



# Spruce Budworm and other forest pest Update

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Maine Forest Service, DACF

Note: photo at left taken in Quebec



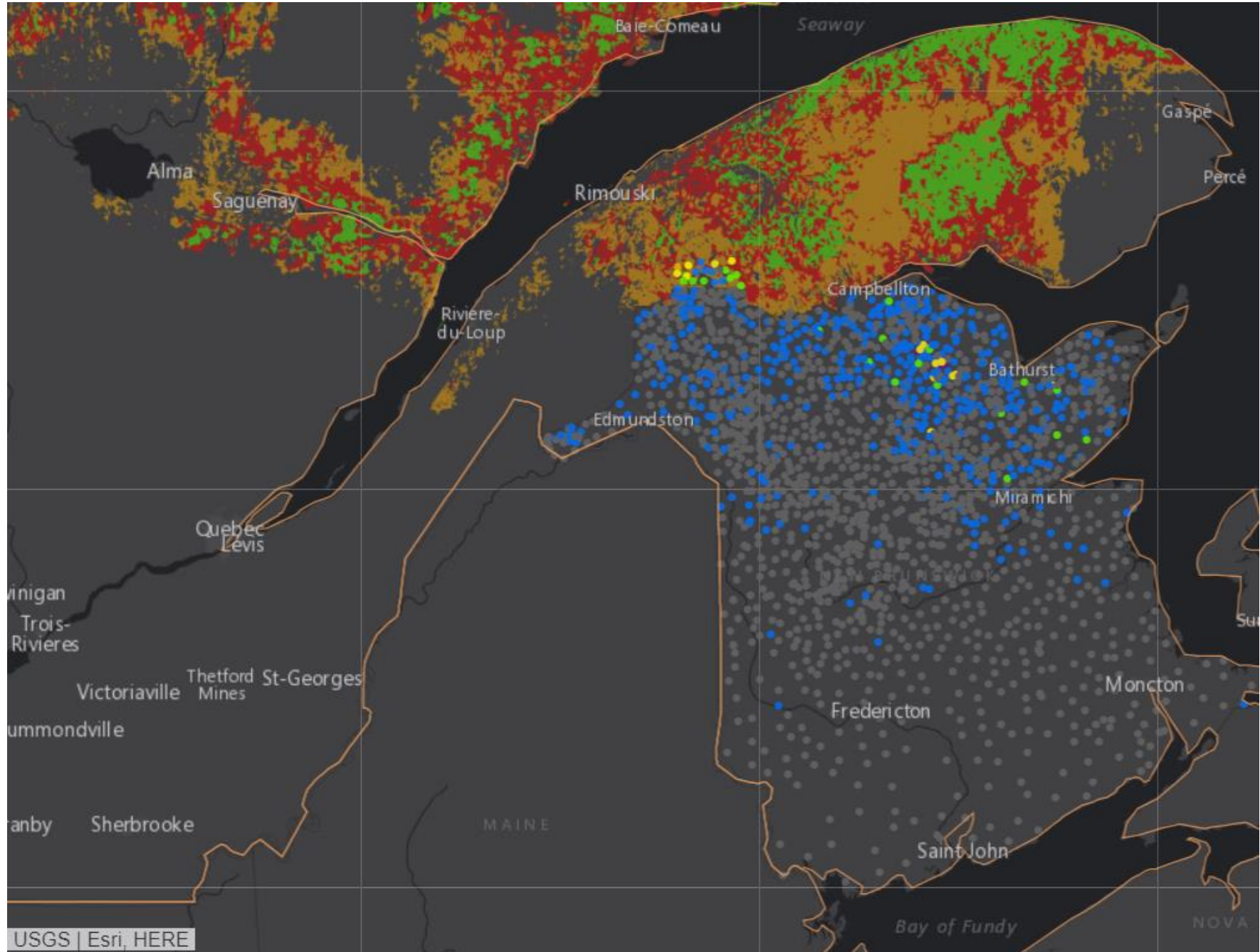
Photos: Egg mass, Natural Resources Canada, Canadian Forest Service (FS); Hibernaculum, USDA FS- Region 2, Bugwood.org; Larva, D. Gordon Mott; Pupa, Maine FS; Adult, Brian Roth, CFRU; Defoliated trees, Maine FS



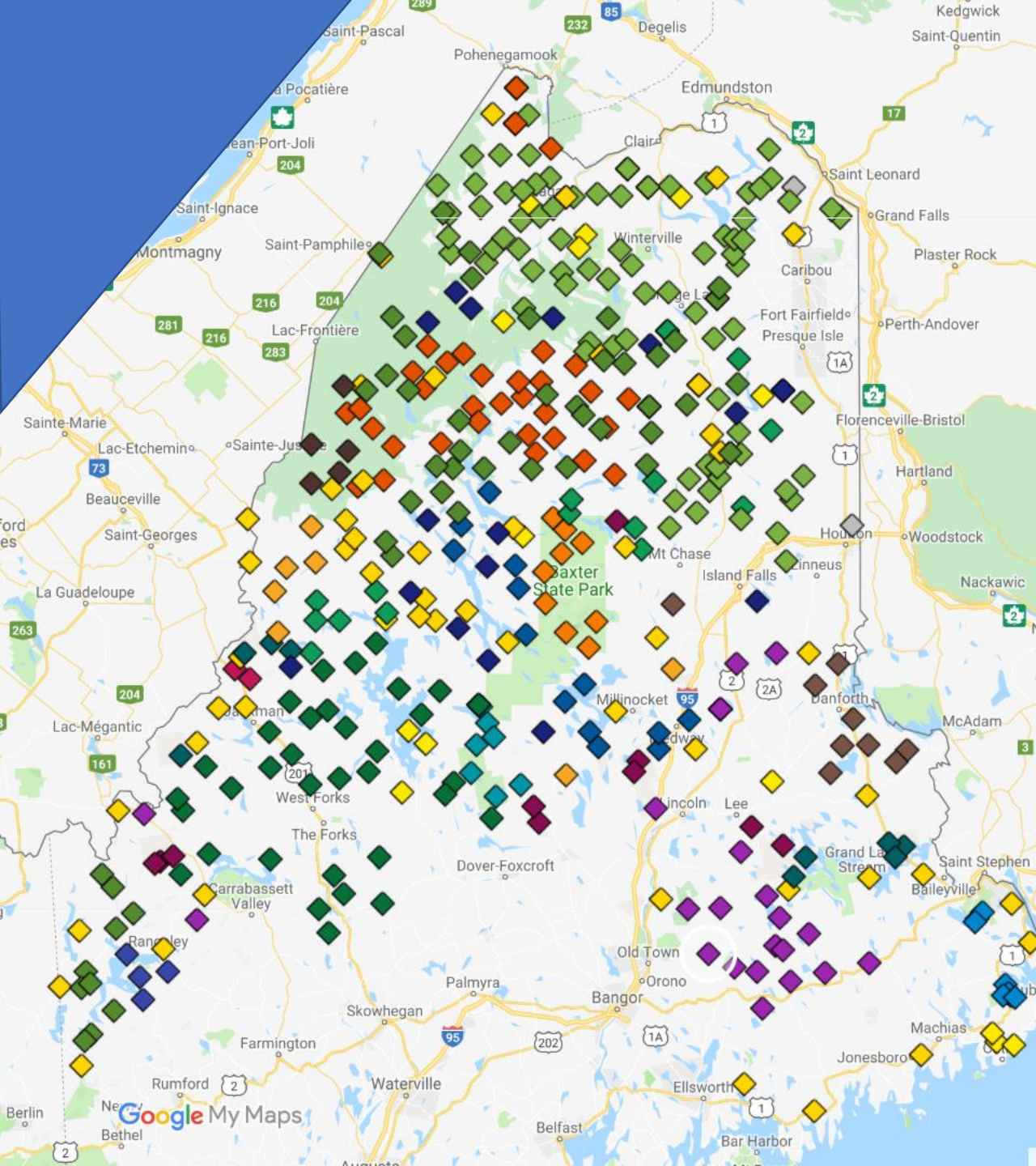
## Acres Defoliated by Spruce Budworm in the Province of Quebec 2003-2018



NB  
Populations  
Down







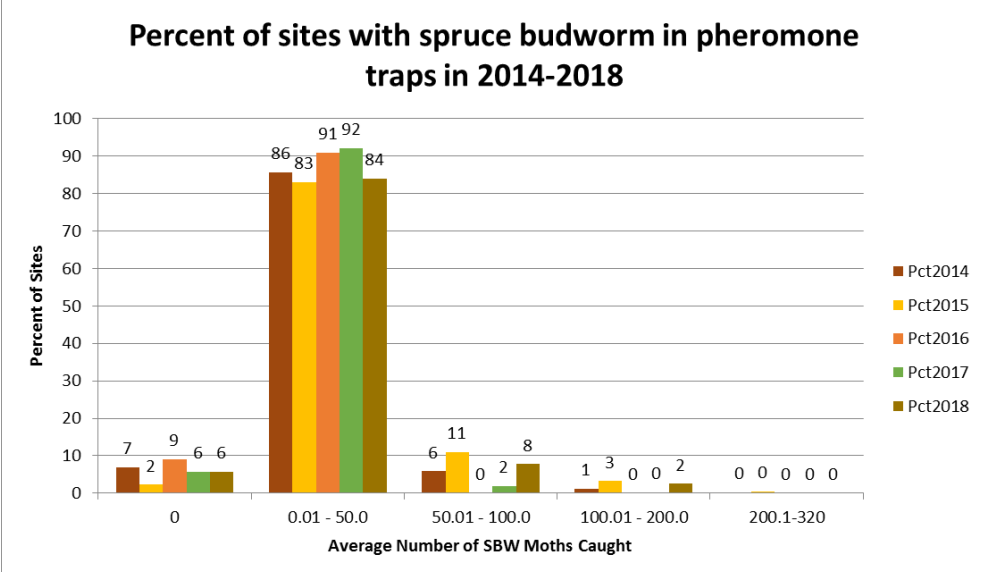
What about  
Maine?





