WEBINAR

1.14.21

11am-12:30pm

EST

Hosted By

INVASIVE SPECIES MANAGEMENT
SAINT LAWRENCE EASTERN LAKE ONTARIO

Cornell Cooperative Extension

St. Lawrence County
Jefferson County

THE POWER OF *Native Plants*

-Chat-box Icebreaker-

***Name**

***Where You're From**

***What is Your Favorite Garden Plant?**

INVASIVE SPECIES MANAGEMENT

SAINT LAWRENCE
EASTERN LAKE ONTARIO

SLELO is Hosted by:

The Nature Conservancy

Where We Work:

Oneida
Oswego
Jefferson
Lewis
St. Lawrence

What We Do:

Collaborate with our partners to protect our lands and waters from the impacts of invasive species.

Teaming up to Stop the Spread of Invasive Species

www.sleloinvasives.org

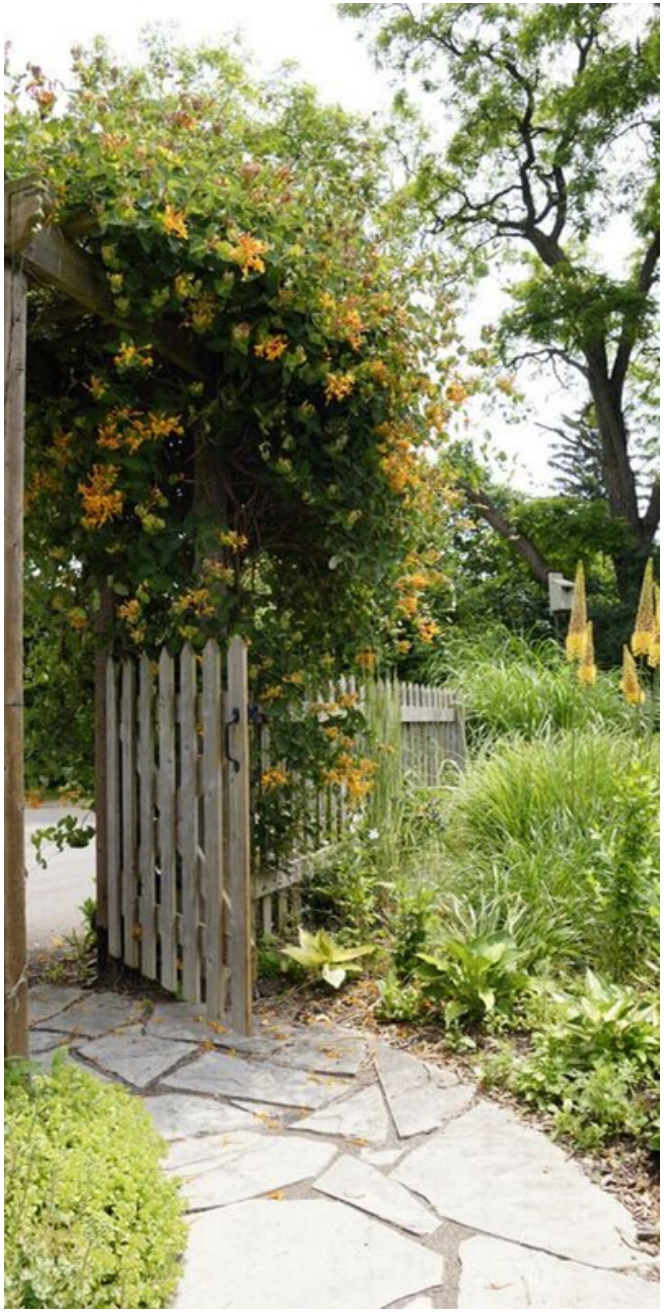
What are Invasive Species

Purple loosestrife (Lythrum salicaria)

Burning bush (*Euonymus alatus)*

Not All Non-native Species Are Invasive

WHY ARE SOME NON-NATIVES INVASIVE ?



Why are they here?

