- 1 Gatineau
- 2 Saint-Basile-le-Grand
- 3 Carignan
- 4 Chambly
- 5 Saint-Mathias-sur-Richelieu
- 6 Richelieu

LEGEND | LÉGENDE

- ▲ Negative Site | Site Négatif
- Regulated Municipality | Municipalité réglementée

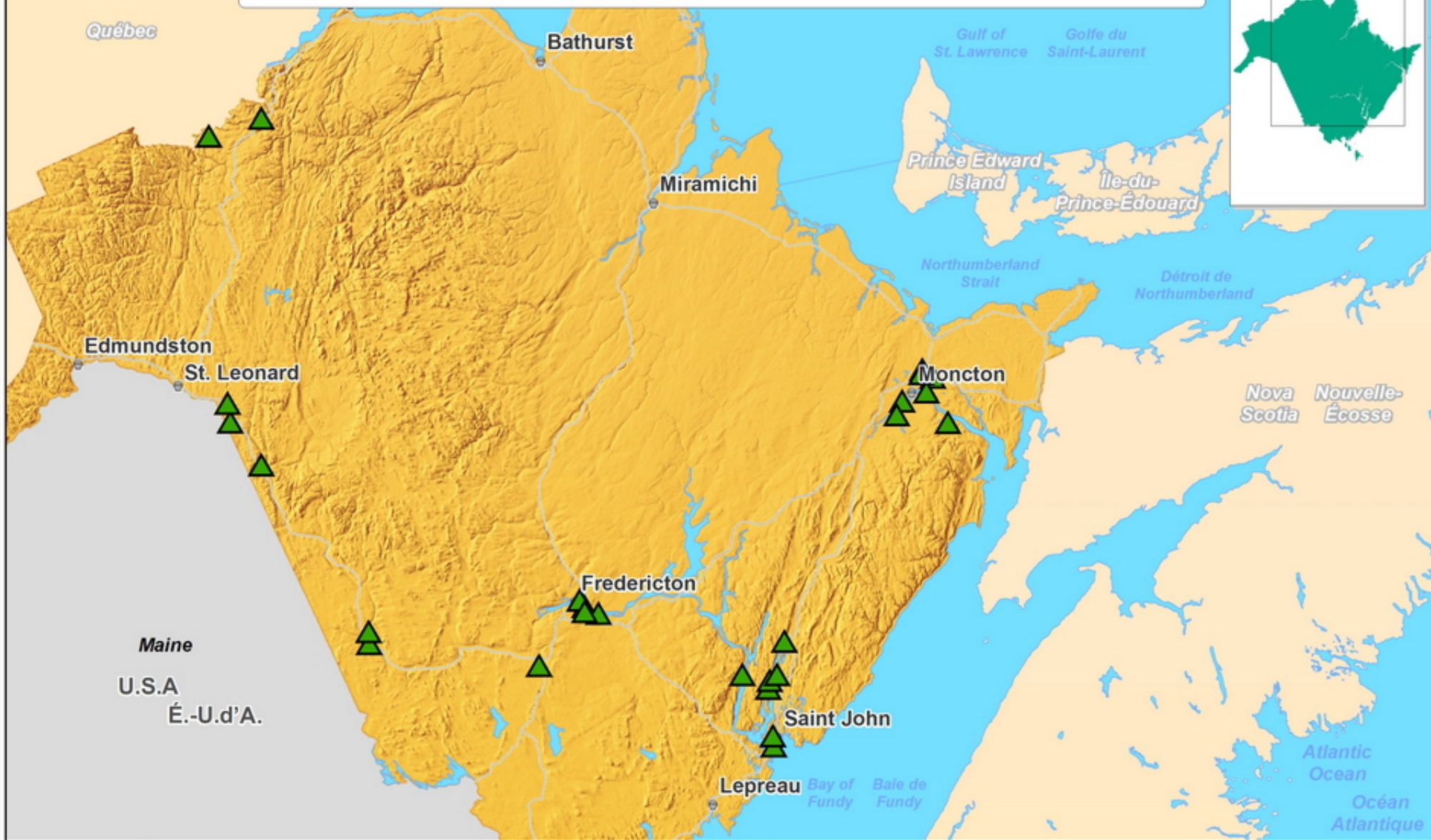
SCALE | ÉCHELLE

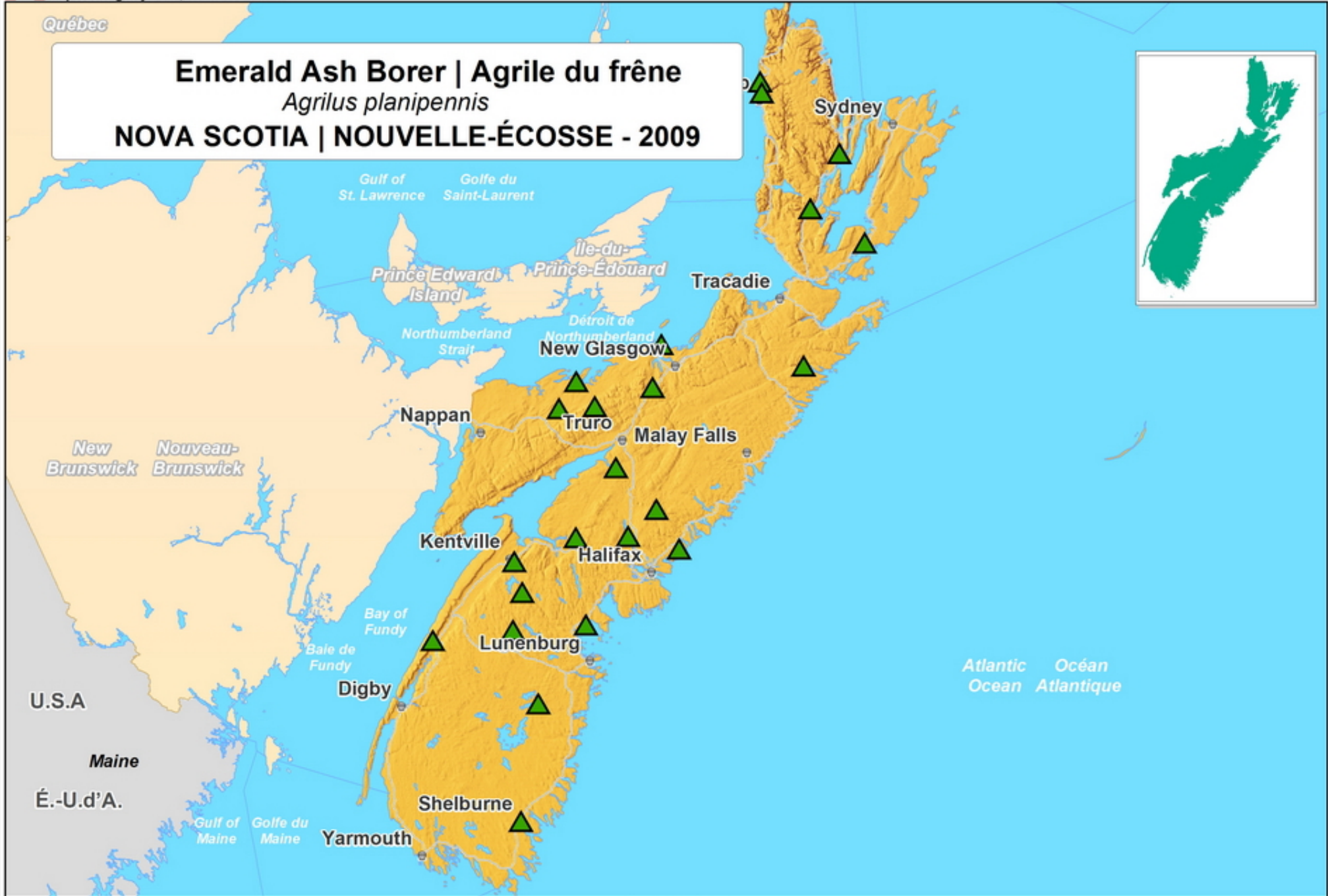


Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 07 07

Emerald Ash Borer | Agrile du frêne *Agrilus planipennis* **NEW BRUNSWICK | NOUVEAU-BRUNSWICK - 2009**

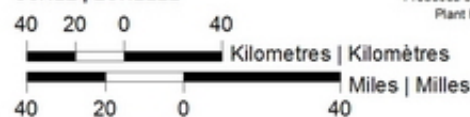




LEGEND | LÉGENDE

 **Negative Site | Site Négatif**

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
 2010 09 08

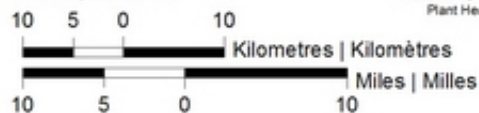
Emerald Ash Borer | Agrile du frêne *Agrilus planipennis* **PRINCE EDWARD ISLAND | ÎLE-DU-PRINCE-ÉDOUARD - 2009**



LEGEND | LÉGENDE

 **Negative Site | Site Négatif**

SCALE | ÉCHELLE



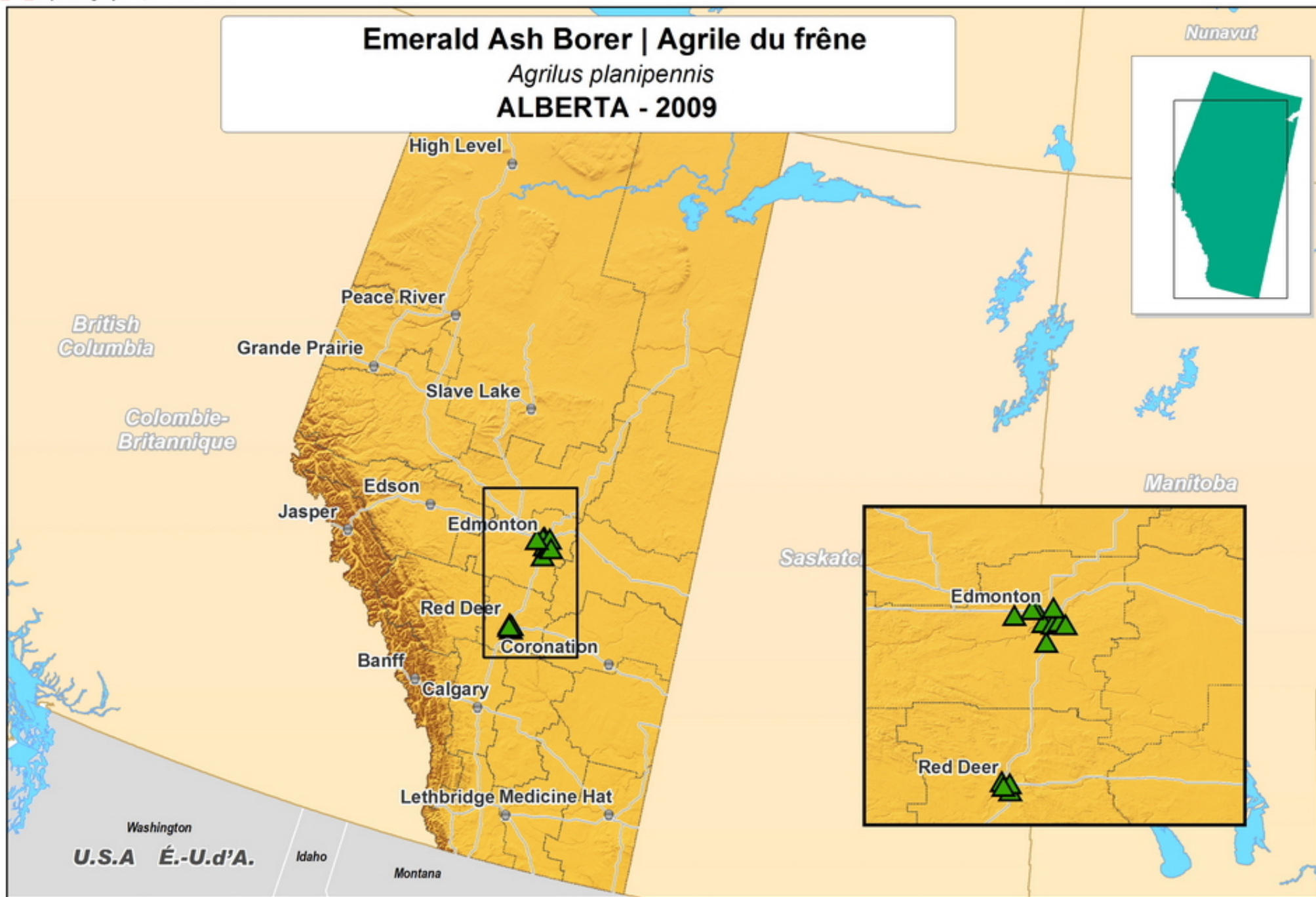
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
 2010 09 08

Emerald Ash Borer | Agrile du frêne

Agilus planipennis

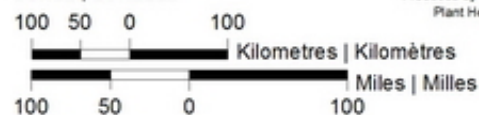
ALBERTA - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



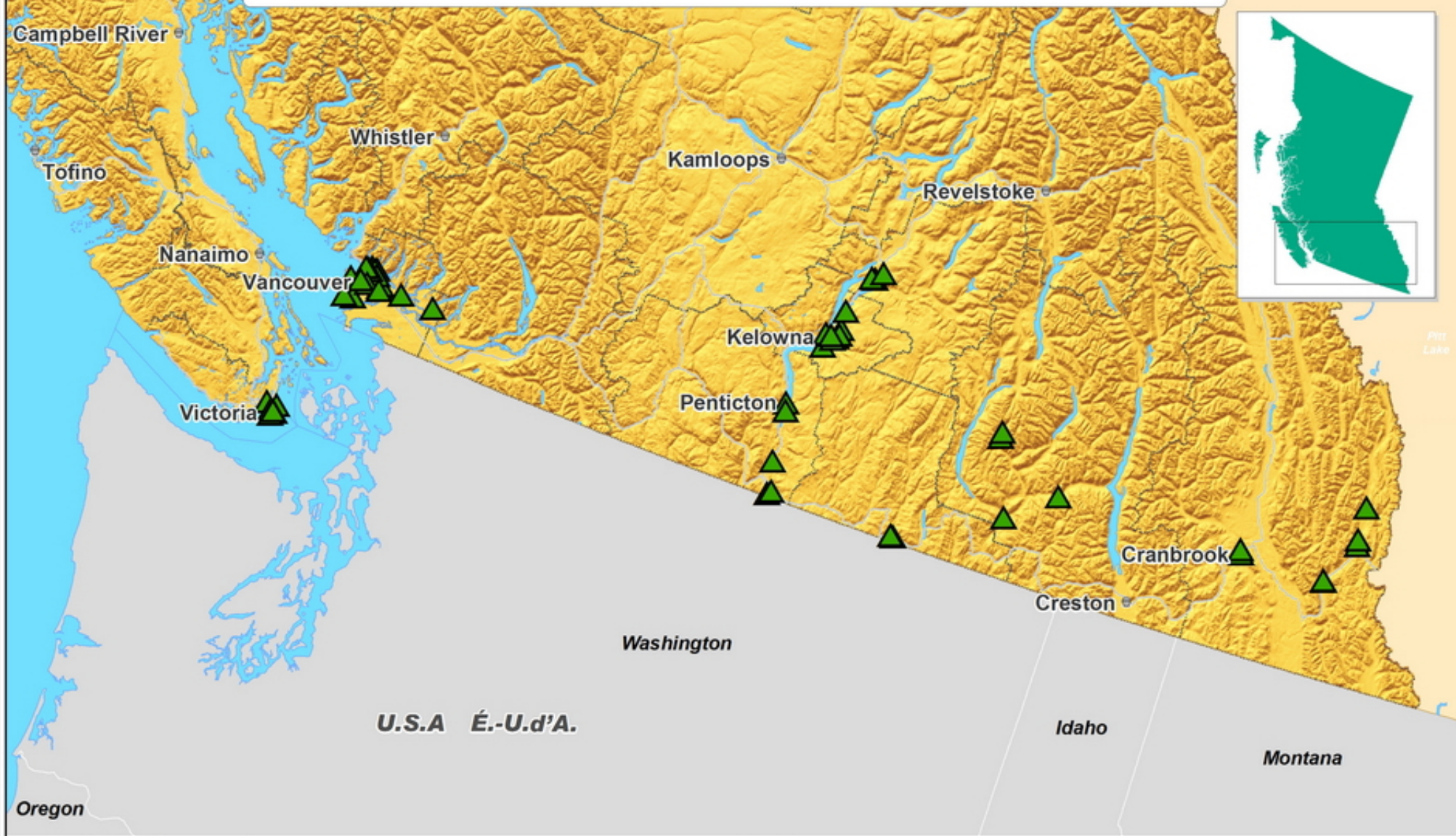
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 11 18

Emerald Ash Borer | Agrile du frêne

Agrilus planipennis

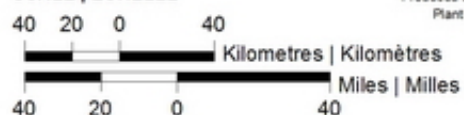
BRITISH COLUMBIA | COLOMBIE-BRITANNIQUE - 2009



LEGEND | LÉGENDE

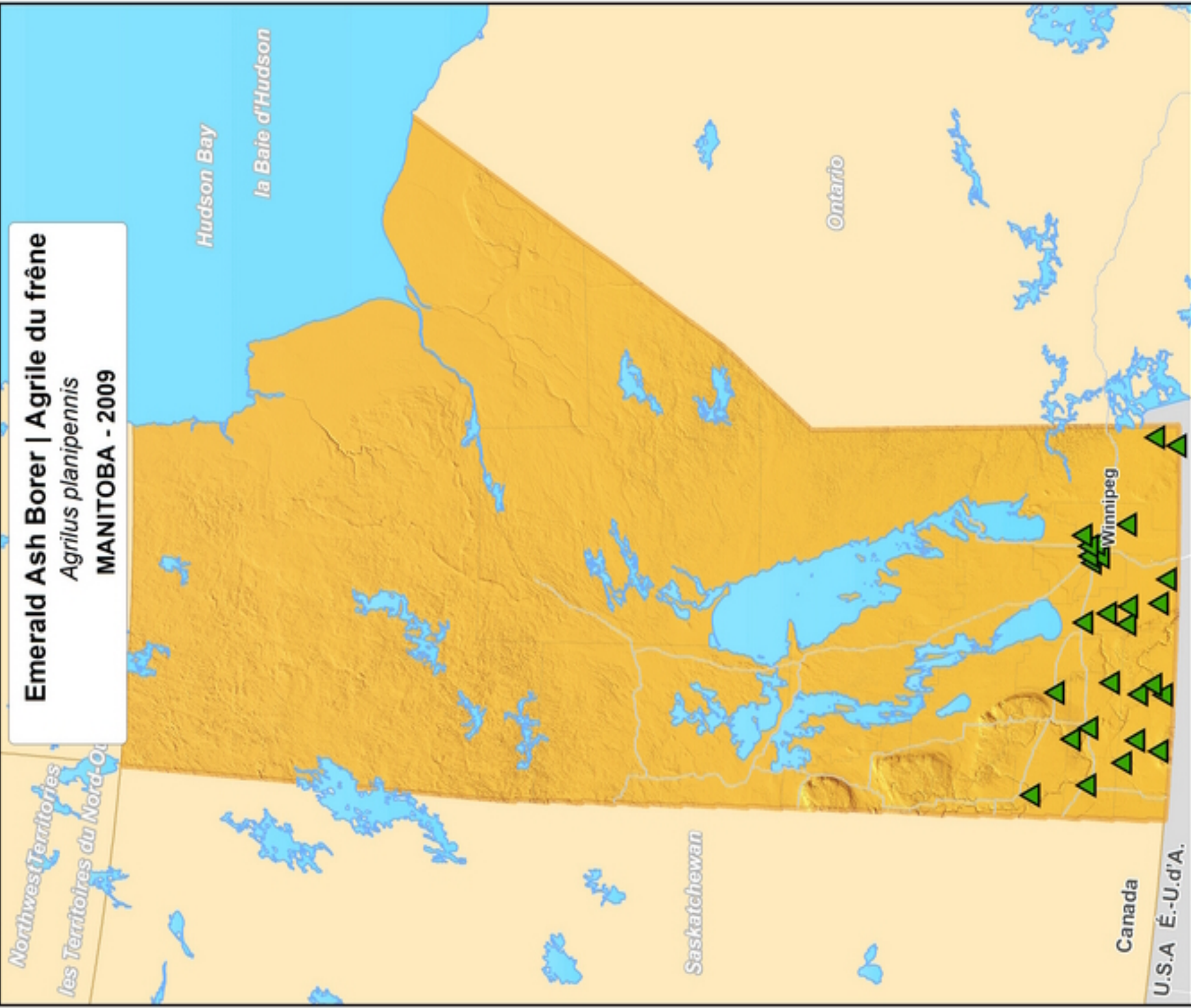
▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 11 19



Emerald Ash Borer | Agrile du frêne
Agrilus planipennis
MANITOBA - 2009

LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

Produced by the Canadian Food Inspection Agency /
 Prepared by the Canadian Food Inspection Agency /
 Préparé par l'Agence canadienne d'inspection des aliments
 Health Surveillance Unit, Ottawa, Ontario /
 Unité de surveillance phyto-sanitaire, Ottawa, Ontario
 Landbird Confirmed Case Projection - Canada /
 Projection confirmée continue de Landbird - Canada

YrAn MoM Day
 2010 07 13

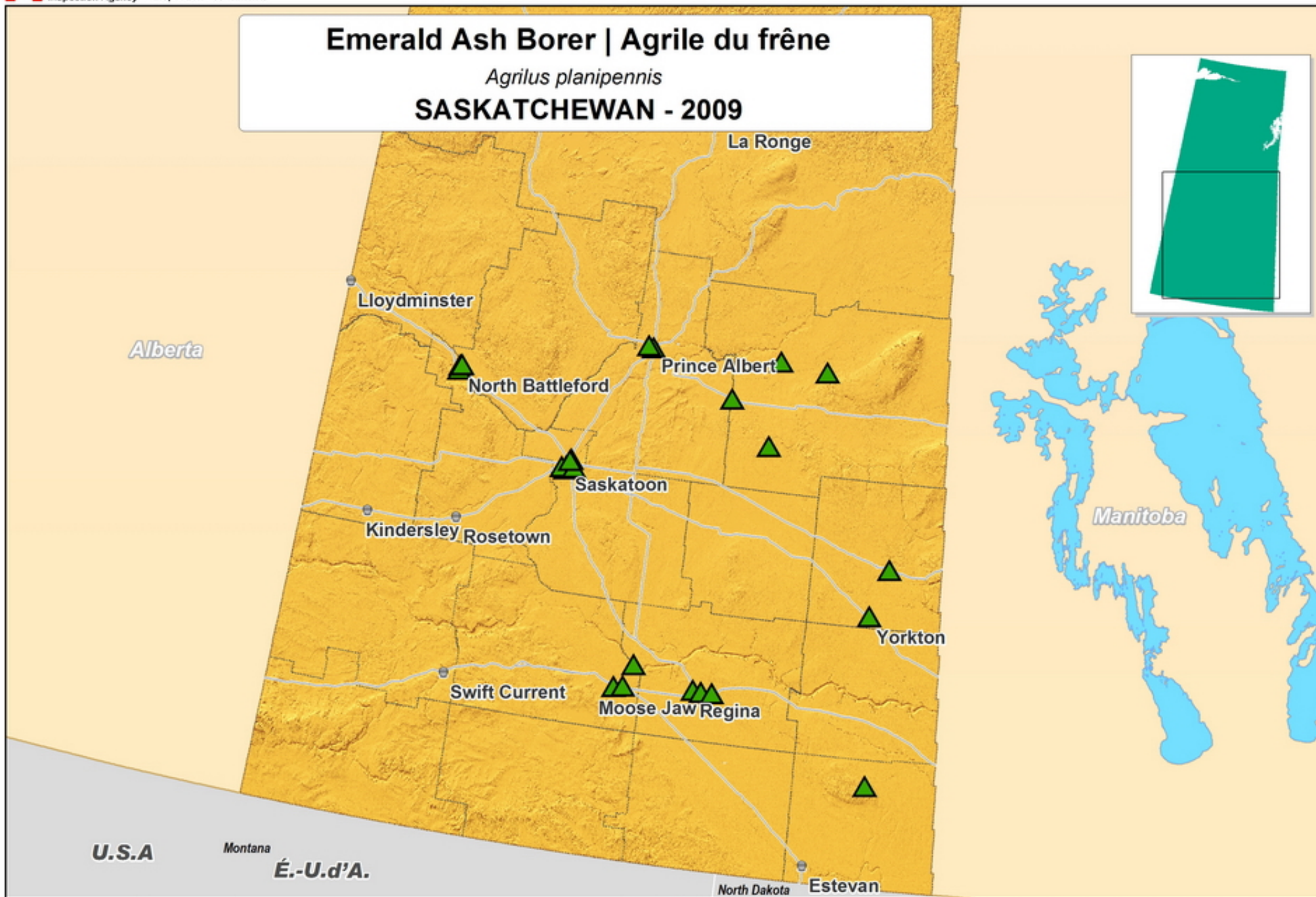
SCALE | ÉCHELLE



Emerald Ash Borer | Agrile du frêne

Agrilus planipennis

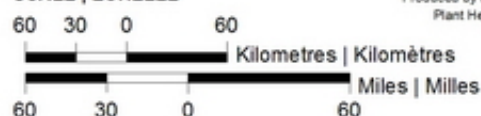
SASKATCHEWAN - 2009



LEGEND | LÉGENDE


 Negative Site | Site Négatif

SCALE | ÉCHELLE



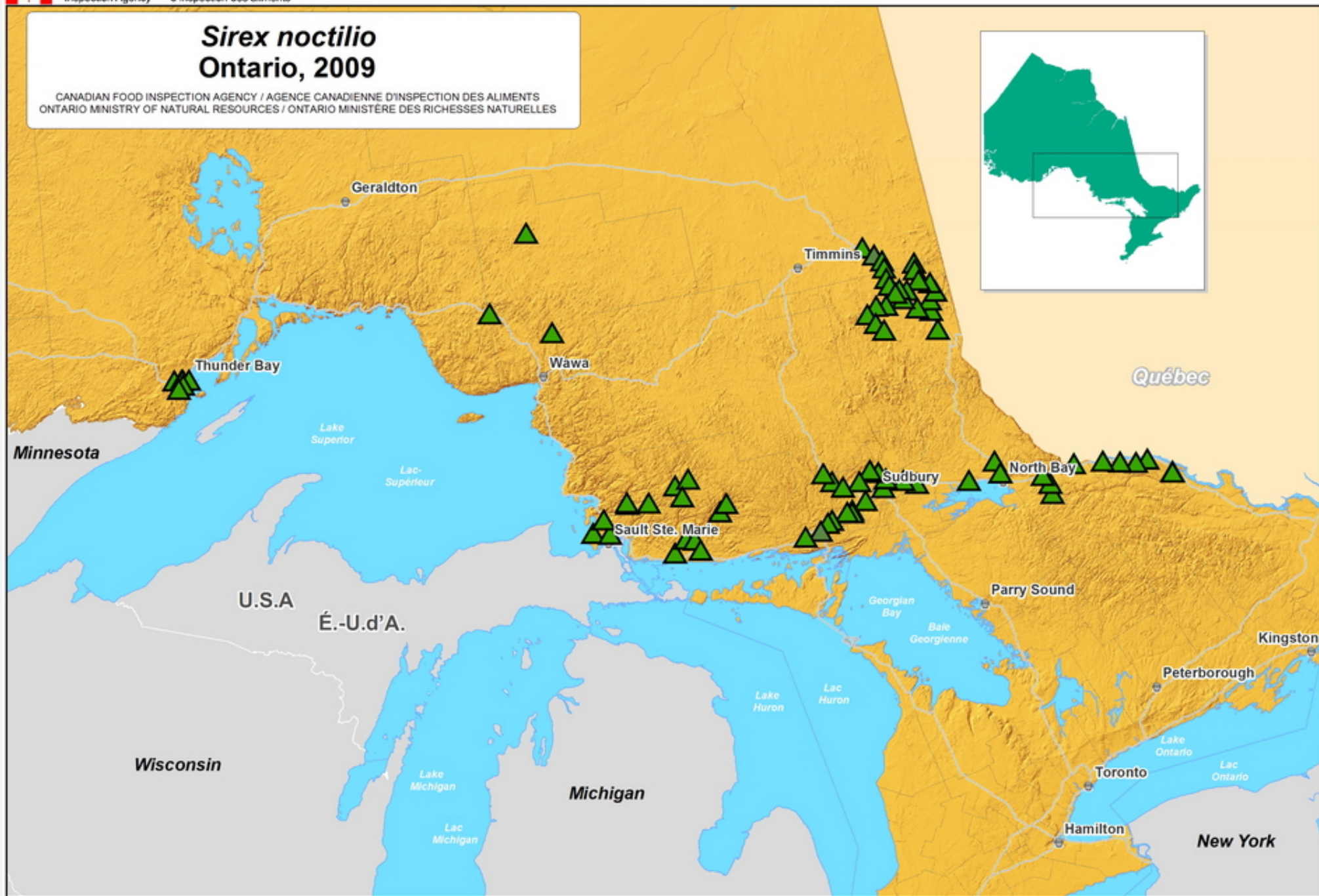
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
 2010 07 07



Sirex noctilio Ontario, 2009

CANADIAN FOOD INSPECTION AGENCY / AGENCE CANADIENNE D'INSPECTION DES ALIMENTS
ONTARIO MINISTRY OF NATURAL RESOURCES / ONTARIO MINISTÈRE DES RICHESSES NATURELLES



LEGEND | LÉGENDE

▲ Negative Site | Site négatif

SCALE | ÉCHELLE

80 40 0 80
Kilometres | Kilomètres

80 40 0 80
Miles | Miles

Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité des enquêtes phytosanitaires, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 06 28



Sirex noctilio QUÉBEC - 2009

CANADIAN FOOD INSPECTION AGENCY / AGENCE CANADIENNE D'INSPECTION DES ALIMENTS
QUÉBEC MINISTRY OF NATURAL RESOURCES / QUÉBEC MINISTÈRE DES RICHESSES NATURELLES



Val-d'Or

Jonquière

Rivière-du-Loup

La Tuque

Québec

Trois-Rivières

Maine

Maniwaki

Sherbrooke

U.S.A

É.-U.d'A.