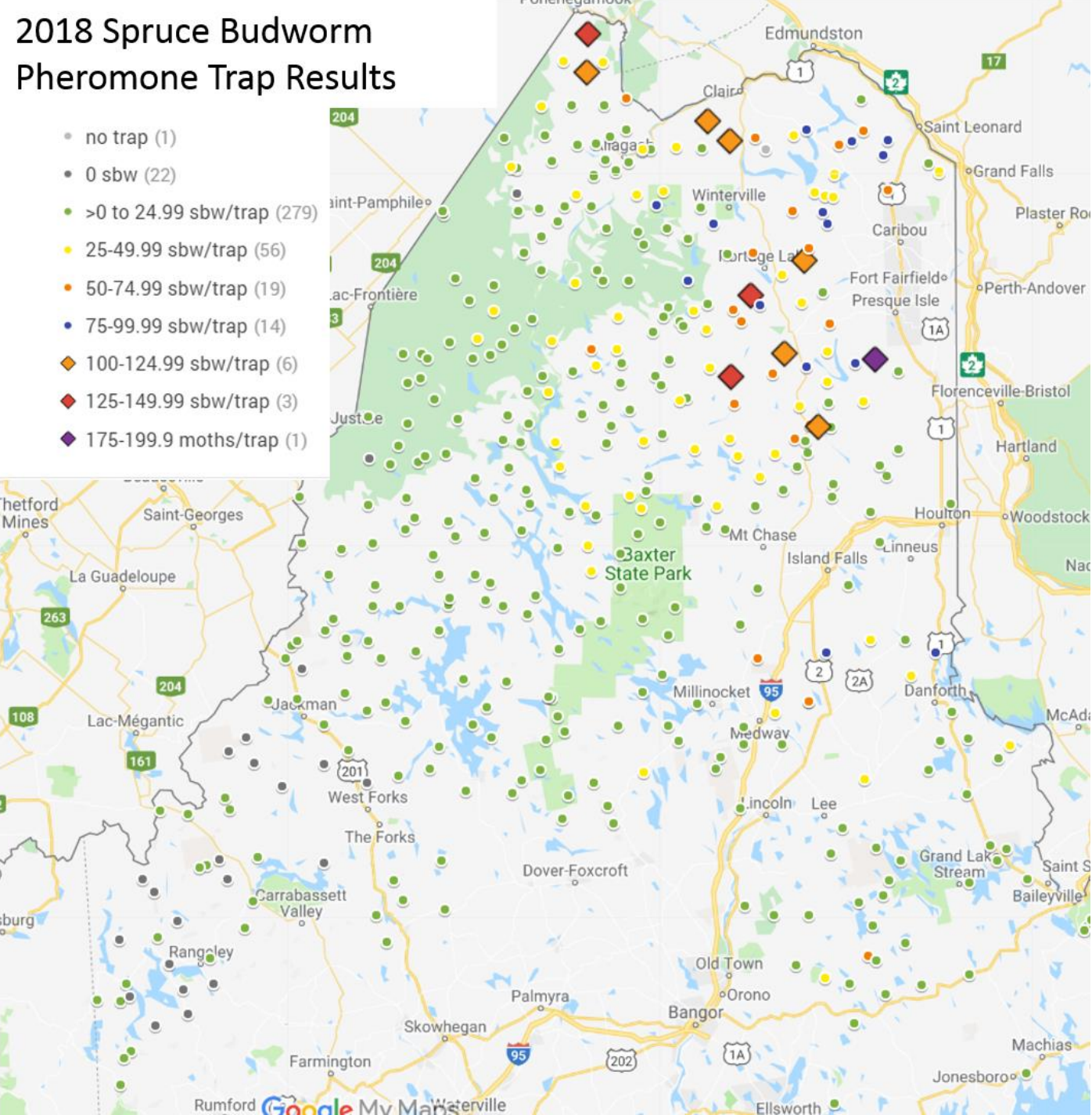
# PHEROMONE TRAP SURVEY

- Average catch up compared to 2017 (from ~10 to ~20)
- Most still <50 moths/trap (357/401)
- 10/401 above 100 moths/trap
  - Diamonds on map
  - Similar areas to higher catches in previous years



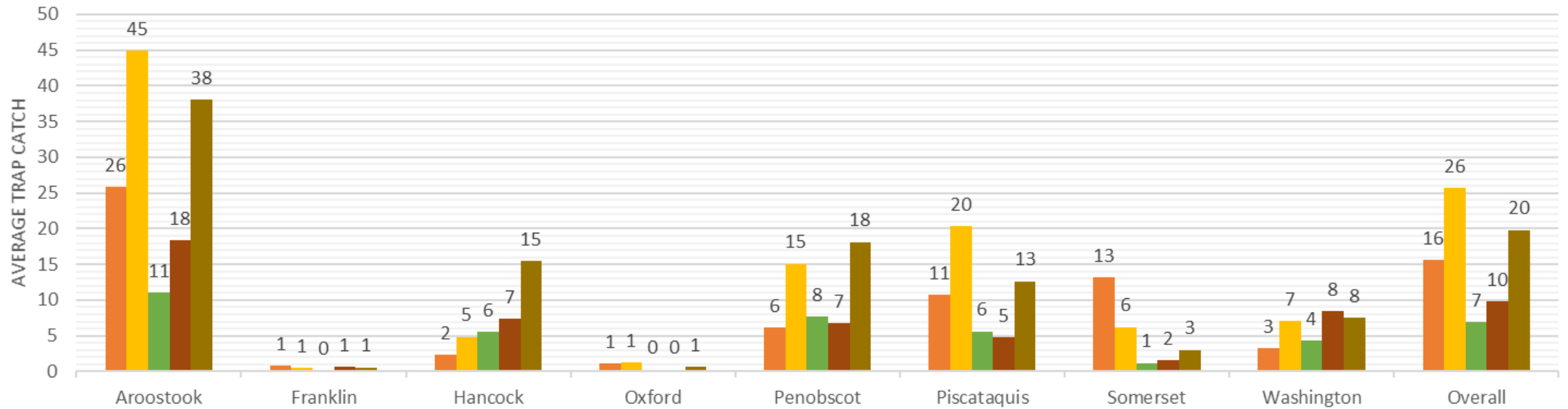
# 2018 Spruce Budworm Pheromone Trap Results

- no trap (1)
- 0 sbw (22)
- >0 to 24.99 sbw/trap (279)
- 25-49.99 sbw/trap (56)
- 50-74.99 sbw/trap (19)
- 75-99.99 sbw/trap (14)
- 100-124.99 sbw/trap (6)
- 125-149.99 sbw/trap (3)
- 175-199.9 moths/trap (1)