Power of Native Plants

INVASIVE SPECIES

TO KEEP AN EYE OUT FOR


Invasive Jumping worm

Jumping worms in the Northeast

1912, Washington DC

Cherry trees

1947, NYC

Bronx zoo

Albany, 1948

Florists' peat moss

Jumping worm policy – New York

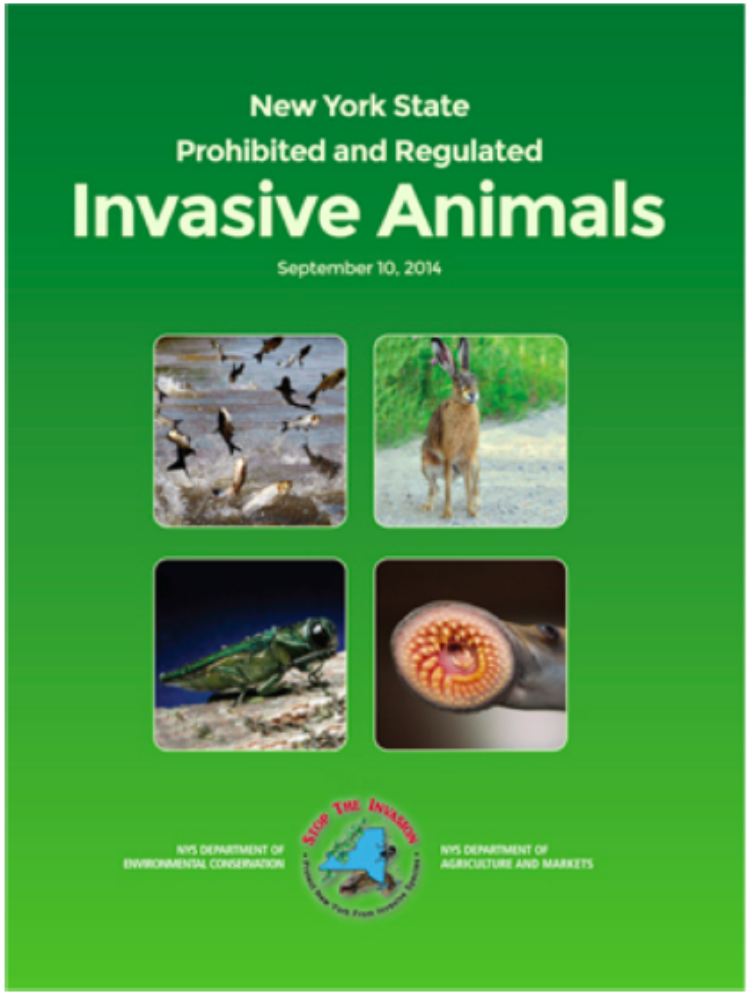
General public

1. Warning
2. Fine (minimum $250)

Nurseries

1. Warning
2. Fine (minimum $600)
3. Revocation of license/certificate

Additional penalties in some counties



https://www.dec.ny.gov/docs/lands_forests_pdf/isprohibitedanimals.pdf

Aren't Earthworms Good for the Soil?

VS

Groomed Gardens

Ploughed regularly
Fast growing annuals
Fertilizer amendments

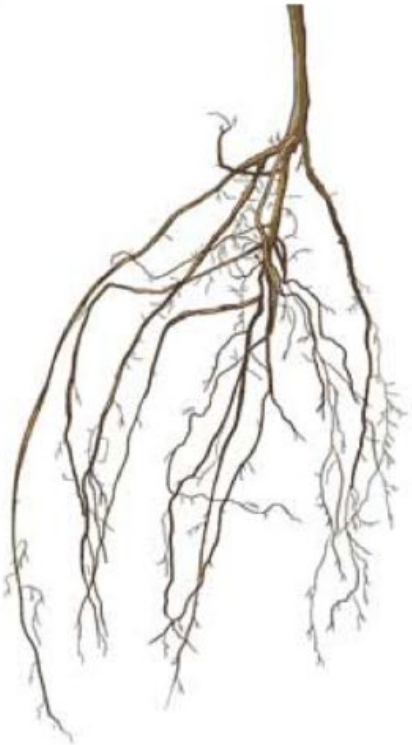
Forests

Slow soil mixing
Slow growing perennials
Associate with mycorrhizal fungi

Impacts
Plants via soil

Modified soil

- Low germination
- Root desiccation
- Unstable rooting



Annual life cycle

- Resilient cocoon

- Juveniles 1-3 cm
- Adults 3-20 cm

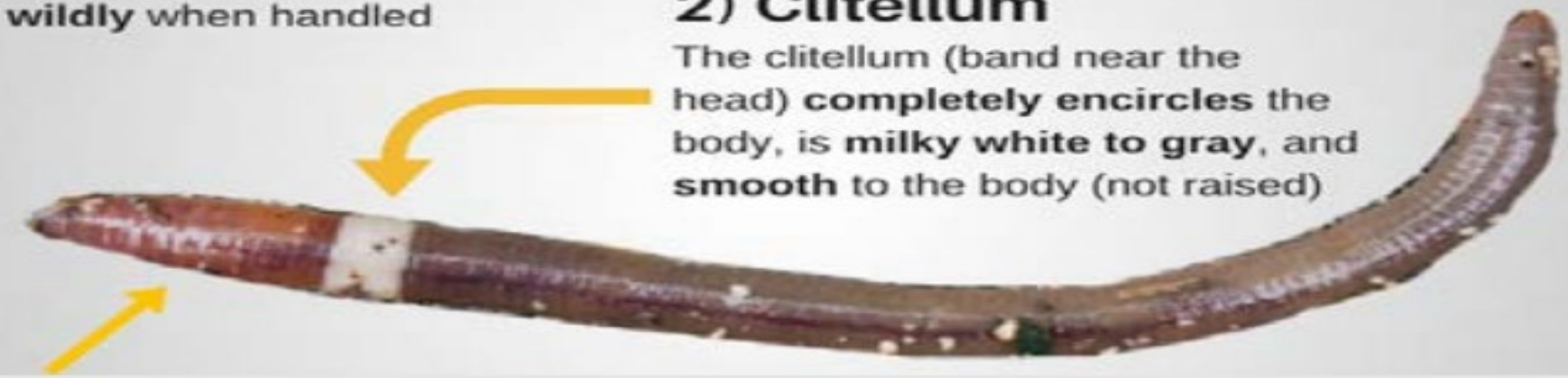
High density/fast maturity
Parthenogenetic
Prolific reproduction

