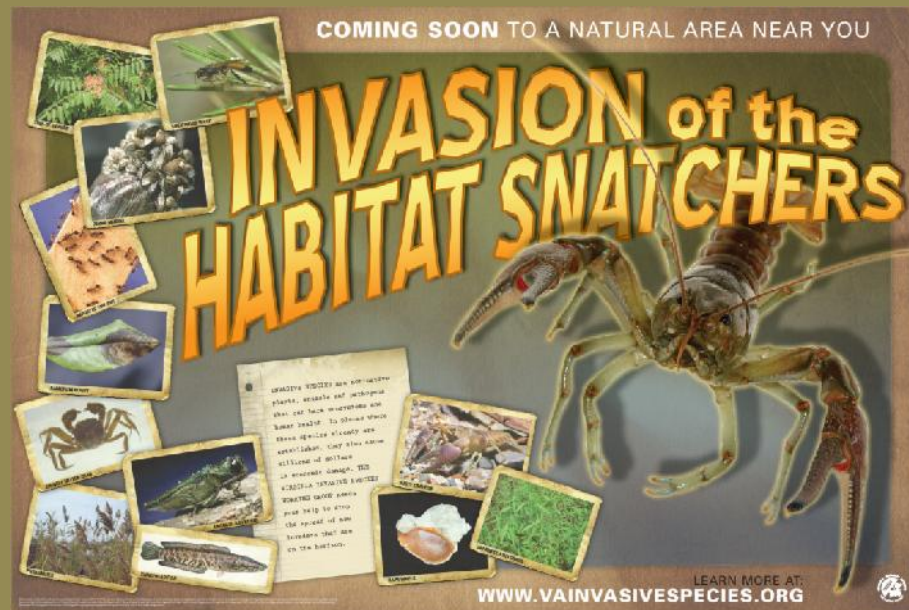


~ INVASIVE SPECIES ~
Coming to a Community near you...



What is an invasive species?

- 1) non-native (or alien) to the ecosystem under consideration and;
- 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health.



What's the Difference?

Native Species



- Species indigenous to a region at the time of European settlement

Non-native Species (*Exotic, Introduced, Alien*)



- Accidental or purposeful introduction of a species outside of its historic range

Invasive Species (*Noxious*)



- Species that rapidly reproduces and displaces native species causing harm

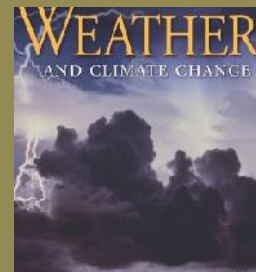
Nuisance Species (*Weed*)



