

European Cherry Fruit Fly in New York



Department of
Agriculture and Markets

European Cherry Fruit Fly

New Pest to North America

Found in Canada in 2015
by an amateur

Found in Canada in 2016
& 2017 in CFIA survey

Found in New York in 2017



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Hosts

Species of *Prunus* & *Lonicera*

- *Prunus avium* (sweet cherry) (Preferred – low acidity)
- *Prunus cerasus* (sour cherry) (Alternate)
- *Prunus serotina* (wild black cherry)
- *Prunus mahaleb* (mahaleb or perfumed cherry)
 - Introduced: present in parts of Lake Ontario region



Hosts

Lonicera

- *Lonicera tatarica* (Tatarian honeysuckle)(Siberia)
- *Lonicera xylosteum* (European dwarf honeysuckle)
(Present in Genesee, Ontario & Onondaga counties)
- Ontario: *L. tatarica*, *L. morrowii* (East Asia) & *L. x bella* (hybrid) (all present in parts of the NY Lake Ontario region)

Host races?

- Strong preferences for natal host plant
- Differences in emergence times
- No genetic differences or incompatibility



Photo: University of Connecticut

Life-cycle

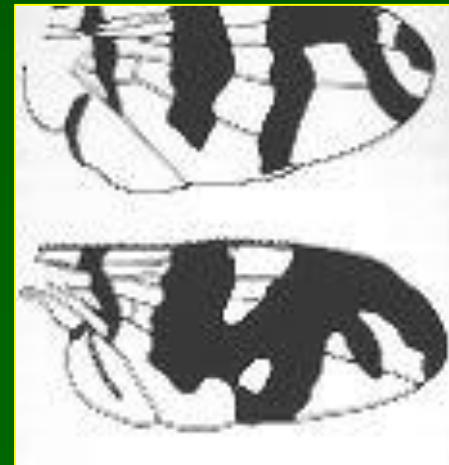
- 1 generation per year
- Overwinters as pupae in soil (0.5-1")
- Winter chill: Approx. 180 days below 5 °C (41 °F) plus approx. 430 DDs above 5 °C (soil temp. at 1") for max. adult emergence (varies with population & temp. patterns)
- Some pupae may remain in the soil for 1, 2, or 3 years
 - % varies with winter temperatures & origin



Photos: R. Coutin/Office Pour les
Insectes et leur Environnement (OPIE)

Life-cycle

- Adults live approx. 4–7 weeks (variable)
- Pre-oviposition period of 6–13 days (temp. dependent)
- Prefer cherries that are:
 - in full sun (min. 16°C [61 °F]) (South/South-East)
 - changing from green to yellow
 - with a hardened pit and at least 5 mm (0.2") pulp
- 1 egg per fruit; 30–200 eggs per female (usually 50–80)



Natives

CFF

BCFF

Life-cycle

- Larvae feed within fruit (near pit)
- Exit (often near stem end) to pupate
- Limited adult dispersal
 - Most less than 100 meters
 - Rarely more than 600 meters
 - Except when hosts are scarce



Photo: C. Daniel /J. Grunder



Photos: R. Coutin/Office Pour les Insectes et leur Environnement (OPIE)