1) Snake-like behavior

Jumping worms will **thrash wildly** when handled

2) Clitellum

The clitellum (band near the head) **completely encircles** the body, is **milky white to gray**, and **smooth** to the body (not raised)



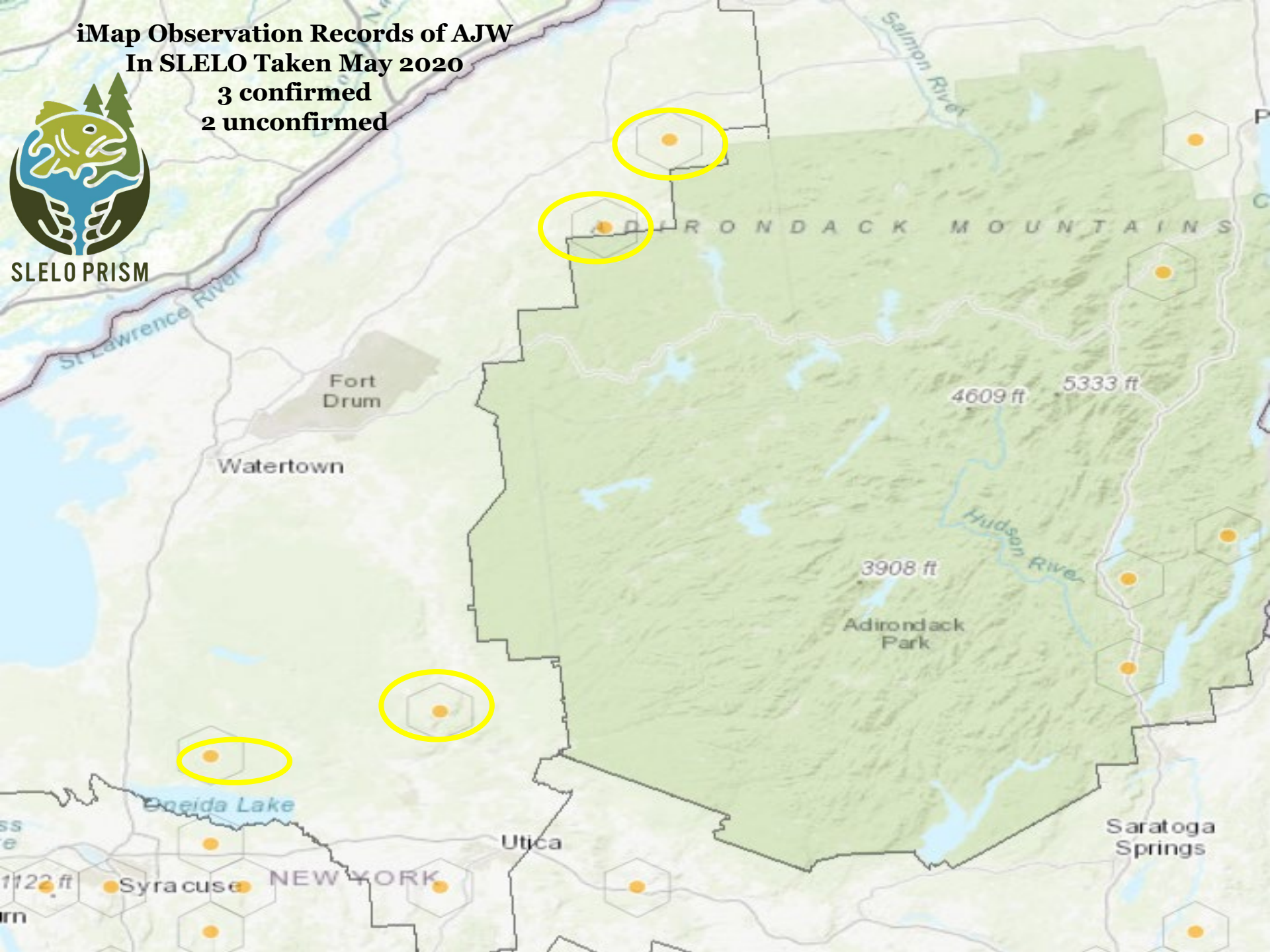
Clitellum located closer to the head than European worm species. **Adults are visible July-September**

Not to be confused with:

Common non-native <u>European</u> species which have a raised, reddish clitellum

Invasive Jumping Worm Behavior

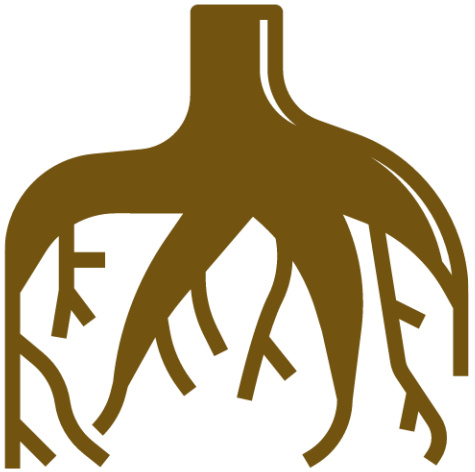
iMap Observation Records of AJW
In SLELO Taken May 2020
3 confirmed
2 unconfirmed



You Can Help!