- Species that interferes with human activities

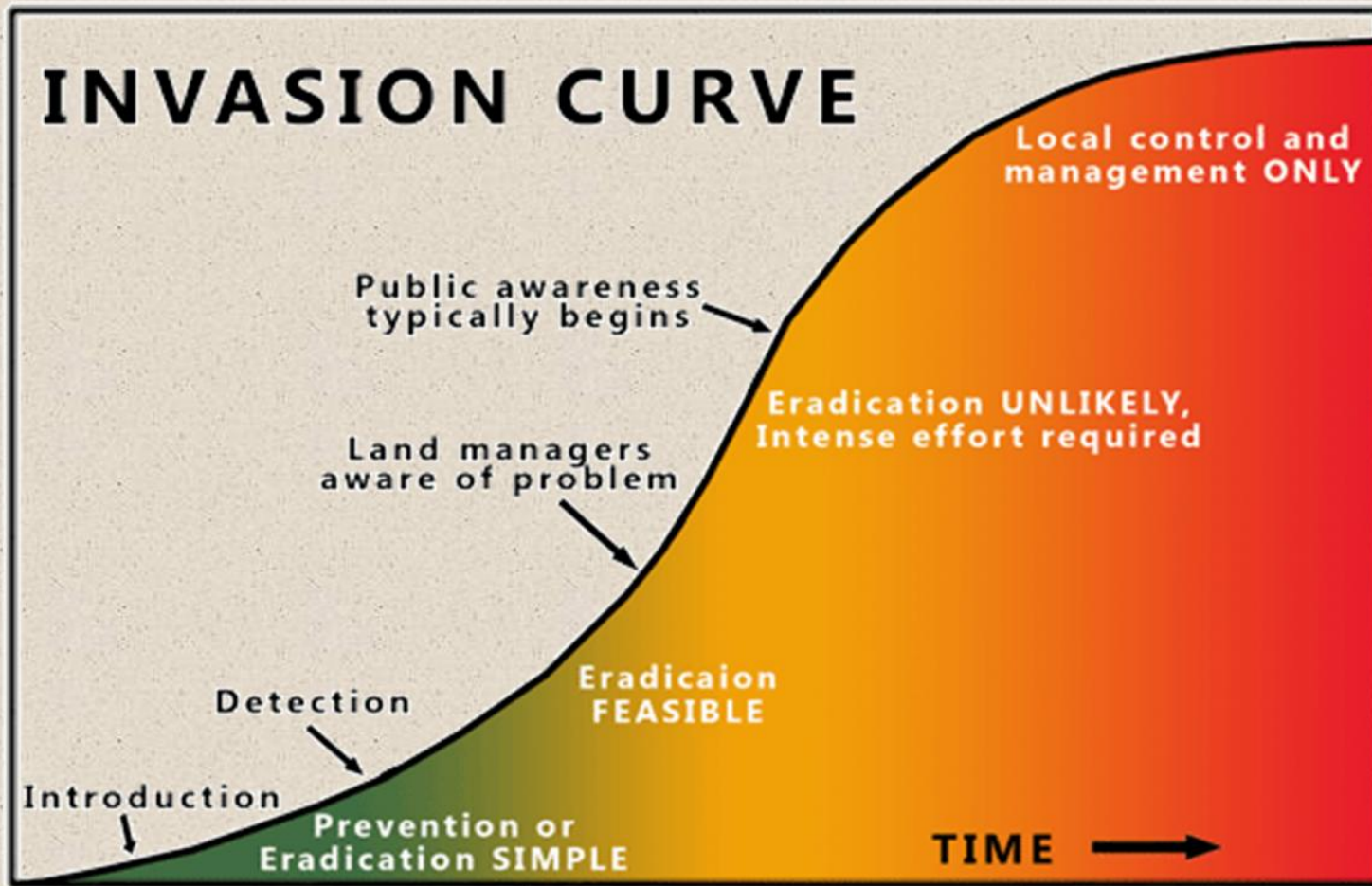
Potential Pathways

- Global Trade
- Climate Change
- Genetic Engineering
- Bioterrorism
- Internet Sales



INVASION CURVE

AREA INFESTED ↑



CONTROL COSTS ↑

TIME →

Lag Phase

Exponential Growth

Carrying Capacity

35% Of Plant Species In NYS Are Nonnative
15% of these cause significant harm



Only a small percentage are problematic!