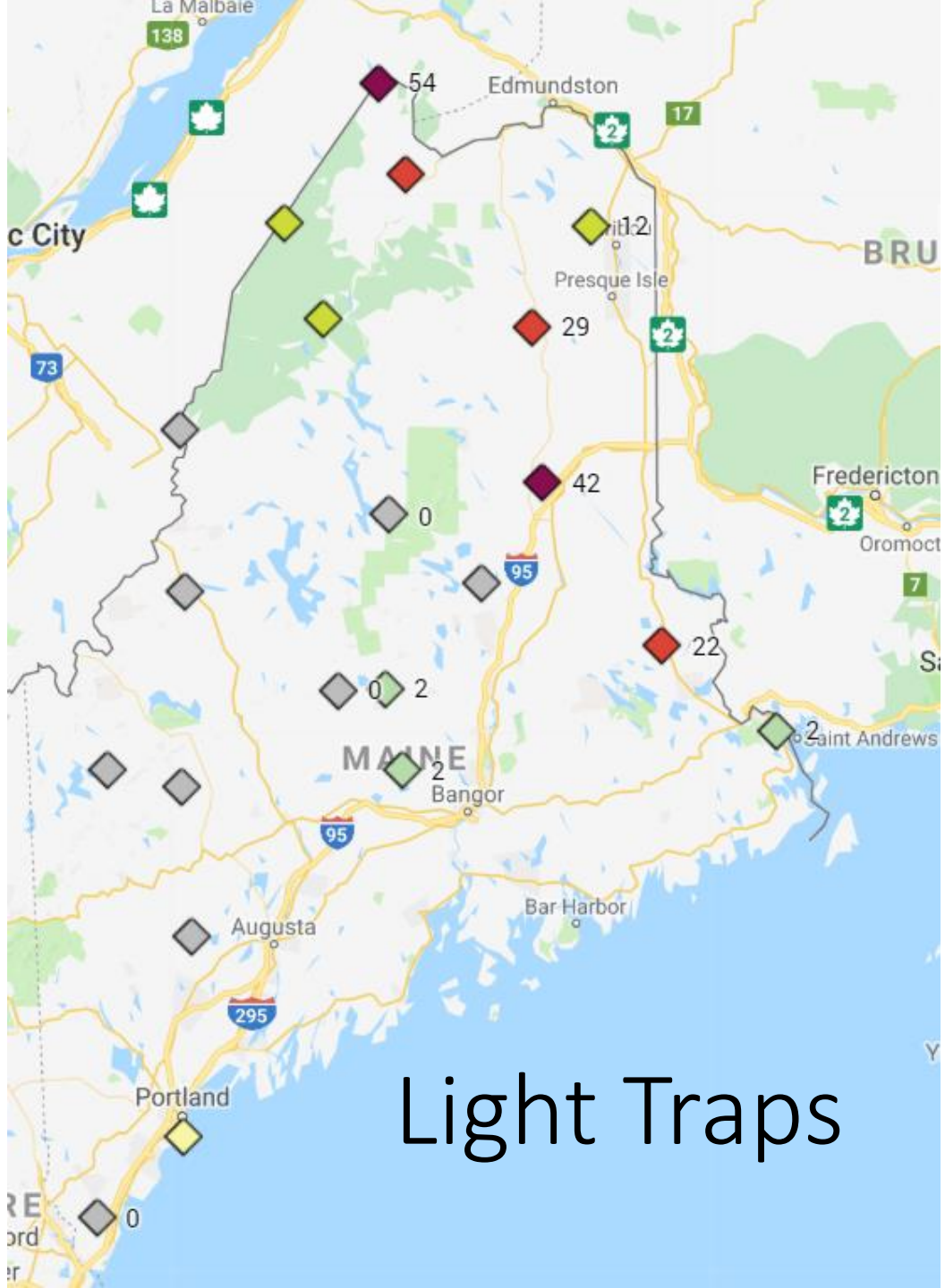


# Average number of spruce budworm moths in pheromone traps by county in Maine 2014–2018

2014 2015 2016 2017 2018

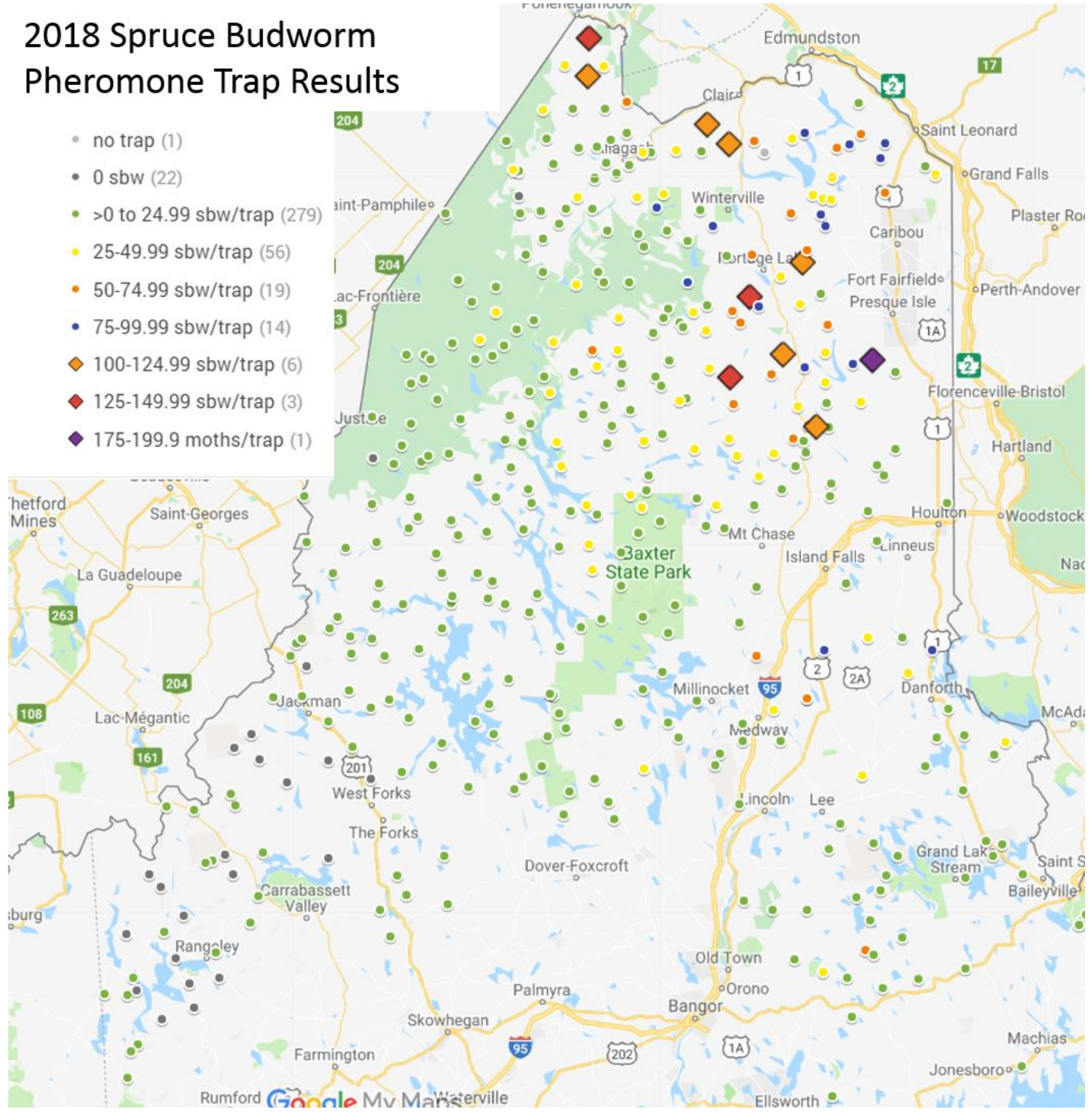






