European Cherry Fruit Fly in New York
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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
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
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)
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

<table>
<thead>
<tr>
<th>Total Traps per County</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cayuga</td>
<td>2</td>
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<tr>
<td>Monroe</td>
<td>2</td>
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<tr>
<td>Niagara</td>
<td>17</td>
</tr>
<tr>
<td>Onondaga</td>
<td>2</td>
</tr>
<tr>
<td>Ontario</td>
<td>2</td>
</tr>
<tr>
<td>Orleans</td>
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<tr>
<td>Schuyler</td>
<td>2</td>
</tr>
<tr>
<td>Seneca</td>
<td>2</td>
</tr>
<tr>
<td>Tompkins</td>
<td>2</td>
</tr>
<tr>
<td>Wayne</td>
<td>12</td>
</tr>
<tr>
<td>Yates</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
</tr>
</tbody>
</table>

- 2016 no finds
- 2017 NYSDAM & NYS IPM and Cornell Coop Extension
  - 50 traps in 11 counties
  - NO sites with ECFF
Where we surveyed
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
Where is the Quarantine?

- $\frac{1}{2}$ mile from find
- $\frac{1}{2} +$ to $4\frac{1}{2}$ mile from find
- $4\frac{1}{2} +$ mile
Where is this Quarantine?

- **½ mile from find** – most restrictive
  - Process fruit
  - Systems approach? (spray & fruit cut)

- **½+ to 4½ mile from find** – some restrictions
  - Pre-harvest treatment for fresh fruit
  - Processing fruit is a treatment
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 ½ mile core area and requirements
  - Identify blocks in ½ + to 4-½ mile area and requirements
- NYSDAM work with DEC on pesticide registrations -2(ee) label
- Surveys in 2018
Contact Info

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