New Hampshire

Ontario

Montréal

Vermont

New York

LEGEND | LÉGENDE

- Positive Site | Site positif
- ▲ Negative Site | Site négatif

SCALE | ÉCHELLE

20 10 0 20

Kilometres | Kilomètres

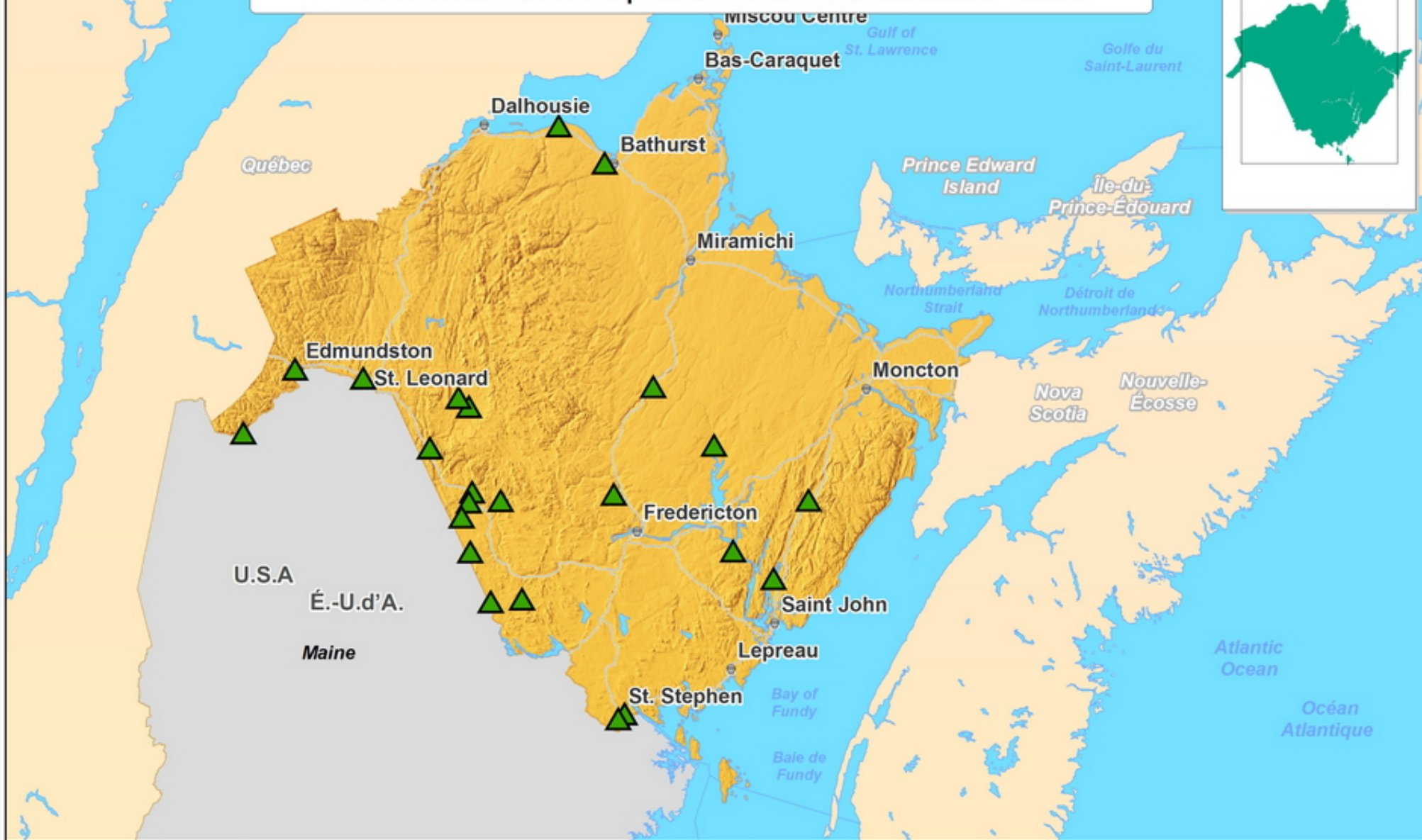
Miles | Milles

20 10 0 20

Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 07 07

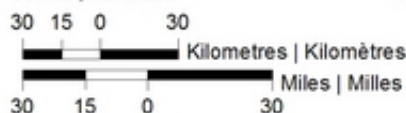
Sirex Wasp | Guêpe perce-bois *Sirex noctilio* F. **NEW BRUNSWICK | NOUVEAU-BRUNSWICK - 2009**



LEGEND | LÉGENDE

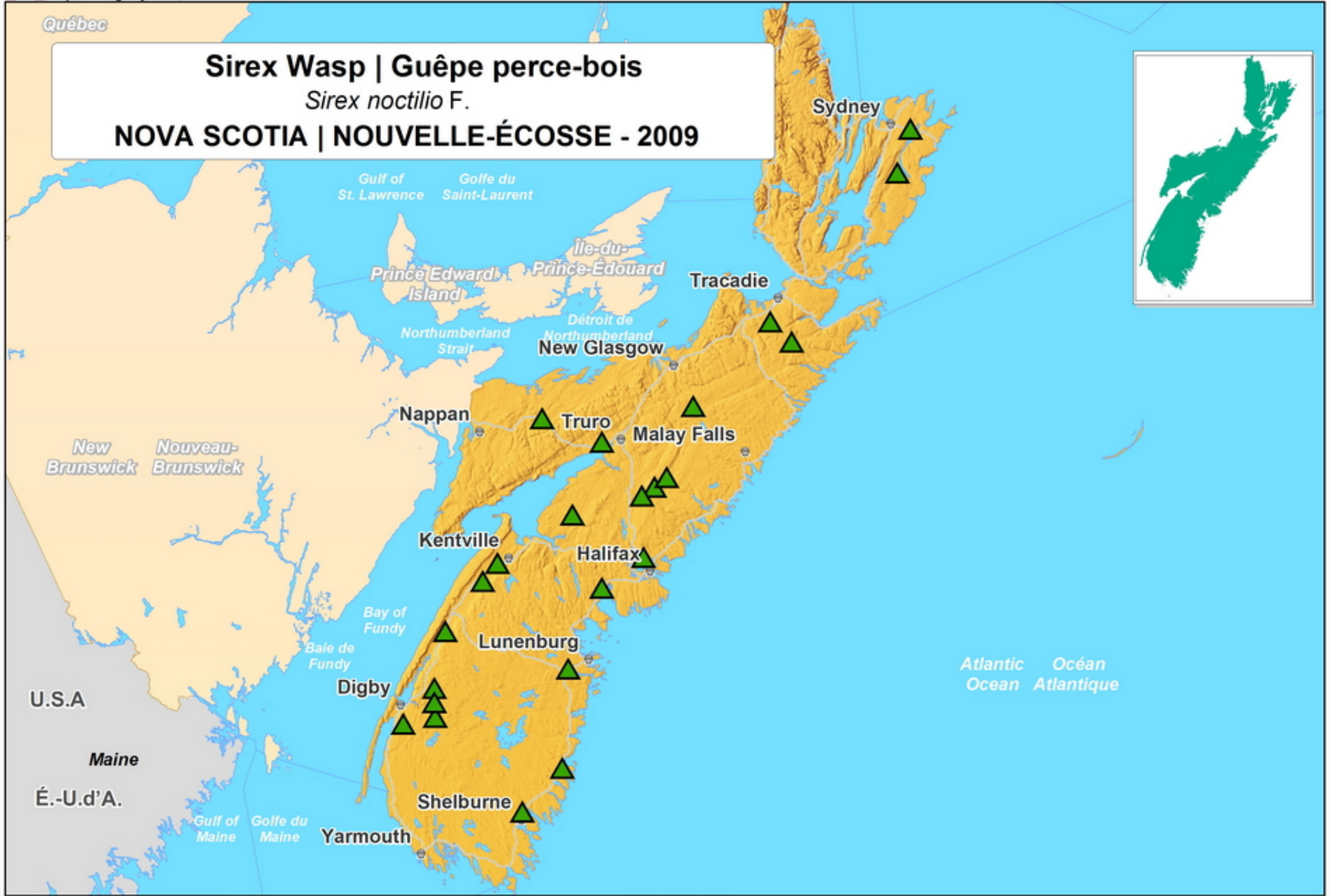
 **Negative Site | Site Négatif**

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. / Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. / Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. / Projection conique conforme de Lambert.

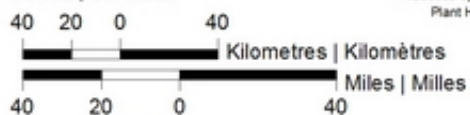
Yr/An Mo/M Da/J
 2010 09 08



LEGEND | LÉGENDE

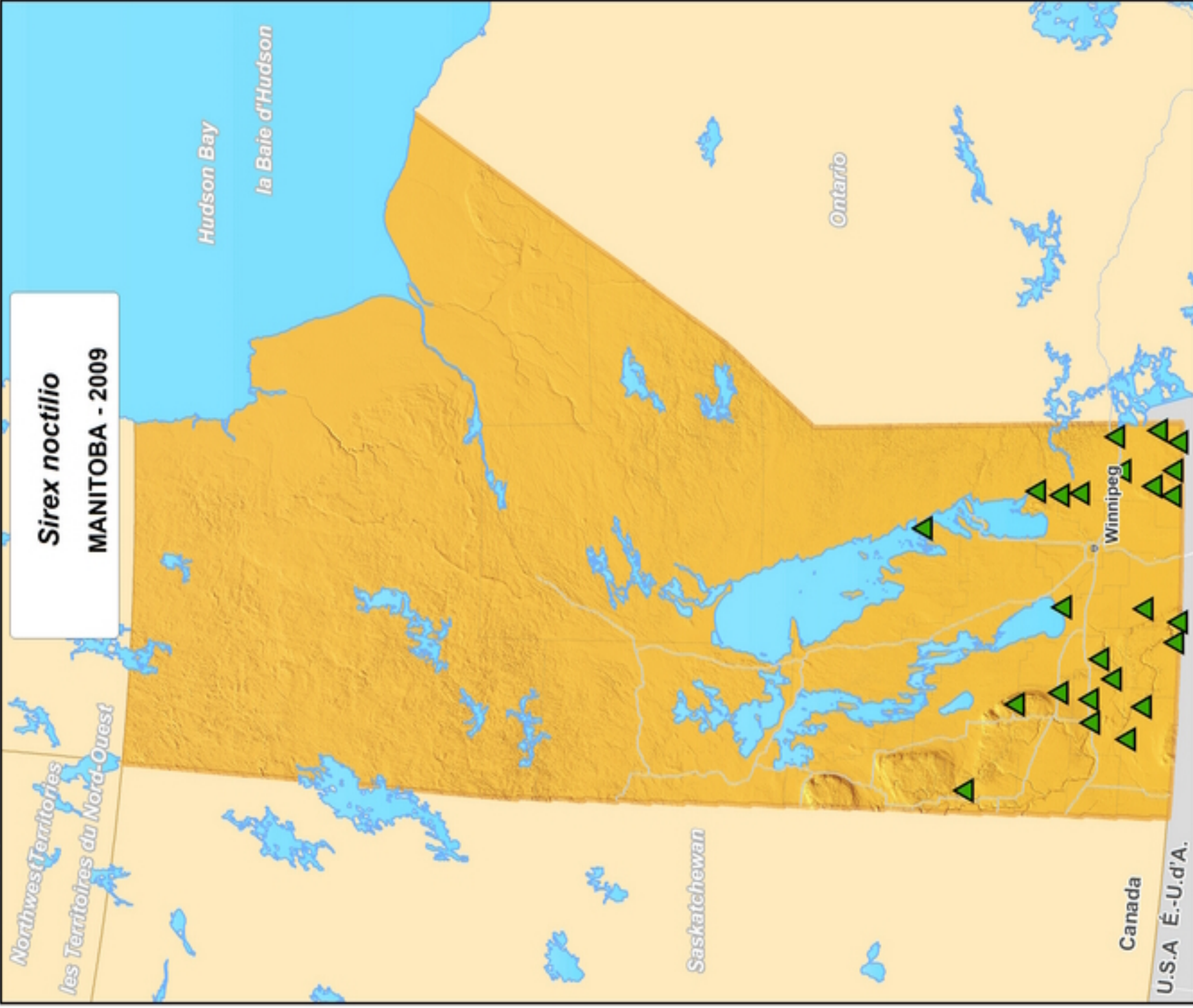
 Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
 2010 09 08



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

Produced by the Canadian Food Inspection Agency
 Prepared by the Canadian Food Inspection Agency
 Unit de surveillance phyto-sanitaire, Ottawa, Ontario
 Projeção cartográfica: UTM, Datum: NAD83

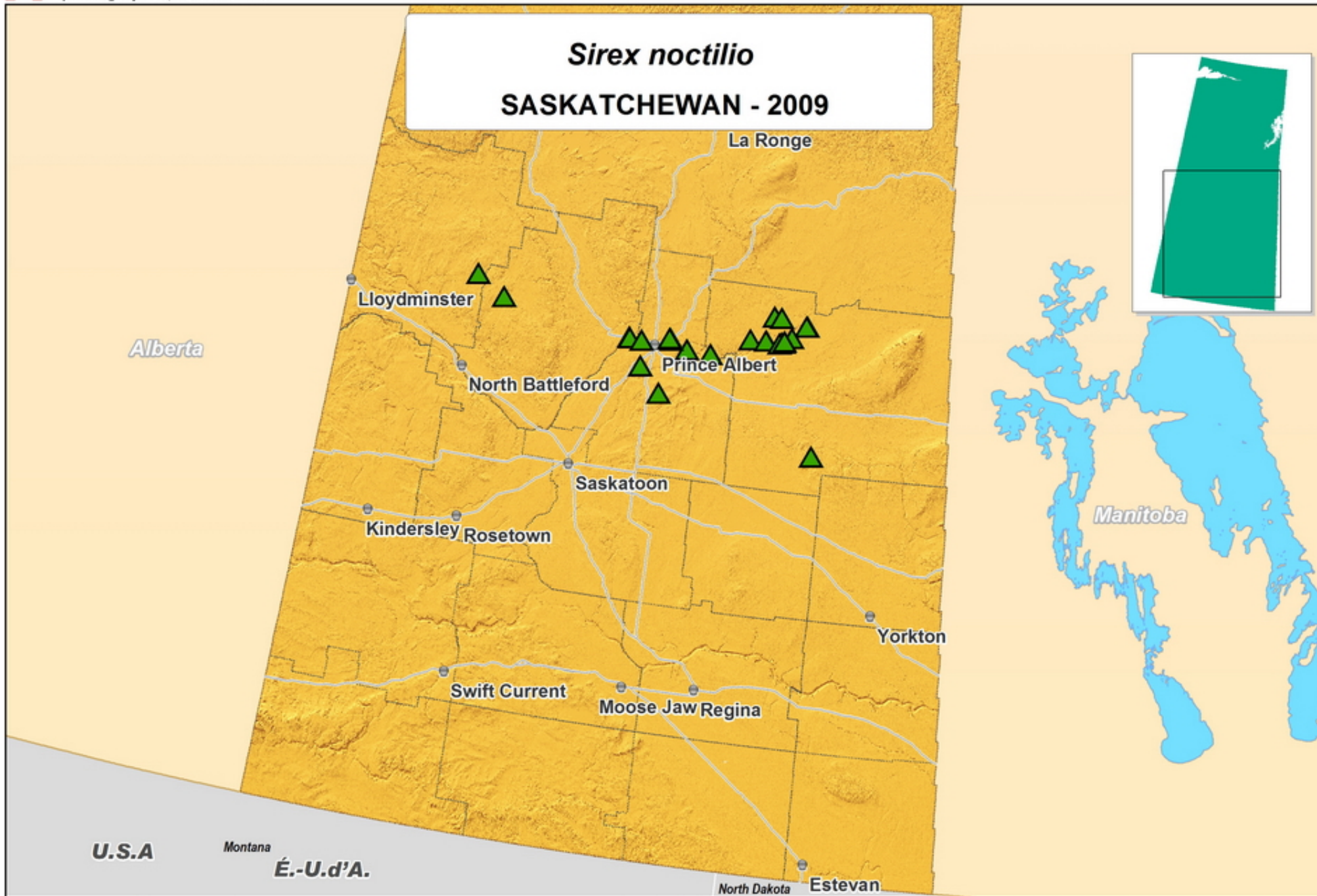
YrAn MoM Day
 2009 07 13

SCALE | ÉCHELLE



Canada

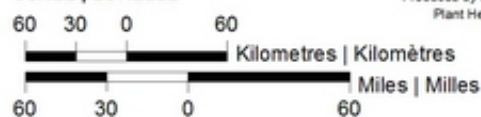
Sirex noctilio SASKATCHEWAN - 2009



LEGEND | LÉGENDE


 Negative Site | Site Négatif

SCALE | ÉCHELLE



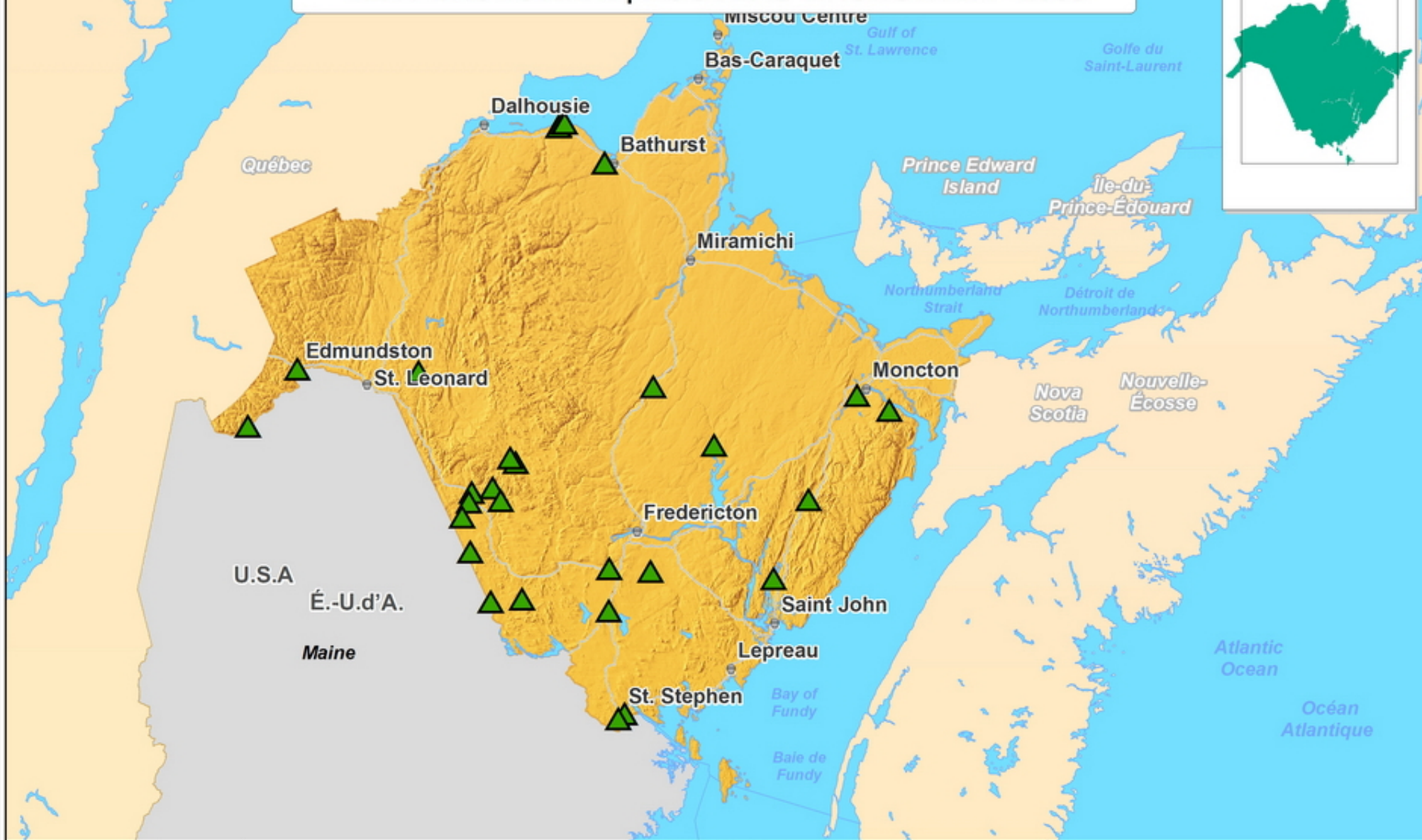
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
 2010 07 07

Pine Shoot Beetle | Grand hylésine du pin

Tomicus piniperda L.

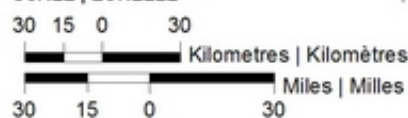
NEW BRUNSWICK | NOUVEAU-BRUNSWICK - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

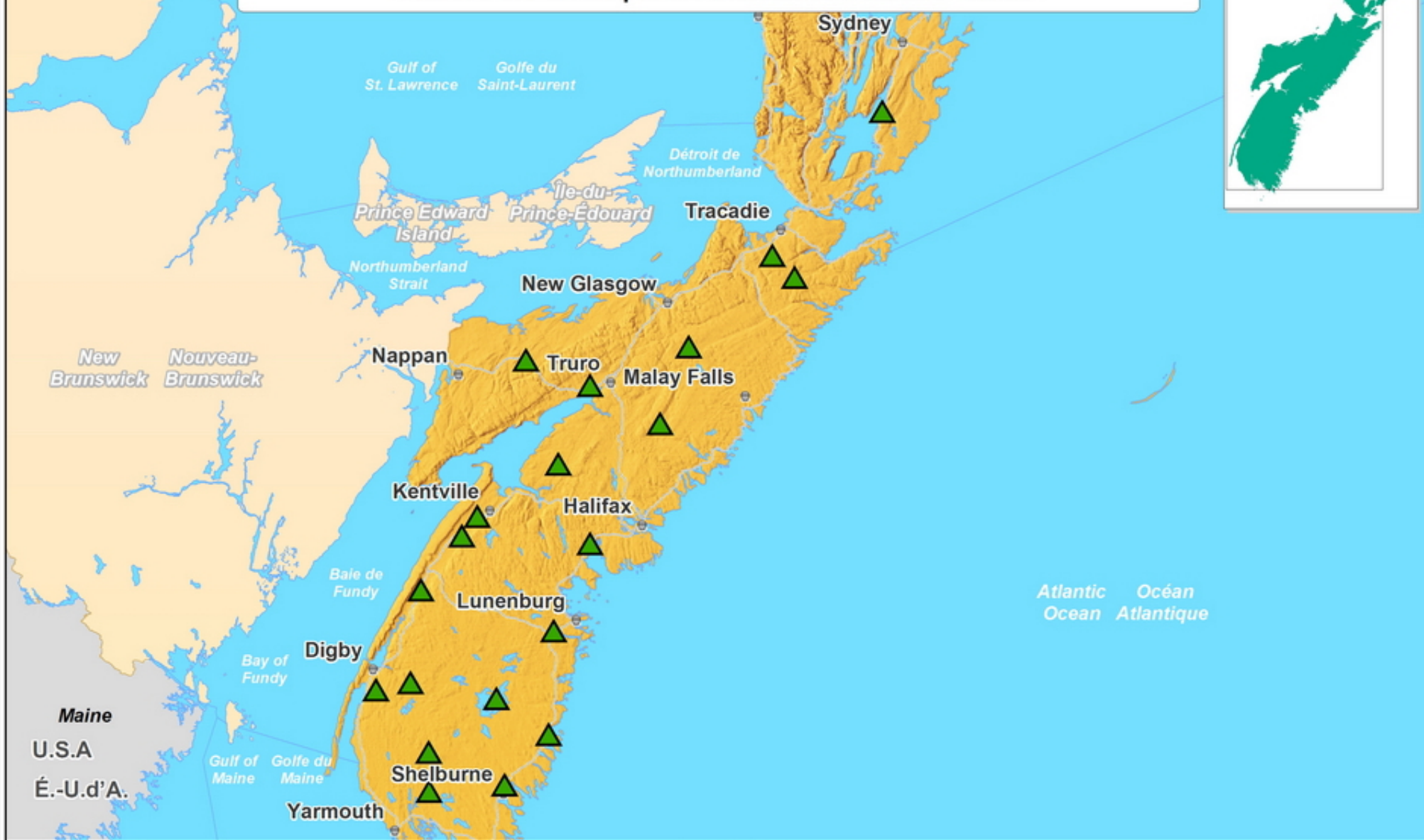
SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 09 08

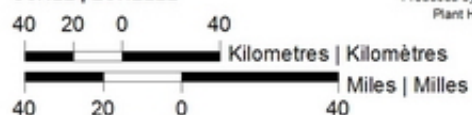
Pine Shoot Beetle | Grand hylésine du pin *Tomicus piniperda* L. NOVA SCOTIA | NOUVELLE-ÉCOSSE - 2009



LEGEND | LÉGENDE

 Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

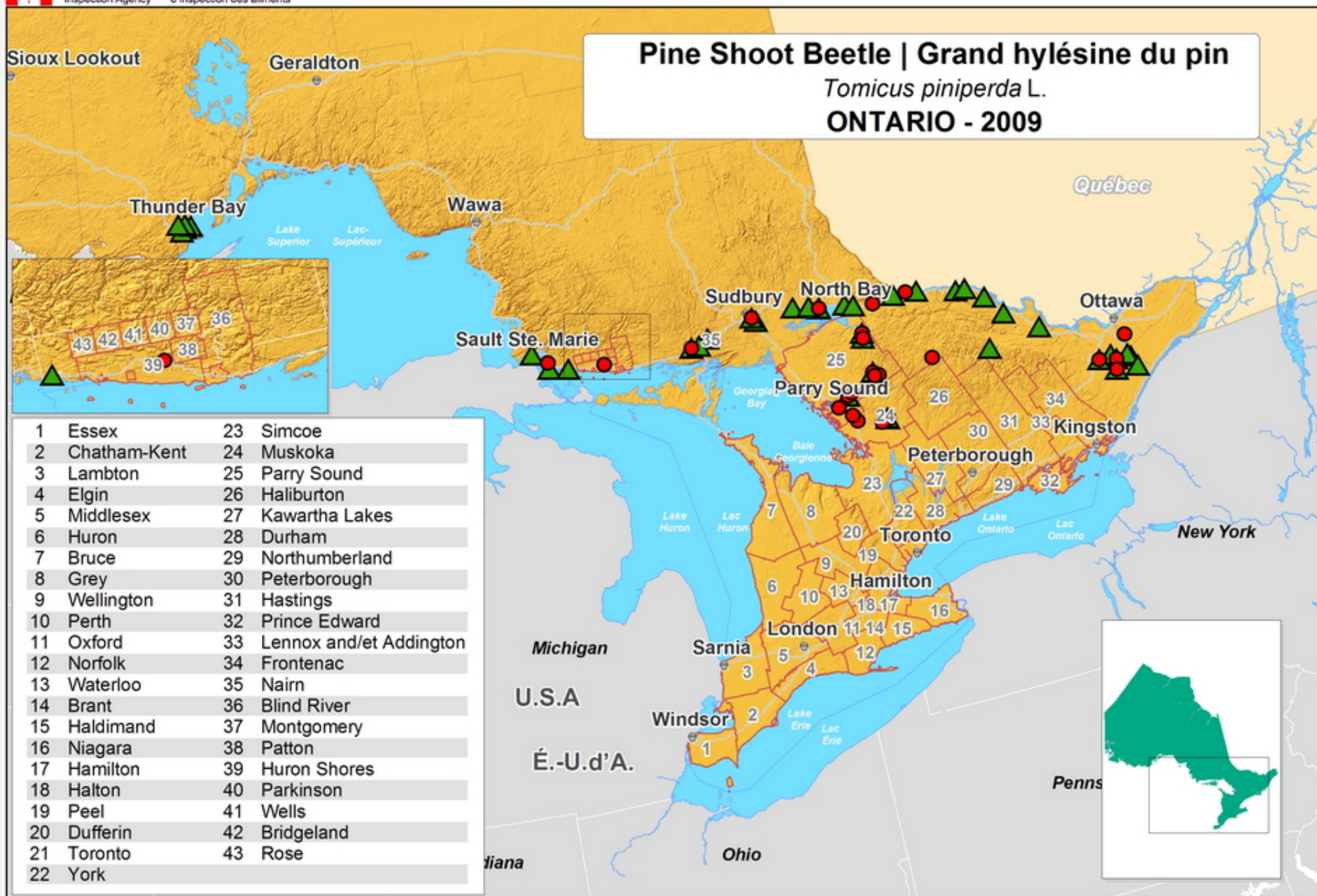
Yr/An Mo/M Da/J
 2010 09 08



Pine Shoot Beetle | Grand hylésine du pin

Tomicus piniperda L.

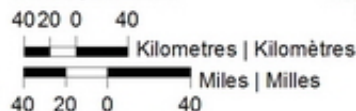
ONTARIO - 2009



LEGEND | LÉGENDE

- Positive Site | Site positif
- ▲ Negative Site | Site Négatif
- Regulated Area | Lieu réglementé

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité des enquêtes phytosanitaires, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 06 28



Common Pine Shoot Beetle | Grand hylésine du pin *Tomicus piniperda* L. Québec - 2009

New Brunswick /
 Nouveau-Brunswick

- | | |
|----------------------------------|------------------------------|
| 1....Pontiac | 31....Saint-Élie |
| 2....Low | 32....Shawinigan |
| 3....Les Collines-de-l'Outaouais | 33....Nicolet-Yamaska |
| 4....Gatineau | 34....Drummond |
| 5....Papineau | 35....Les Maskoutains |
| 6....Notre-Dame-du-Laus | 36....Acton |
| 7....Notre-Dame-de-Pontmain | 37....La Haute-Yamaska |
| 8....L'Annonciation | 38....Brome-Missisquoi |
| 9....Les Laurentides | 39....Memphrémagog |
| 10....Argenteuil | 40....Coaticook |
| 11....Les Pays-d'en-Haut | 41....Le Haut-Saint-François |
| 12....La Rivière-du-Nord | 42....Sherbrooke |
| 13....Mirabel | 43....Le Val-Saint-François |
| 14....Deux-Montagnes | 44....Les Sources |
| 15....Vaudreuil-Soulanges | 45....Arthabaska |
| 16....Beauharnois-Salaberry | 46....Bécancour |
| 17....Le Haut-Saint-Laurent | 47....Saint-Prospère |
| 18....Les Jardins-de-Napierville | 48....Saint-Gilbert |
| 19....Roussillon | 49....Saint-Raymond |
| 20....Montréal | 50....Saint-Basile |
| 21....Laval | 51....Lotbinière |
| 22....Thérèse-De-Blainville | 52....L'Érable |
| 23....Les Moulins | 53....Les Appalaches |
| 24....D'Au-tray | 54....Le Granit |
| 25....Marguerite-D'Youville | 55....Beauce-Sartigan |
| 26....Longueuil | 56....Robert-Cliche |
| 27....Le Haut-Richelieu | 57....La Nouvelle-Beauce |
| 28....Rouville | 58....Lévis |
| 29....La Vallée-du-Richelieu | 59....Bellechasse |
| 30....Pierre-De Saurel | 60....Les Etchemins |
| | 61....Saint-Pamphile |

LEGEND | LÉGENDE

- Positive site | site positif
- ▲ Negative site | site négatif

Regulated Municipality | municipalité réglementée

0 80 Kilometres | Kilomètres
 0 80 Miles | Miles

Produced by the Canadian Food Inspection Agency /
 Préparé par l'Agence canadienne d'inspection des aliments

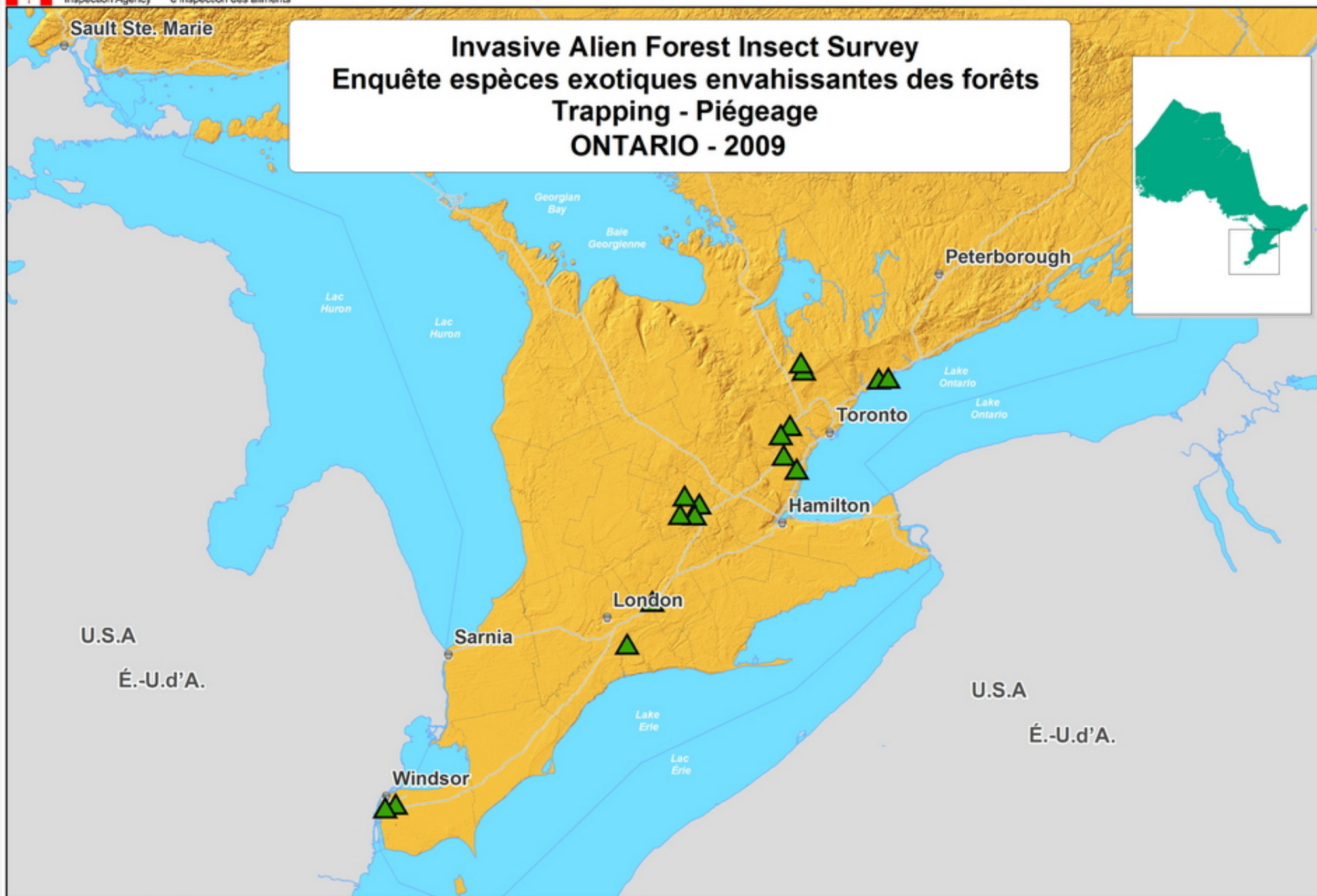
Yr/An Mo/M Da/J
 2010 11 24



Canadian Food
Inspection Agency

Agence canadienne
d'inspection des aliments

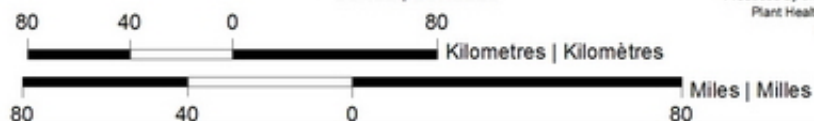
Invasive Alien Forest Insect Survey Enquête espèces exotiques envahissantes des forêts Trapping - Piégeage ONTARIO - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 06 28

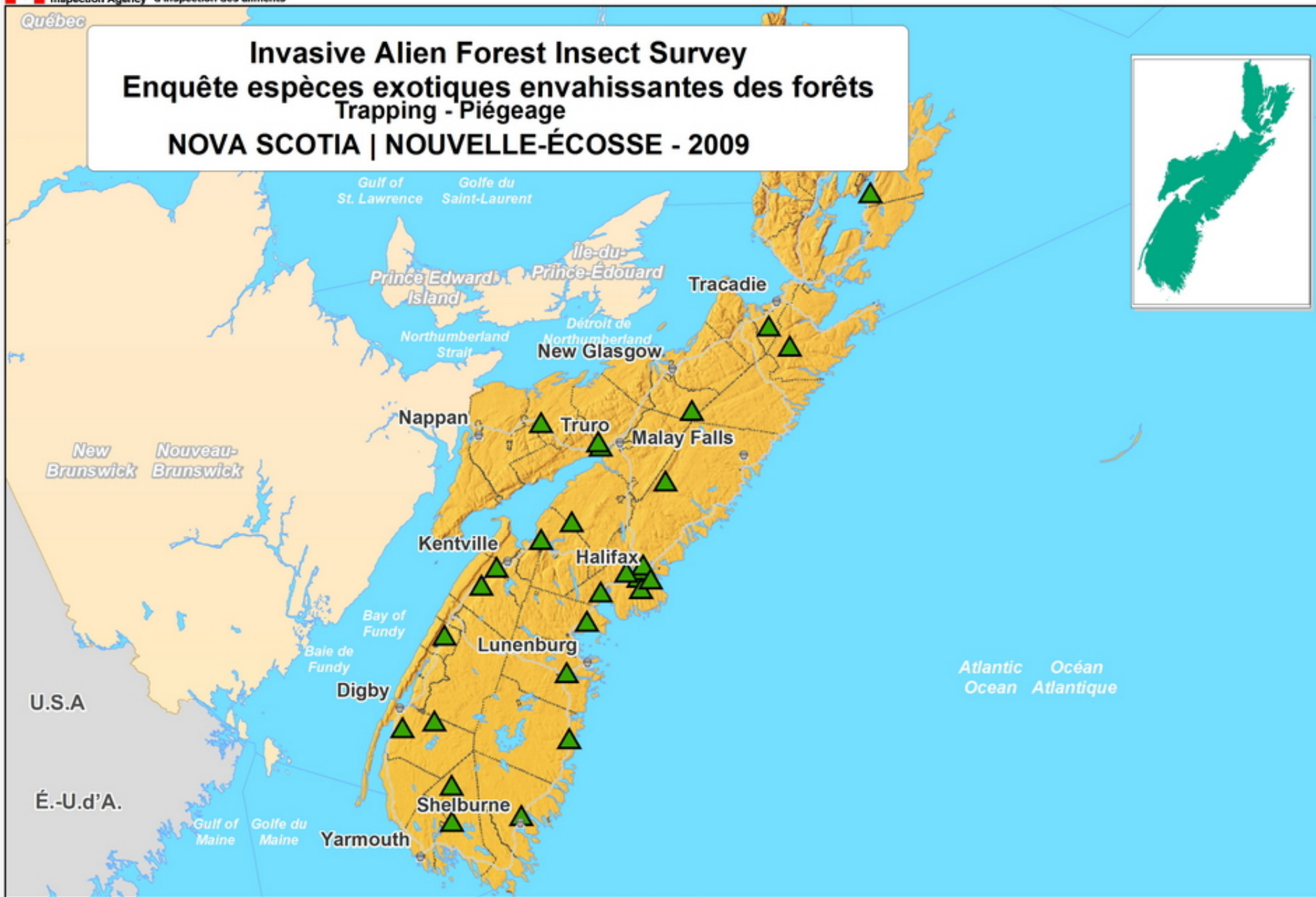


Invasive Alien Forest Insect Survey

Enquête espèces exotiques envahissantes des forêts

Trapping - Piégeage

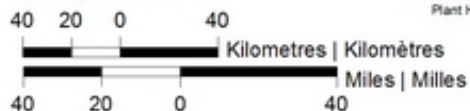
NOVA SCOTIA | NOUVELLE-ÉCOSSE - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE