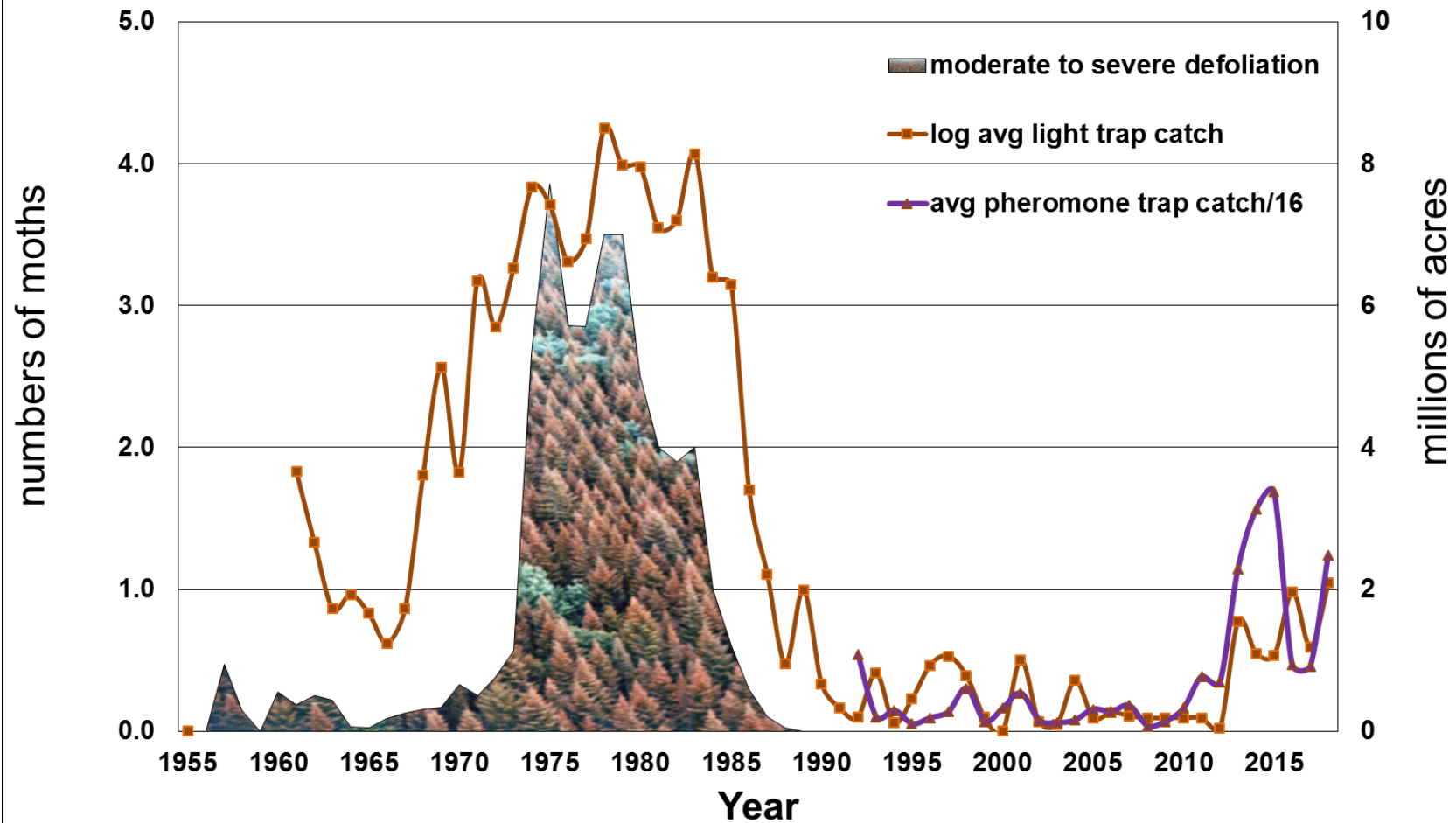
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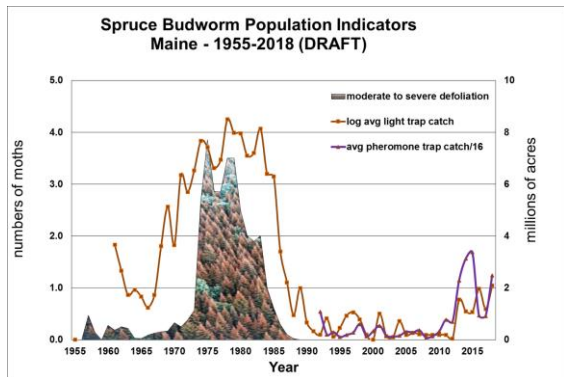
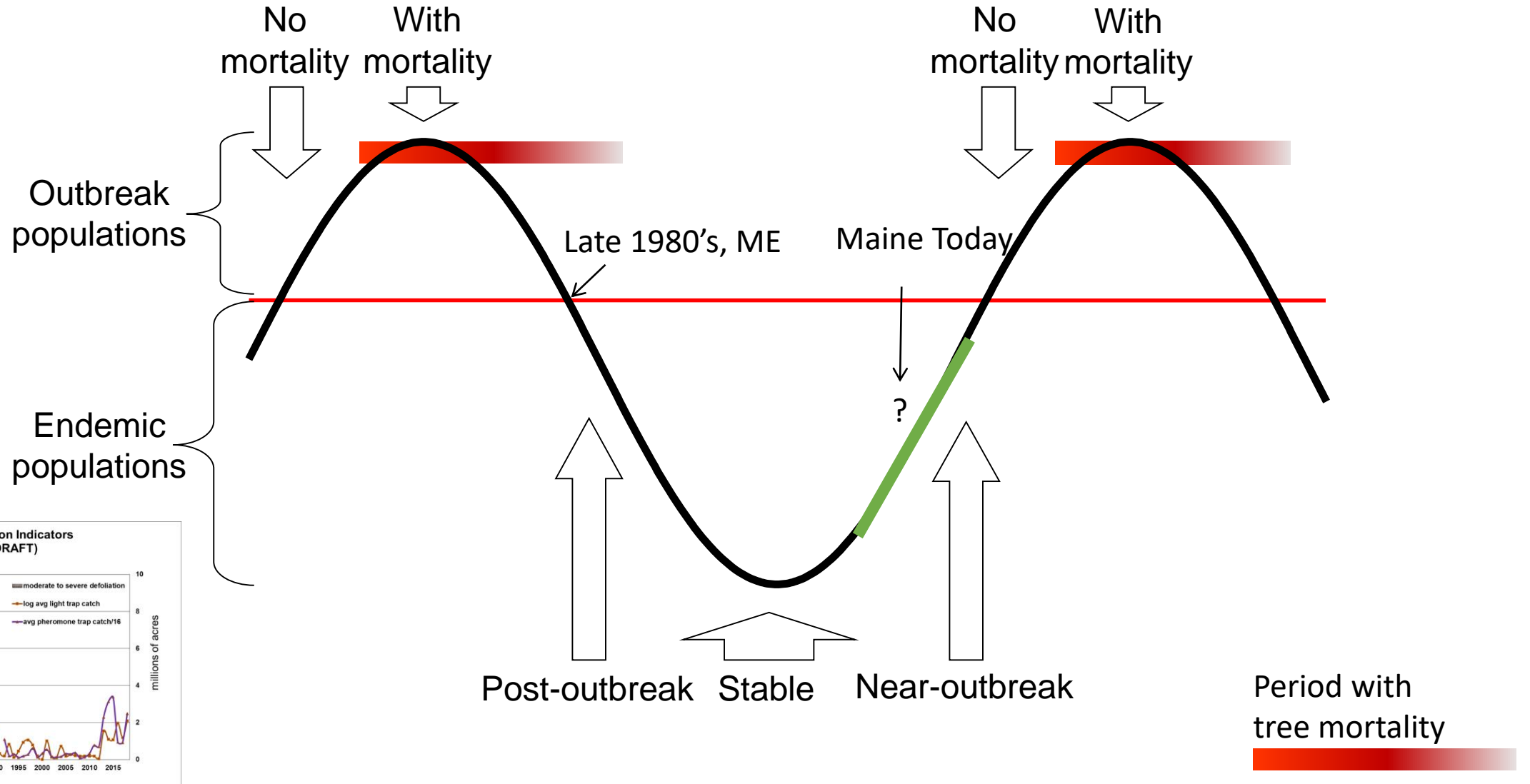