Monitoring & Management



- May emerge approx. 1-2 weeks earlier than native cherry fruit flies

Surveys Conducted in NY

2016 and 2017



• 2016 no finds

• 2017 USDA

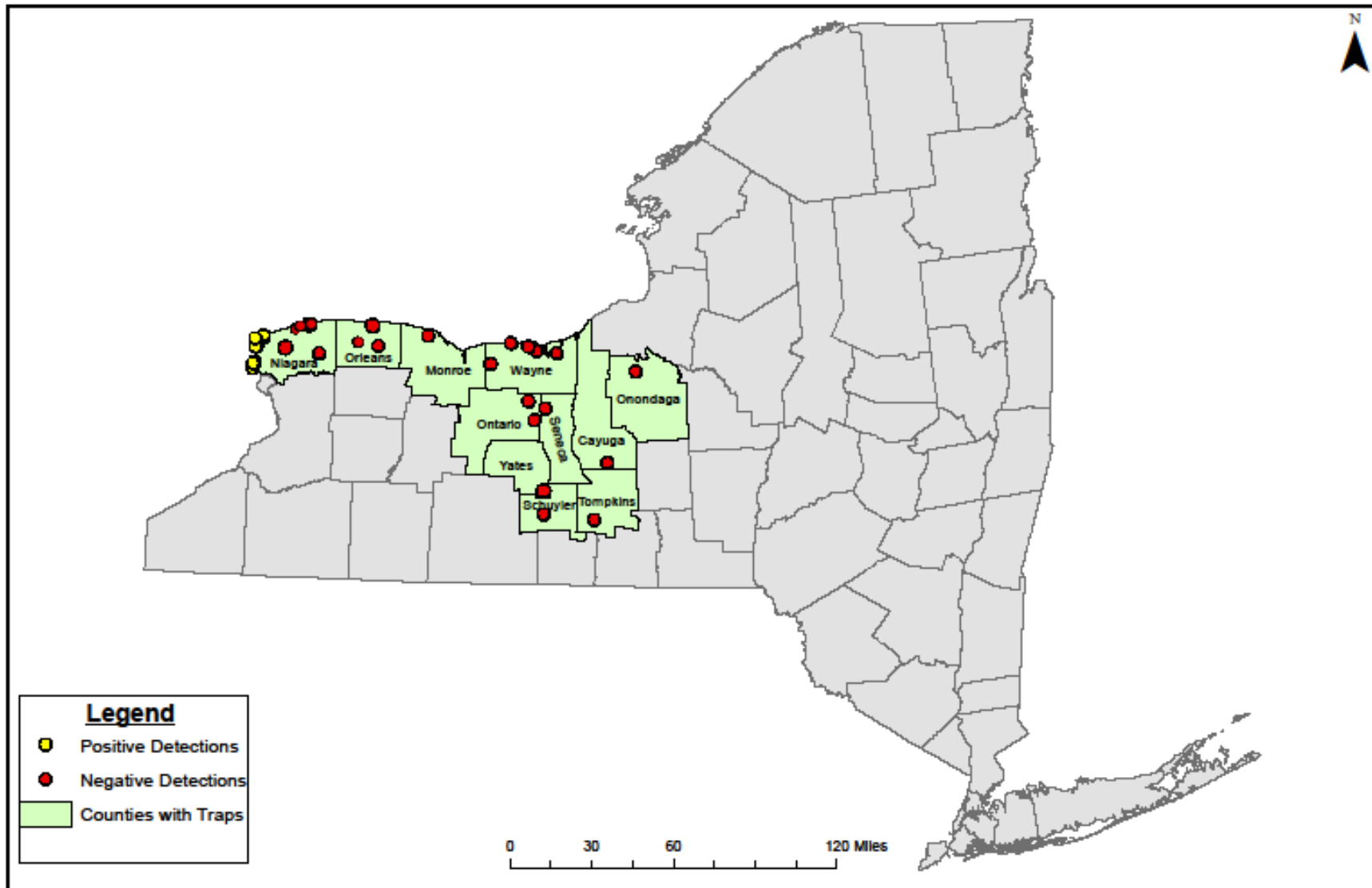
- Along the Niagara River
- 769 traps at 438 sites
- 26 sites with ECFF