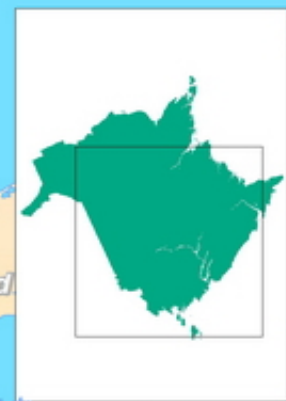
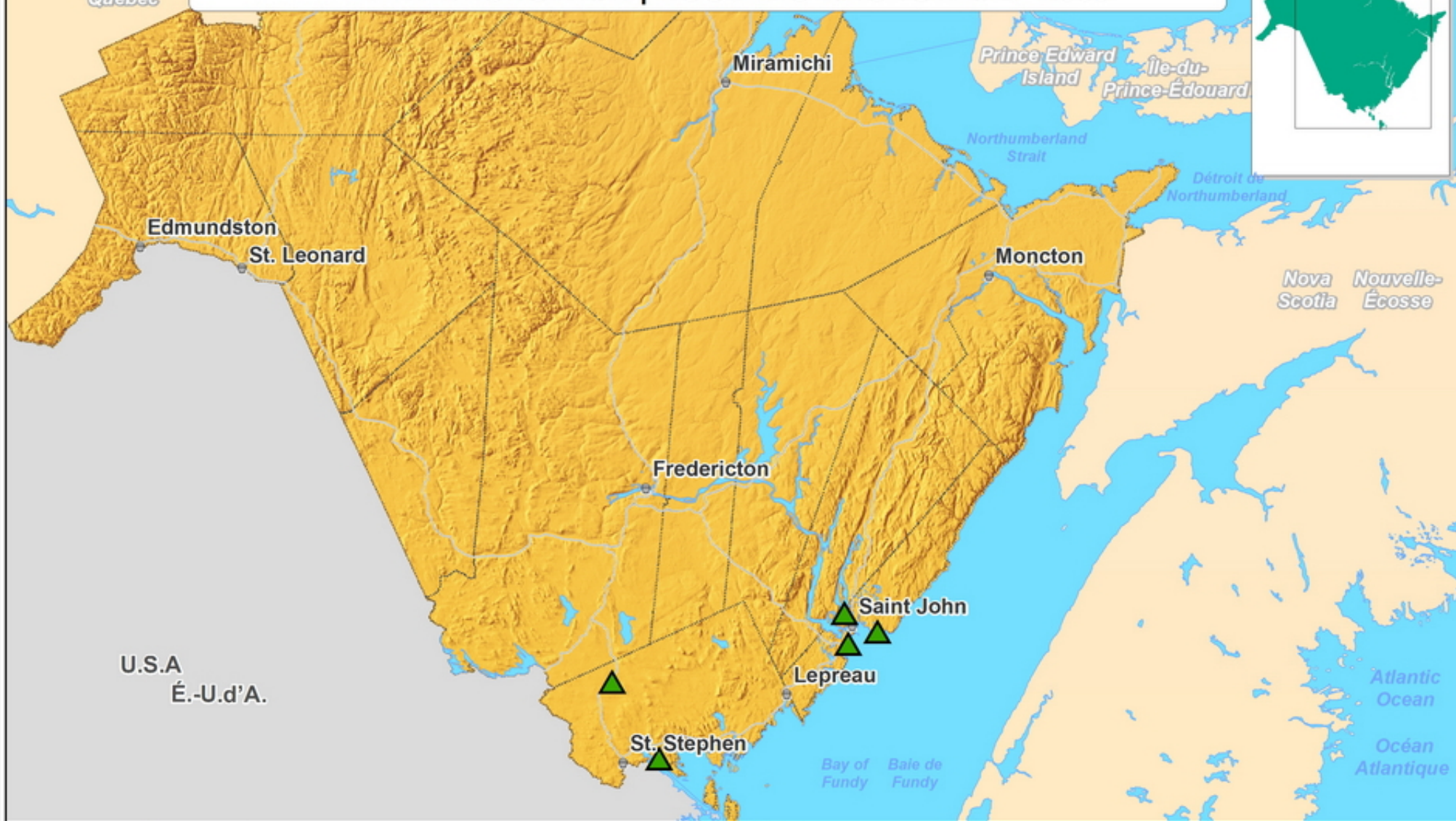


Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 09 08

Invasive Alien Forest Insect Survey Enquête espèces exotiques envahissantes des forêts Trapping - Piégeage

NEW BRUNSWICK | NOUVEAU-BRUNSWICK - 2009



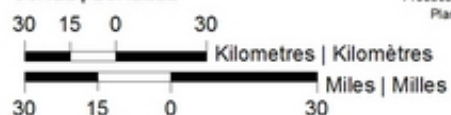
Invasive Alien Forest Insect Survey **Enquête espèces exotiques envahissantes des forêts** **Trapping - Piégeage** **NEWFOUNDLAND & LABRADOR | TERRE-NEUVE-ET-LABRADOR - 2009**



LEGEND | LÉGENDE

 **Negative Site | Site Négatif**

SCALE | ÉCHELLE

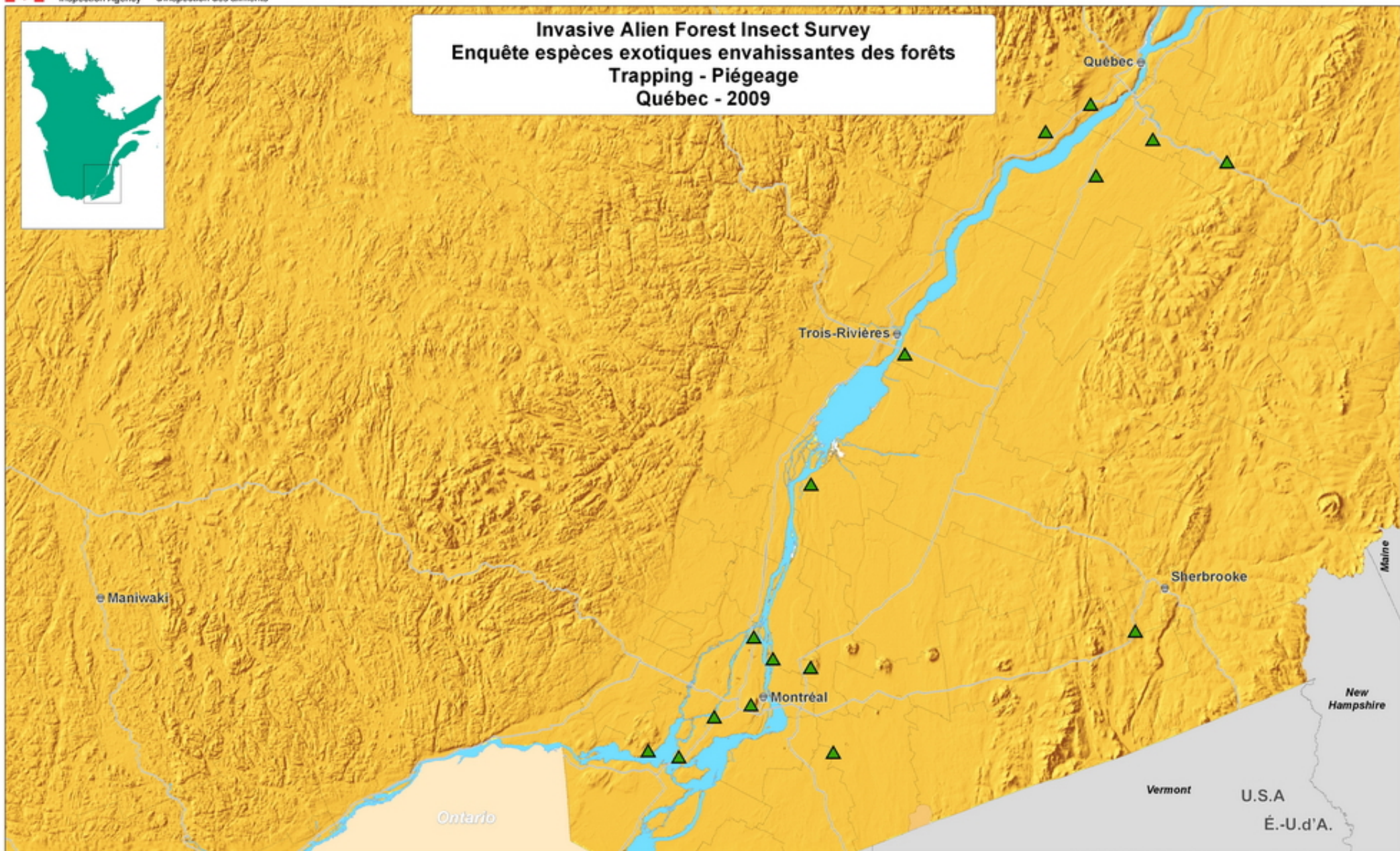


Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.


Yr/An Mo/M Da/J
 2010 09 08



Invasive Alien Forest Insect Survey Enquête espèces exotiques envahissantes des forêts Trapping - Piégeage Québec - 2009



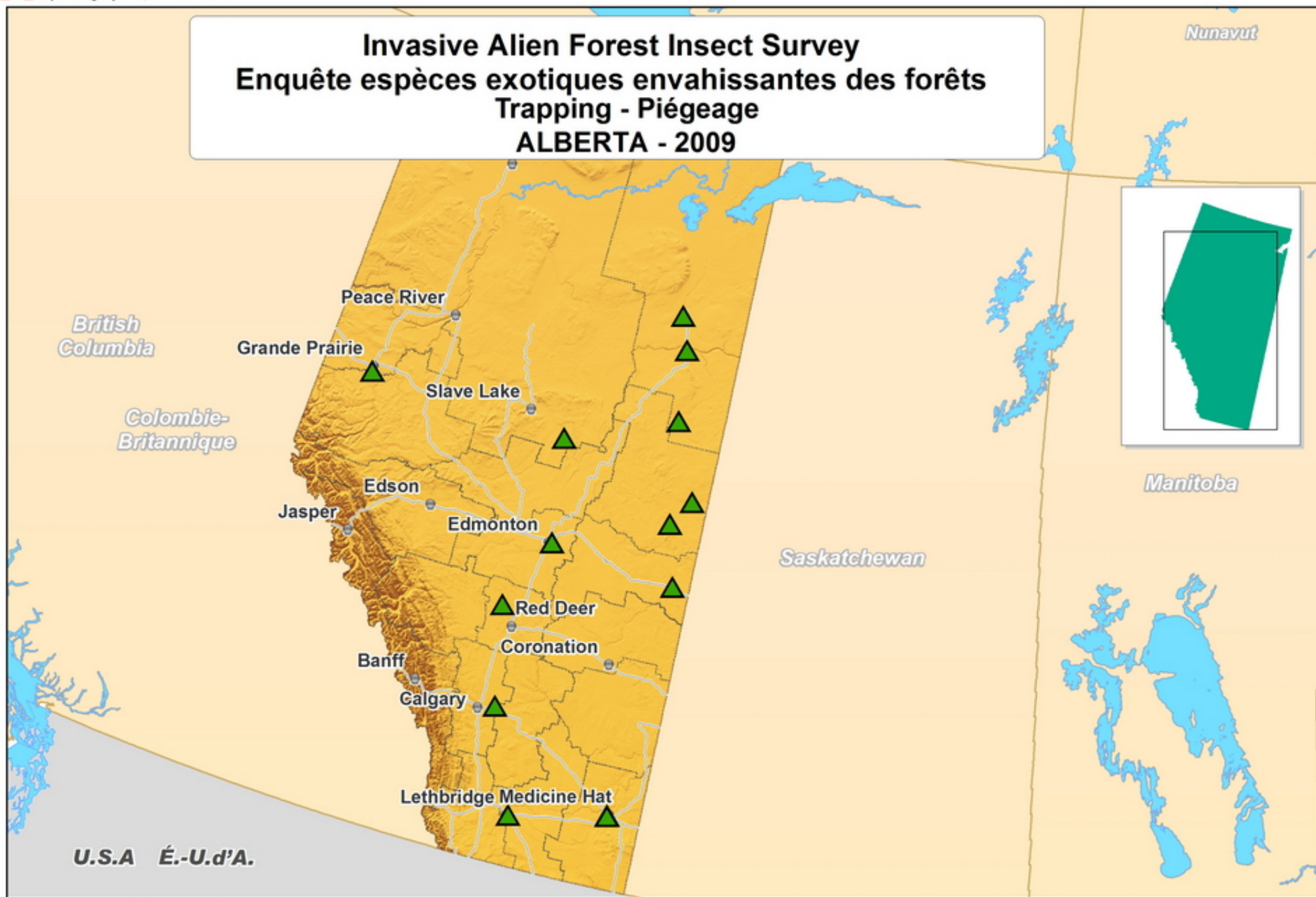
LEGEND | LÉGENDE

 Negative site | site négatif



Produced by the Canadian Food Inspection Agency
 Préparé par l'Agence canadienne d'inspection des aliments
 Yr/An 2010 Mo/M 11 Da/J 24

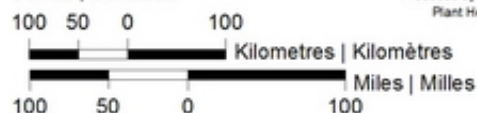
Invasive Alien Forest Insect Survey Enquête espèces exotiques envahissantes des forêts Trapping - Piégeage ALBERTA - 2009



LEGEND | LÉGENDE


 Negative Site | Site Négatif

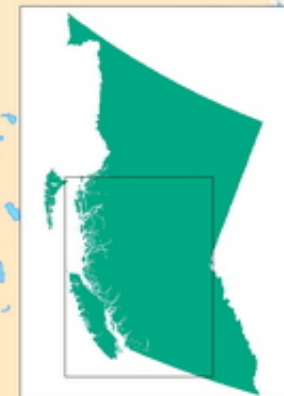
SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
 2010 07 07

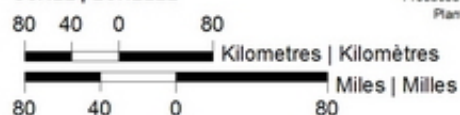
Invasive Alien Forest Insect Survey
Enquête espèces exotiques envahissantes des forêts
Trapping - Piégeage
BRITISH COLUMBIA | COLOMBIE-BRITANNIQUE - 2009



LEGEND | LÉGENDE

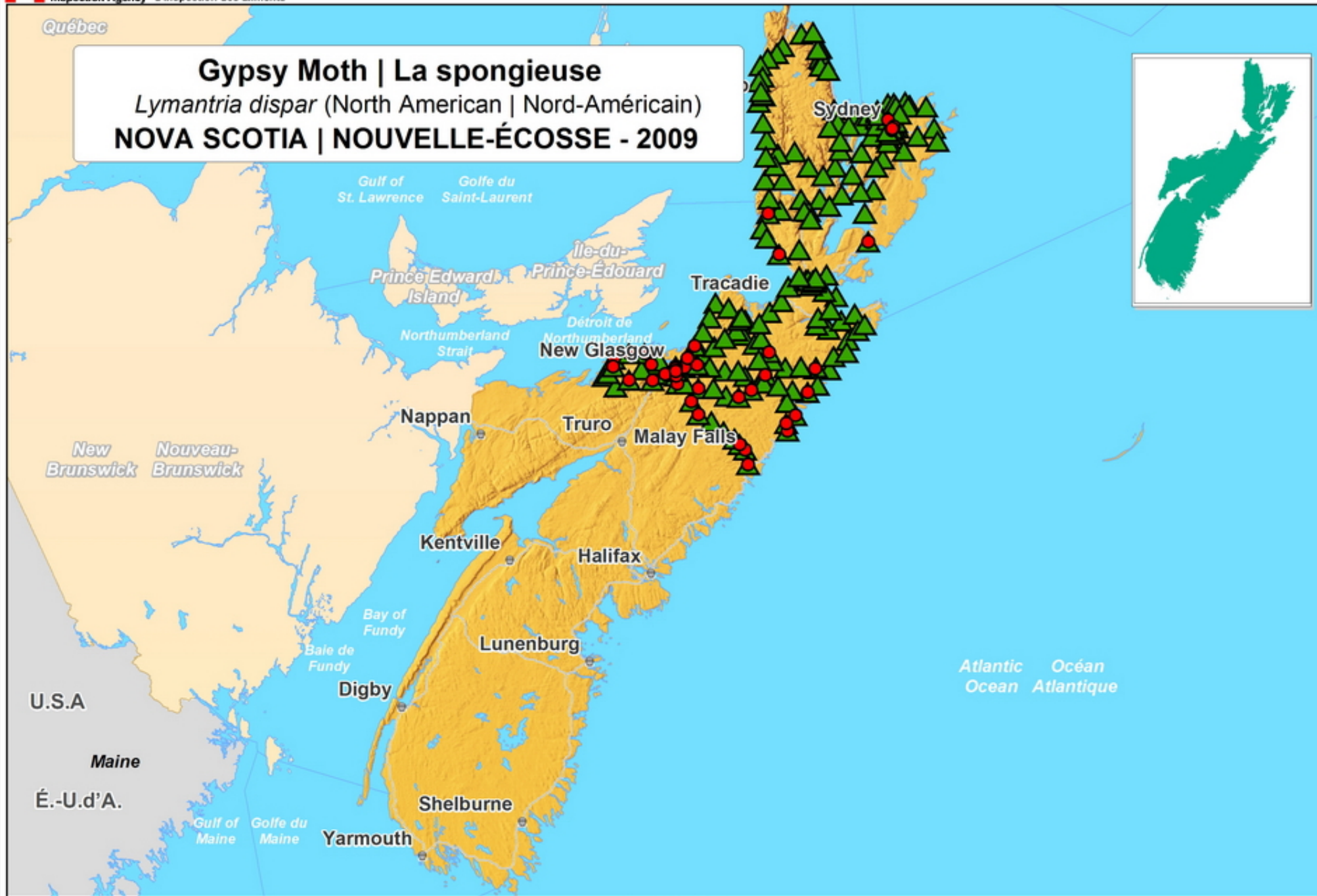
▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 07 07



LEGEND | LÉGENDE

- Positive Site | Site positif
- ▲ Negative Site | Site Négatif

SCALE | ÉCHELLE

40 20 0 40

Kilometres | Kilomètres

Miles | Milles

40 20 0 40

Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.

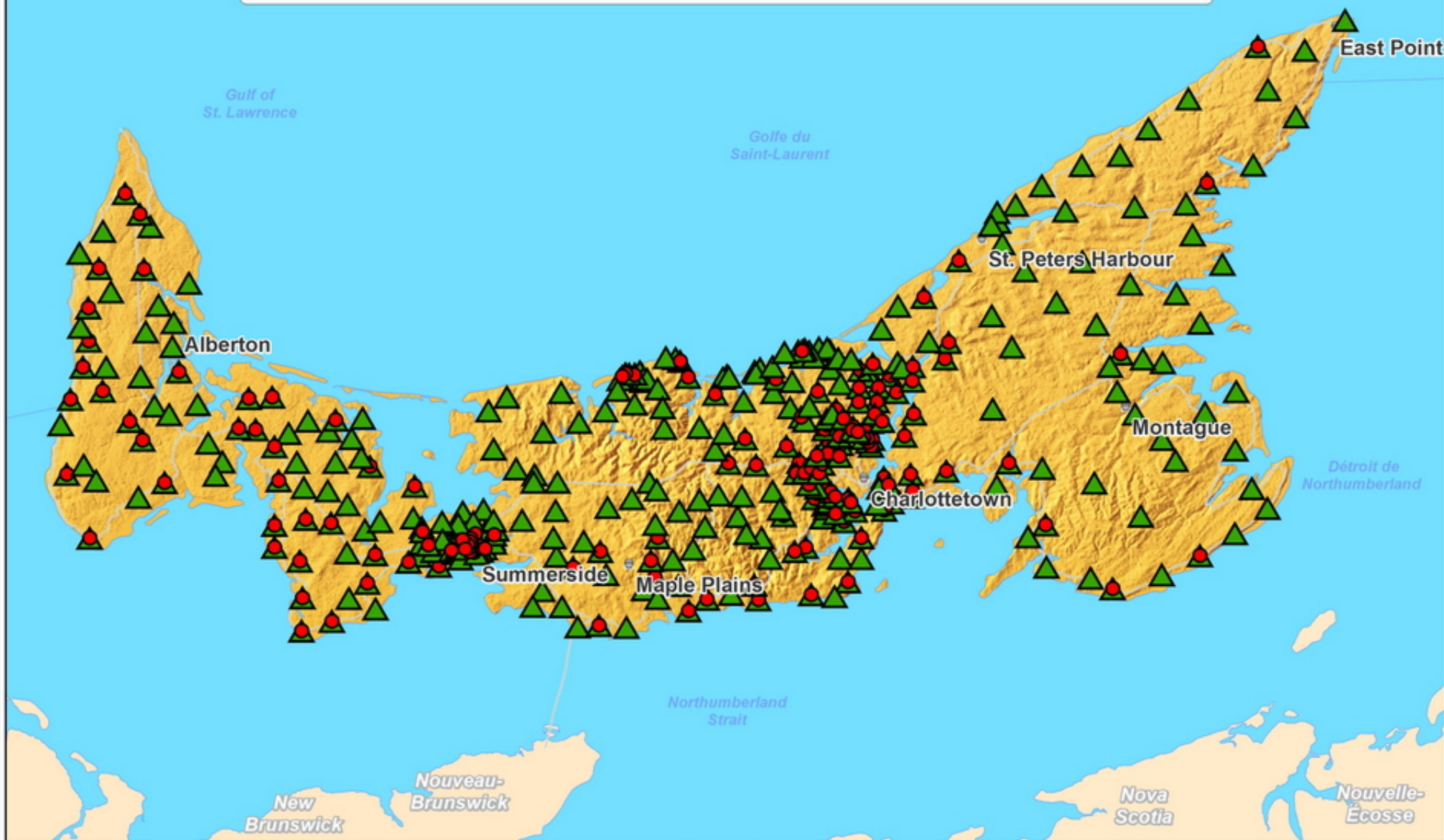
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.

Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 09 08

Canada

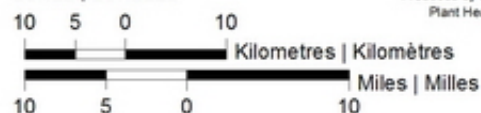
Gypsy Moth | La spongieuse *Lymantria dispar* (North American | Nord-Américain) **PRINCE EDWARD ISLAND | ÎLE-DU-PRINCE-ÉDOUARD - 2009**



LEGEND | LÉGENDE

- Positive Site | Site positif
- ▲ Negative Site | Site négatif

SCALE | ÉCHELLE



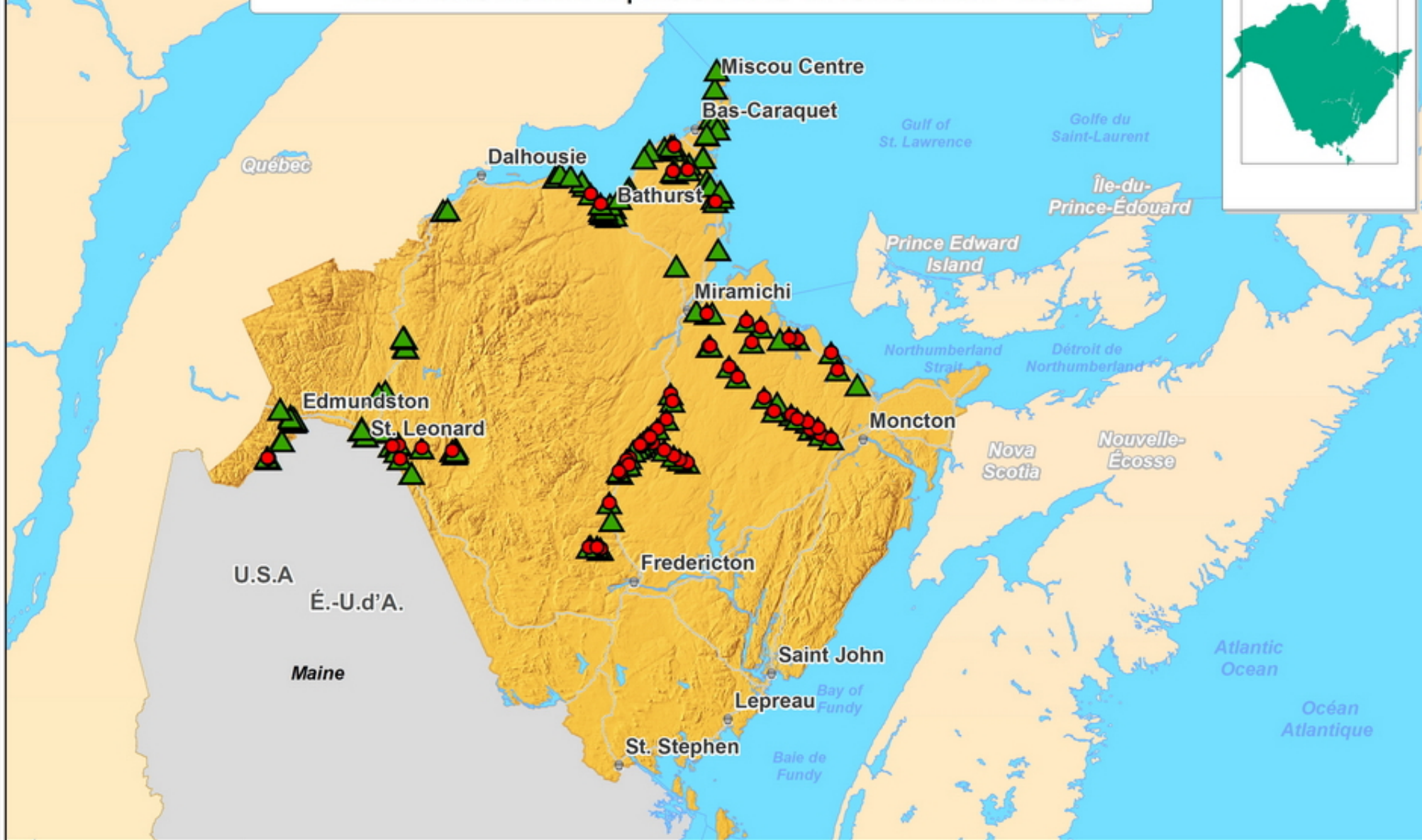
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
 2010 09 08

Gypsy Moth | La spongieuse

Lymantria dispar (North American | Nord-Américain)

NEW BRUNSWICK | NOUVEAU-BRUNSWICK - 2009



LEGEND | LÉGENDE

- Positive Site | Site positif
- ▲ Negative Site | Site Négatif

SCALE | ÉCHELLE

30 15 0 30

Kilometres | Kilomètres

Miles | Milles

Produced by the Canadian Food Inspection Agency. / Préparée par l'Agence canadienne d'inspection des aliments.

Plant Health Surveillance Unit, Ottawa, Ontario. / Unité de surveillance phytosanitaire, Ottawa, Ontario.

Lambert Conformal Conic Projection. / Projection conique conforme de Lambert.

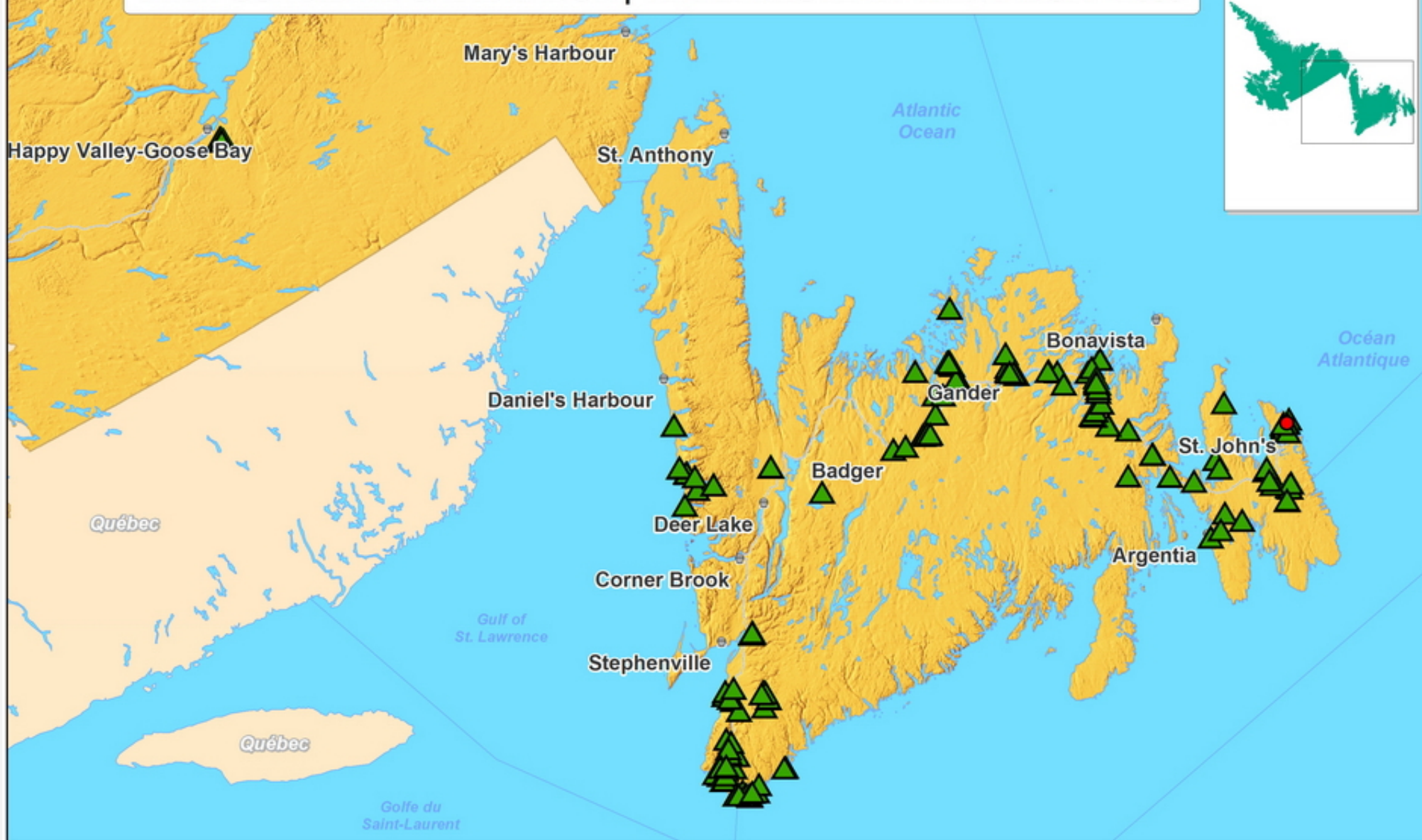
Yr/An Mo/M Da/J
2010 09 08

Canada

Gypsy Moth | La spongieuse

Lymantria dispar (North American | Nord-Américain)

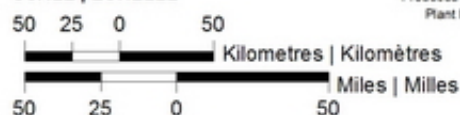
NEWFOUNDLAND & LABRADOR | TERRE-NEUVE-ET-LABRADOR - 2009



LEGEND | LÉGENDE

- Positive Site | Site positif
- ▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 09 08



Gypsy Moth | La spongieuse

Lymantria dispar (North American | Nord-Américain)
ONTARIO - 2009



Manitoba

Sioux Lookout

Geraldton

Kenora

Thunder Bay

U.S.A.

É.-U.d'A.