# Spruce Budworm Population Indicators Maine - 1955-2018 (DRAFT)



# When is Spruce Budworm Coming?



Adapted from: Quebec Ministry of Forests, Parks and Wildlife Graphic





**Serious  
impacts on  
quality of life  
and health**

## Invasive Browntail Moth (*Euproctis chrysorrhoea*)

Image from anonymous  
affected public, permission  
for use granted to MFS





# Browntail Moth Key Messages

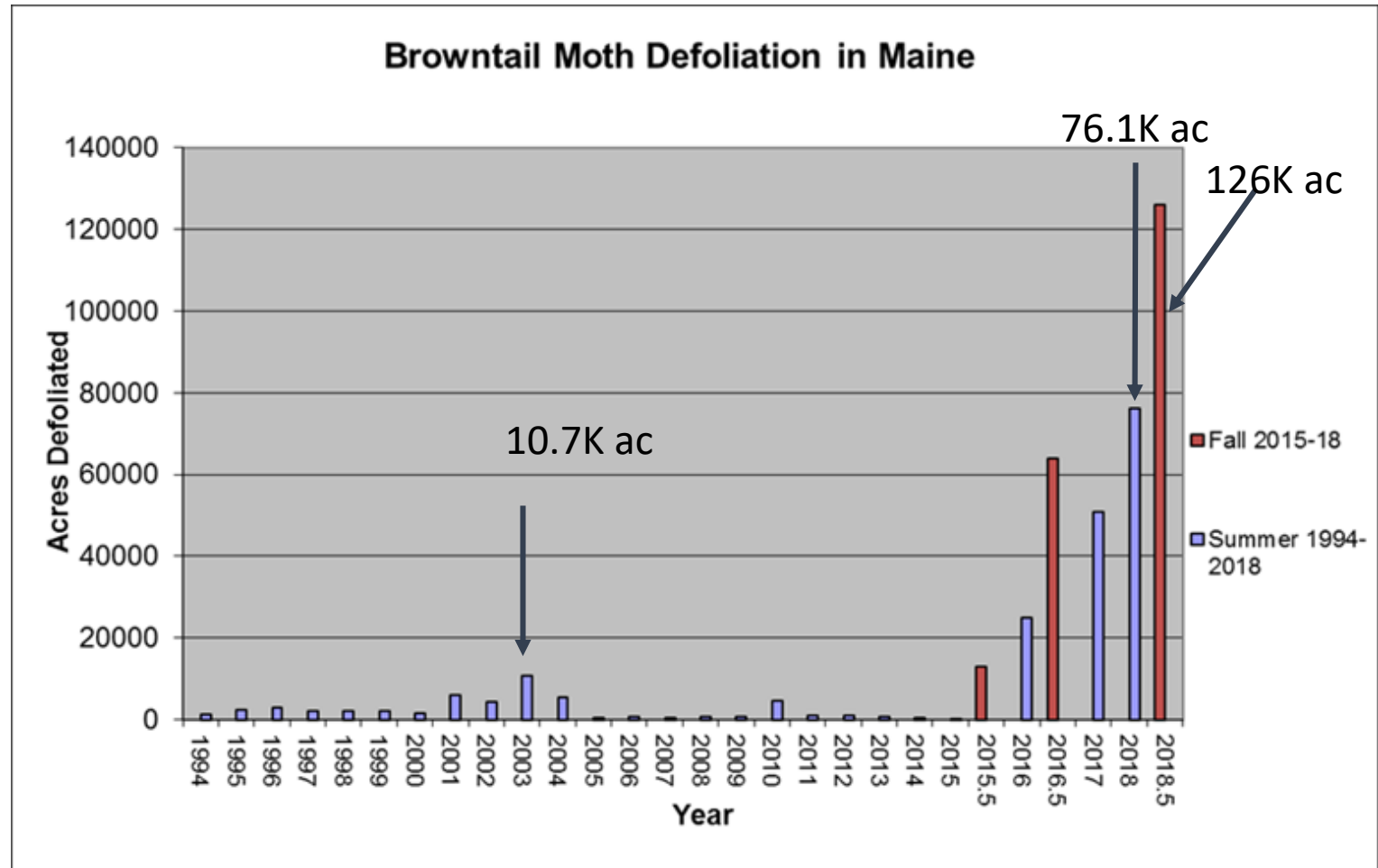


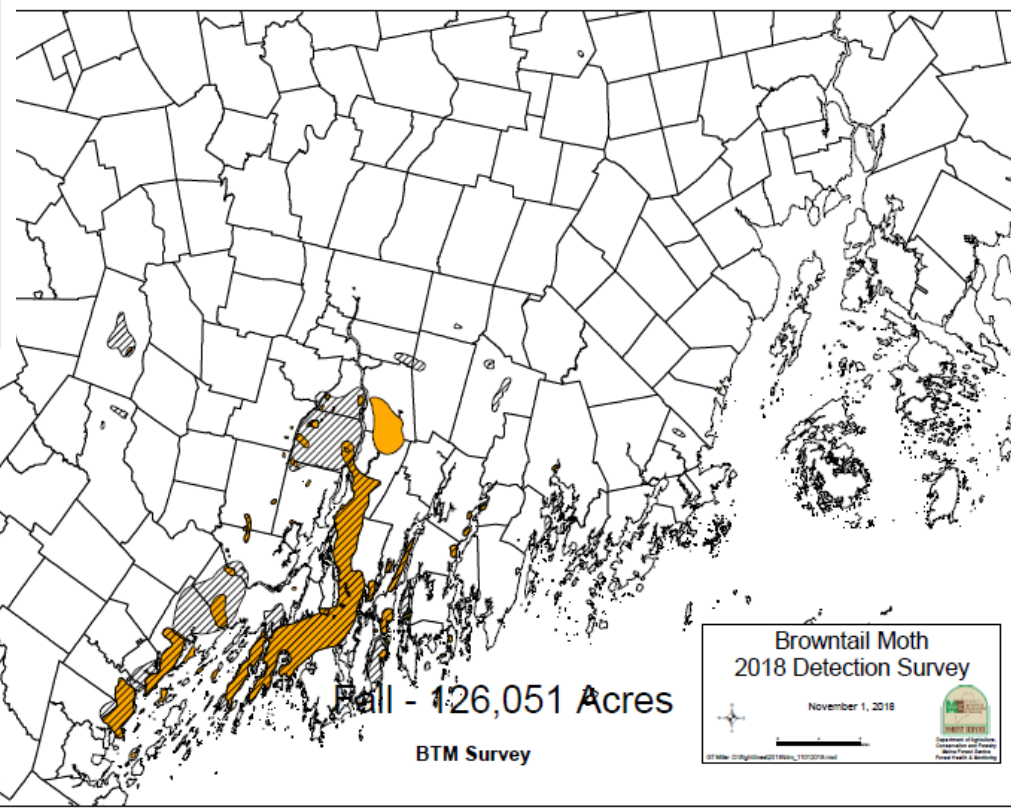
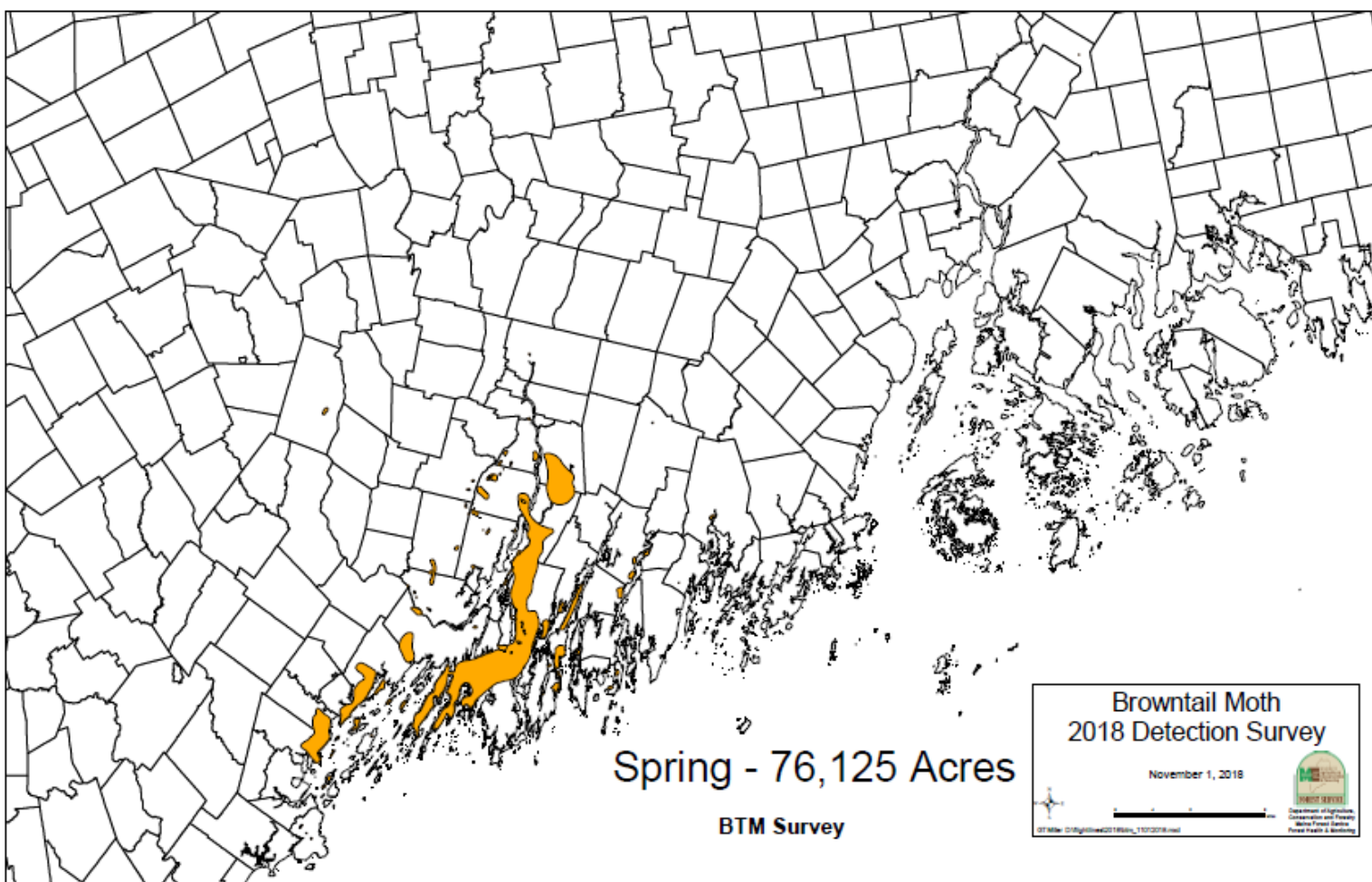
- Browntail moth is in Maine (year 115 and counting).
- It is expanding.
- It could be in your dooryard (on your campus, at your business, etc).
  - **Check hardwoods (fruit trees (Rosaceae), oaks and others)**
    - Yes.
      - reduce populations and try not to spread it.
    - YES!!!!!! OMG!!!
      - protect yourself from toxic hairs during Late May-July, dry conditions outside that period or when working in hosts
    - No.
      - Gratitude exercises. Stay vigilant.
    - Maybe?
      - check website for help
      - send photos