Don't Use as Bait

Buy Bare Root

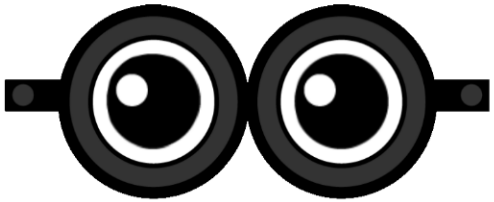


Don't Use for Vermiculture

Don't Dump Yardwaste in Natural Areas

Be Compost Conscious

Check for Signs



HOW TO CHECK YOUR PROPERTY FOR INVASIVE JUMPING WORMS

Using a mustard pour

1) Mix 1 gallon of water with 1/3 cup of ground yellow mustard seed

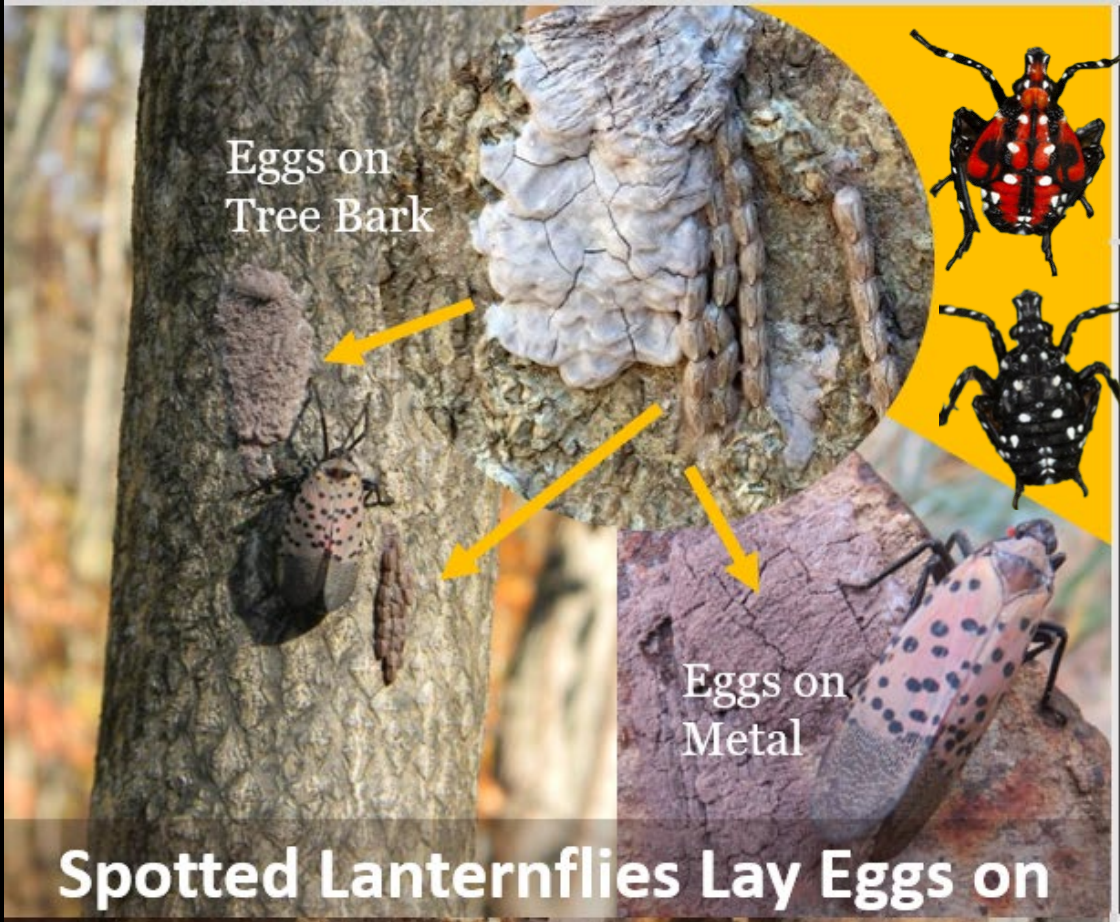
2) Clear a bare patch of soil and pour solution slowly over soil. This will drive any worms to the surface

3) If you have jumping worms, report it to www.nyimapinvasives.org

iMapInvasives

Sharing information for strategic management

Spotted Lanternfly is in New York



- Check any flat surface for egg masses.
- SLF confirmed in Staten Island, Ithaca, Port Jervis, Sloatsburg, Orangeburg, NY.