Minnesota

Lake
Superior

Lac-
Supérieur

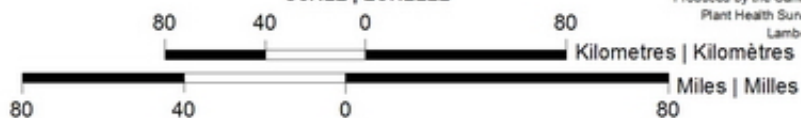
Michigan

Wisconsin

LEGEND | LÉGENDE

- Positive Site | Site positif
- ▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



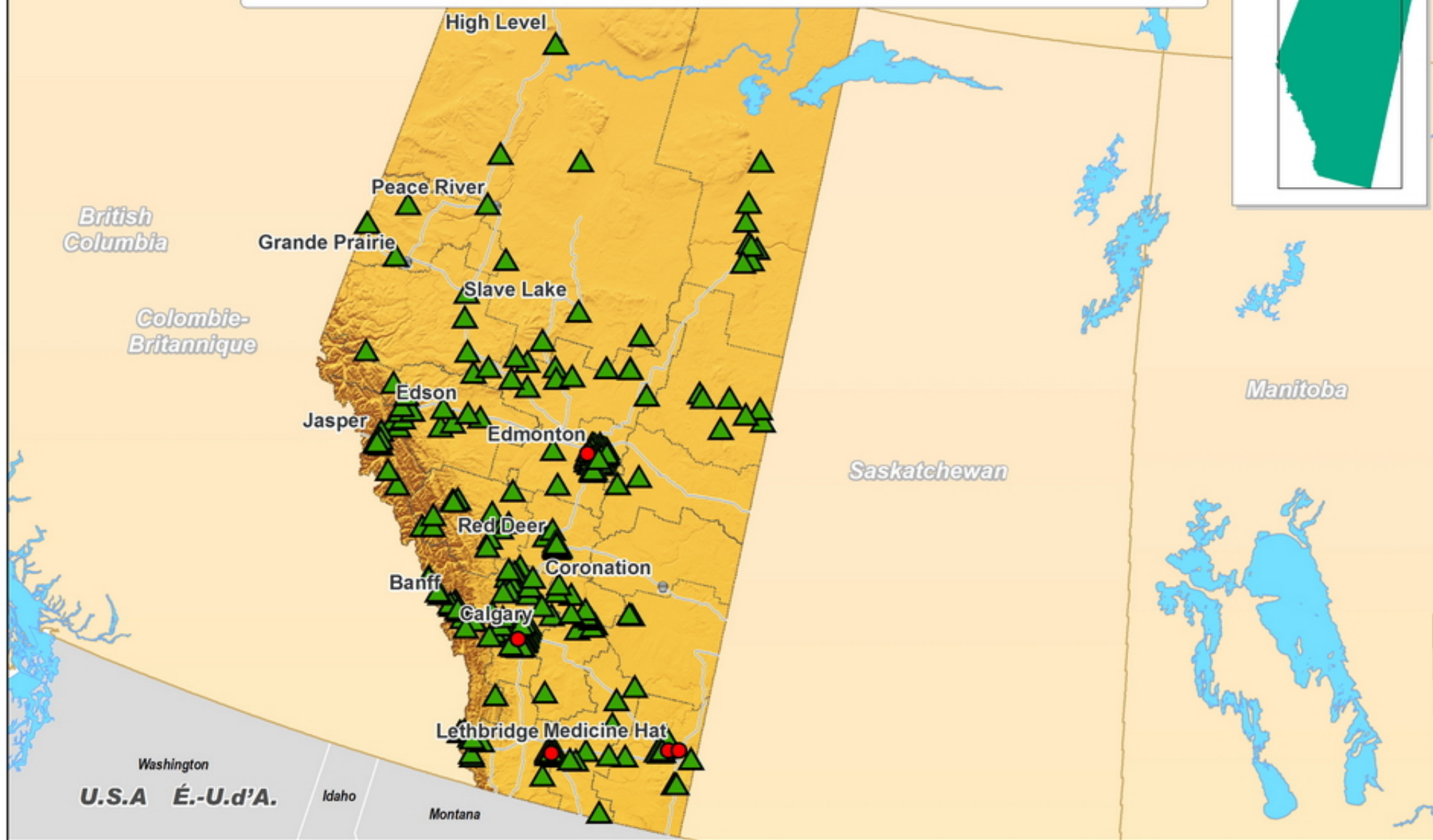
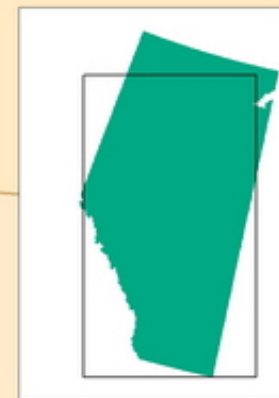
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 06 15



Gypsy Moth | La spongieuse *Lymantria dispar* (North American | Nord-Américain) ALBERTA - 2009

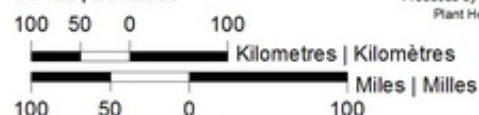
Nunavut



LEGEND | LÉGENDE

- Positive Site | Site positif
- ▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

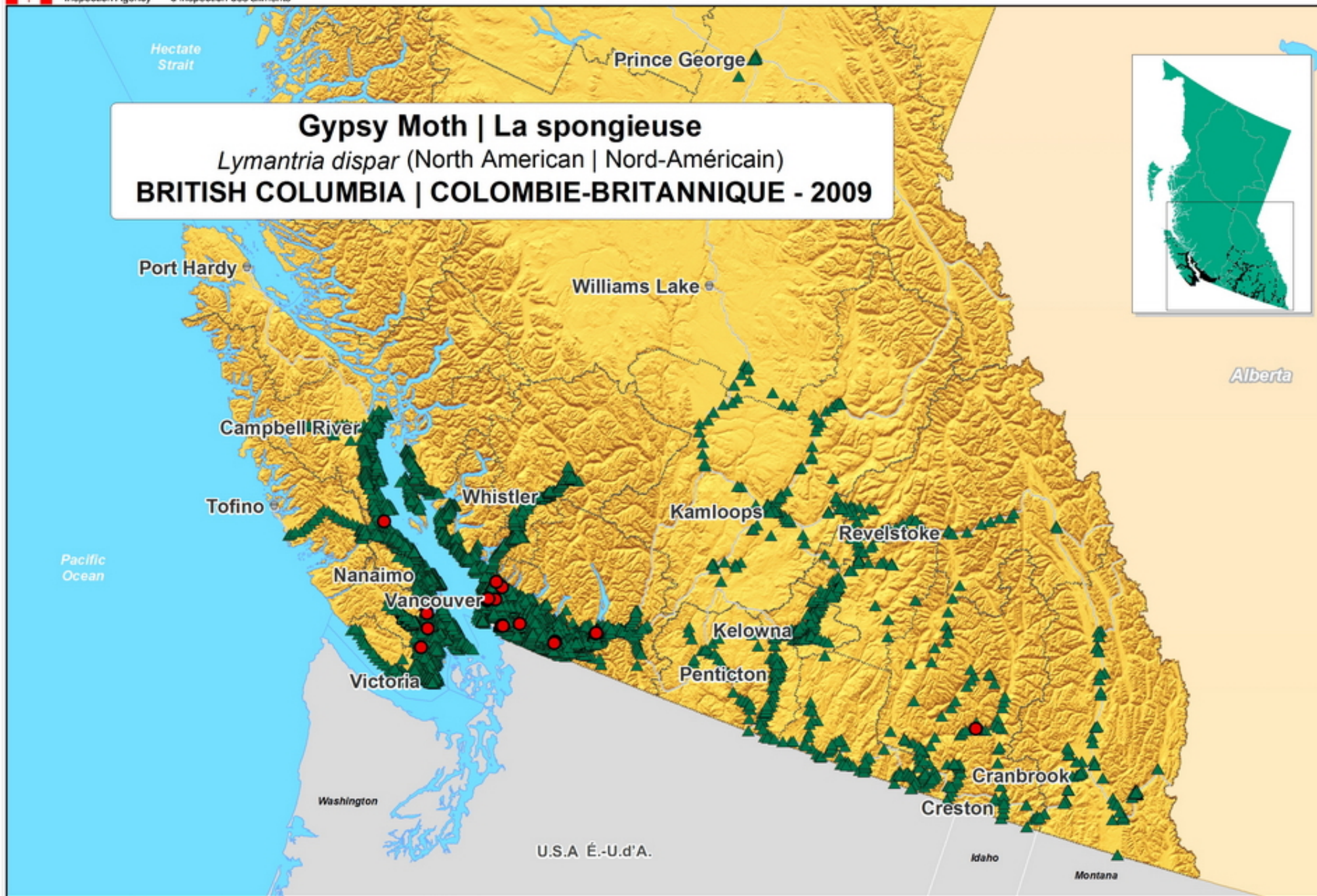
Yr/An Mo/M Da/J
 2010 07 07



Gypsy Moth | La spongieuse

Lymantria dispar (North American | Nord-Américain)

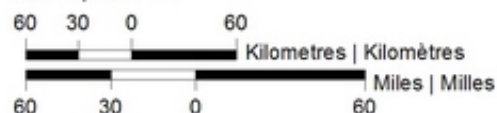
BRITISH COLUMBIA | COLOMBIE-BRITANNIQUE - 2009



LEGEND | LÉGENDE

- Positive Site | Site positif
- ▲ Negative Site | Site Négatif

SCALE | ÉCHELLE

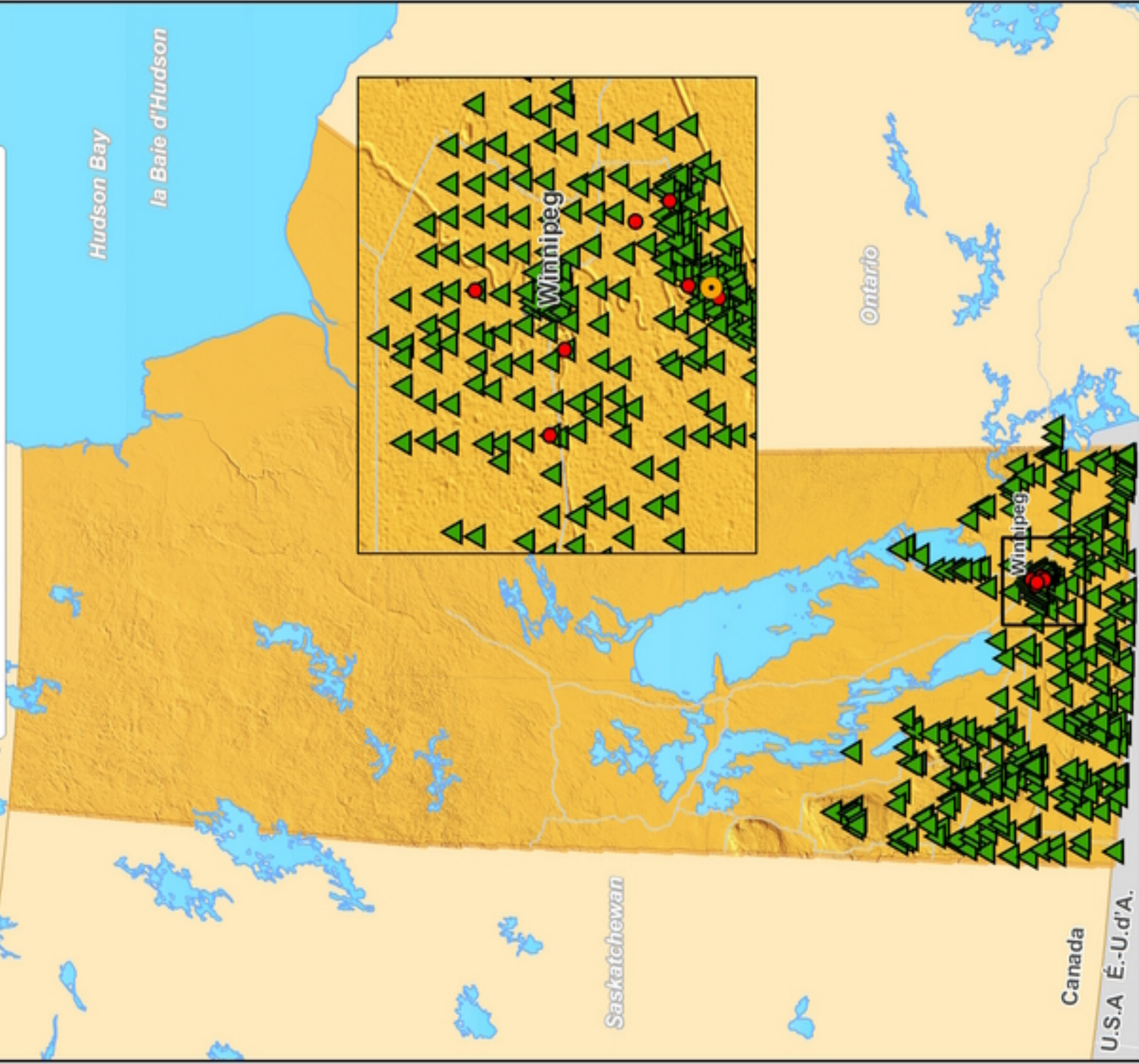


Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 01 21

Northwest Territories
les Territoires du Nord-Ouest

Gypsy Moth | La spongieuse *Lymantria dispar* **MANITOBA - 2009**



LEGEND | LÉGENDE

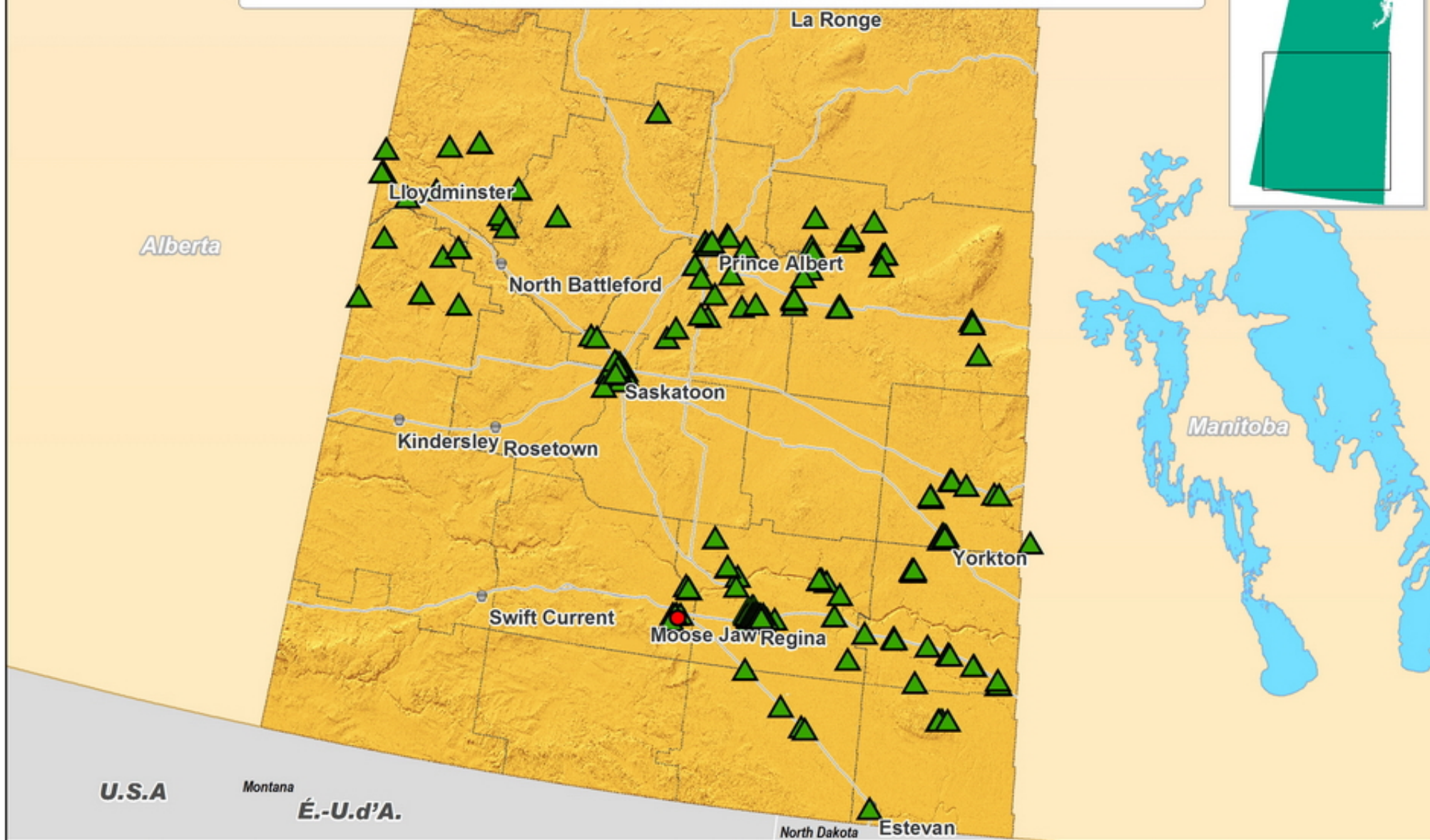
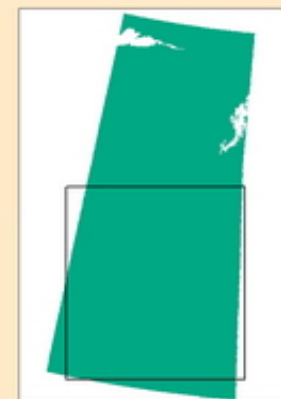
- Positive Site | Site positif
- Negative Site | Site Négatif

Prepared by the Canadian Food Inspection Agency
 Préparé par l'Agence canadienne d'inspection des aliments
 Unité de surveillance phyto-sanitaire, Ottawa, Ontario
 Plant Health Surveillance Unit, Ottawa, Ontario
 Unité de surveillance phyto-sanitaire, Ottawa, Ontario
 Prepared by the Canadian Food Inspection Agency
 Préparé par l'Agence canadienne d'inspection des aliments
 Unité de surveillance phyto-sanitaire, Ottawa, Ontario
 Plant Health Surveillance Unit, Ottawa, Ontario
 Unité de surveillance phyto-sanitaire, Ottawa, Ontario

SCALE | ÉCHELLE



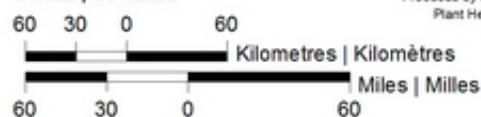
Gypsy Moth | La spongieuse *Lymantria dispar* (North American | Nord-Américain) **SASKATCHEWAN - 2009**



LEGEND | LÉGENDE

- Positive Site | Site positif
- ▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



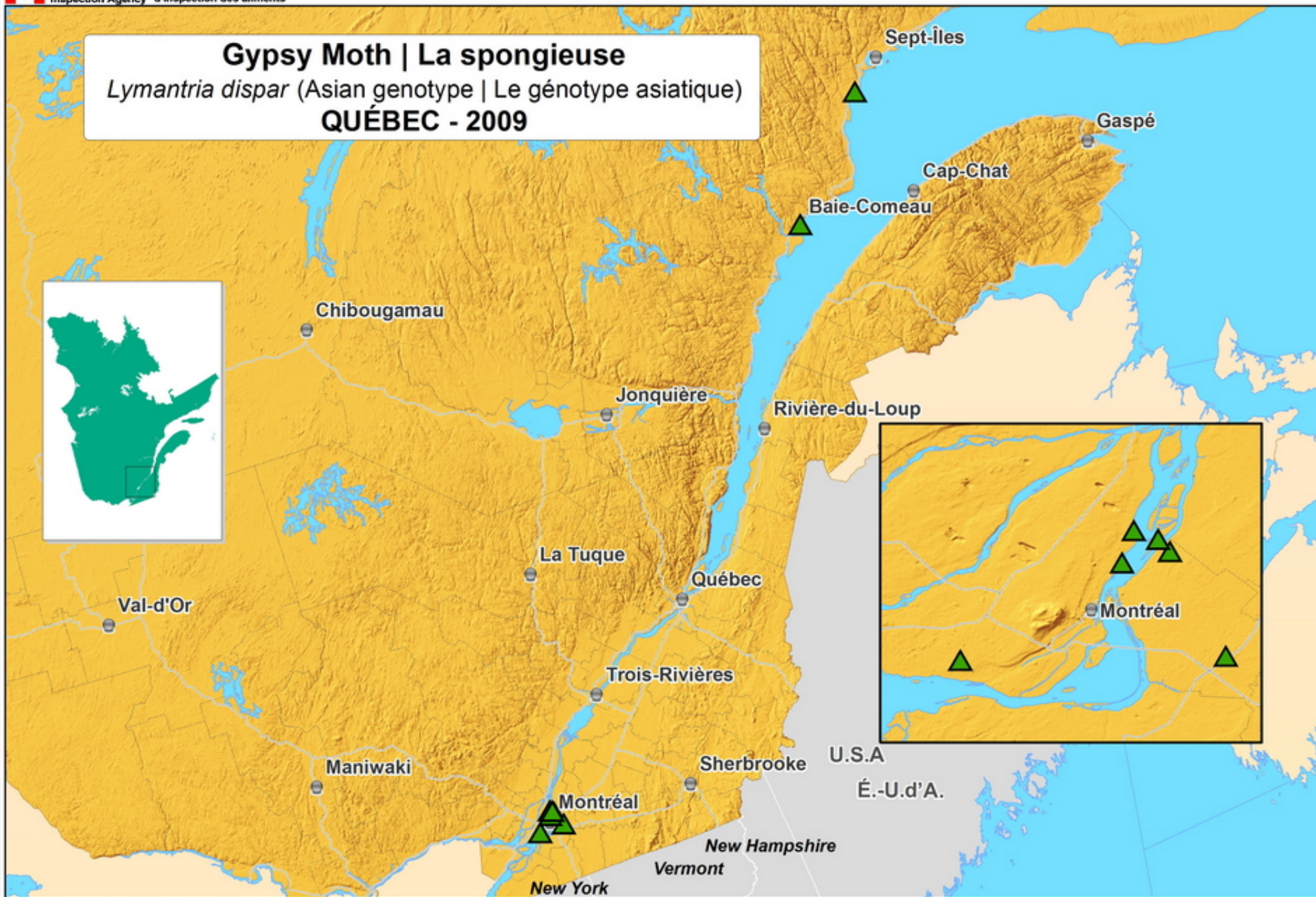
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
 2010 07 07

Gypsy Moth | La spongieuse

Lymantria dispar (Asian genotype | Le génotype asiatique)

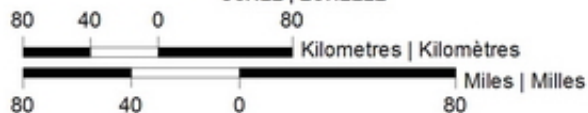
QUÉBEC - 2009



LEGEND | LÉGENDE

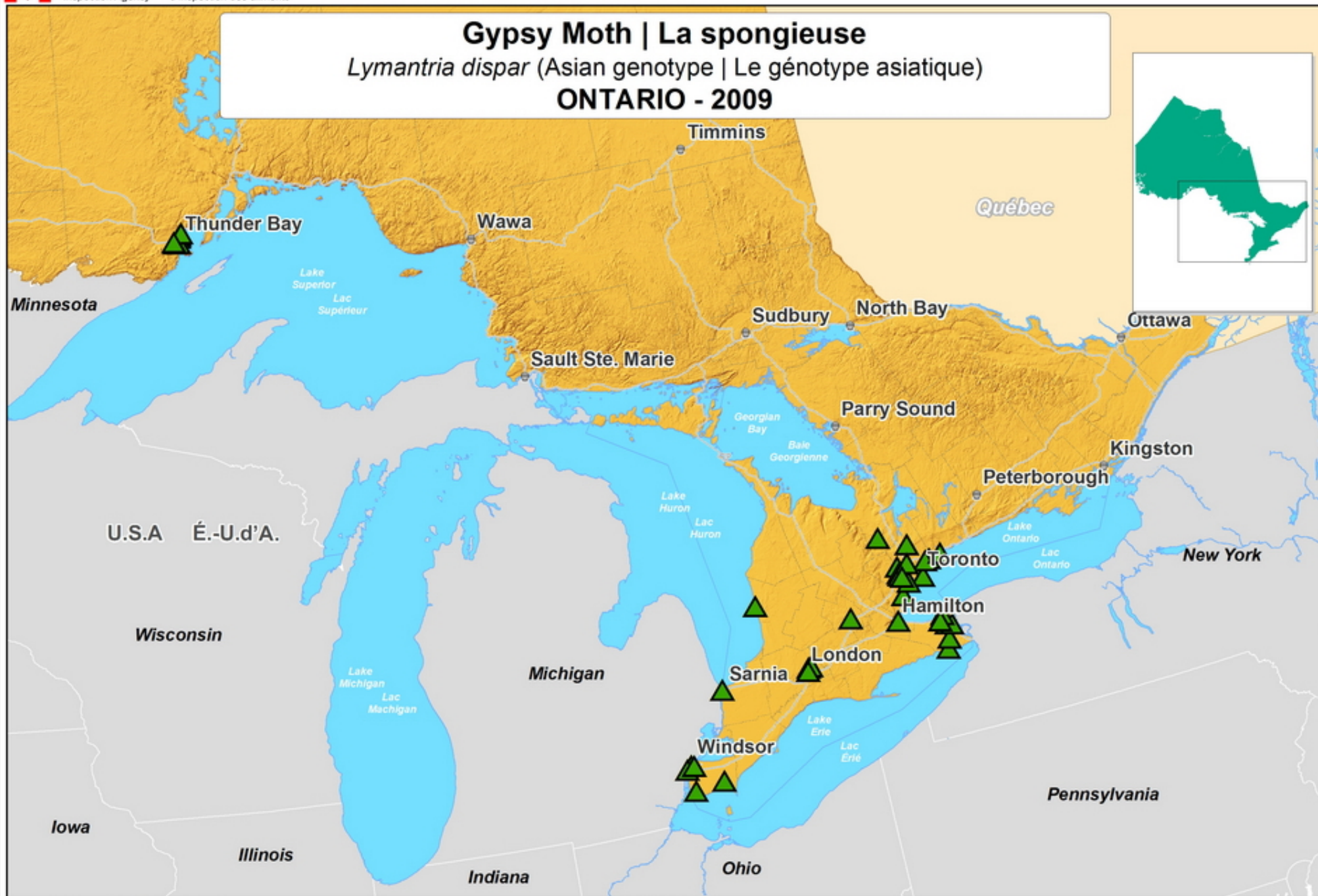
 Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

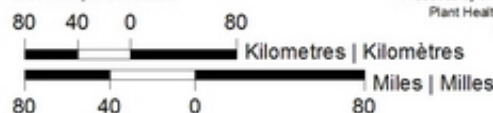
Yr/An Mo/M Da/J
 2010 07 07



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

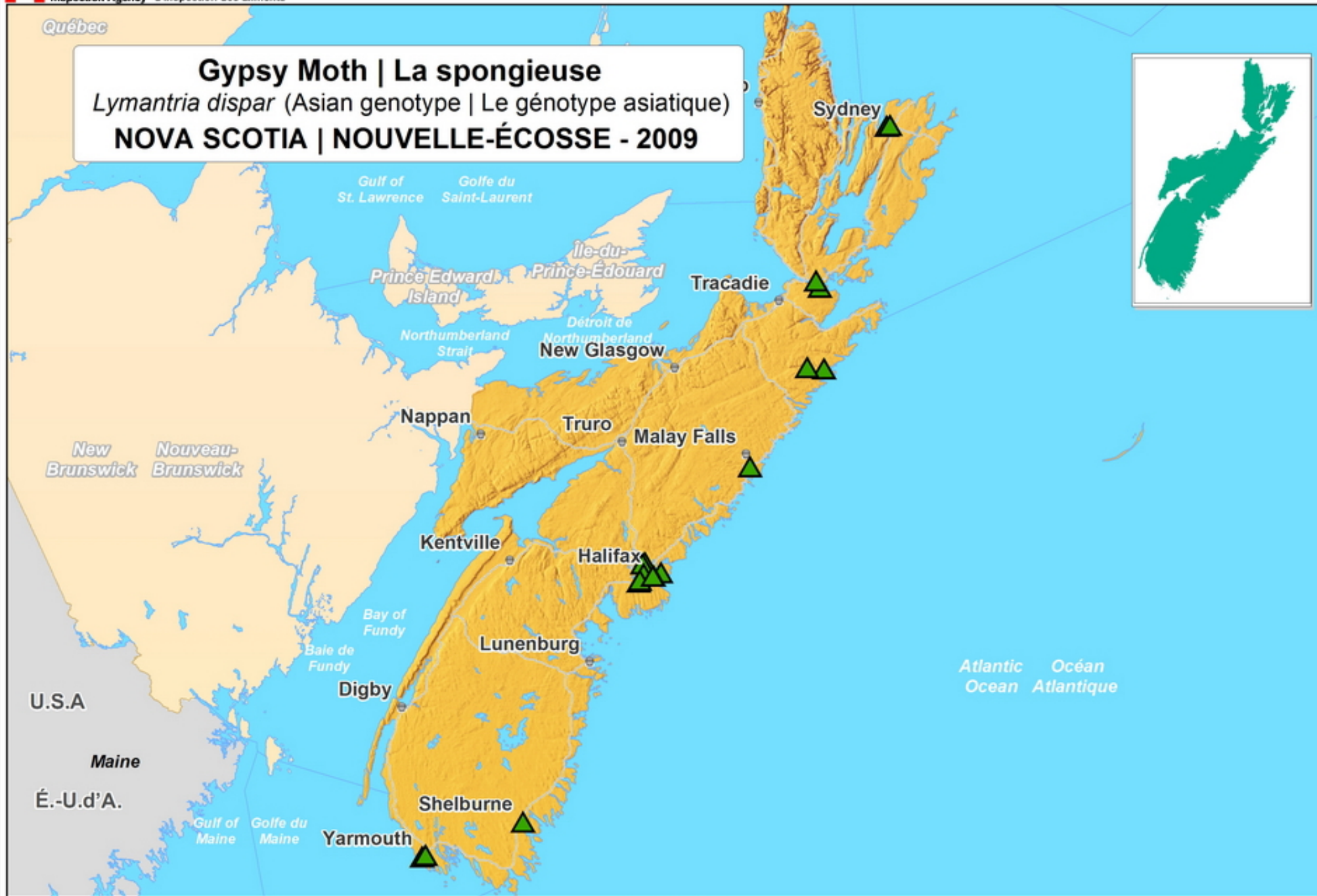
SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 06 28

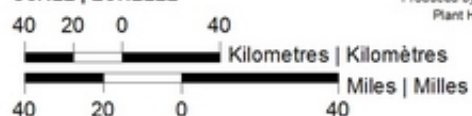




LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
 2010 09 08

Gypsy Moth | La spongieuse

Lymantria dispar (Asian genotype | Le génotype asiatique)

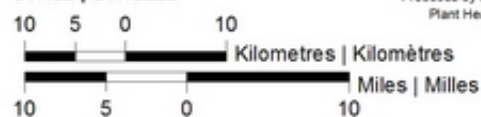
PRINCE EDWARD ISLAND | ÎLE-DU-PRINCE-ÉDOUARD - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



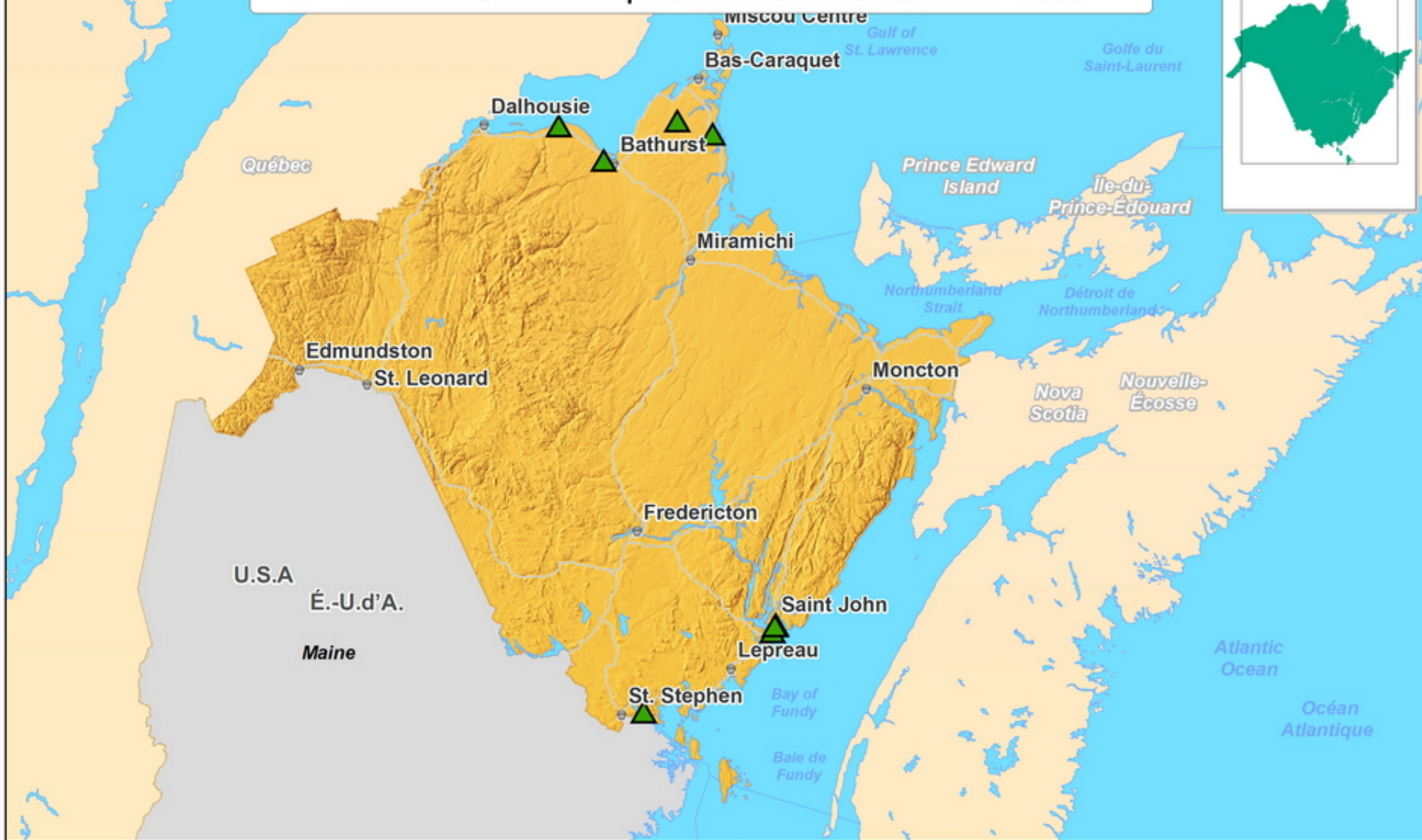
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 09 08