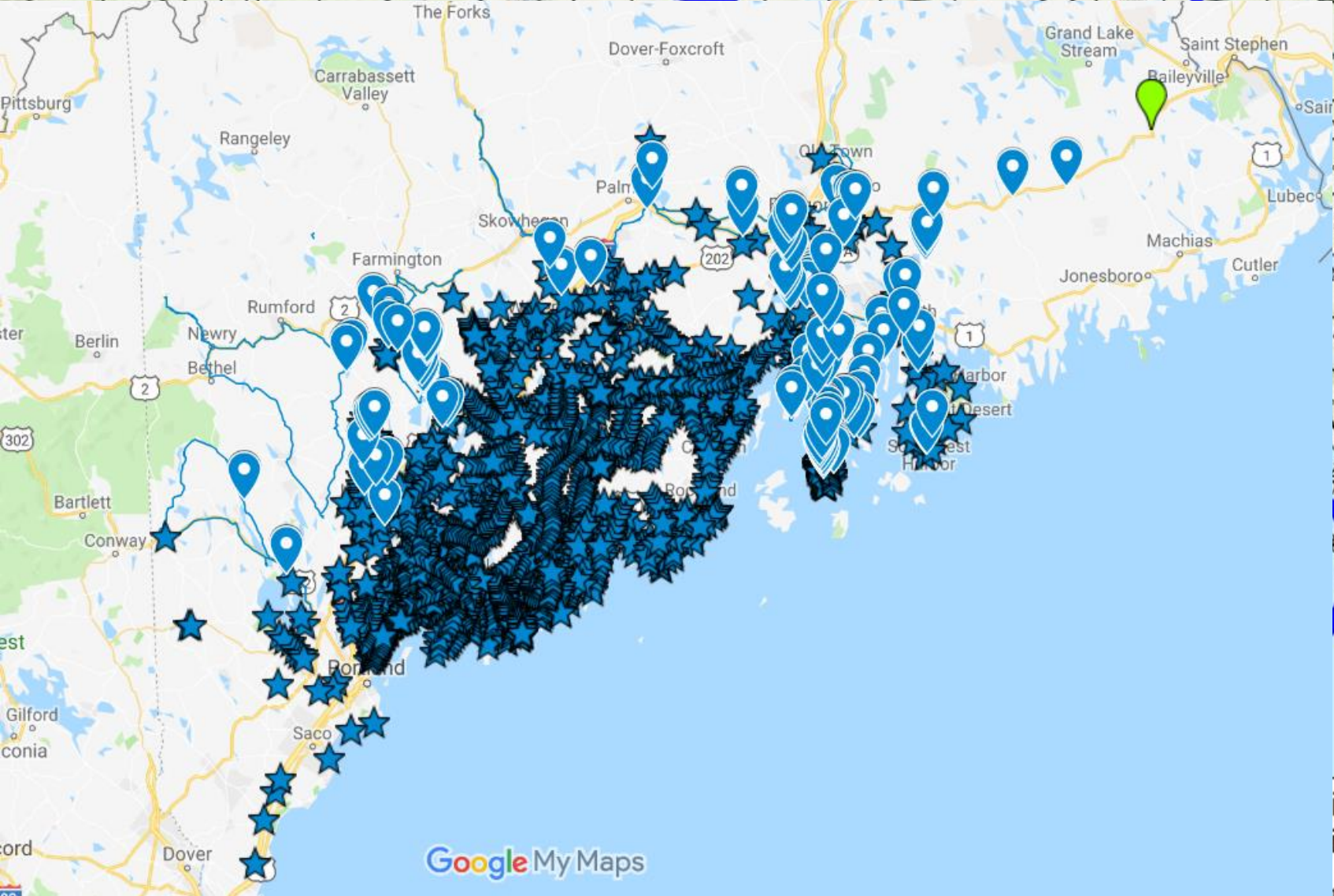
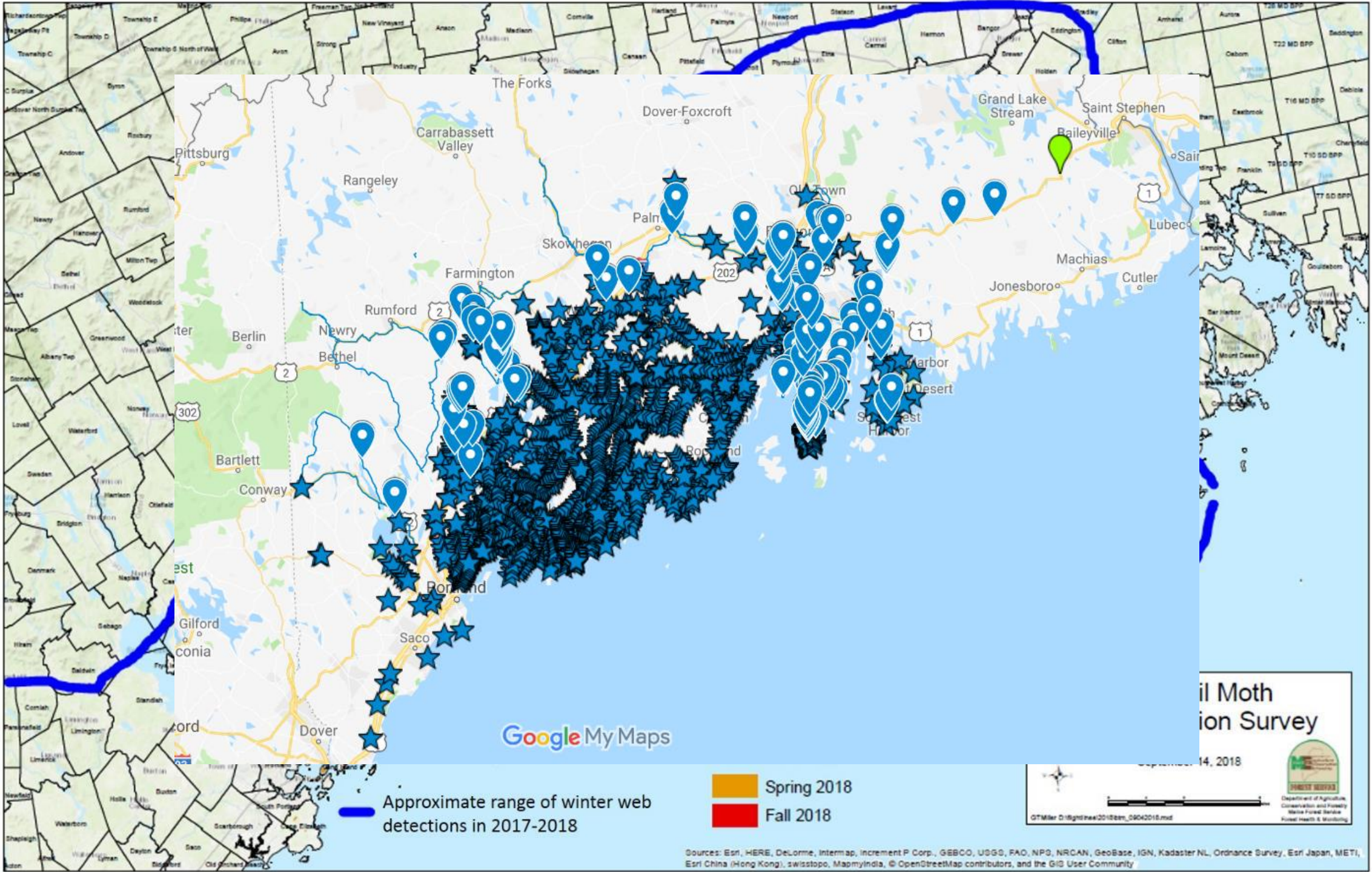
# BTM Aerial Survey Data

- Blue: Late June/Early July Flights
- Red: Late August/Early Sept Flights









### Spruce Bark Beetle Web Detection Survey

September 14, 2018



Department of Agriculture,  
Conservation and Forestry  
New Brunswick  
Forest Health & Monitoring



Google My Maps

Approximate range of winter web  
detections in 2017-2018

- Spring 2018
- Fall 2018

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, UGG, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community





# Winter Webs

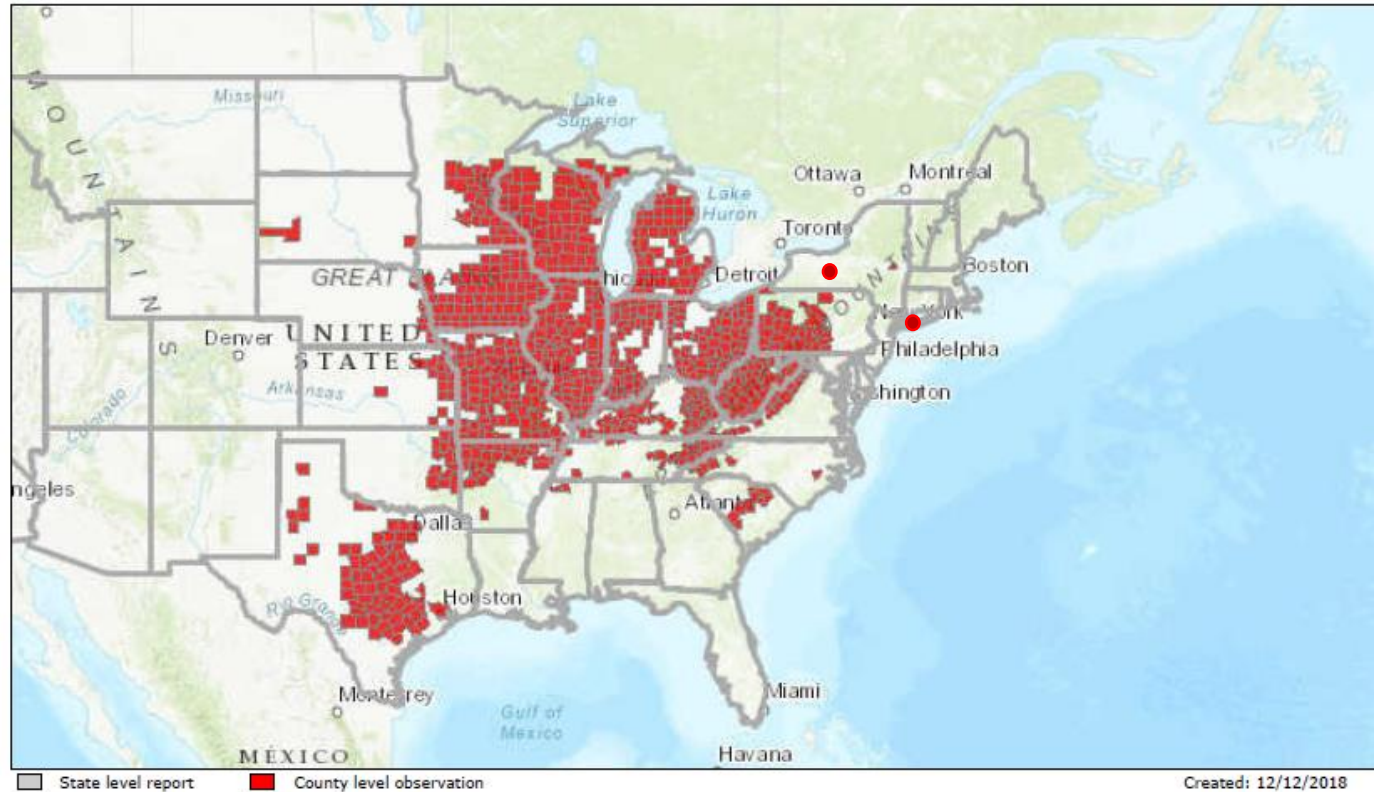
- Wide range of hosts, oak, birch, apple other fruit and hardwood trees & shrubs