Report sightings to
spottedlanternfly@agriculture.ny.gov
Include photos and location

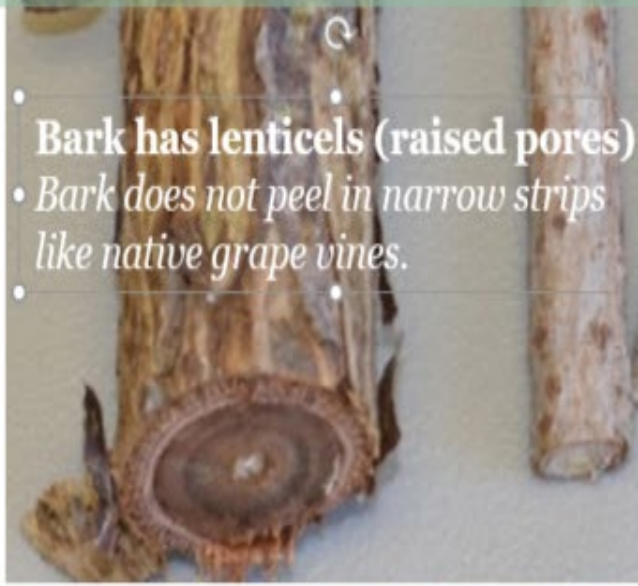
Spotted Lanternflies Lay Eggs on any Flat Surface

Porcelain Berry (*Ampelopsis brevipedunculata*)

Leaves can be simple with serrated edges.

Vines grow densely over other vegetation

Berries are purple/blue with speckles and a shine similar to porcelain- hence the name.



- **Bark has lenticels (raised pores)**
- *Bark does not peel in narrow strips like native grape vines.*

Leaves can be deeply lobed.

Wild Parsnip, *Pastinaca sativa*

Invasive Plants to Avoid Growing

How to Attract Pollinators to Your Garden

Supporting Pollinators in Your Landscape

Sue Gwise

Cornell University
Cooperative Extension
Jefferson County

“Populations of native bees and native pollinators are in decline throughout the world due to pesticides and habitat fragmentation, loss and degradation.”

-the Xerces Society

PHOTO- Kathy Sturr

Why we need to encourage pollinators

- Pollinators are *keystone species*- a large number of other species depend on them for survival
- Abundant pollinators are indicative of healthy ecosystems
- Pollination creates a seed → perpetuates the species
- 80% of flowering plants and most native plants need insects for adequate pollination

Without pollinators…


















These Photos Capture The Startling Effect Of Shrinking Bee Populations

In rural China, humans pollinate flowers by hand.

DECLINE OF BEES FORCES CHINA'S APPLE FARMERS TO POLLINATE BY HAND

After Bee Die-Off, Chinese Apple Farmers Resort to Hand Pollination

When Humans Are Forced To Replace The Bees They Killed

Downward spiral…

Pollinators disappear

Native plants disappear

Invasive plants move in

Birds and animals move out

What can you do to support pollinators?

#1- Do not plant invasives!

Norway Maple
>Red or Sugar Maple, Red Oak
Wintercreeper
>Ferns
Japanese Barberry
>Chokeberry
>Ninebark
Burning Bush
>Dogwood
>Chokeberry

Do not plant invasives!

Bradford Pear
>Crabapple
>Serviceberry
Autumn/Russian Olive
>Staghorn Sumac
>Hazelnut
Asian Honeysuckles
>Dogwood
Bishop's Weed
>Golden Alexanders
>Canada Anemone

#2- Favor Native Plants

- Native plants are adapted to our soil and climate conditions
- Native plants have fewer disease and insect issues
- Native plants are ‘well-behaved’
- A healthy population of native plants can help prevent invasive species from invading an area.

Favor Native Plants…

- Our native insects, birds, plants and animals all evolved together
  - Our native birds and insects know how to use native plants as a result of millions of years of evolution
  - When we plant native species we are adding something to the environment that native insects and birds recognize and can use for food and shelter.

Non-native plants provide less support to native pollinators!

Favor Native Plants…

- Native plants attract native insects which attract native birds
- 90% of all songbirds raise their young on caterpillars that feed on native plants

Caterpillars need food plants!

- Eating machines
- Often very specific as to what they will feed on- native species
- Adults females lay eggs on food plants
- Caterpillars are an important source of food for nesting birds to feed to their young- Protein

Native food plants → Caterpillars (adult butterflies and moths) → Songbirds

What is “native”?

Plants that were here before colonization (1600)

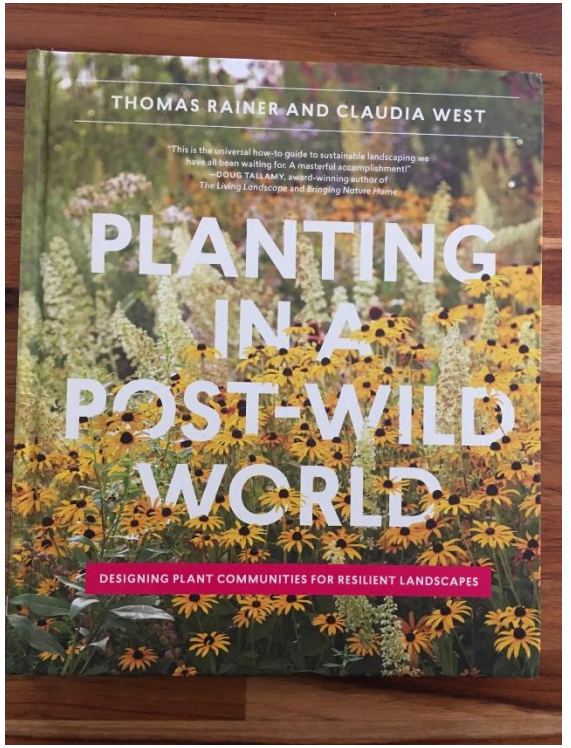
There is much debate about nativity!