Gypsy Moth | La spongieuse

Lymantria dispar (Asian genotype | Le génotype asiatique)

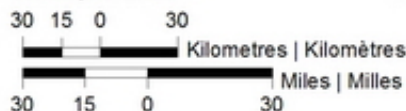
NEW BRUNSWICK | NOUVEAU-BRUNSWICK - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE

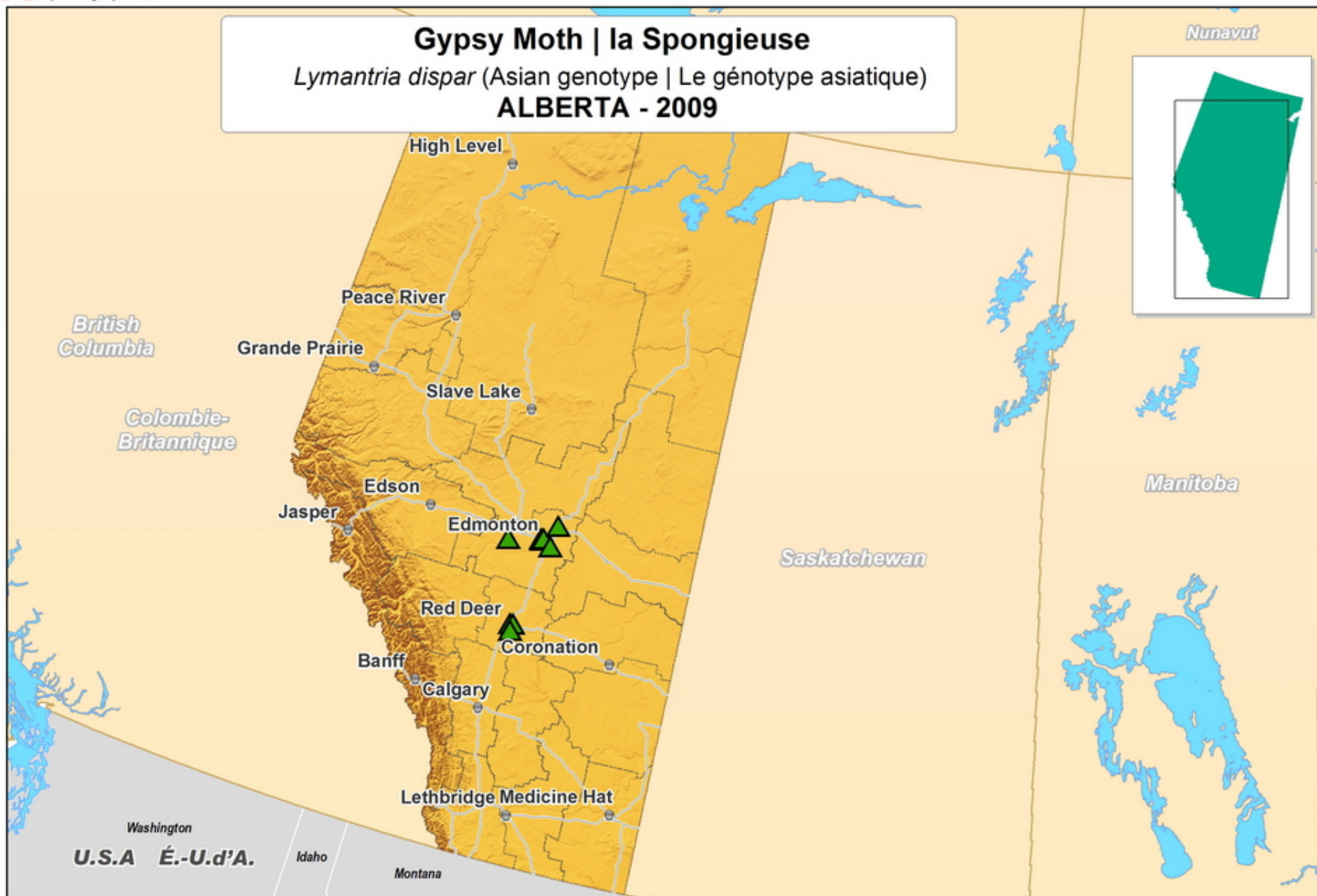


Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 09 08

Gypsy Moth | la Spongieuse

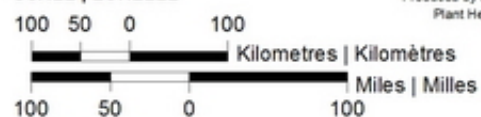
Lymantria dispar (Asian genotype | Le génotype asiatique)
ALBERTA - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

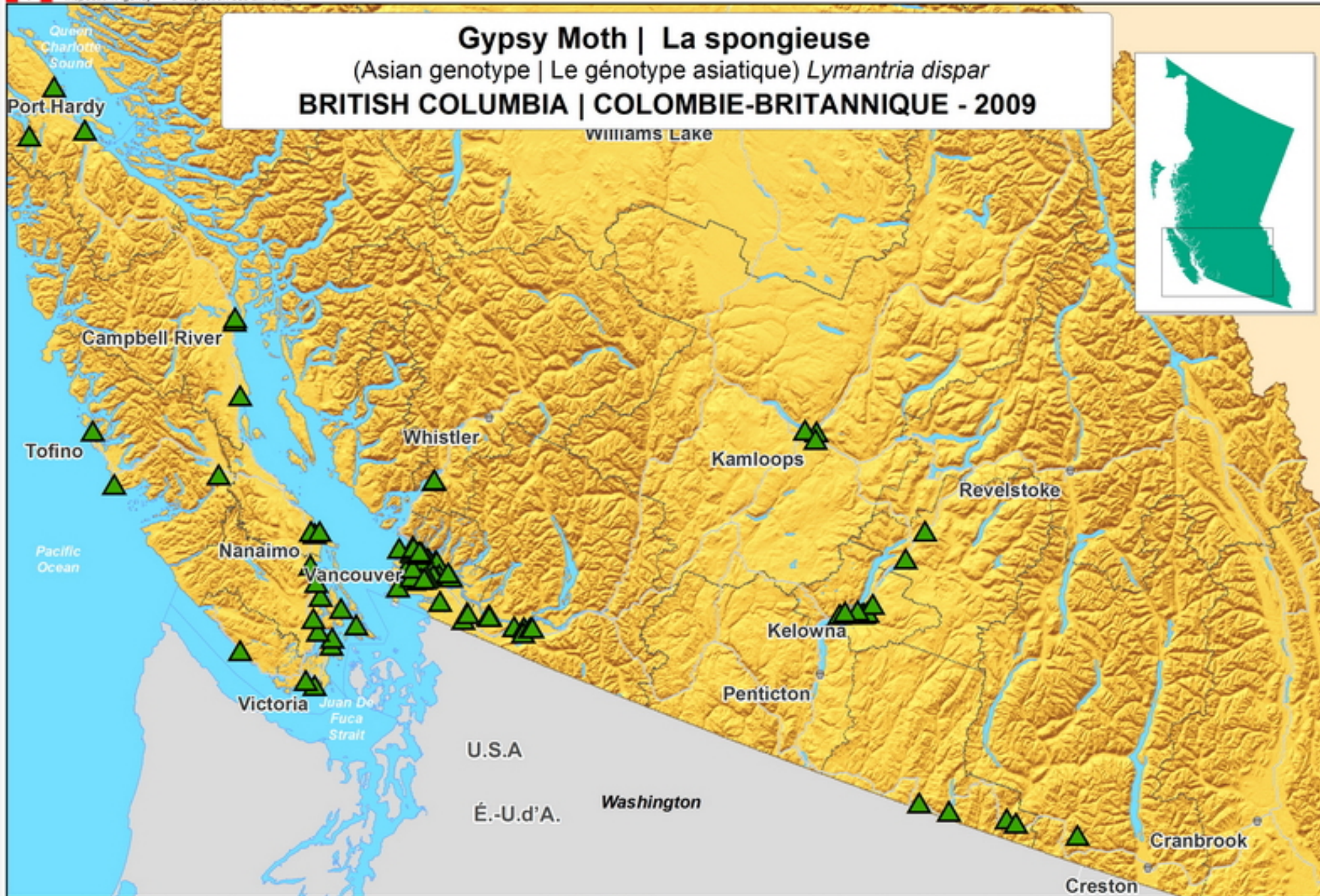
Yr/An Mo/M Da/J
2010 11 15



Gypsy Moth | La spongieuse

(Asian genotype | Le génotype asiatique) *Lymantria dispar*

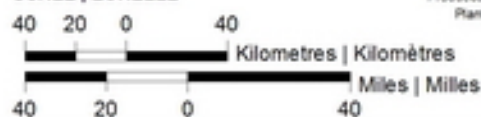
BRITISH COLUMBIA | COLOMBIE-BRITANNIQUE - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

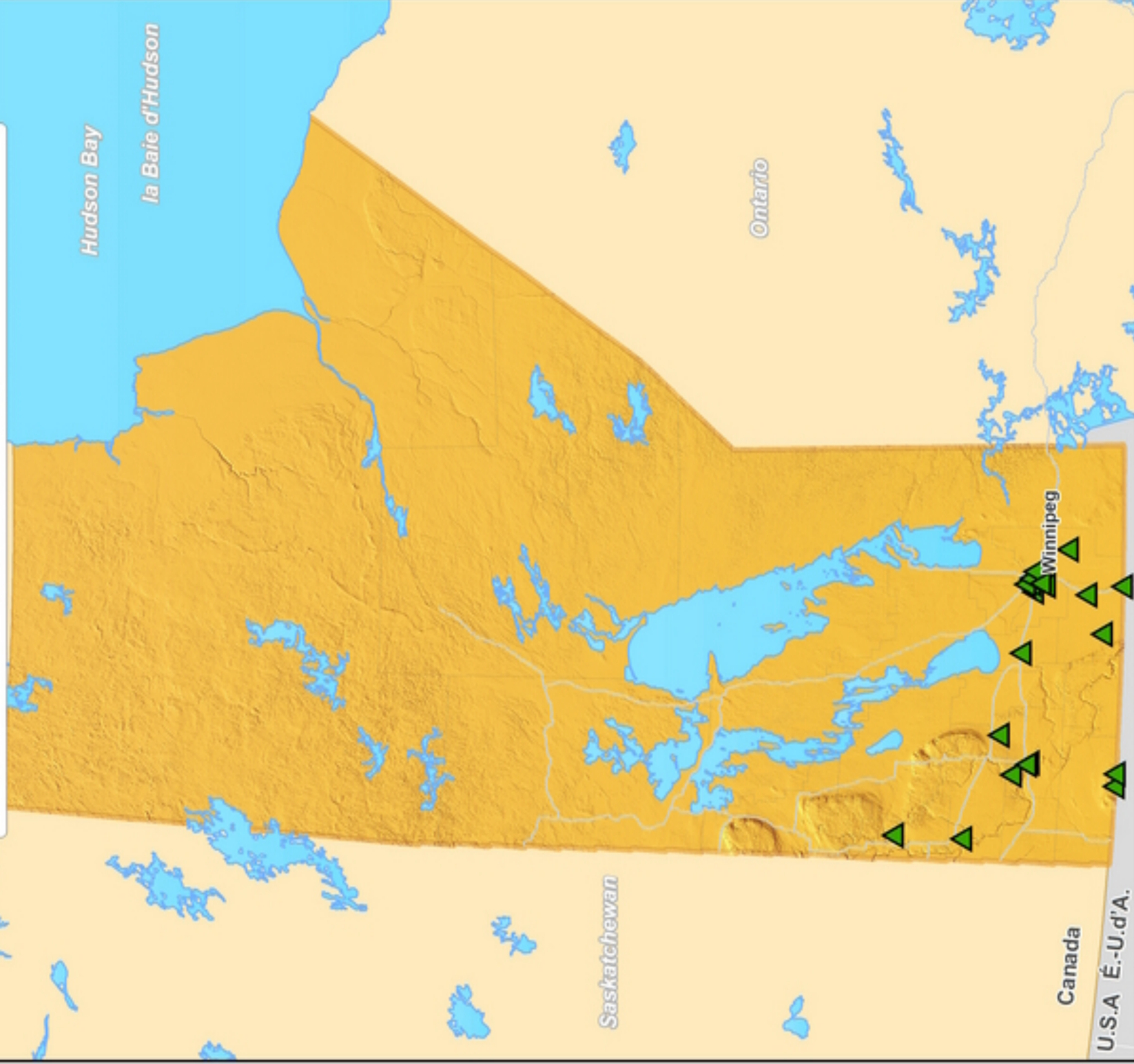
Yr/An Mo/M Da/J
2010 11 19

Northwest Territory
les Territoires du Nord-Ouest

Gypsy Moth | La spongieuse

Lymantria dispar (Asian genotype | Le génotype asiatique)

MANITOBA - 2009



U.S.A. É.-U.d'A.

LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

Produced by the Canadian Food Inspection Agency
Préparé par l'Agence canadienne d'inspection des aliments
Plant Health Surveillance Unit, Ottawa, Ontario
Unité de surveillance phyto-sanitaire, Ottawa, Ontario
Lambert Conformal Conic Projection - Canada
Projection conique conforme de Lambert - Canada

YrAn MoMl DaJ

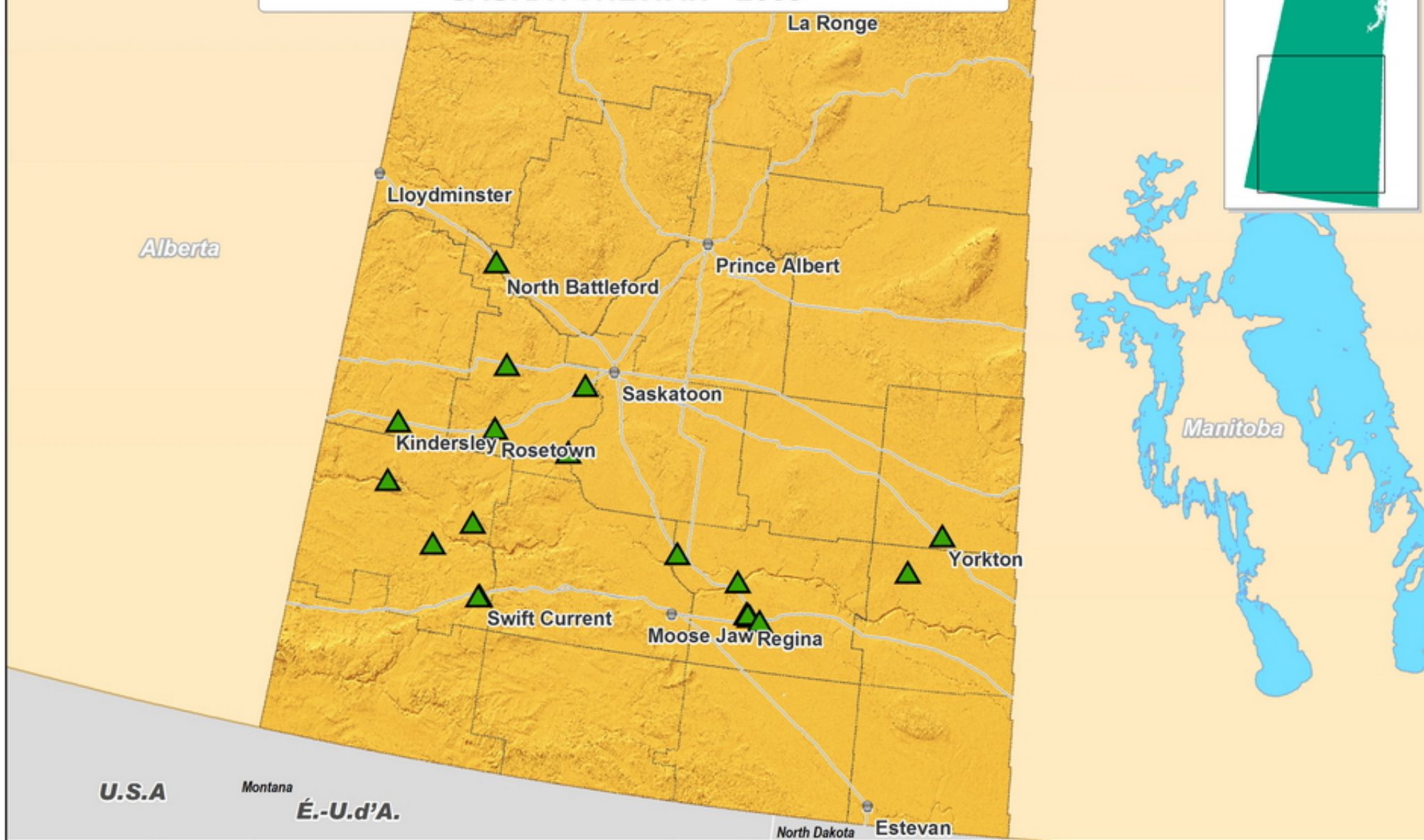
2010 07 13

SCALE | ÉCHELLE



Canada

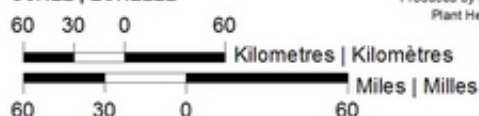
Gypsy Moth | La spongieuse *Lymantria dispar* (Asian genotype | Le génotype asiatique) SASKATCHEWAN - 2009



LEGEND | LÉGENDE

 Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

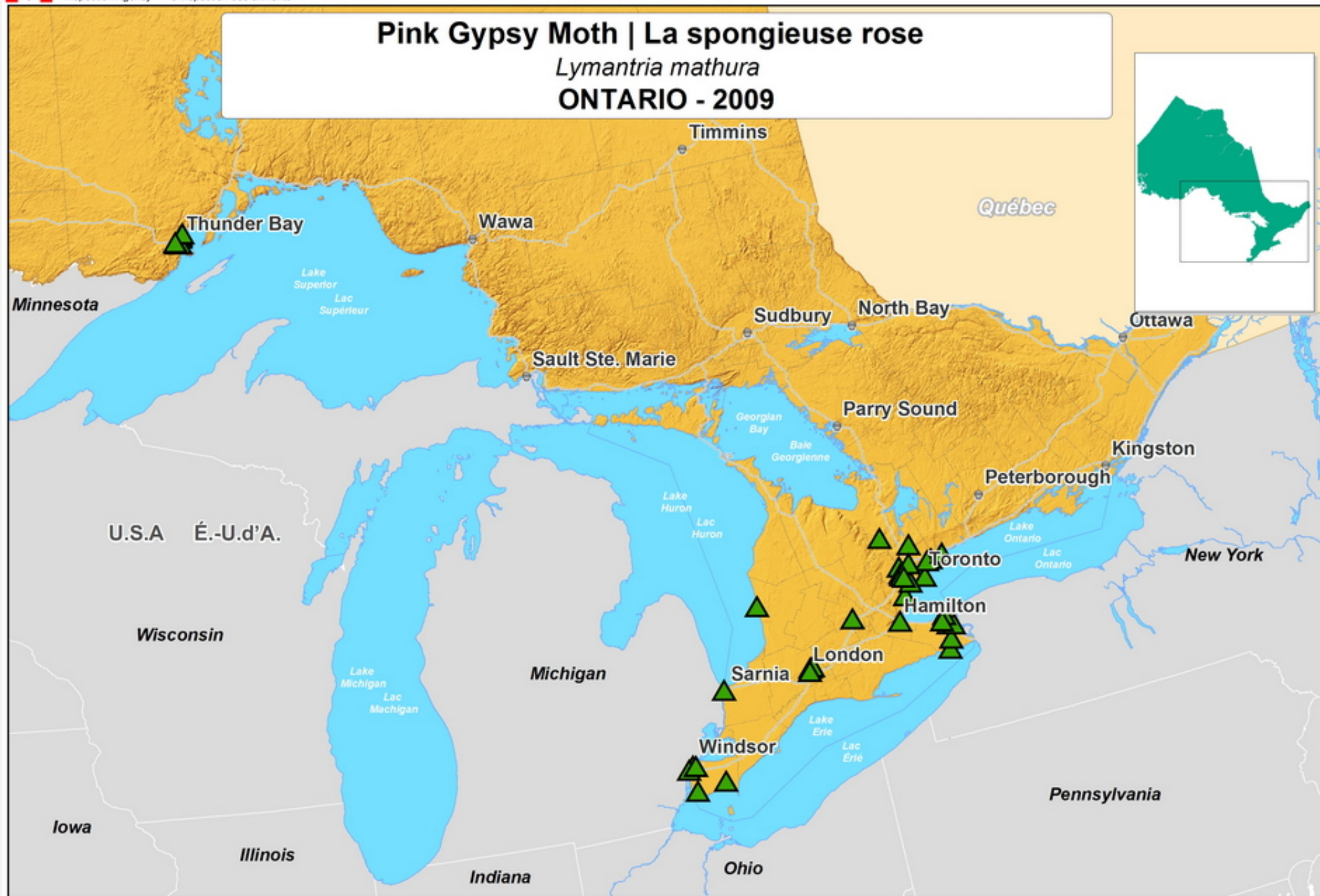
Yr/An Mo/M Da/J
 2010 07 07



Pink Gypsy Moth | La spongieuse rose

Lymantria mathura

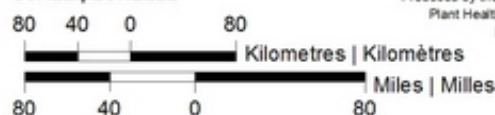
ONTARIO - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

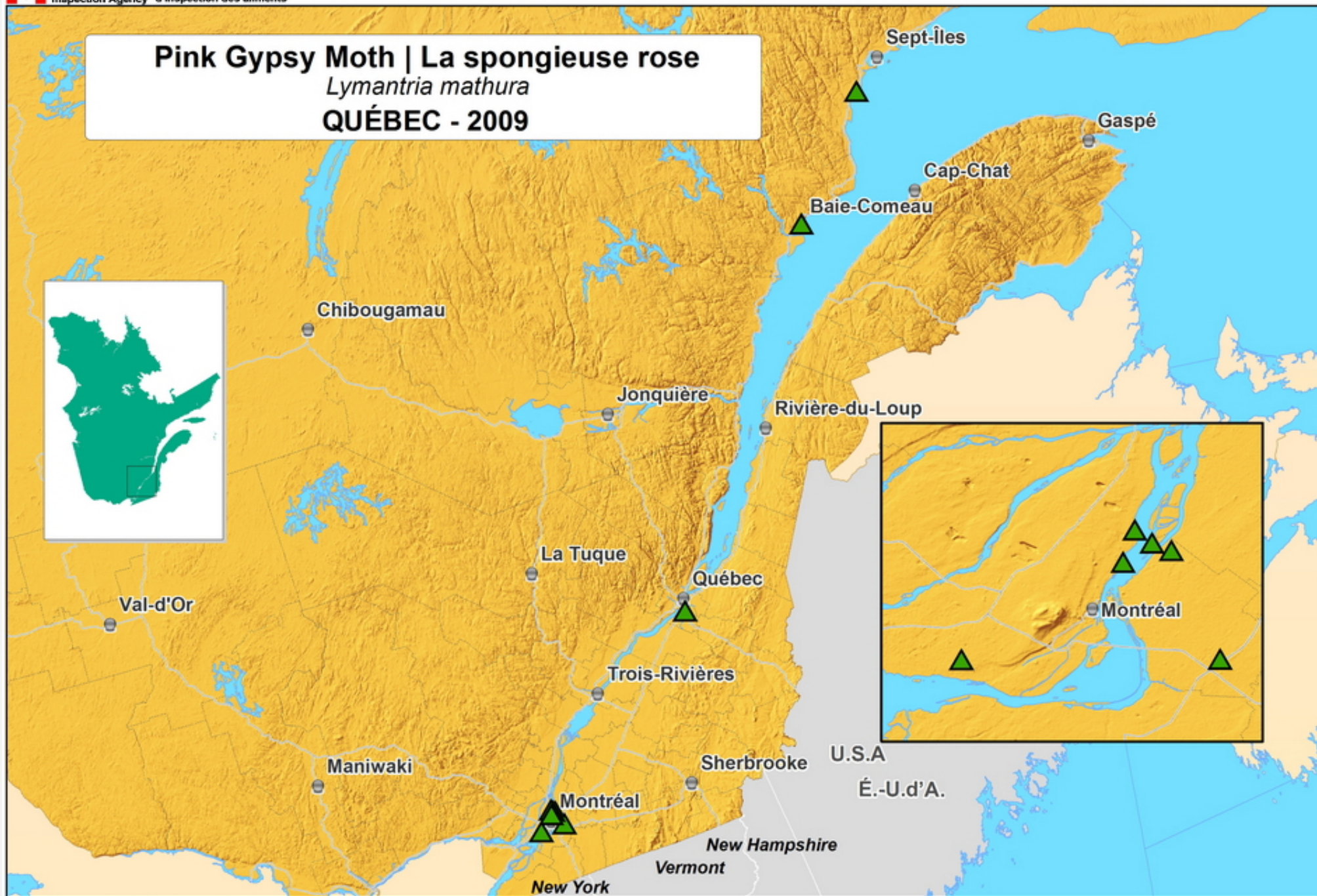
Yr/An Mo/M Da/J
2010 11 03



Pink Gypsy Moth | La spongieuse rose

Lymantria mathura

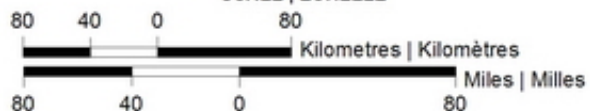
QUÉBEC - 2009



LEGEND | LÉGENDE

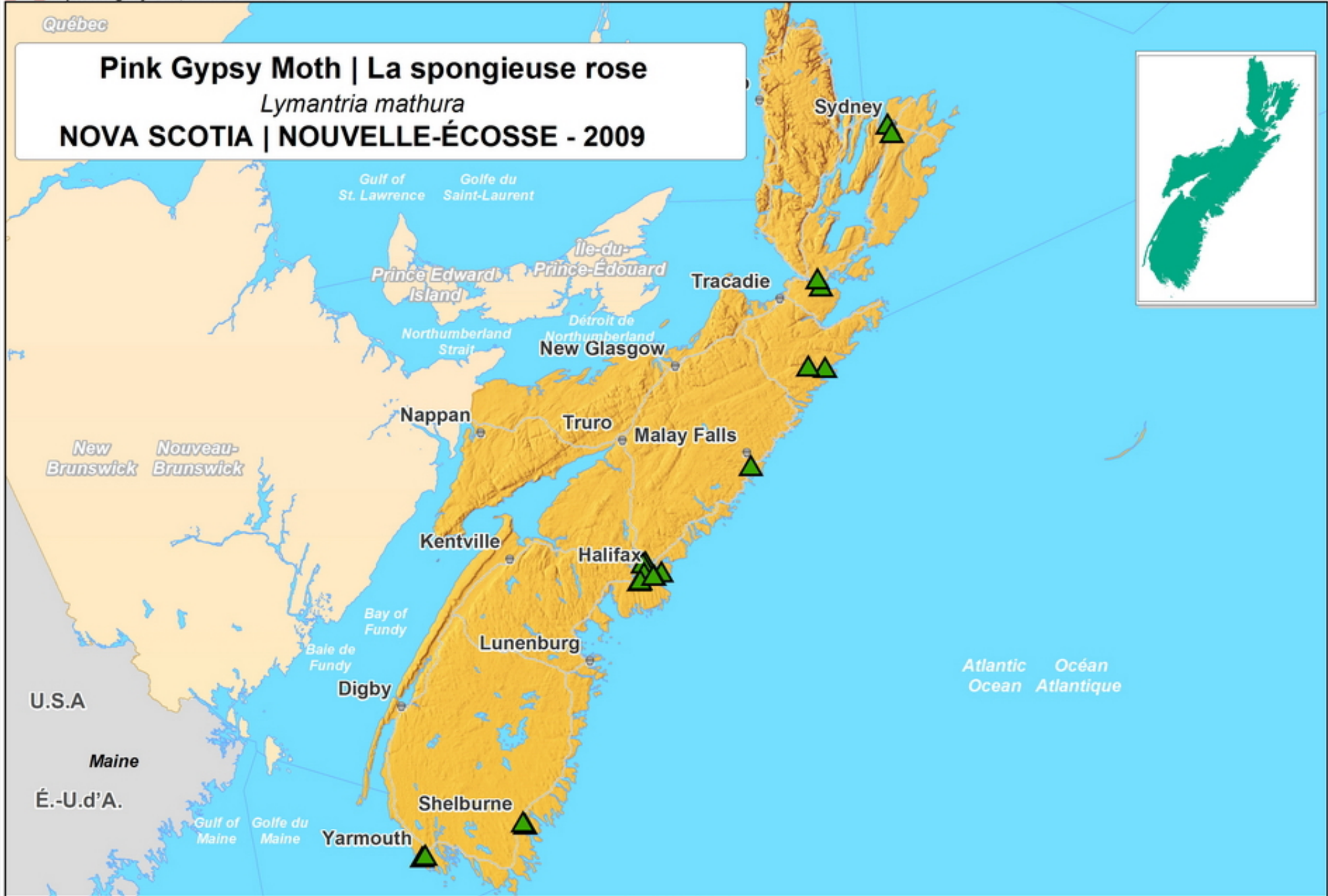
▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

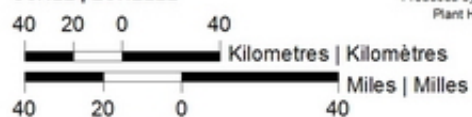
Yr/An Mo/M Da/J
2010 07 07



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 09 08

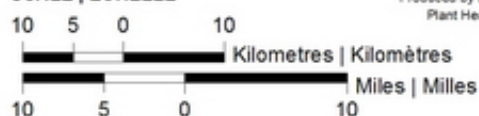
Pink Gypsy Moth | La spongieuse rose *Lymantria mathura* PRINCE EDWARD ISLAND | ÎLE-DU-PRINCE-ÉDOUARD - 2009



LEGEND | LÉGENDE

 Negative Site | Site Négatif

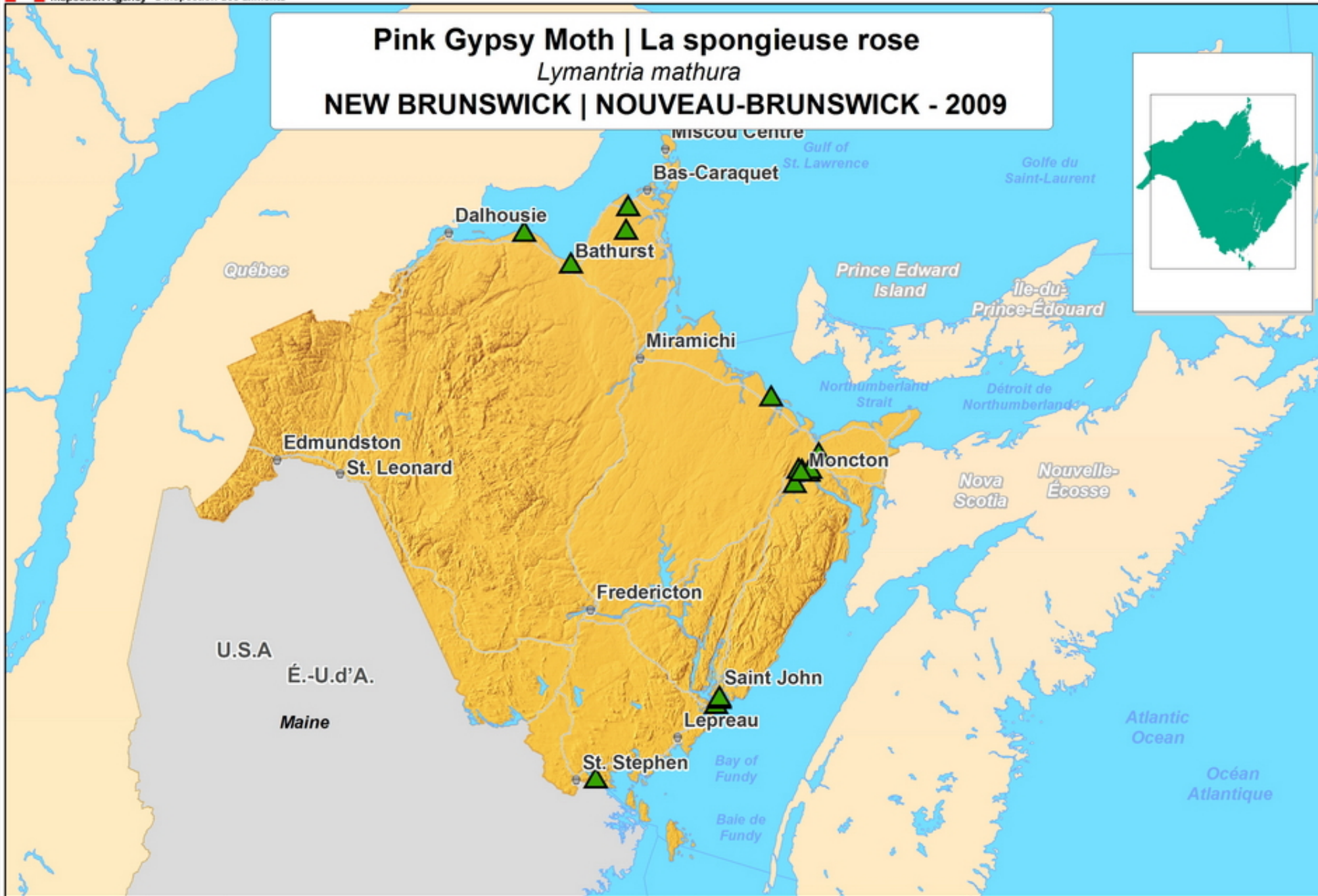
SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
 2010 09 08

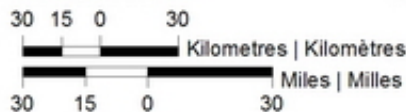
Pink Gypsy Moth | La spongieuse rose *Lymantria mathura* NEW BRUNSWICK | NOUVEAU-BRUNSWICK - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