An Invasive Species-  
Preferred Mode of  
Transportation

# Oak Wilt



Forest Health Protection (FHP) and its partners strive to maintain an accurate Aerial Detection Survey (ADS) Dataset, but due to the conditions under which the data are collected, FHP and its partners shall not be held responsible for missing or inaccurate data. ADS are not intended to replace more specific information. An accuracy assessment has not been done for this dataset; however, ground checks are completed in accordance with local and national guidelines. Maps and data may be updated without notice. Please cite "USDA Forest Service, Forest Health Protection and its partners" as the source of this data in maps and publications.



# Oak Wilt

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- Vascular Wilt
- Vectored by beetles; spread by root grafts
- Potential movement in logs/firewood (sites in NY strongly suggest firewood origin)
- Primary Cue:  
Significant Early Leaf Drop on Oak (July = prime time)









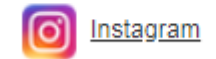
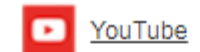
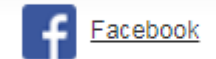
# Emerald Ash Borer

- ❑ Metallic woodboring beetle (Buprestidae)
- ❑ Native to Asia
- ❑ Kills healthy or declining ash



~ 1/2" long  
metallic green

## Connect with Us

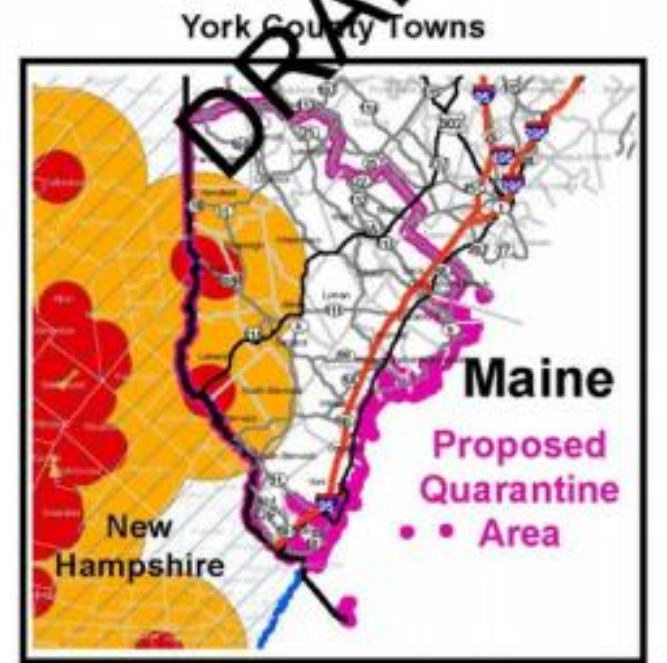
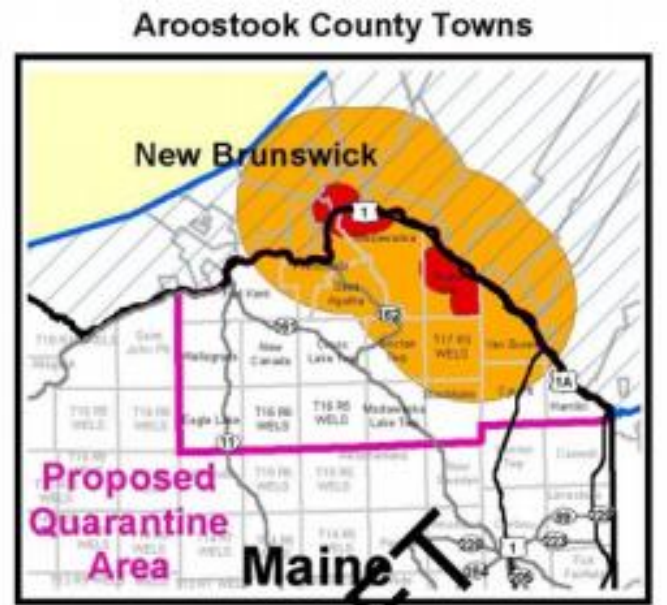
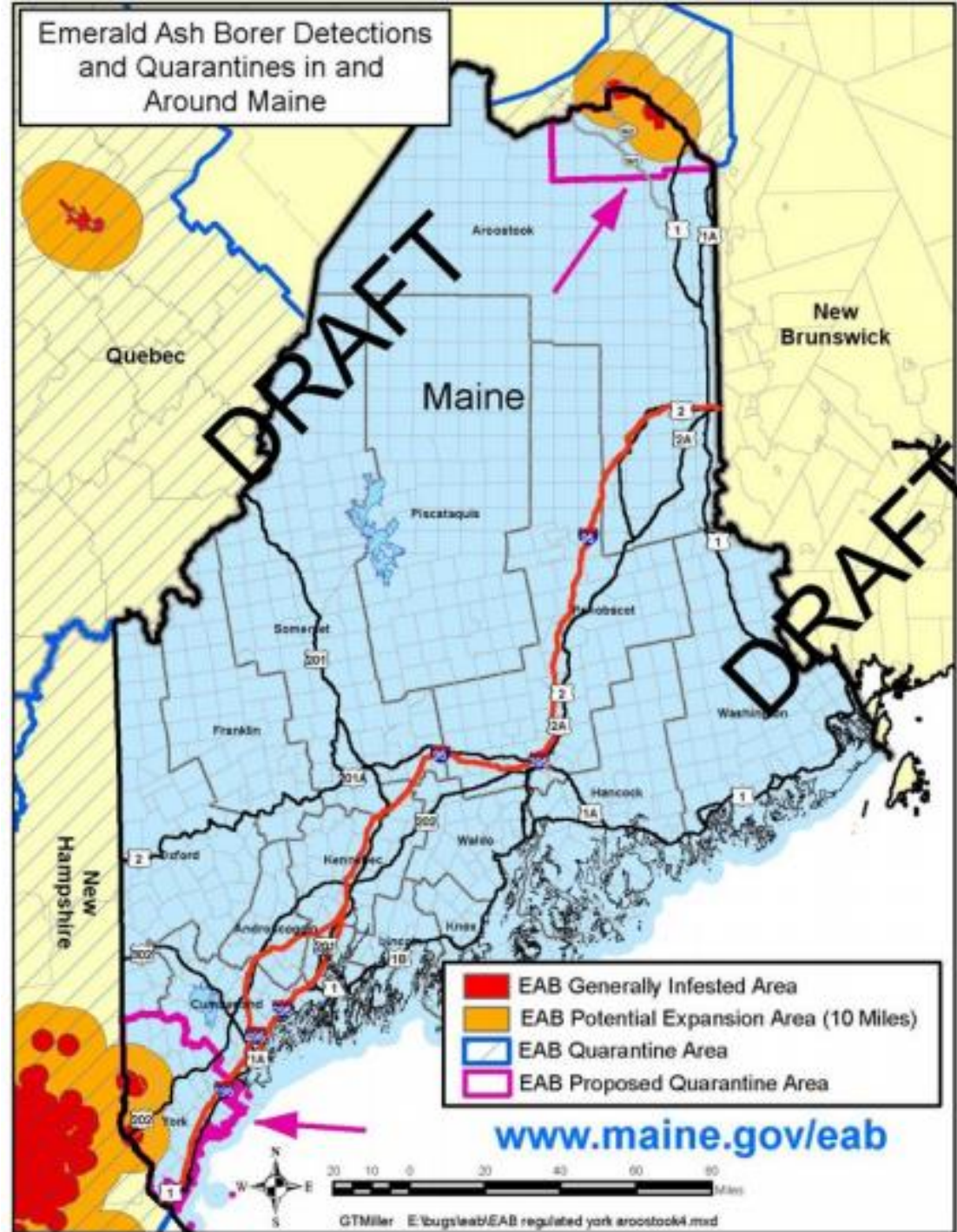