How do I find out?

Native Plants of New York by Don Leopold

Audubon Field Guides

NY Flora Atlas



Many non-natives and less desirable plants also support pollinators!

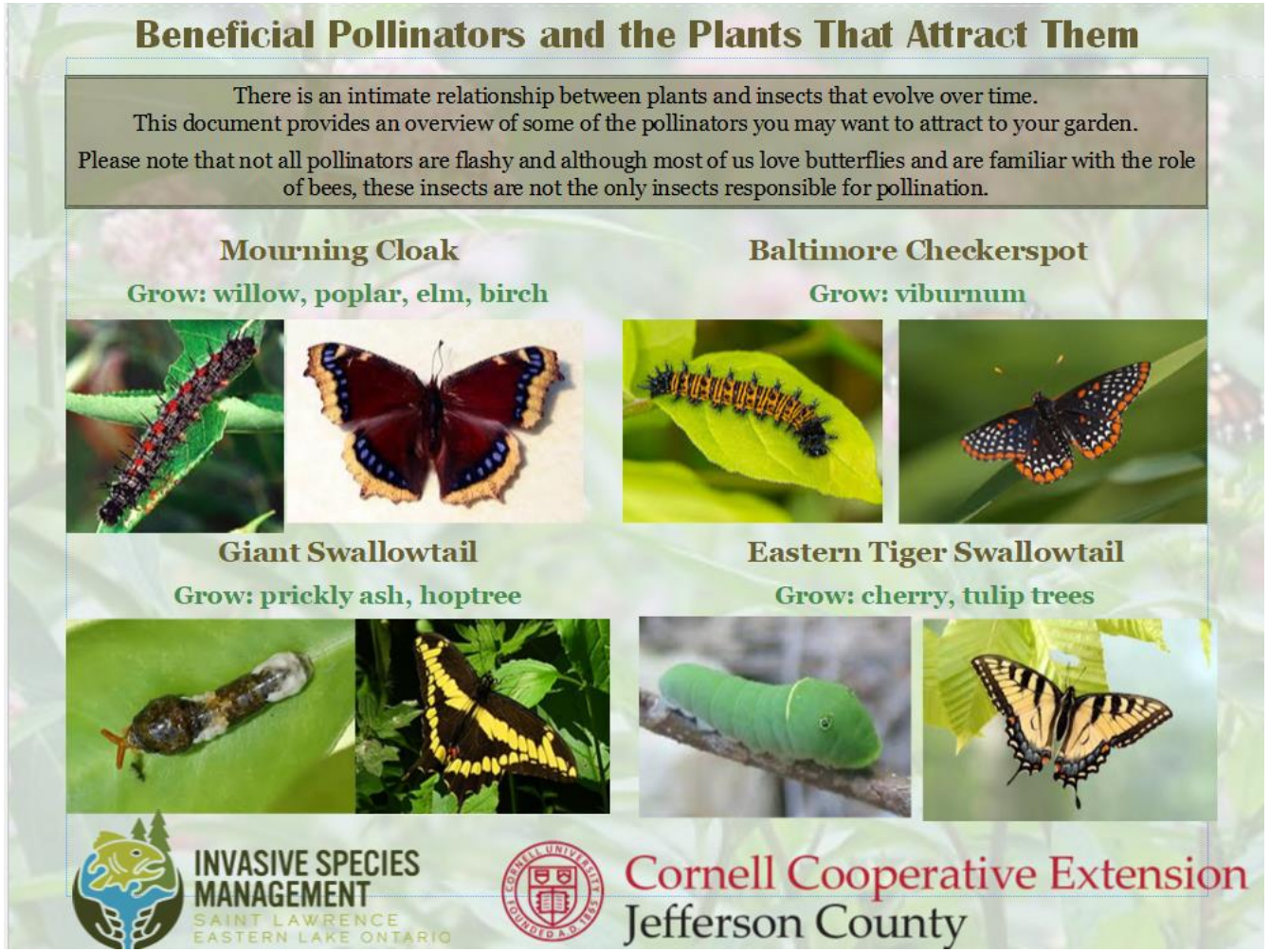
- Many introduced weeds and ornamentals are used as food plants
- Anything with a flower that has nectar or pollen will support adult pollinators
- Don’t get hung up on making sure everything is native!
  - Be more concerned about invasive plants
  - Do we even have a ‘native’ environment anymore?

#3- Diversity is the key!

- Different plant families
- Trees, shrubs, perennials, vines
- Different flower shapes
- Different flower colors

Even plants considered boring, lowly, weedy, non-native and annoying have a role to play….