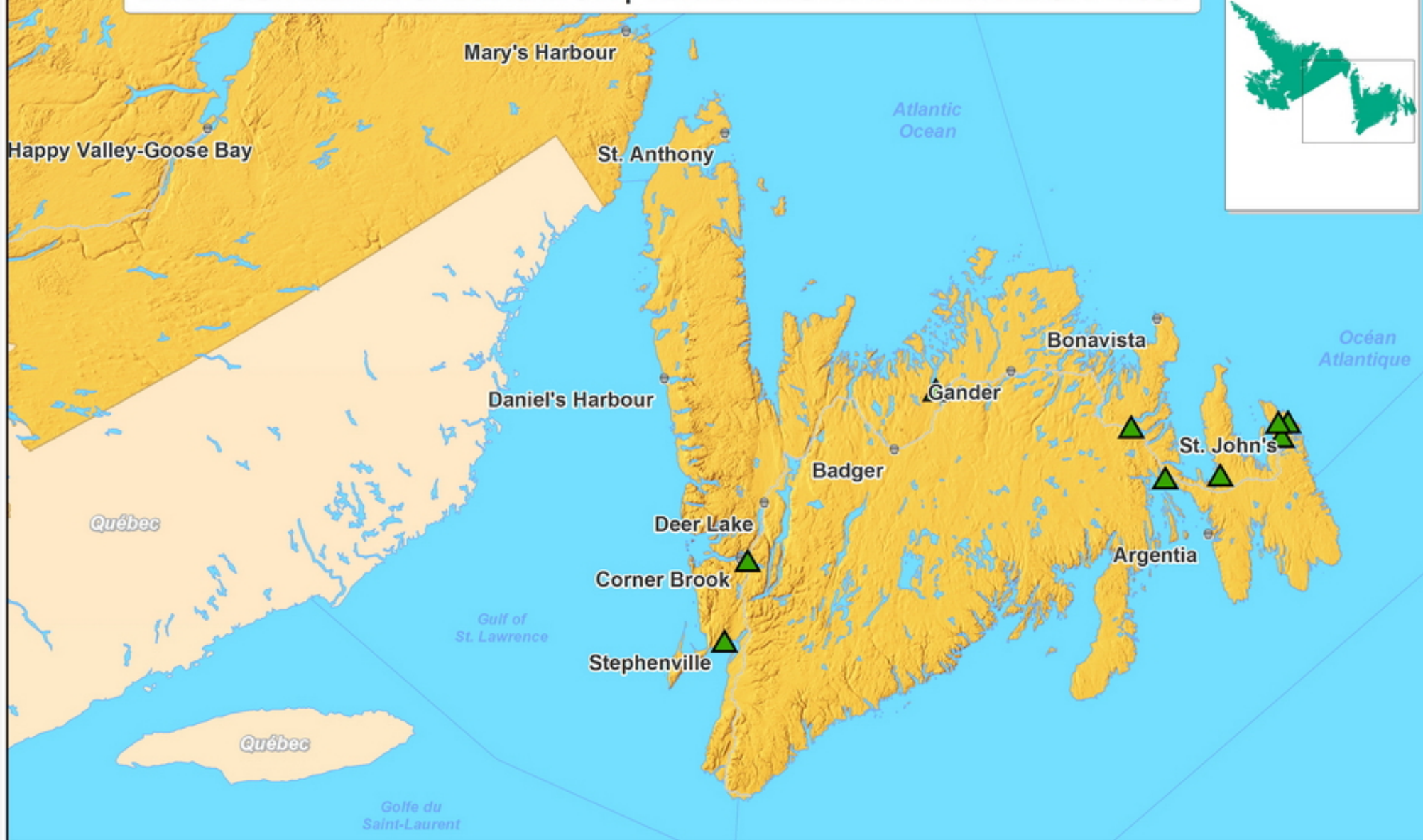
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 09 08

Pink Gypsy Moth | La spongieuse rose

Lymantria mathura

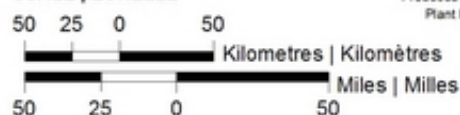
NEWFOUNDLAND & LABRADOR | TERRE-NEUVE-ET-LABRADOR - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



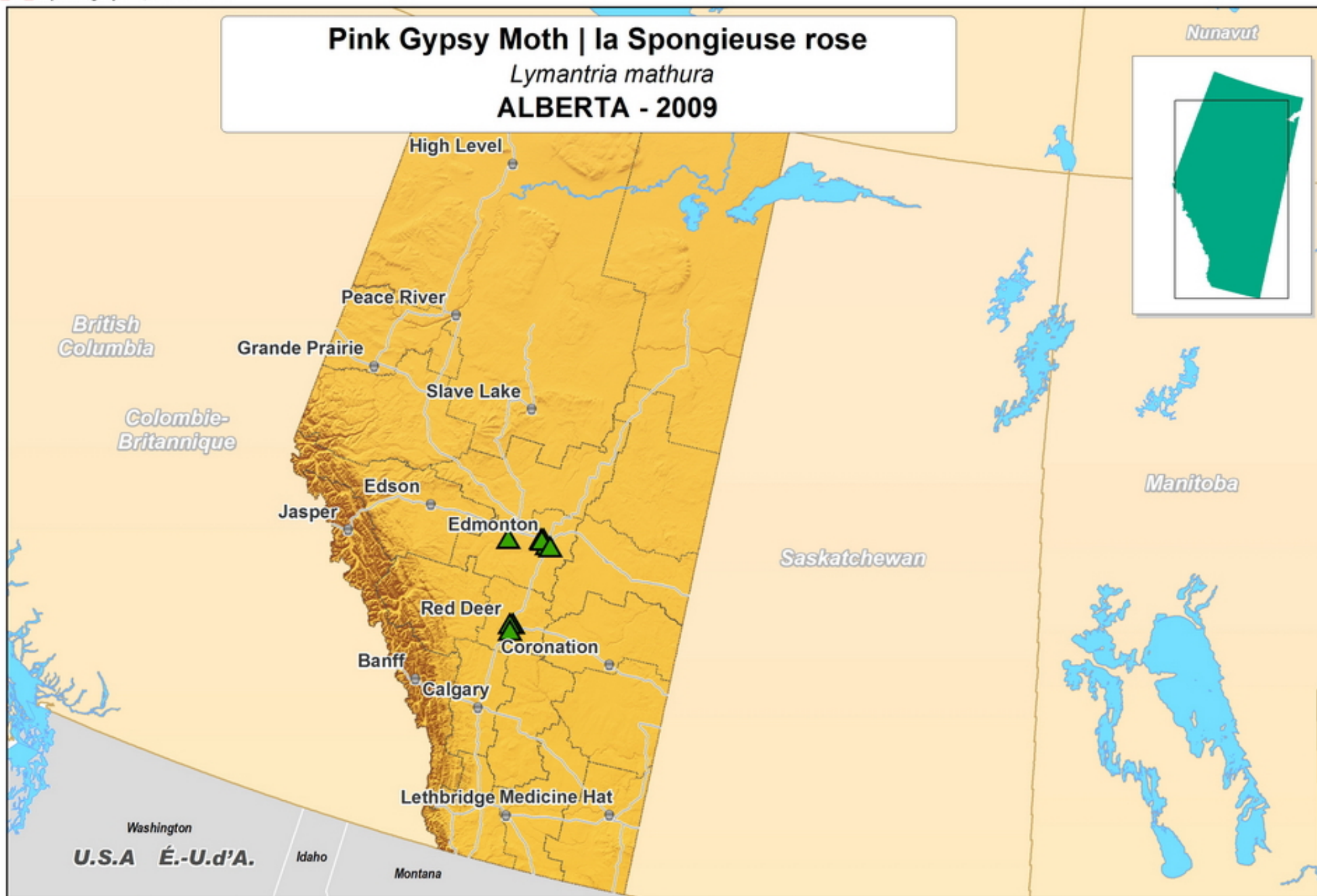
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 09 08

Pink Gypsy Moth | la Spongieuse rose

Lymantria mathura

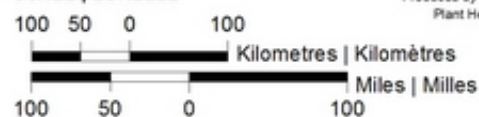
ALBERTA - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

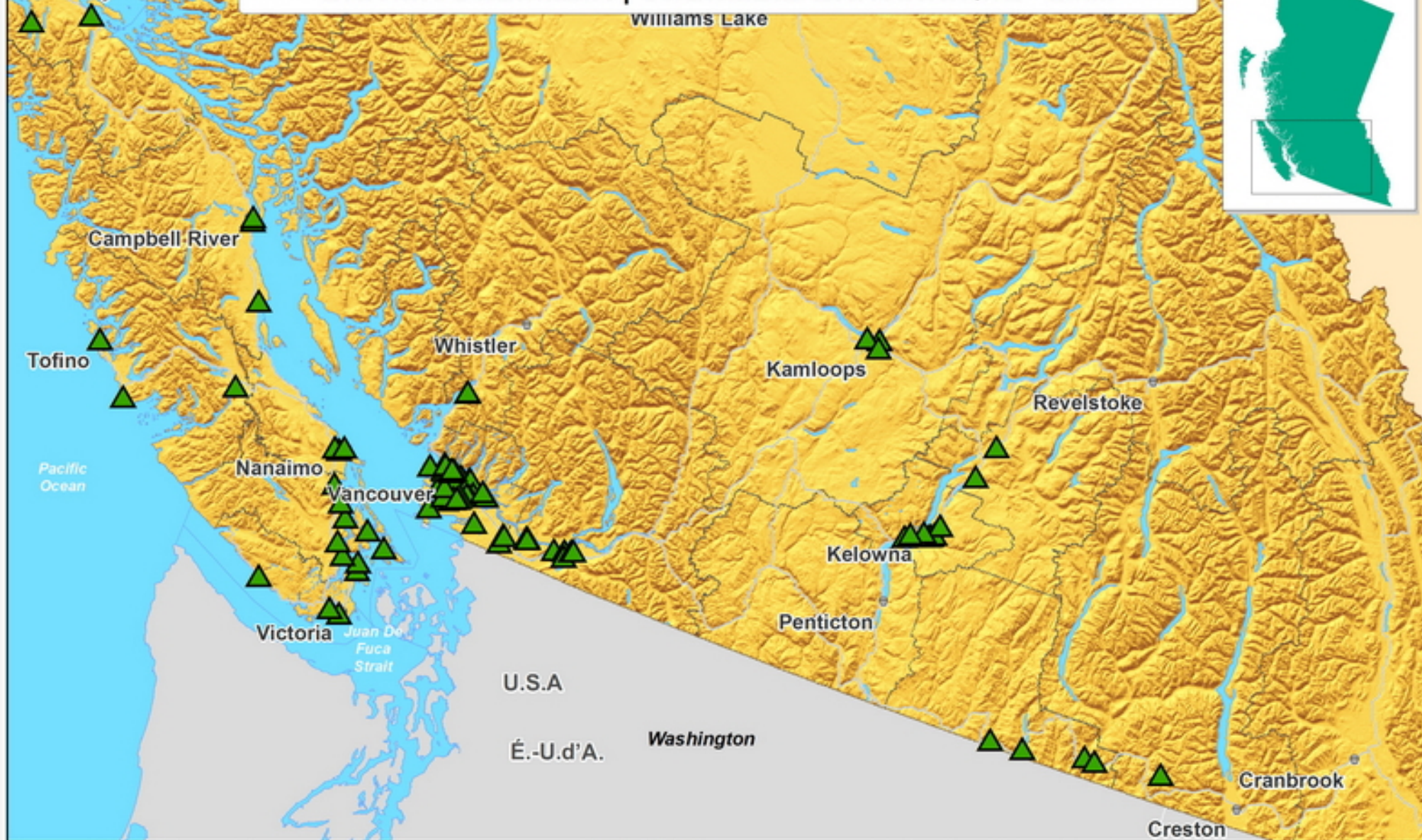
Yr/An Mo/M Da/J
2010 11 15



Pink Gypsy Moth | La spongieuse rose

Lymantria mathura

BRITISH COLUMBIA | COLOMBIE-BRITANNIQUE - 2009



LEGEND | LÉGENDE

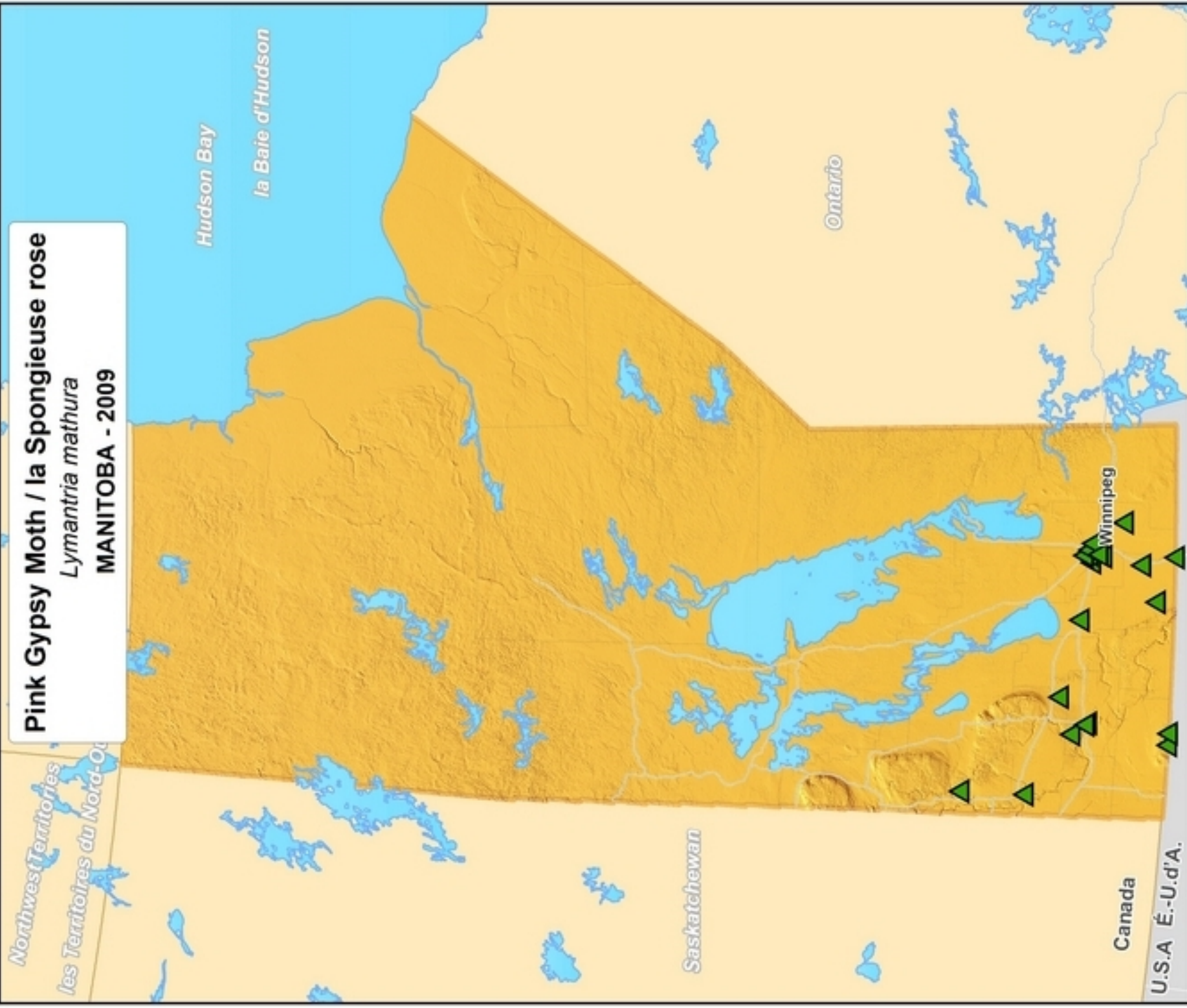
▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 11 19



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

Produced by the Canadian Food Inspection Agency /
Plant Health Surveillance Unit, Ottawa, Ontario
L'unité de surveillance phyto-sanitaire, Ottawa, Ontario
Projet de surveillance phyto-sanitaire de l'Agence - Canada

YrAn MoM DaJ
2010 07 13

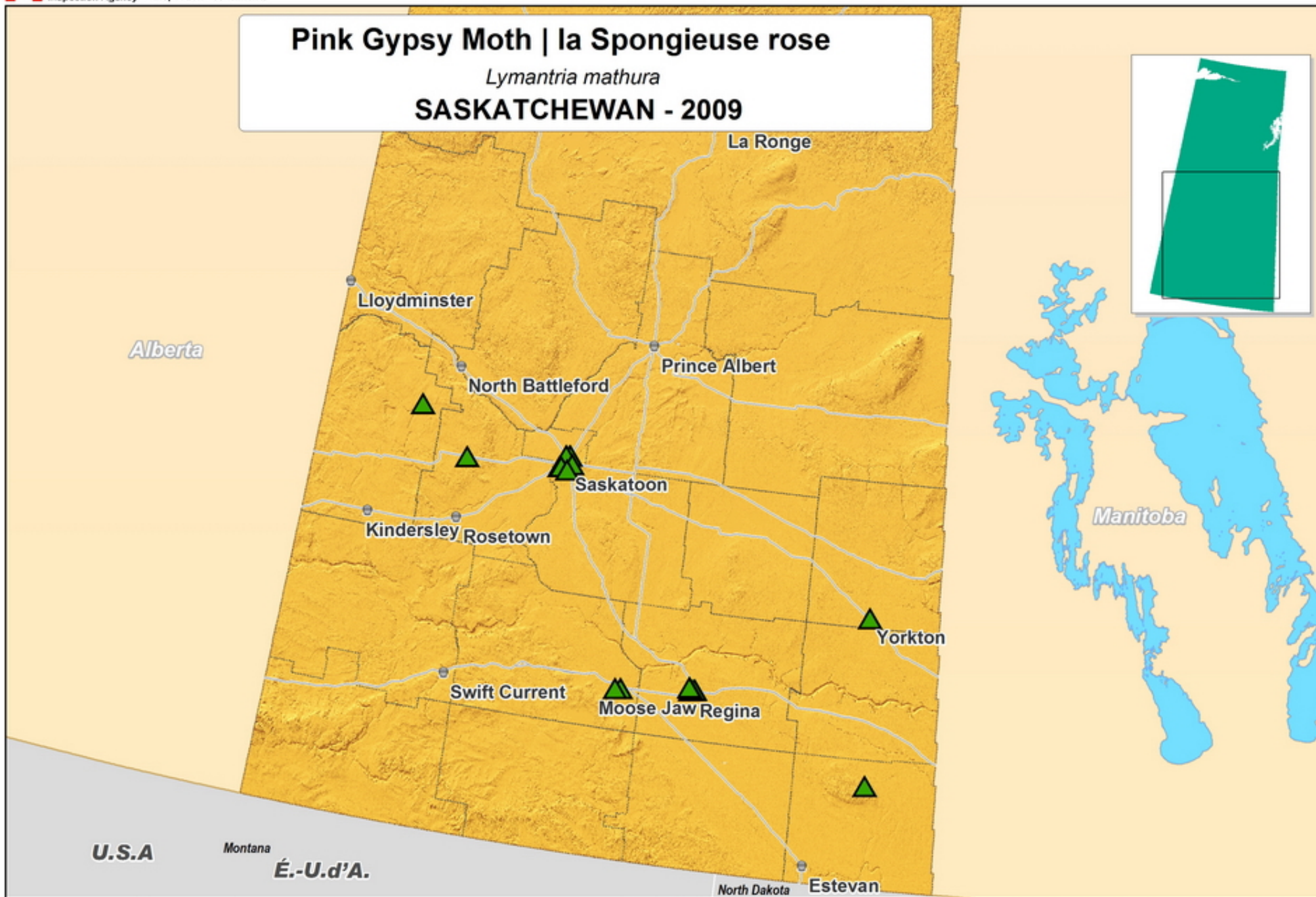
SCALE | ÉCHELLE



Pink Gypsy Moth | la Spongieuse rose

Lymantria mathura

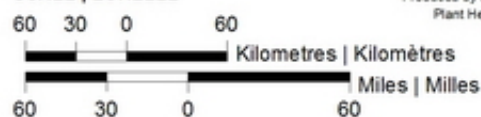
SASKATCHEWAN - 2009



LEGEND | LÉGENDE

 Negative Site | Site Négatif

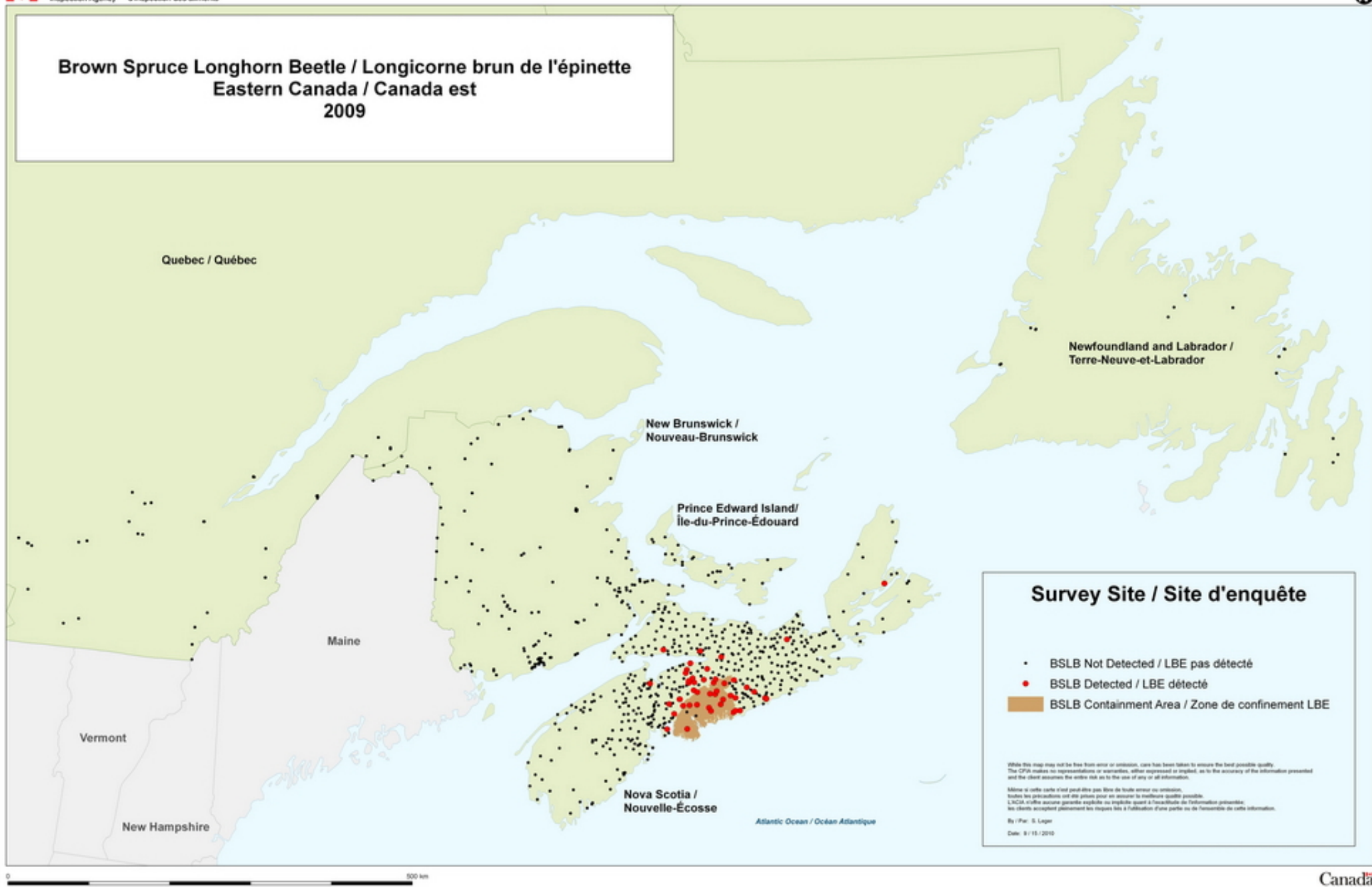
SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
 2010 07 07

Brown Spruce Longhorn Beetle / Longicorne brun de l'épinette Eastern Canada / Canada est 2009



Survey Site / Site d'enquête

- BSLB Not Detected / LBE pas détecté
- BSLB Detected / LBE détecté
- BSLB Containment Area / Zone de confinement LBE

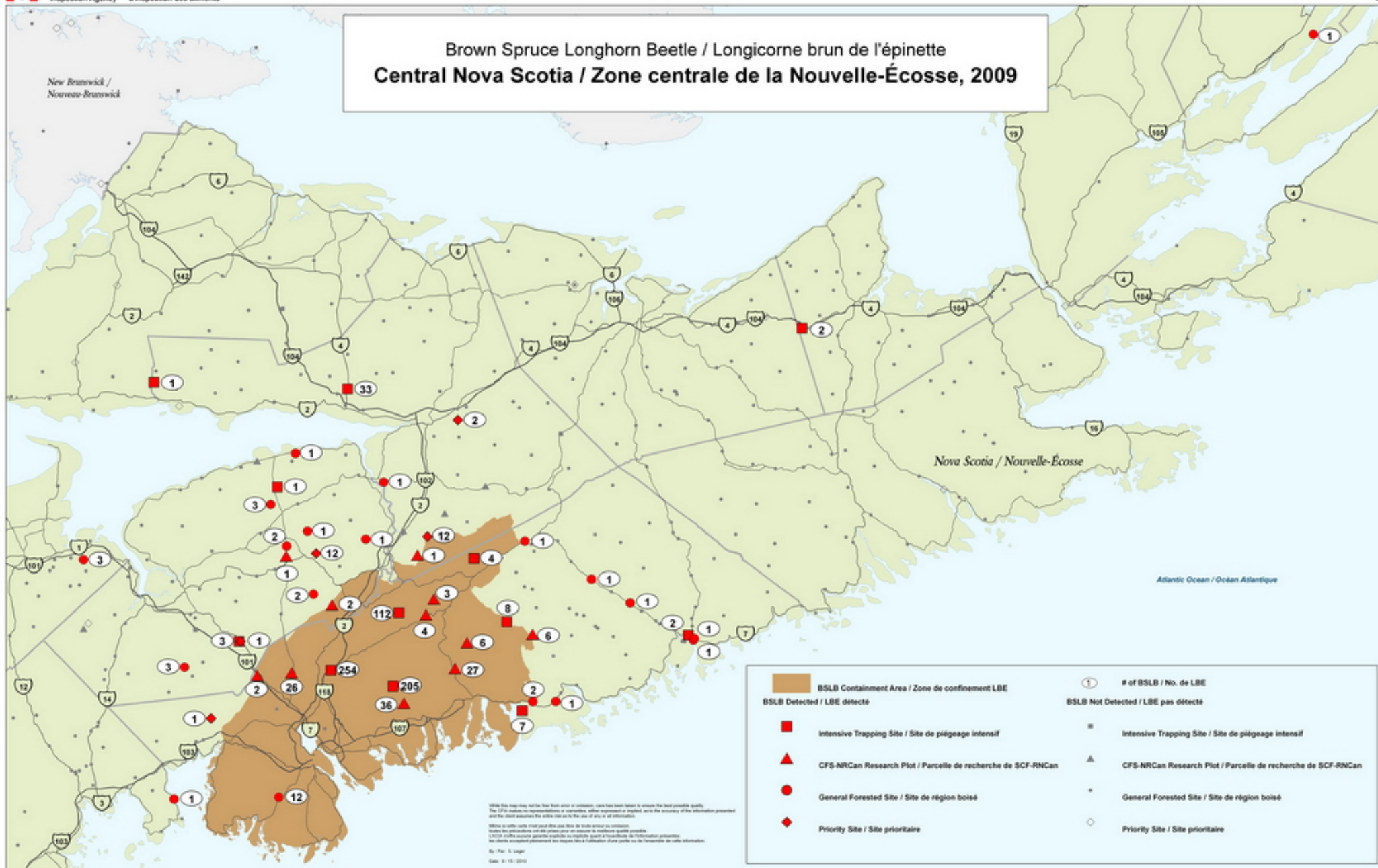
While this map may not be free from error or omission, care has been taken to ensure the best possible quality.
 The CFIA makes no representations or warranties, either expressed or implied, as to the accuracy of the information presented
 and the client assumes the entire risk as to the use of any or all information.

Même si cette carte n'est pas libre de toute erreur ou omission,
 toutes les précautions ont été prises pour en assurer la meilleure qualité possible.
 L'ACIA n'offre aucune garantie explicite ou implicite quant à l'exactitude de l'information présentée;
 les clients acceptent pleinement les risques liés à l'utilisation d'une partie ou de l'ensemble de cette information.

By / Par: S. Leger

Date: 9 / 11 / 2010

Brown Spruce Longhorn Beetle / Longicorne brun de l'épinette Central Nova Scotia / Zone centrale de la Nouvelle-Écosse, 2009



While this map may not be the most precise or complete, care has been taken to ensure the best possible quality.
The CFIA makes no representations or warranties, either expressed or implied, with the accuracy of the information presented
and the client assumes the entire risk as to the use of any of the information.
Même si cette carte n'est pas parfaite, que l'on se donne le meilleur effort possible.
Toutes les présentations ont été prises pour en assurer la meilleure qualité possible.
L'ACIA n'offre aucune garantie explicite ou implicite, quant à l'exactitude de l'information présentée.
Le client accepte pleinement les risques liés à l'utilisation d'une partie ou de l'ensemble de cette information.

By / Par: S. Leger
Date: 01-10-2010



Canadian Food Inspection Agency
Agence canadienne d'inspection des aliments

Brown Spruce Longhorn Beetle / Longicorne brun de l'épinette

Positive Sites Outside Containment Area / Sites positifs à l'extérieur de la zone de confinement

Nova Scotia / Nouvelle-Écosse, 2006 - 2009



Legend / Légende

Positive Sites Identification Number (Outside Containment Area) /
Numéro d'identification de sites positifs à l'extérieur de la zone de confinement

- 1 2006
- 1 2007
- 1 2008
- 1 2009

BSLB Containment Area /
Zone de confinement LBE

DATE: 11 JAN. 2010

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the entire risk as to the use of any or all information.