# Proposed Areas

## York County

### Part of Aroostook County

- Cross Lake Twp (T17 R5 WELS),
- Cyr Plt,
- Eagle Lake,
- Fort Kent,
- Frenchville,
- Grand Isle,
- Hamlin,
- Madawaska,
- Madawaska Lake Twp (T16 R4 WELS),
- New Canada,
- Saint Agatha,
- Sinclair Twp (T17 R4 WELS),
- Stockholm,
- T16 R5 WELS,
- T16 R6 WELS
- T17 R3 WELS,
- Van Buren and
- Wallagrass



November 19, 2018

Department of Agriculture,  
Conservation and Forestry  
Maine Forest Service  
Forest Health & Monitoring







# Cooperative Emerald Ash Borer Project

Initial county EAB detections in North America

March 1, 2019



### Map Key

- Initial county EAB detection
- ◊ Federal EAB quarantine boundaries
- ◊ State quarantine-generally infested area
- Indian Reservation
- National Forests
- Canadian EAB regulated areas

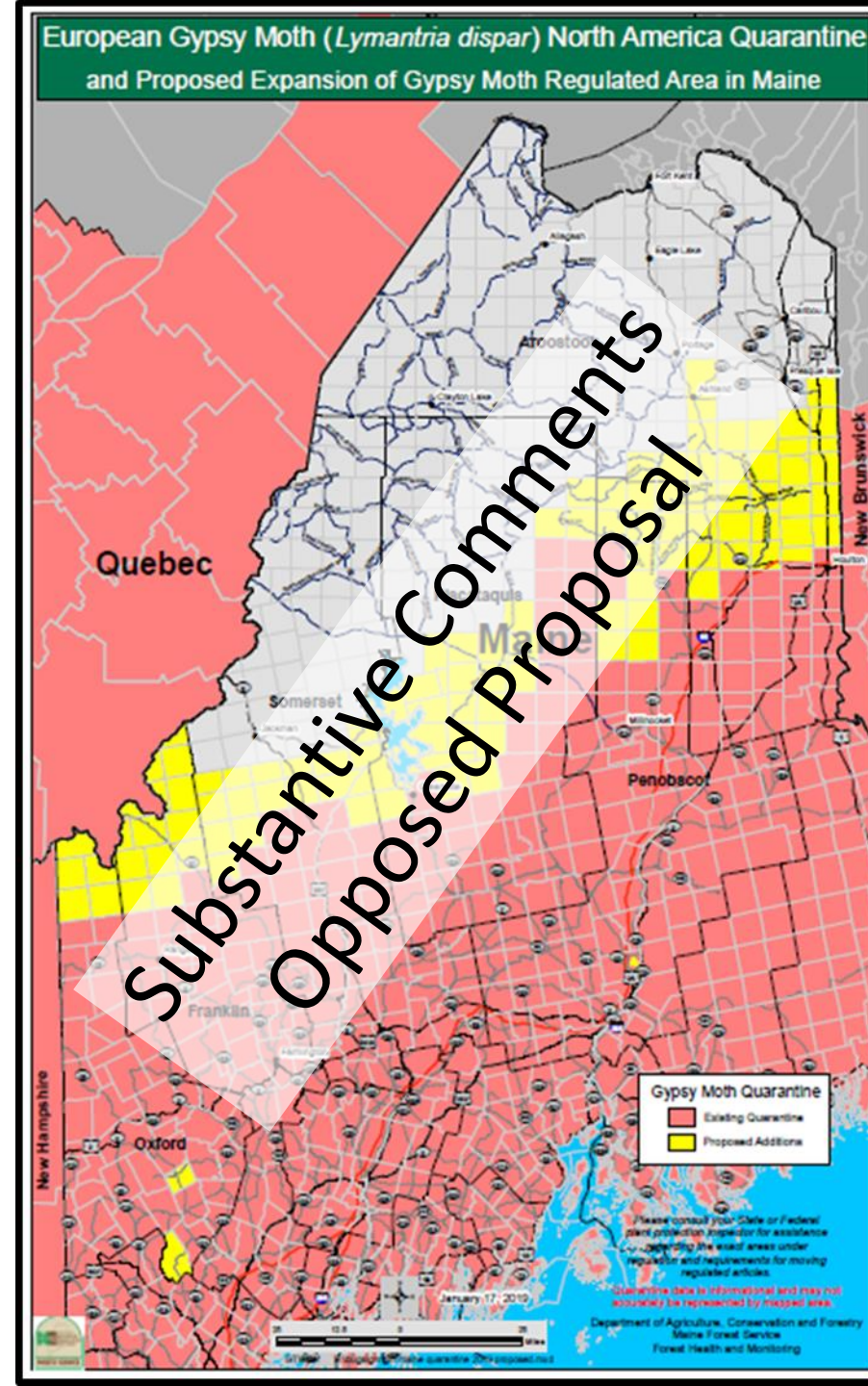
DISCLAIMER: These data, and all the information contained therein, have been collected by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), or by its cooperation, on APHIS' behalf, for restricted government purposes only and is the sole property of APHIS. Data may be disseminated on a need-to-know basis only and must be used for their intended government purpose(s). All information contained within this data are subject to required Federal safeguards and shall only be shared and/or used consistent with the Trade Secret Act (18 U.S.C. 1905), the Privacy Act of 1974, as amended (5 U.S.C. 552a), the Freedom of Information Act (5 U.S.C. 552), the confidentiality provisions of the Food Security Act of 1985 (7 U.S.C. 2276), Section 1019 of the Food, Conservation, and Energy Act of 2008 (7 U.S.C. 8791), and other applicable Federal laws.

Data sources:  
U.S. Department of Agriculture  
U.S. Department of the Interior

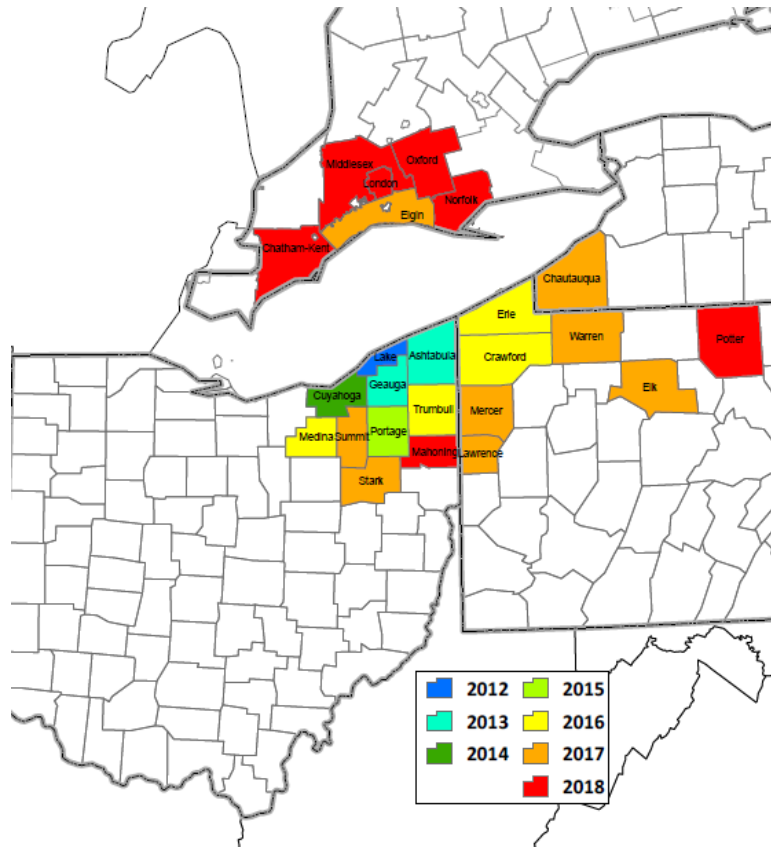


# Gypsy Moth Quarantine

- Amended Quarantine Rules Proposed Jan 2019
  - Heads up to stakeholders Feb 2018;
    - Stakeholder input; as small as possible
  - Public Comment Period open Closed Feb 25<sup>th</sup>
    - Substantive Comments: opposed and in favor of full-state quarantine
- New proposal for full-state quarantine to be announced later this week
  - No public hearing planned
  - Comment period will end April 26<sup>th</sup>.







# Newer Threats to Beech

## Beech Leaf Disease



“In the sample plots in Halifax where the weevil has been established for 5 to 10 years, beech mortality increased from 18 percent in 2014 to 88 percent in 2015.”

J. Sweeney, R. Johns. 2016. Impact note 61: Beech Leaf-Mining Weevil. NRCan, CFS, AFC



Photo: NRCan on Twitter

# Newer Threats to Beech

## Beech Leaf-Mining Weevil



# Recommendations for Landowners and the Public:

- Stay informed
- Watch your woods
- Help in surveys where able
- Report issues (Even if your photos won't win any prizes)
- Keep 'it' local
  - Firewood, but also soil, plants and other items
- Spread the word!

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