Surveys in NY Orchards

2016 and 2017

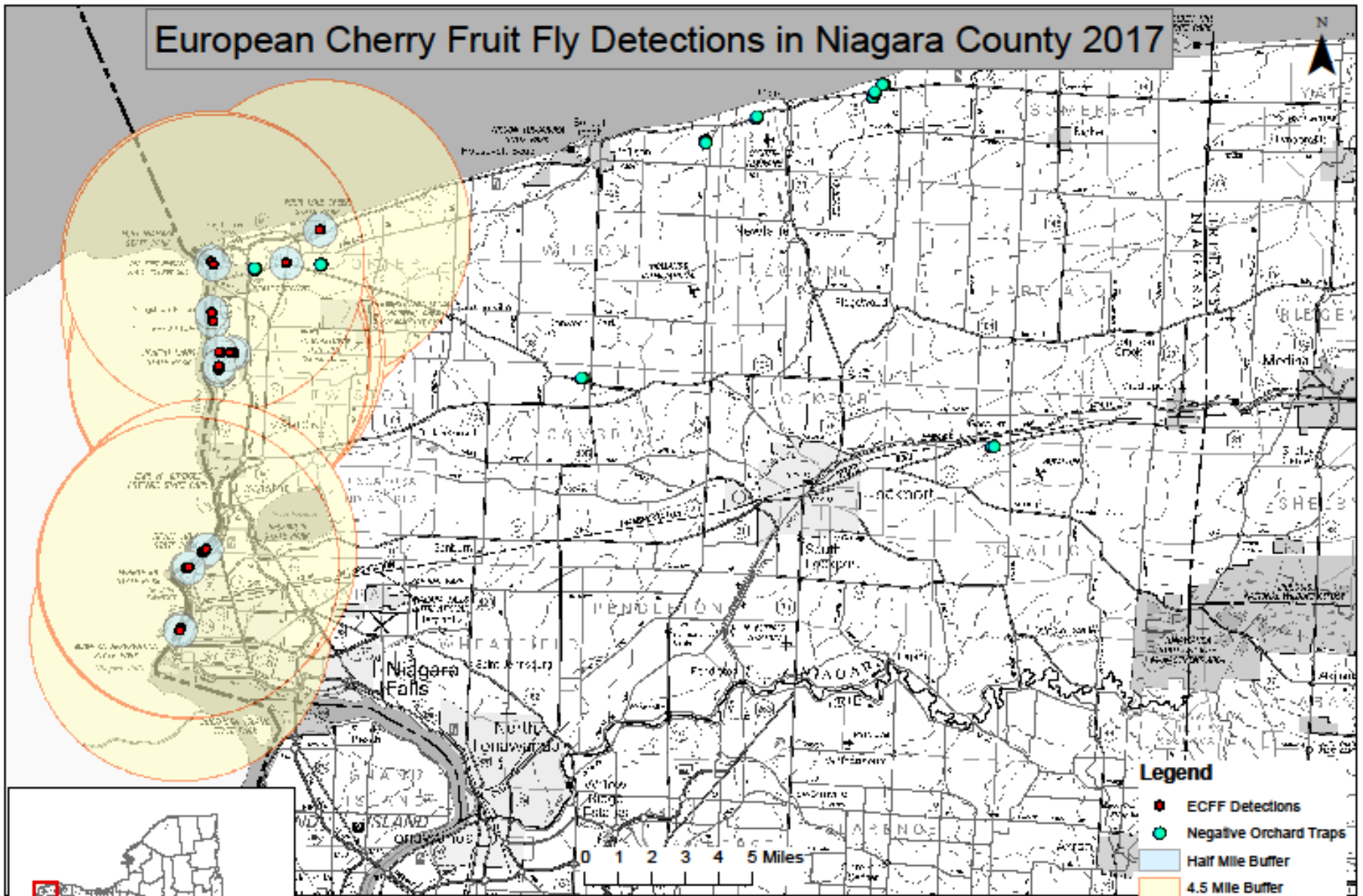
Total Traps per County	
Cayuga	2
Monroe	2
Niagara	17
Onondaga	2
Ontario	2
Orleans	5
Schuyler	2
Seneca	2
Tompkins	2
Wayne	12
Yates	2
Total	50

- 2016 no finds
- 2017 NYSDAM & NYS IPM and Cornell Coop Extension
 - 50 traps in 11 counties
 - NO sites with ECFF



European Cherry Fruit Fly Trap Orchard Locations in New York State 2017

European Cherry Fruit Fly Detections in Niagara County 2017



What does this mean?

- Eradication – led by USDA Fruit Fly Exclusion and Detection (FFED) program
 - Treat area within 200 m (1/8 mile)
 - Foliar and soil treatments
 - Program staff apply treatments



What does this mean?

- Quarantines- require treatment of fruit from designated area
 - Processing is a treatment
 - Foliar sprays with a bait for fresh fruit
 - Compliance agreement



What does this mean?

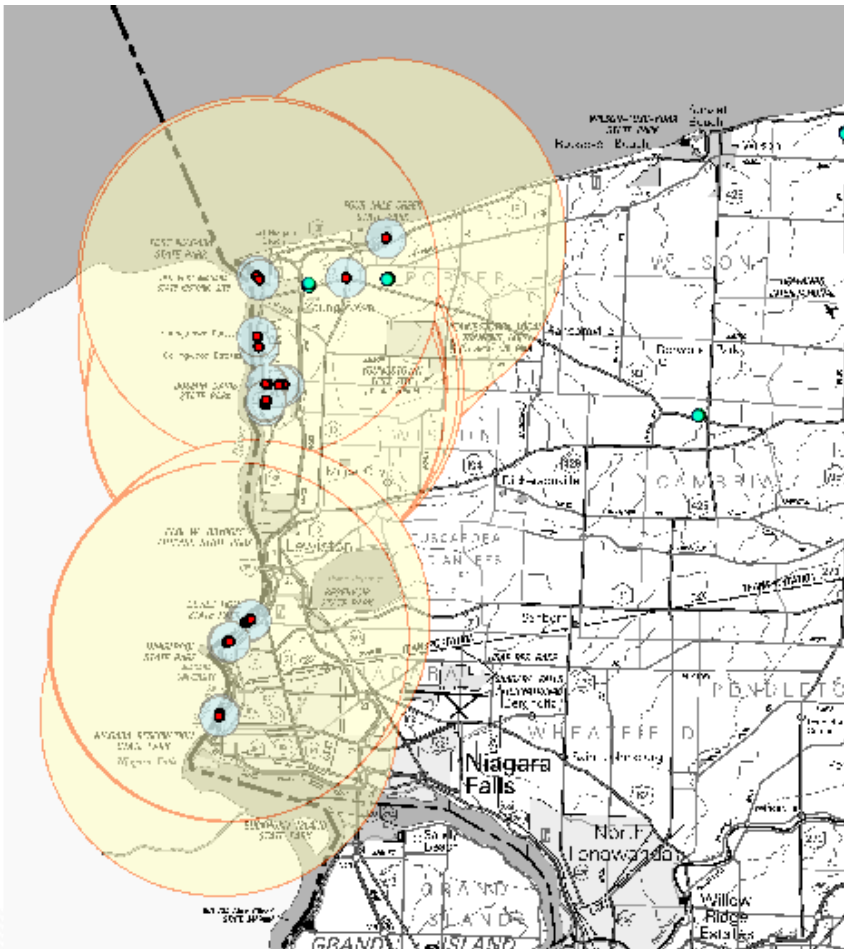
- Pre-Harvest Treatments
 - Malathion plus Nu-Lure Insect Bait *
 - GF-120 Naturalyte (Spinosad with bait)*
- 30 days prior to harvest
- Every 6-10 days through harvest