Même si cette carte n'est peut-être pas libre de toute erreur ou omission, toutes les précautions ont été prises pour en assurer la meilleure qualité possible.
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Hemlock Woolly Adelgid | Puceron lanigère de la pruche

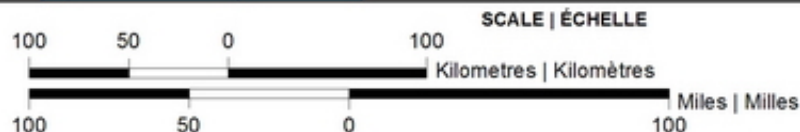
Adelges tsugae (Annand)

ONTARIO - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif



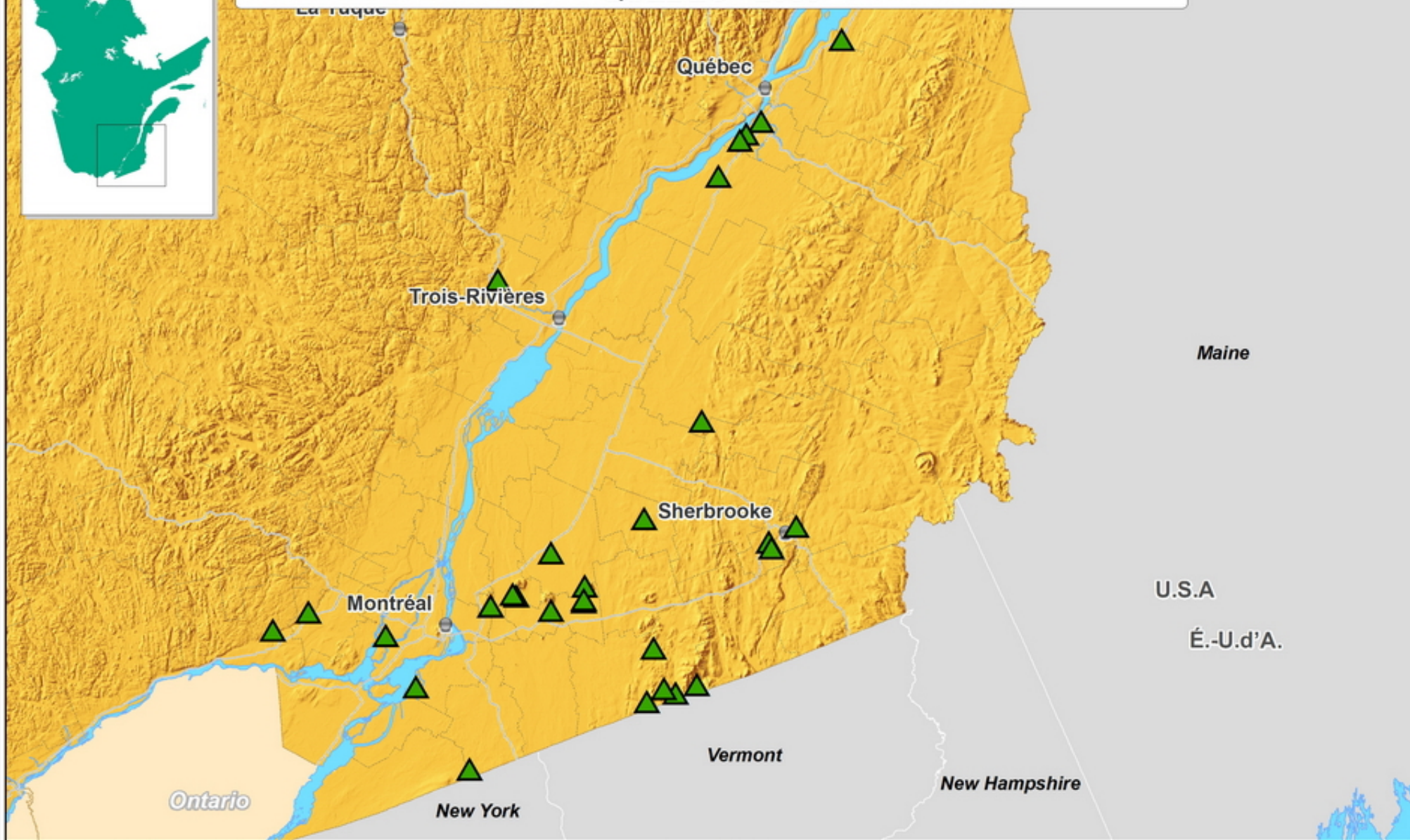
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 06 28

Hemlock Woolly Adelgid | Puceron lanigère de la pruche

Adelges tsugae (Annand)

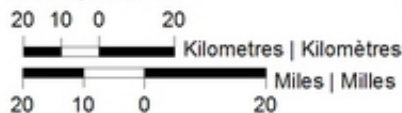
QUÉBEC - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE





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Yr/An Mo/M Da/J
2010 11 29



Woolly Cupgrass | Ériochloé velue
Eriochloa villosa
Québec - 2009



LEGEND | LÉGENDE
 Positive site | site positif
 Negative site | site négatif

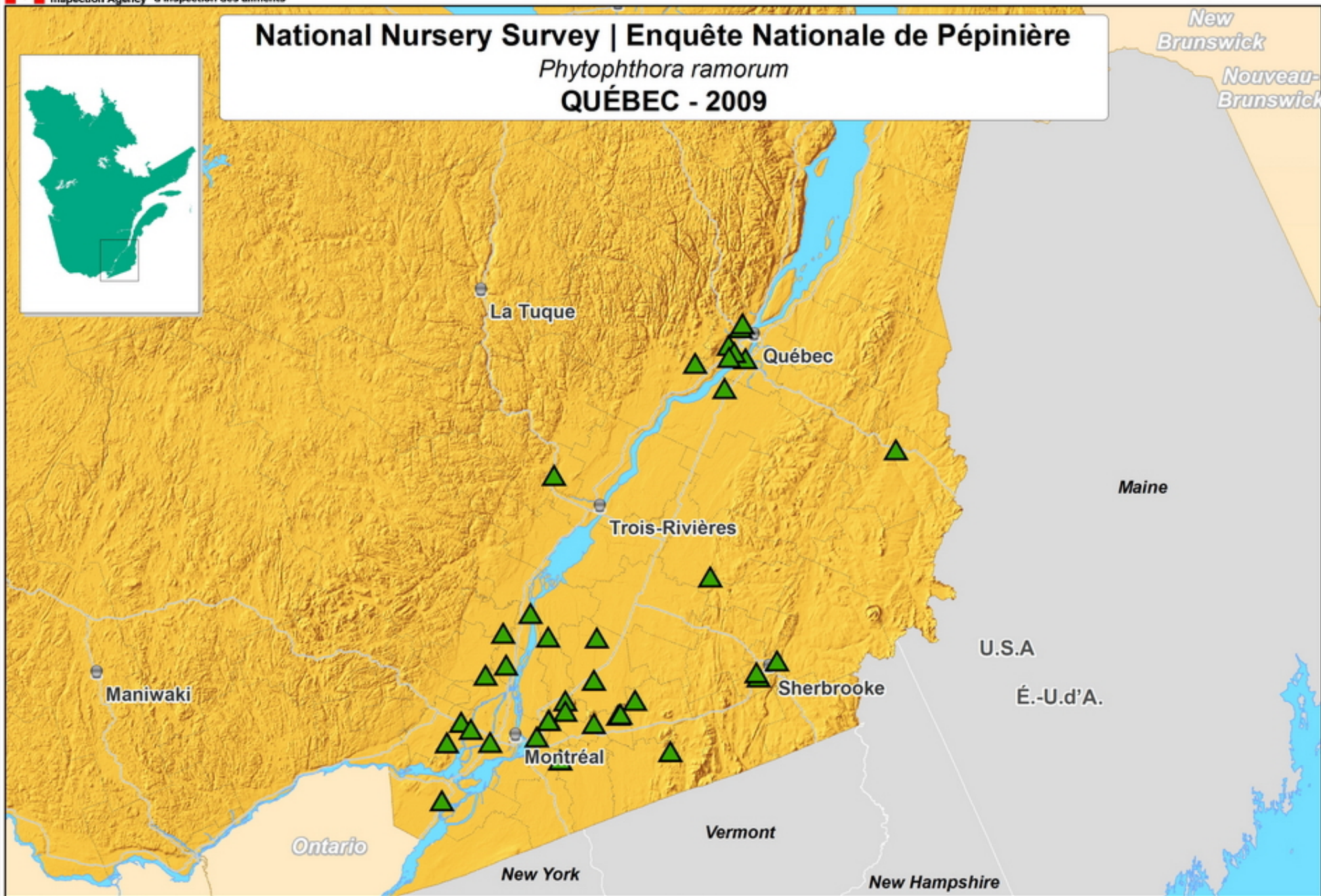
0 25 Kilometres | Kilomètres
 0 25 Miles | Miles

Produced by the Canadian Food Inspection Agency
 Préparé par l'Agence canadienne d'inspection des aliments
 Date de publication : 2010-11-24
 Date of publication : 2010-11-24

National Nursery Survey | Enquête Nationale de Pépinière

Phytophthora ramorum

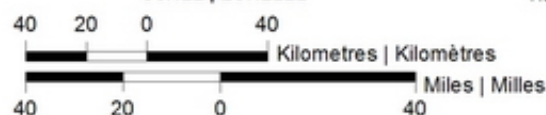
QUÉBEC - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



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2010 07 07



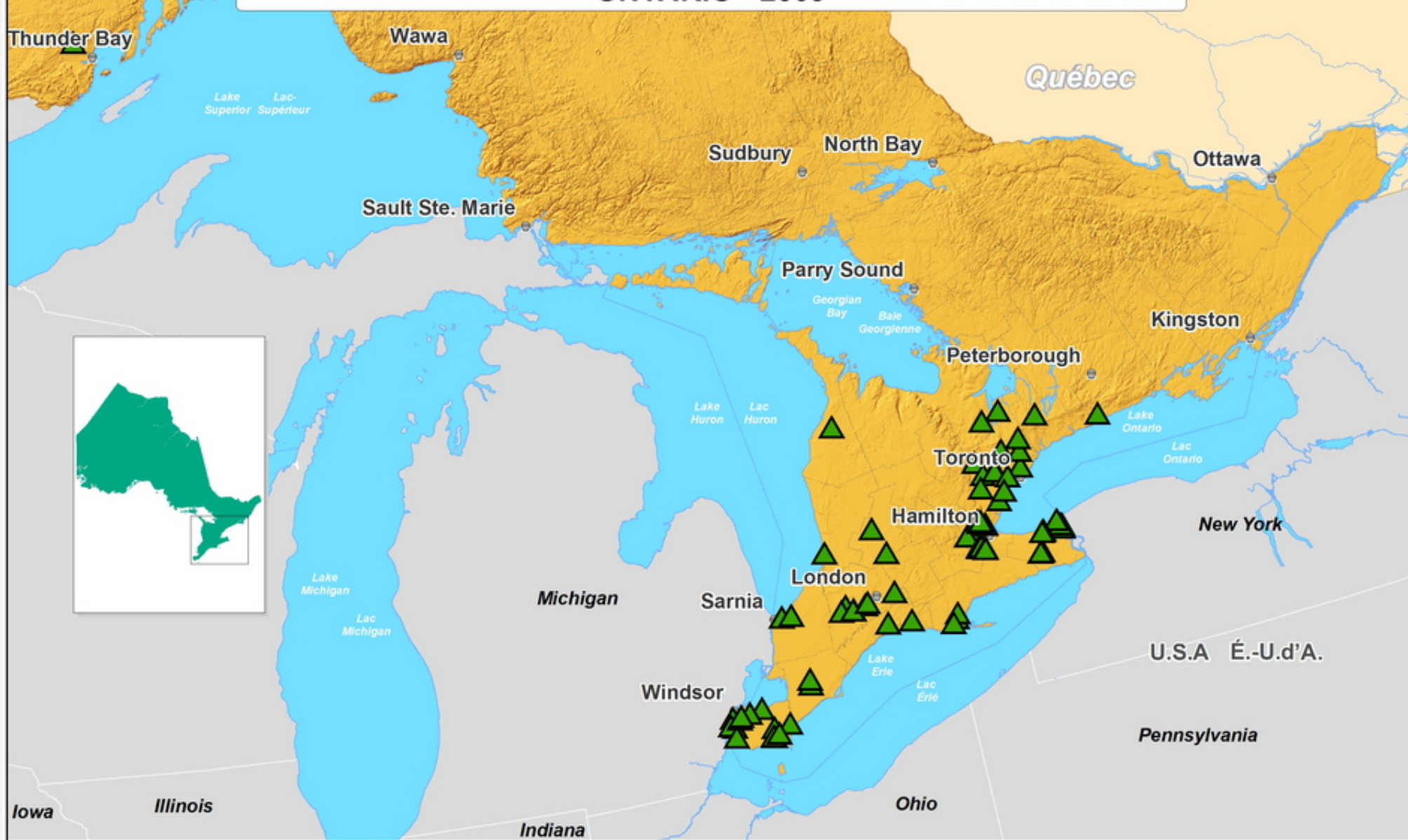
Canadian Food
Inspection Agency

Agence canadienne
d'inspection des aliments

National Nursery Survey | Enquête Nationale de Pépinière

Phytophthora ramorum

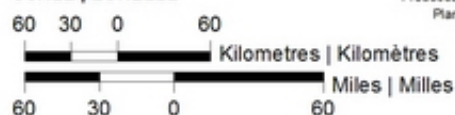
ONTARIO - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



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2010 11 08

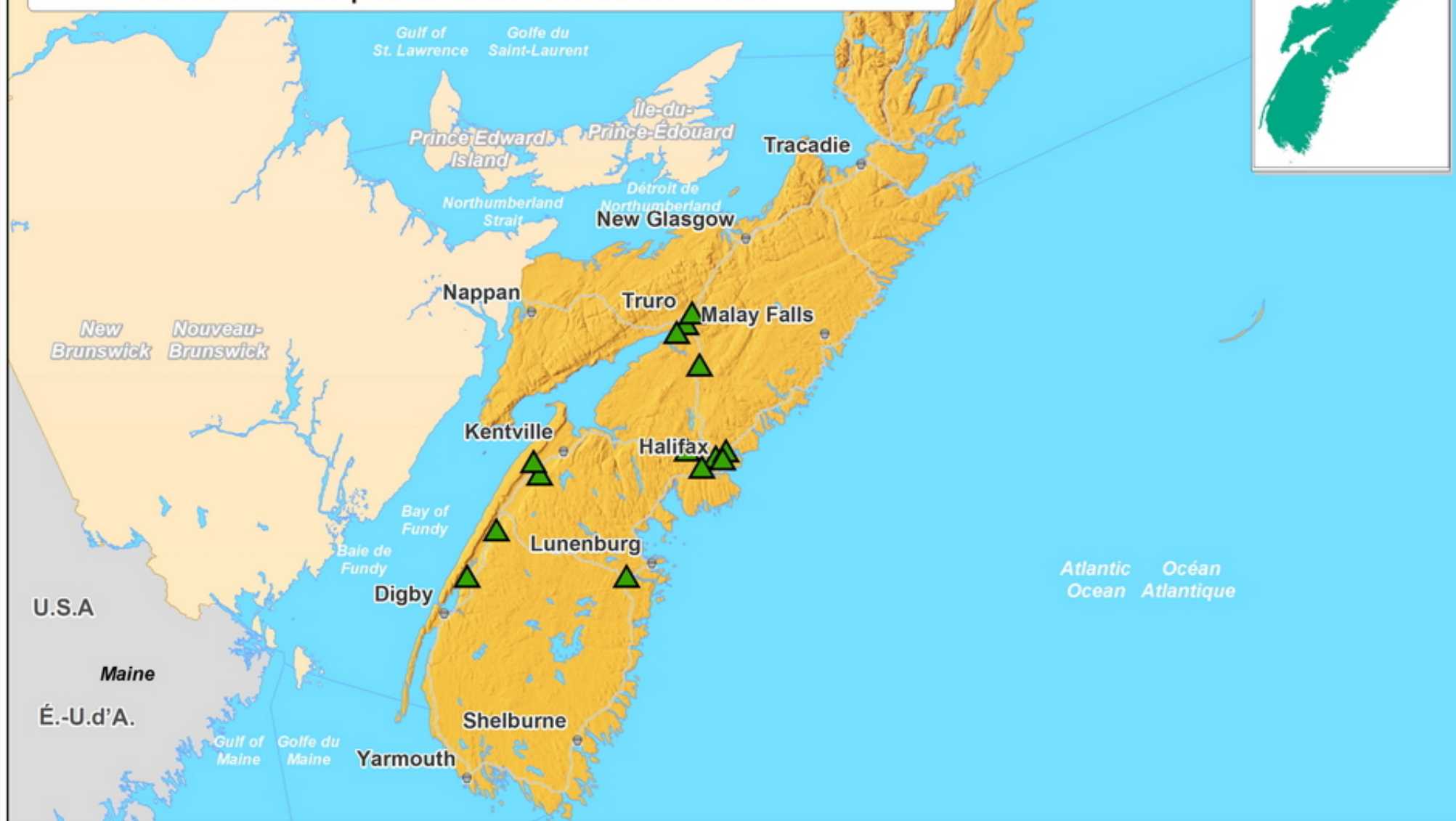


Québec

National Nursery Survey | Enquête Nationale de Pépinière

Phytophthora ramorum

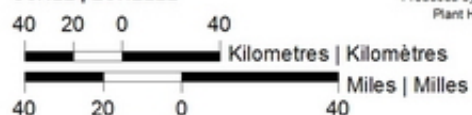
NOVA SCOTIA | NOUVELLE-ÉCOSSE - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
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2010 09 08



National Nursery Survey | Enquête Nationale de Pépinière

Phytophthora ramorum

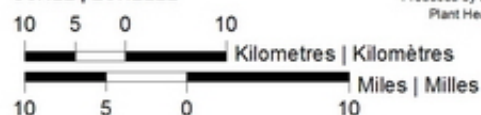
PRINCE EDWARD ISLAND | ÎLE-DU-PRINCE-ÉDOUARD - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



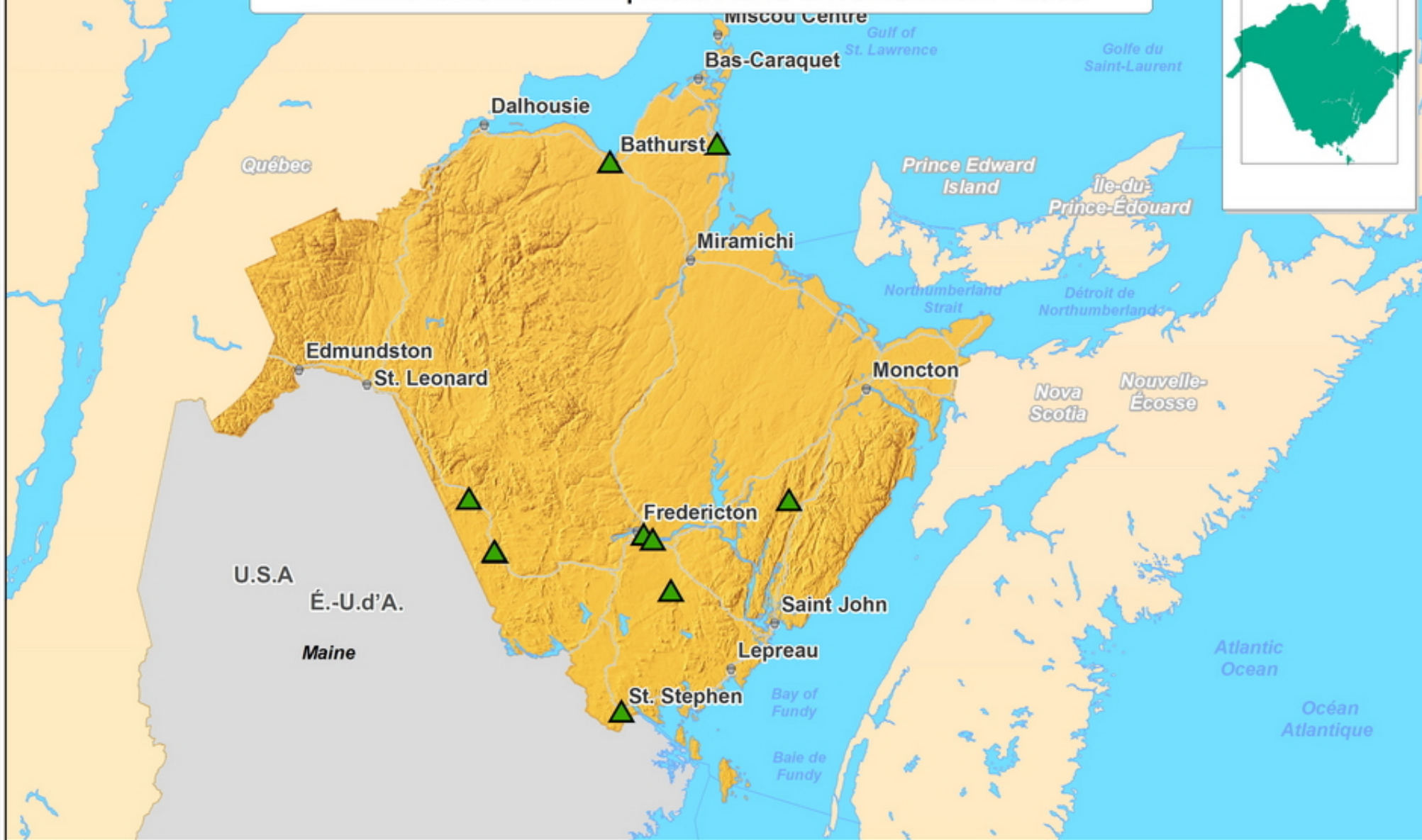
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 09 08



Canada

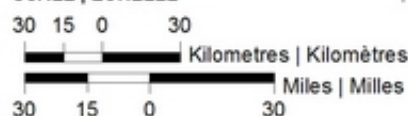
National Nursery Survey | Enquête Nationale de Pépinière *Phytophthora ramorum* **NEW BRUNSWICK | NOUVEAU-BRUNSWICK - 2009**



LEGEND | LÉGENDE

 **Negative Site | Site Négatif**

SCALE | ÉCHELLE



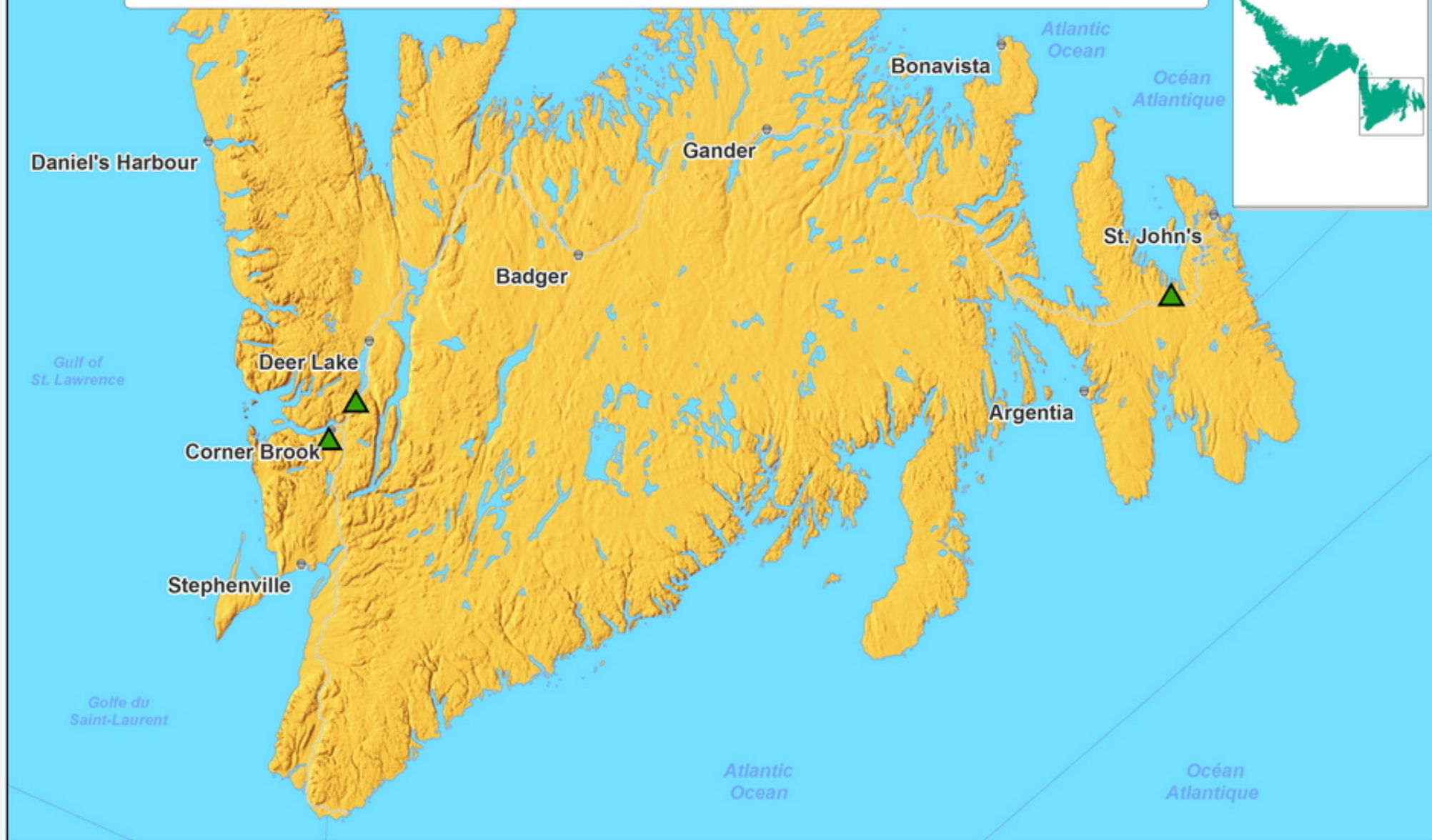
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

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 2010 09 08

National Nursery Survey | Enquête Nationale de Pépinière

Phytophthora ramorum

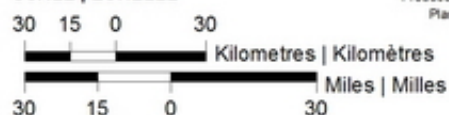
NEWFOUNDLAND & LABRADOR | TERRE-NEUVE-ET-LABRADOR - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



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Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

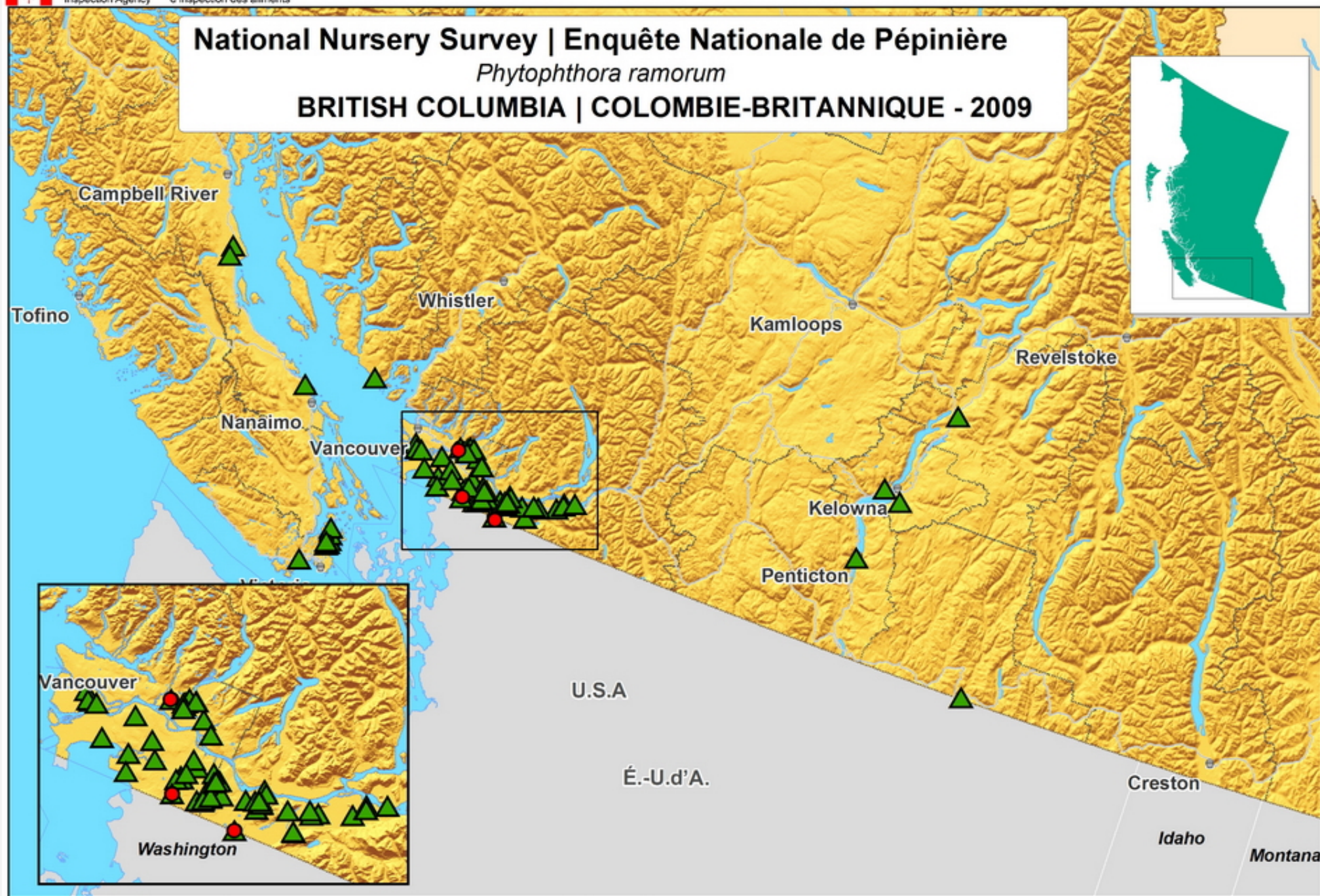
Yr/An Mo/M Da/J
2010 09 08



National Nursery Survey | Enquête Nationale de Pépinière

Phytophthora ramorum

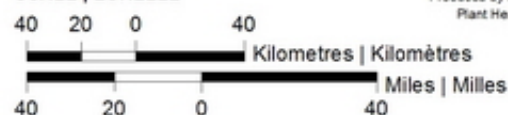
BRITISH COLUMBIA | COLOMBIE-BRITANNIQUE - 2009



LEGEND | LÉGENDE

- Positive Site | Site positif
- ▲ Negative Site | Site Négatif

SCALE | ÉCHELLE

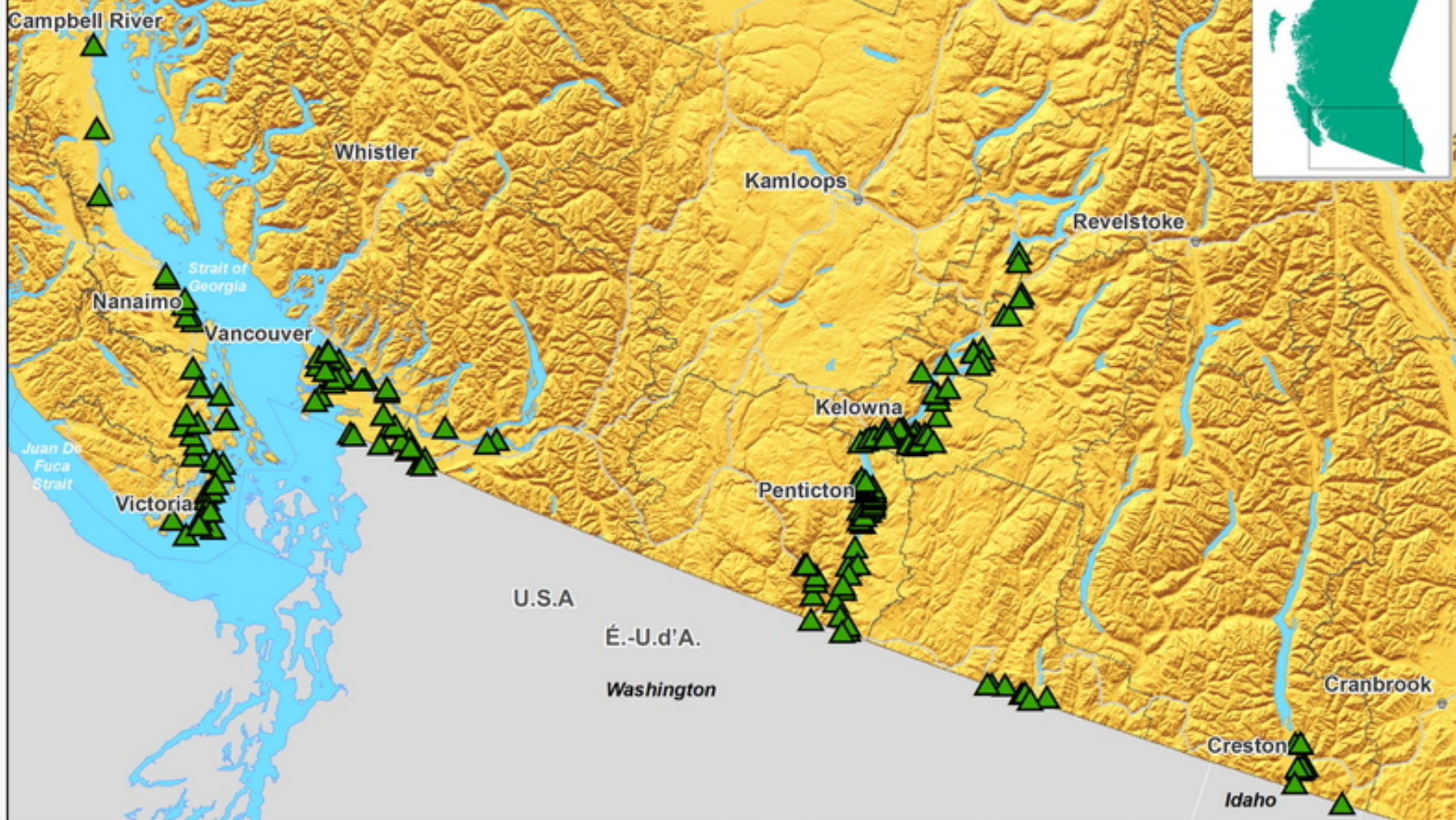


Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 11 19

Oriental Fruit Moth | Tordeuse orientale du pêcher *Grapholita molesta* (Busck) BRITISH COLUMBIA | COLOMBIE-BRITANNIQUE - 2009

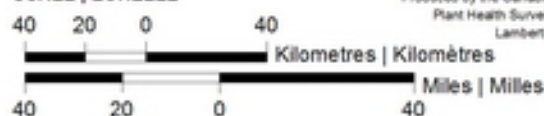
Alberta



LEGEND | LÉGENDE


 Negative Site | Site Négatif

SCALE | ÉCHELLE



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 Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
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 2010 11 19

Japanese Beetle | Scarabée japonaise

Popillia japonica (Newman)

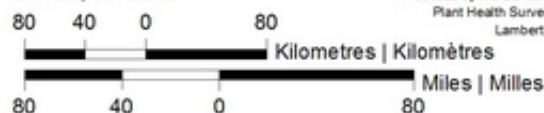
BRITISH COLUMBIA | COLOMBIE-BRITANNIQUE - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



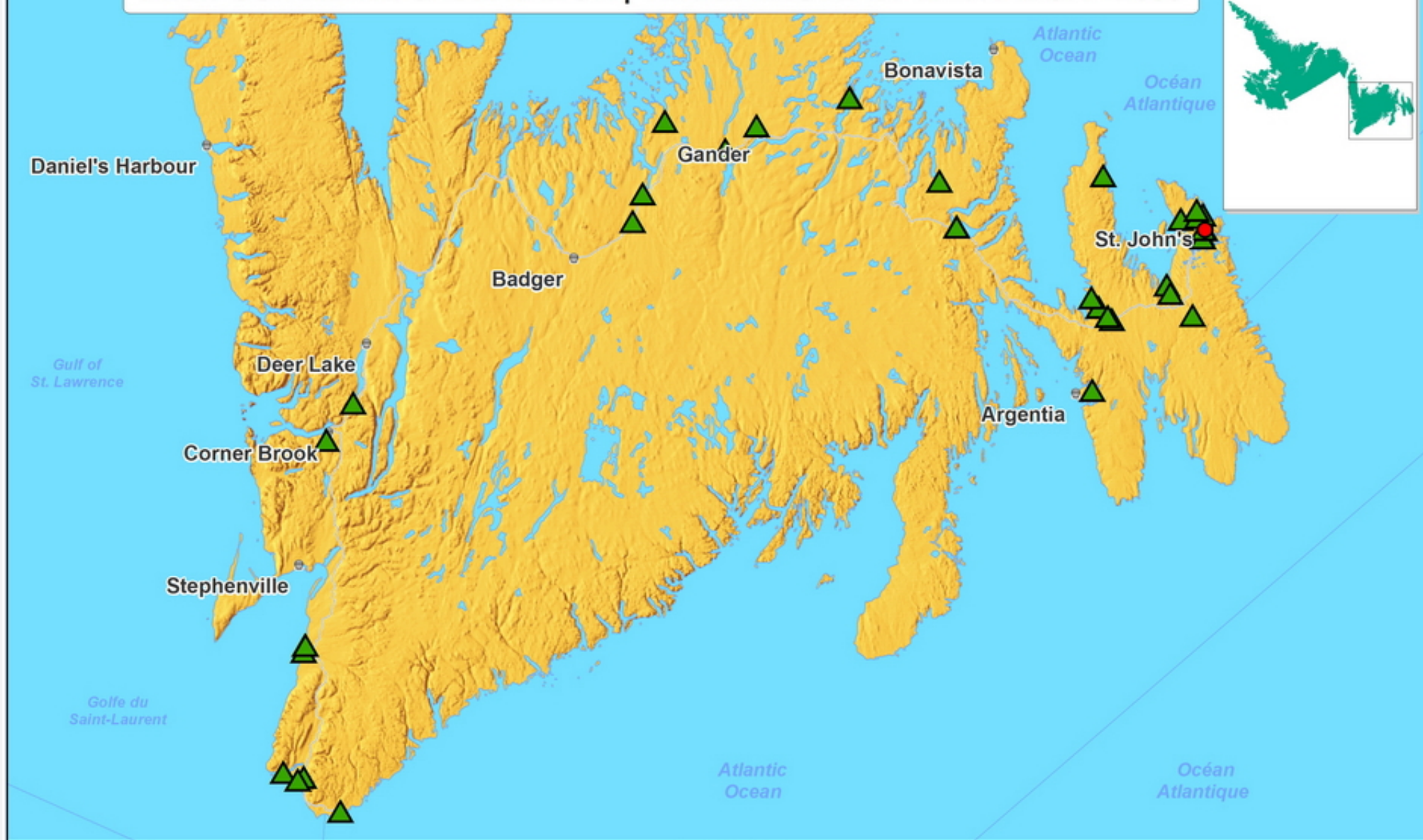
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 07 07