Beneficial Pollinators: sleloinvasives.org



Diversity…Food Plants

Eastern Tiger Swallowtail-

- Cherry
- Ash

Black Swallowtail-

- Carrot Family
  - Dill
  - Fennel
  - Parsley
  - Queen Anne's Lace

Clouded Sulphur-

- Legumes
  - Alfalfa
  - Clover
  - Vetch

Spring Azure-

- Dogwood
- Viburnum

Diversity…Food Plants

Silvery Blue-

- Legumes
  - Vetch

Red Admiral-

- Nettles

Mourning Cloak-

- Willow
- Poplar
- Elm
- Hackberry
- Birch

Painted Lady-

- Burdock
- Thistle

Diversity…Food Plants

Silvery Checkerspot-

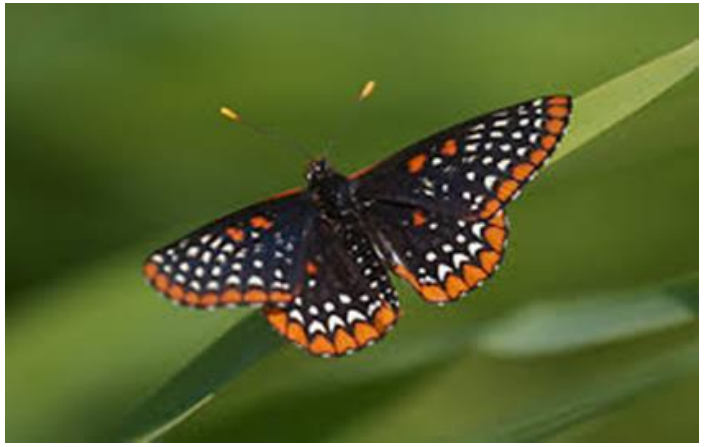
- Sunflower family

White Admiral-

- Willow
- Aspen
- Poplar

Baltimore-

- Turtlehead



Northern Pearly Eye-

- Grasses

Diversity…Food Plants

Cecropia Moth

- Apple
- Box elder
- Cherry
- Lilac
- Willow
- Poplar

Polyphemus Moth-

- Rose
- Birch
- Willow

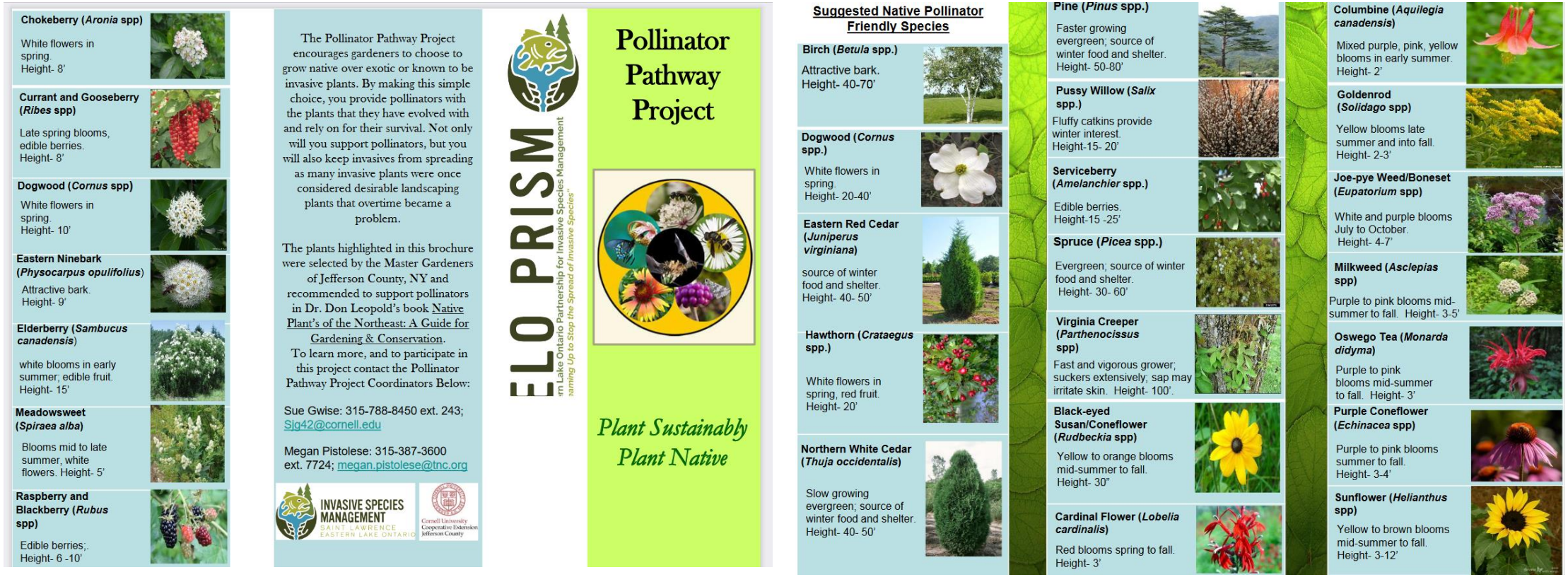
Luna Moth-

- Birch
- Hickory
- Walnut

Hummingbird Clearwing-

- Viburnum

Pollinator Pathway Brochure: sleloinvasives.org



Master Gardener
Cornell Cooperative Extension™

Plant Diversity = Pollinator Diversity!