** registrations*



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Where is the Quarantine?



- 1/2 mile from find
- 1/2+ to 4 1/2 mile from find
- 4 1/2 + mile

Where is this Quarantine?

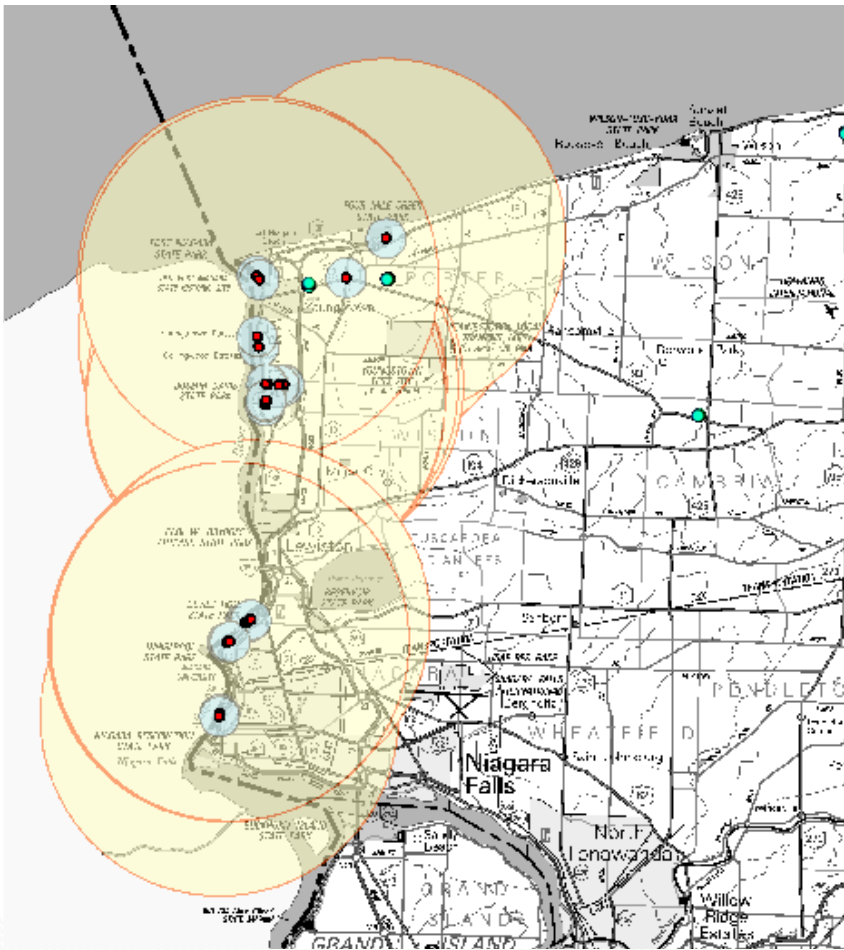
- **1/2 mile from find** – most restrictive
 - Process fruit
 - Systems approach? (spray & fruit cut)
- **1/2+ to 4 1/2 mile from find** – some restrictions
 - Pre-harvest treatment for fresh fruit
 - Processing fruit is a treatment



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Where is the Quarantine?



- 4½+ mile from find
no restrictions

Future finds?

Next Steps

- Develop eradication plans
- Treatments in 1/8 mile area by USDA program
- Growers in Quarantine Area placed under Compliance Agreement
 - Identify blocks in 1/2 mile core area and requirements
 - Identify blocks in 1/2 + to 4-1/2 mile area and requirements
- NYSDAM work with DEC on pesticide registrations -2(ee) label
- Surveys in 2018



Contact Info

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