Japanese Beetle | Scarabée japonais

Popillia japonica (Newman)

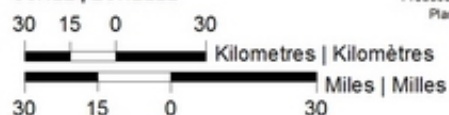
NEWFOUNDLAND & LABRADOR | TERRE-NEUVE-ET-LABRADOR - 2009



LEGEND | LÉGENDE

- Positive Site | Site Positif
- ▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



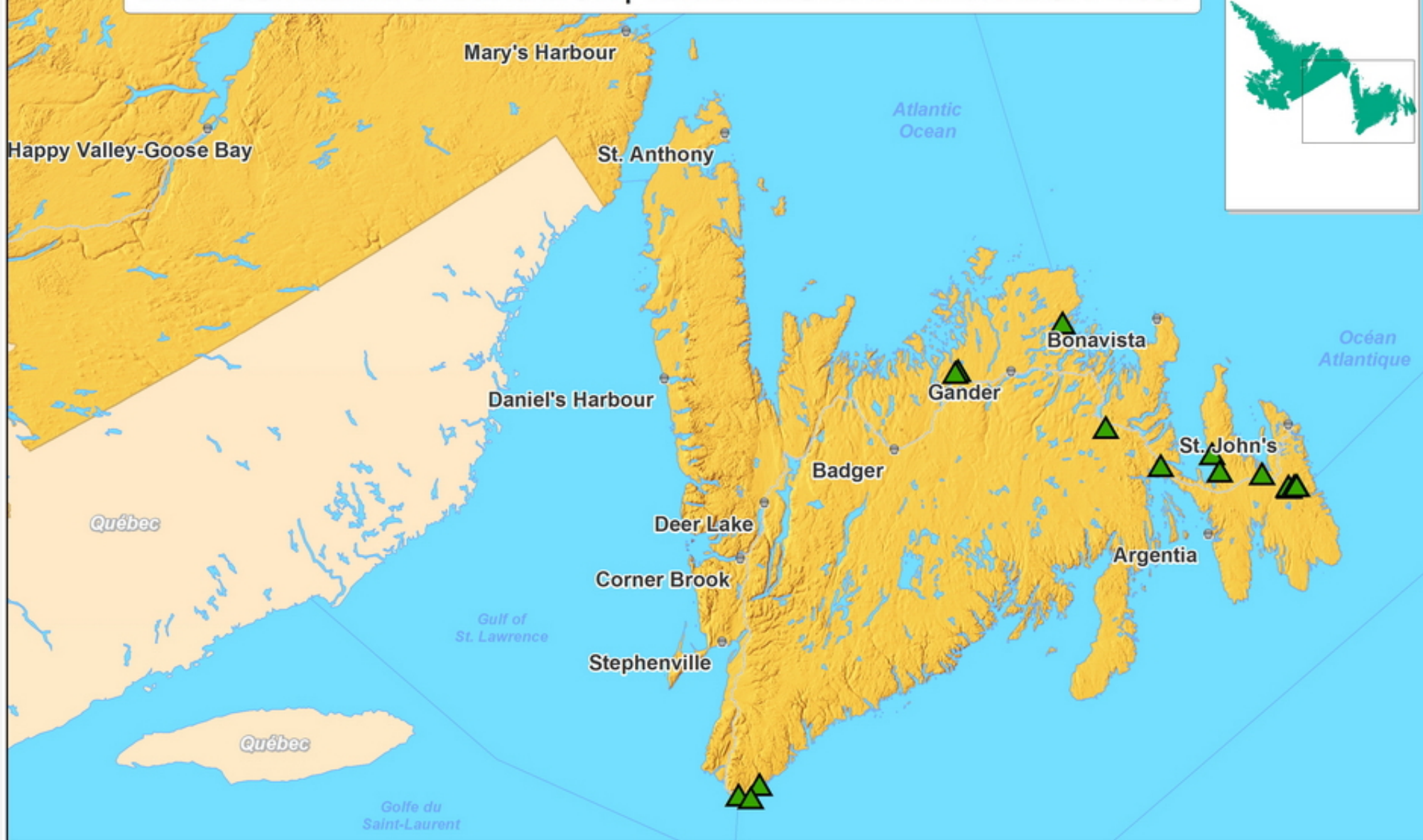
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 09 08

Blueberry Maggot | Mouche du bleuets

Rhagoletis mendax Curran

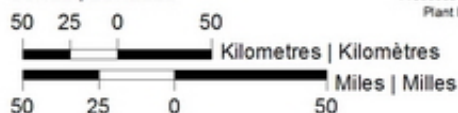
NEWFOUNDLAND & LABRADOR | TERRE-NEUVE-ET-LABRADOR - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



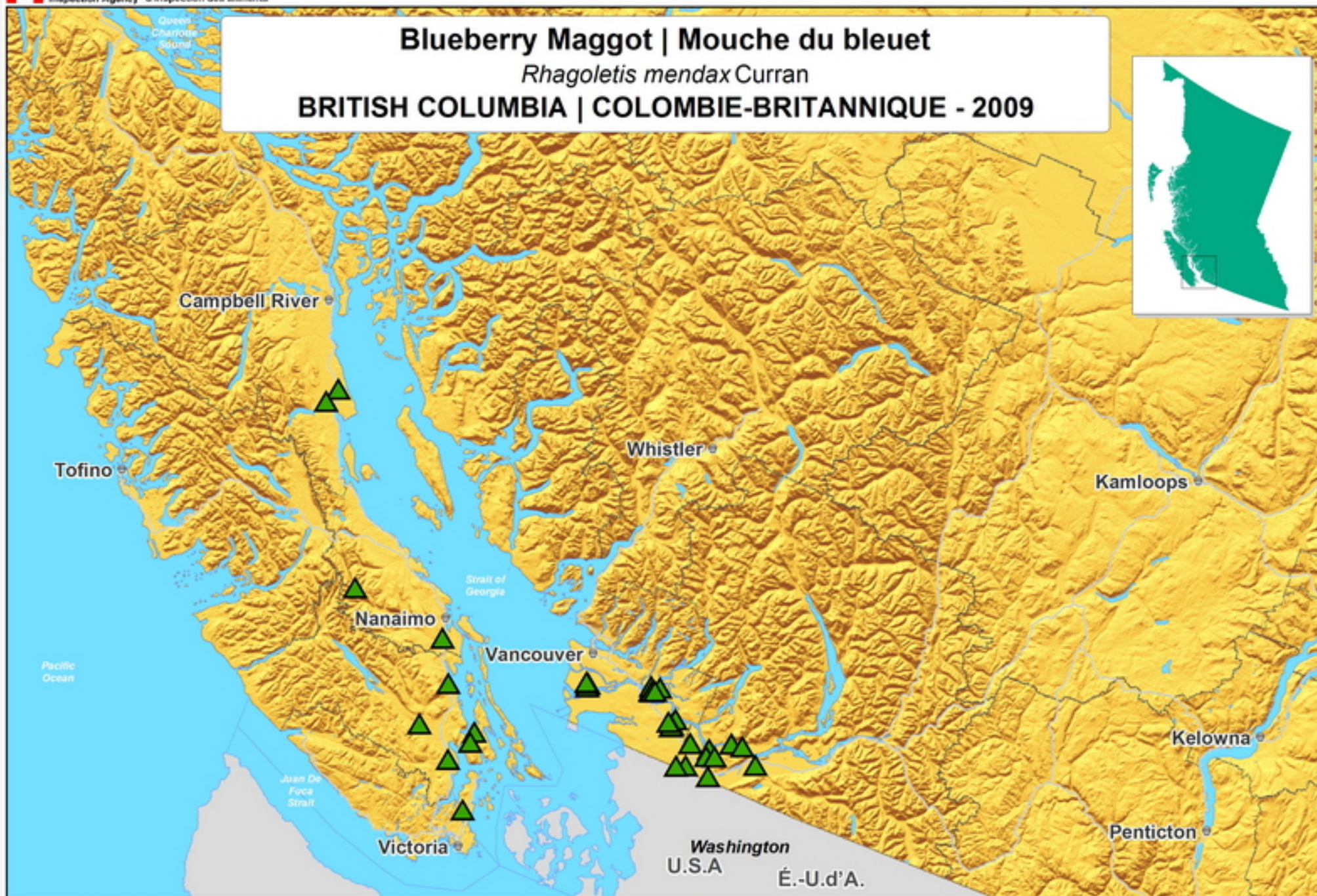
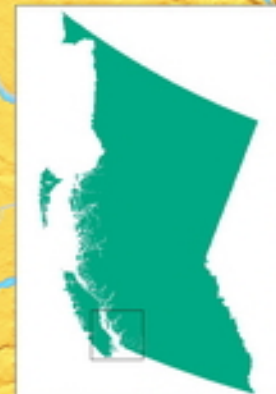
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 09 08

Blueberry Maggot | Mouche du bleuët

Rhagoletis mendax Curran

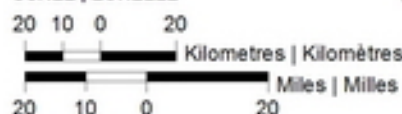
BRITISH COLUMBIA | COLOMBIE-BRITANNIQUE - 2009



LEGEND | LÉGENDE

▲ Negative Site | Site Négatif

SCALE | ÉCHELLE

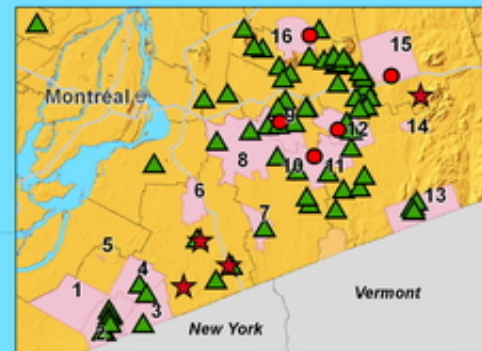
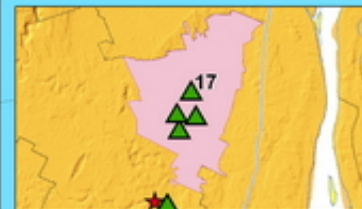
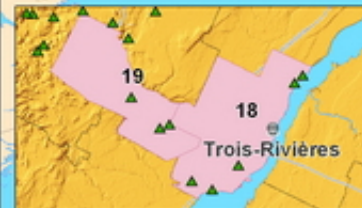
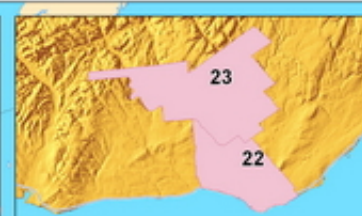


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Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 07 07

Blueberry Maggot | Mouche du bleuet *Rhagoletis mendax* Curran Québec - 2009

- 1....Ormstown
- 2....Franklin
- 3....Havelock
- 4....Saint-Chrysostome
- 5....Howick
- 6....Saint-Édouard
- 7....Saint-Valentin
- 8....Saint-Jean-sur-Richelieu
- 9....Mont-Saint-Grégoire
- 10....Saint-Alexandre
- 11....Sainte-Sabine
- 12....Farnham
- 13....Frelighsburg
- 14....East Farnham
- 15....Granby
- 16....Saint-Damase
- 17....Saint-Thomas
- 18....Trois-Rivières
- 19....Saint-Étienne-des-Grès
- 20....Notre-Dame-du-Portage
- 21....Saint-Antonin
- 22....Bonaventure
- 23....Saint-Elzéar



LEGEND | LÉGENDE
● Positive site | site positif
▲ Negative site | site négatif
 Regulated Municipality | municipalité réglementée

0 125 Kilometres | Kilomètres
 0 125 Miles | Miles

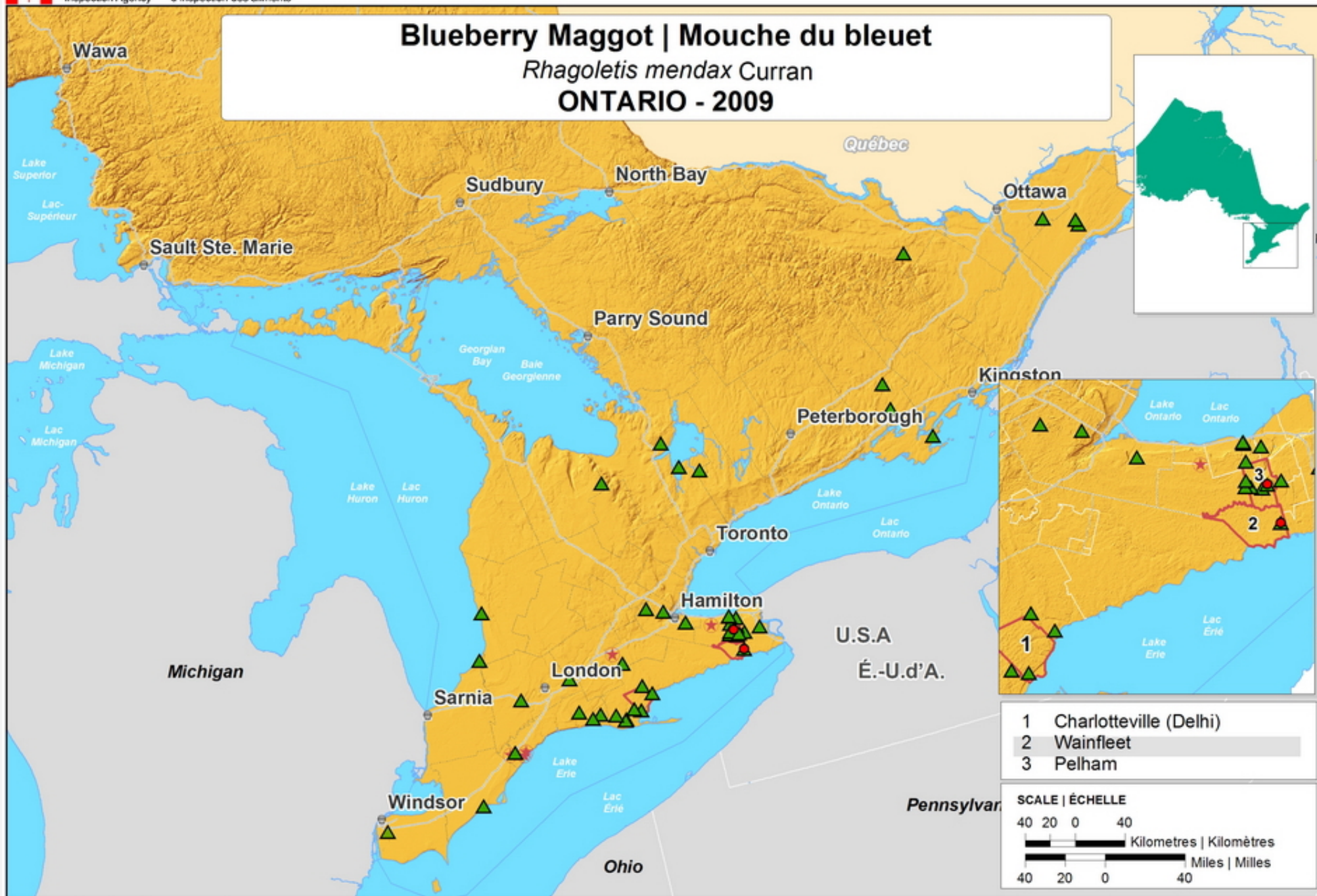
Produced by the Canadian Food Inspection Agency
 Préparé par l'Agence canadienne d'inspection des aliments
 Yr/An Mo/M Da/J
 2010 11 24



Blueberry Maggot | Mouche du bleuet

Rhagoletis mendax Curran

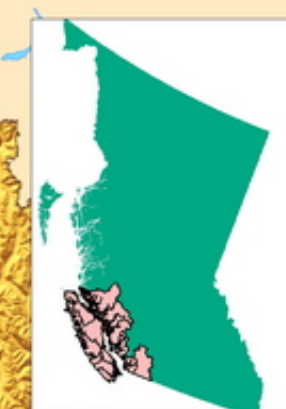
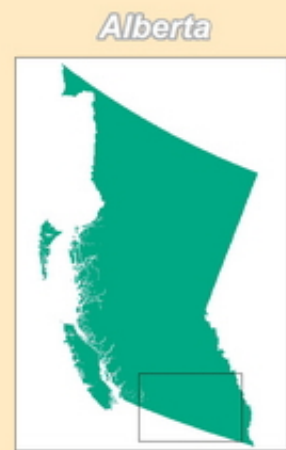
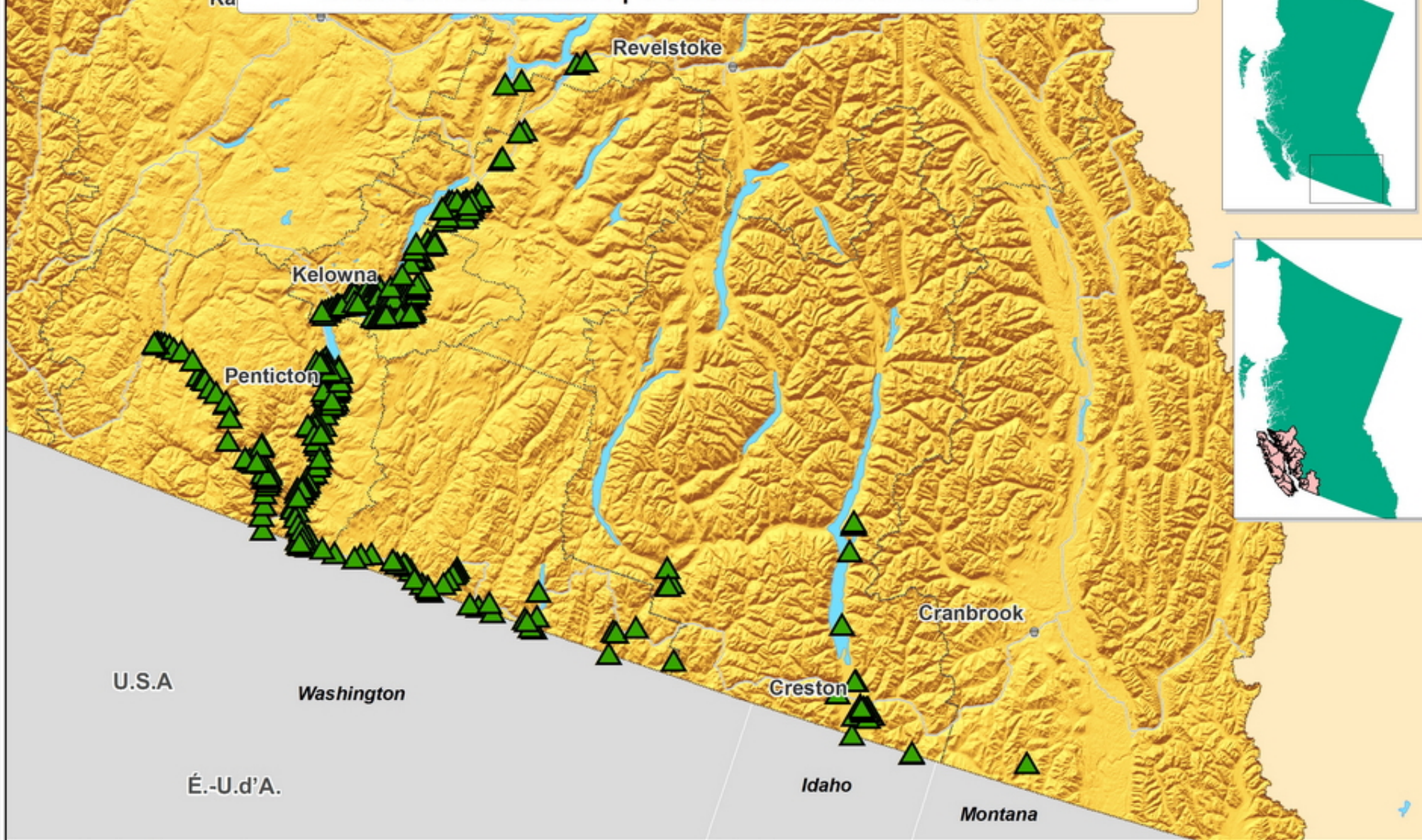
ONTARIO - 2009



LEGEND | LÉGENDE

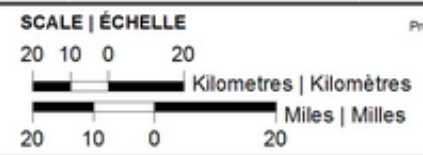
- Positive Site | Site positif
- ★ Regulated Farm | Ferme réglementée
- ▲ Negative Site | Site Négatif
- Regulated Municipality | Municipalité réglementée

Apple Maggot | Mouche de la pomme *Rhagoletis pomonella* (Walsh) **BRITISH COLUMBIA | COLOMBIE-BRITANNIQUE - 2009**



LEGEND | LÉGENDE

-  **Negative Site | Site Négatif**
-  **Regulated Area** | **Région réglementée**



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 Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
 2010 07 07

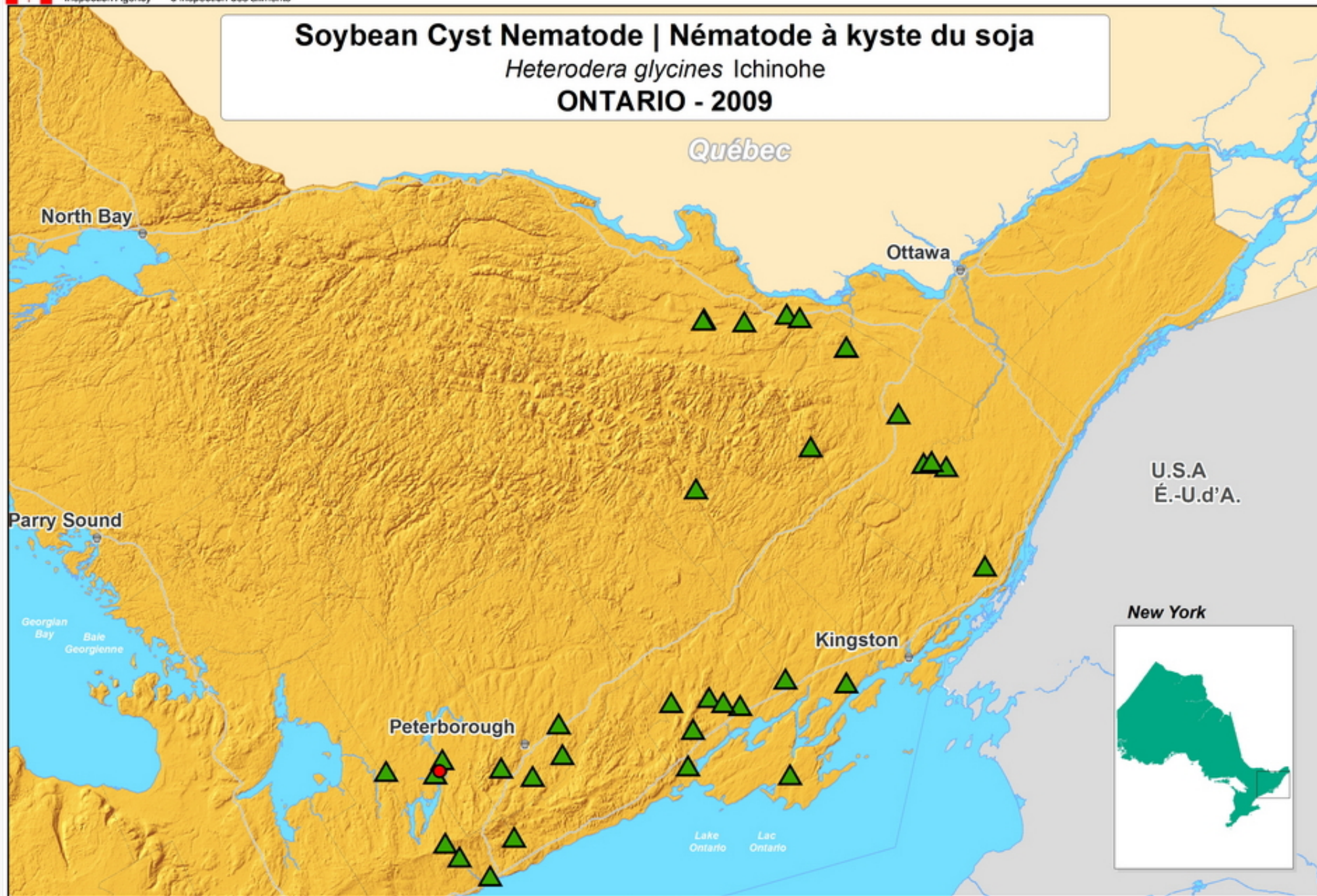




Soybean Cyst Nematode | Nématode à kyste du soja

Heterodera glycines Ichinohe

ONTARIO - 2009



LEGEND | LÉGENDE

- Positive Site | Site positif
- ▲ Negative Site | Site Négatif

SCALE | ÉCHELLE

12 6 0 12

Kilometres | Kilomètres

Miles | Milles

12 6 0 12

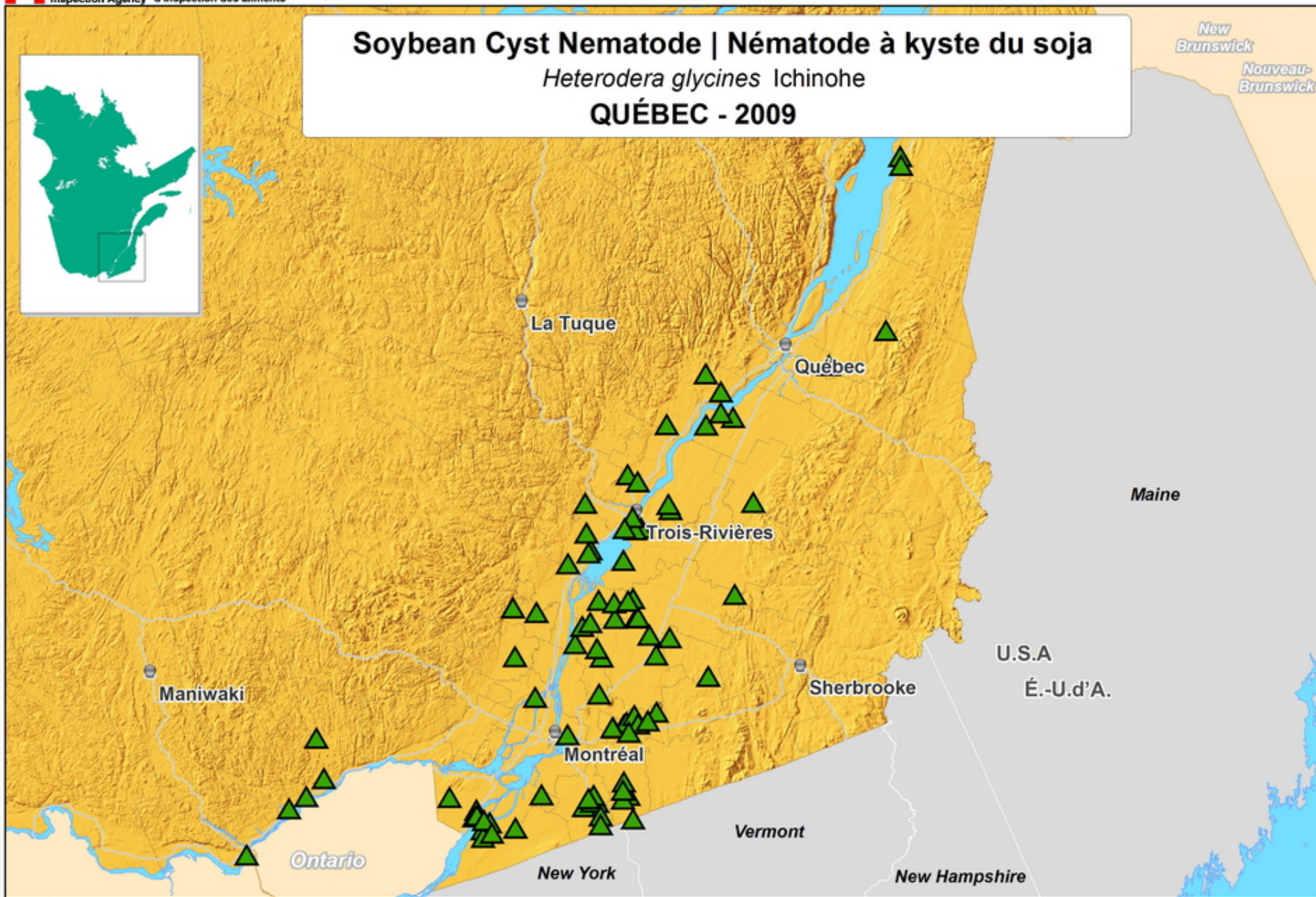
Produced by the Canadian Food Inspection Agency. Préparée par l'Agence canadienne d'inspection des aliments.
Plant Health Surveillance Unit, Ottawa, Ontario. Unité de surveillance phytosanitaire, Ottawa, Ontario.
Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 06 28

Soybean Cyst Nematode | Nématode à kyste du soja

Heterodera glycines Ichinohe

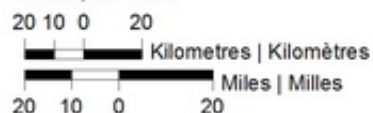
QUÉBEC - 2009



LEGEND | LÉGENDE

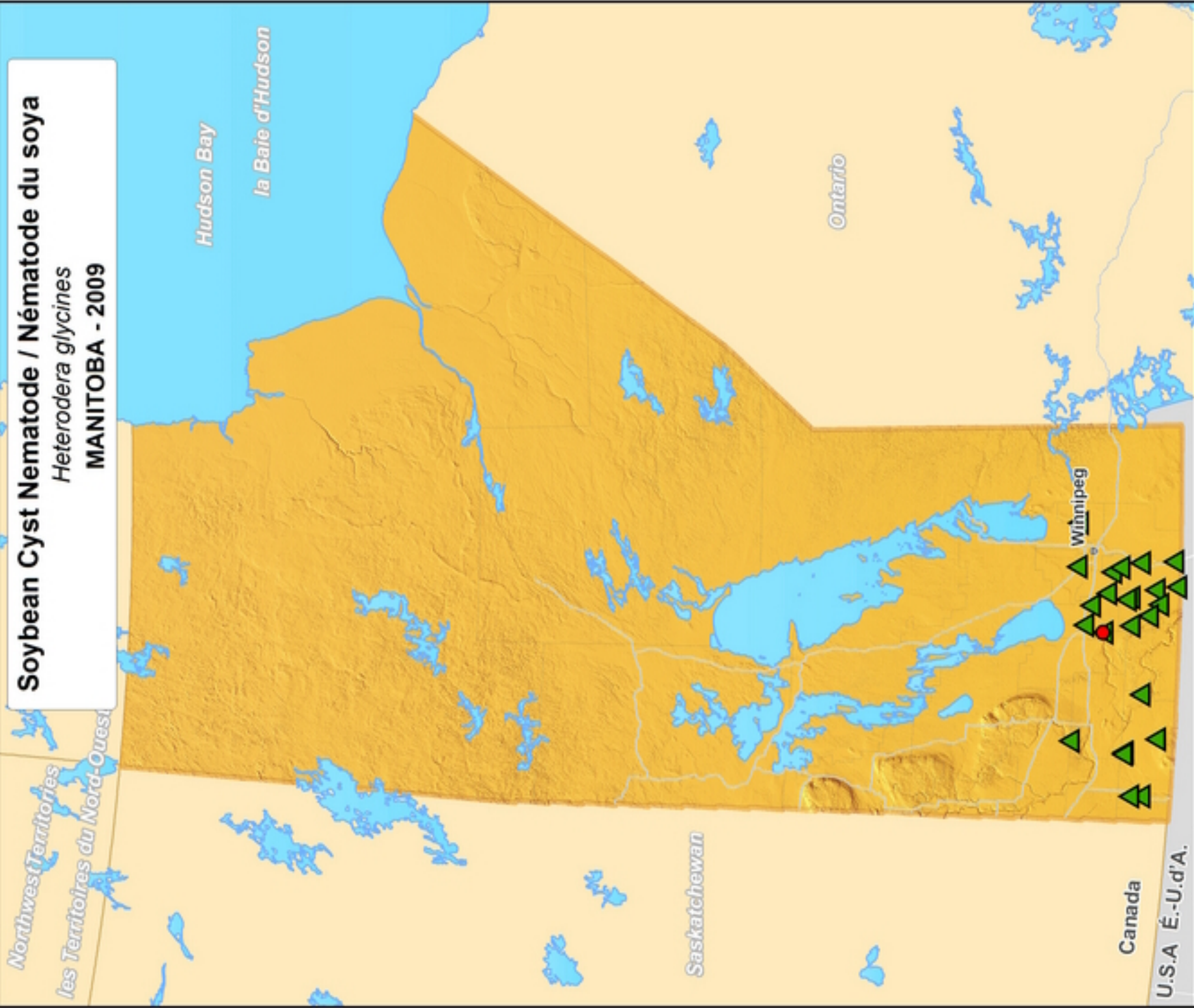
▲ Negative Site | Site Négatif

SCALE | ÉCHELLE



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Lambert Conformal Conic Projection. Projection conique conforme de Lambert.

Yr/An Mo/M Da/J
2010 07 07



LEGEND | LÉGENDE

- Positive Site | Site positif
- ▲ Negative Site | Site Négatif

Produced by the Canadian Food Inspection Agency
Plant Health Surveillance Unit, Ottawa, Ontario
Unité de surveillance phyto-sanitaire, Ottawa, Ontario
Projet de cartographie des sites de l'infestation - Canada
YrAin MoMl DaJ
2010 07 13

SCALE | ÉCHELLE