Deciduous Trees-

- Birch
- Hawthorn
- Serviceberry
- Cherry
- Poplar

Plant Diversity = Pollinator Diversity!

Evergreen Trees-

- Eastern Red Cedar
- Northern White Cedar
- Pine
- Spruce

Plant Diversity = Pollinator Diversity!

Shrubs-

- Dogwood
- Chokeberry
- Currant/Gooseberry
- Ninebark
- Elderberry
- Raspberry/Blackberry
- Willow

Vine-

- Virginia Creeper

Plant Diversity = Pollinator Diversity!

Perennials (wildflowers)-

- Sunflower
- Milkweed
- Bee Balm
- Purple Coneflower
- Black-eyed Susan
- Meadowsweet
- Cardinal flower
- Columbine
- Joe Pye Weed
- Goldenrod

#4- Plant flowers that are attractive to pollinators…

Carrot Family

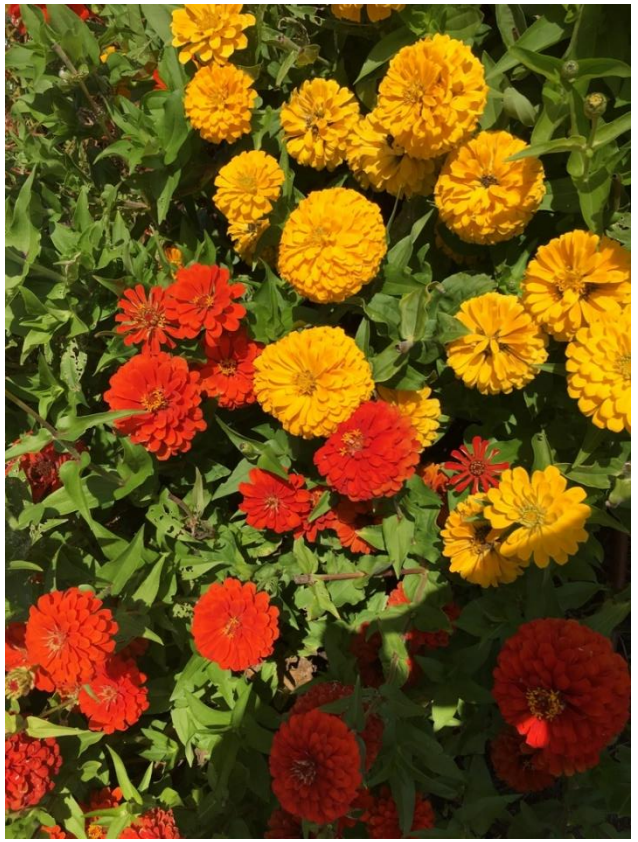
- Carrot, parsley, celery, dill, coriander
- Umbel flower head

Daisy Family

- Sunflower, aster, daisy, marigold, strawflower, zinnia, dahlia, chrysanthemum
- Composite flower head

How to use flowers for the most benefit

- Diversity- use at least 15 different flowering species
  - Plant diversity = wildlife diversity
- Successional blooming- food is available when insects are active
- Plant flowers in groups
- Use ‘species’ plants rather than hybrids
- Attractive flowers:
  - Butterflies- long, tubular flowers; red, orange and yellow
  - Moths- night blooming flowers: jimsonweed, evening primrose
  - Bees cannot ‘see’ red; blue flowers attract bees



#5- Consider the Habitat

- The trouble with lawns…
- Freedom from pesticides
  - Insecticides are not selective!
- Water
  - Butterflies like puddles
- Provide nesting habitat
  - Bare soil for ground nesting bees
  - Trees with loose bark
  - Snags/unkempt areas provide shelter

PHOTO: Emma Nowak

#6- Consider less ‘flashy’ pollinators

- Pollinators are not just honey bees and butterflies!

Other bees…

- Honey Bees are not native!
- Native Solitary bees- do not live in colonies
  - Wood nesting bees
  - Ground nesting bees

- Bumble bees are excellent pollinators!
  - They have longer tongues than other bees. This allows them to pollinate deeper flowers with complex shapes.
  - They are generalists that visit a variety of plant species, including native wildflowers and food plants.
  - Thermoregulation- shivering. Can forage under cold, cloudy, rainy conditions
  - Buzz pollination

Important pollinators- Flies

Flower Fly

Bee Fly

Important pollinators- Beetles

Flower Beetle

Pollen Beetle

Wood Borer

Soldier Beetle

Firefly

Bottom Line-

- Diversify!
- Nurture what you have
- Eliminate invasive species
- Provide a pollinator friendly habitat- for all pollinators
- Do not use pesticides
- Favor native species, but know that they may not be ideal depending on your setting.

Resources…

- Bringing Nature Home, by Douglas Tallamy
- Native Plants of New York, by Don Leopold
- Audubon Guides (Trees and Wildflowers)
- Caterpillars of Eastern North America, by David Wagner
- Pollination Conservation Handbook, The Xerces Society
- www.xerces.org
- Prairie Moon Nursery prairiemoon.com (MN)
- Ernst Seeds ernstseed.com (PA)

<<<Get Involved>>>