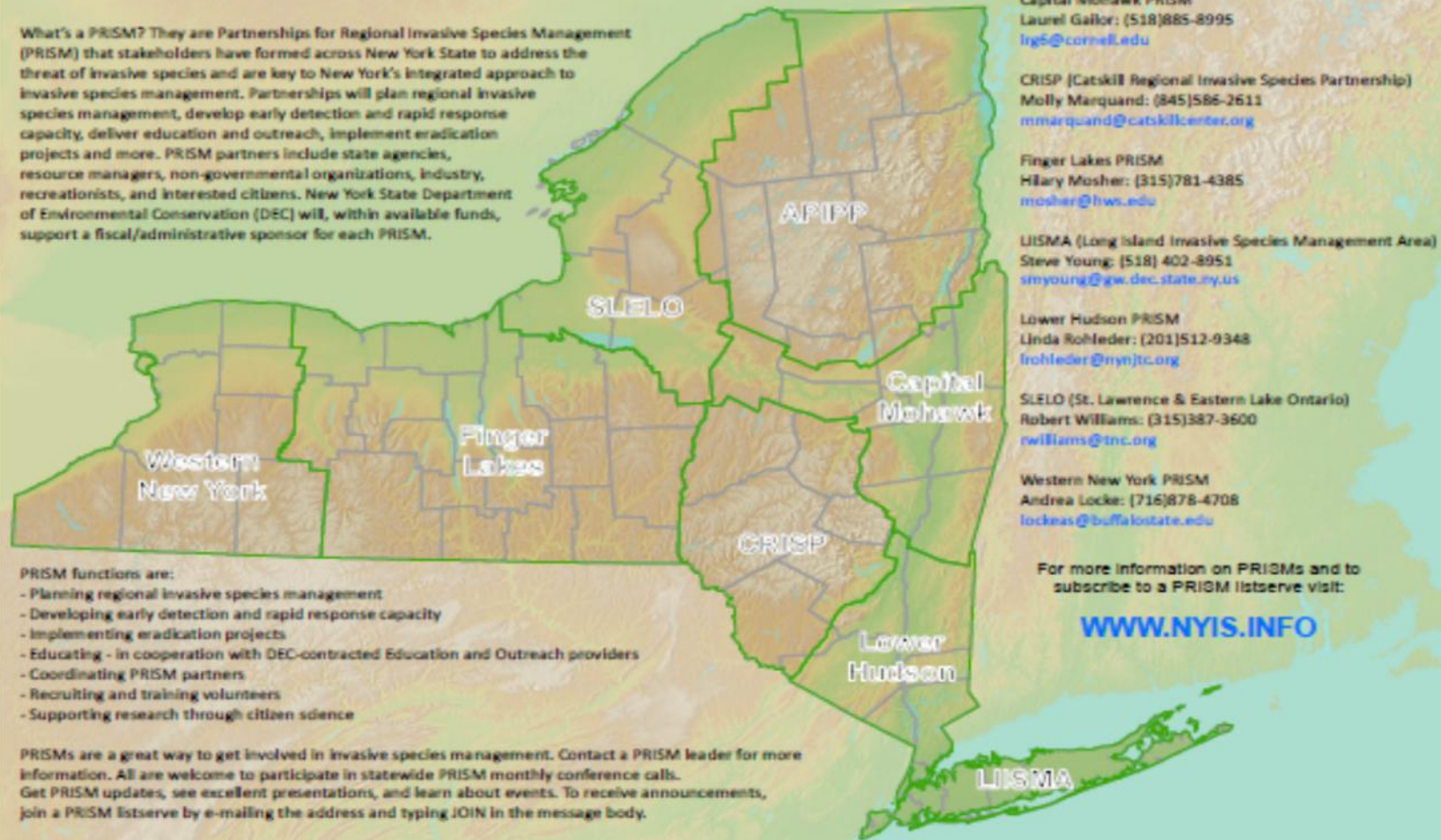
New York State's Partnerships for Regional Invasive Species Management (PRISMs)

What's a PRISM? They are Partnerships for Regional Invasive Species Management (PRISM) that stakeholders have formed across New York State to address the threat of invasive species and are key to New York's integrated approach to invasive species management. Partnerships will plan regional invasive species management, develop early detection and rapid response capacity, deliver education and outreach, implement eradication projects and more. PRISM partners include state agencies, resource managers, non-governmental organizations, industry, recreationists, and interested citizens. New York State Department of Environmental Conservation (DEC) will, within available funds, support a fiscal/administrative sponsor for each PRISM.

PRISM functions are:

- Planning regional invasive species management
- Developing early detection and rapid response capacity
- Implementing eradication projects
- Educating - in cooperation with DEC-contracted Education and Outreach providers
- Coordinating PRISM partners
- Recruiting and training volunteers
- Supporting research through citizen science

PRISMs are a great way to get involved in invasive species management. Contact a PRISM leader for more information. All are welcome to participate in statewide PRISM monthly conference calls. Get PRISM updates, see excellent presentations, and learn about events. To receive announcements, join a PRISM listserv by e-mailing the address and typing JOIN in the message body.



PRISM Contacts and Listserves

APFP (Adirondack Park Invasive Plant Program)
Hillary Smith: (518)576-2082
hsmith@tnc.org

Capital Mohawk PRISM
Laurel Gallor: (518)885-8995
lrg5@cornell.edu

CRISP (Catskill Regional Invasive Species Partnership)
Molly Marquand: (845)586-2611
mmarquand@catskillcenter.org

Finger Lakes PRISM
Hillary Mosher: (315)781-4385
mosher@hws.edu

LISMA (Long Island Invasive Species Management Area)
Steve Young: (516) 402-8951
smyoung@gw.dec.state.ny.us

Lower Hudson PRISM
Linda Rohleder: (201)512-9348
lrohleder@nynjtc.org

SLELO (St. Lawrence & Eastern Lake Ontario)
Robert Williams: (315)387-3600
rwilliams@tnc.org

Western New York PRISM
Andrea Locke: (716)878-4708
lockeas@buffalostate.edu

For more information on PRISMs and to subscribe to a PRISM listserv visit:

WWW.NYIS.INFO

Capital / Mohawk PRISM

Mission Statement: *“detect, prevent, and control invasive species through direct action and education to protect biodiversity, the natural environment, economy and quality of life.”*



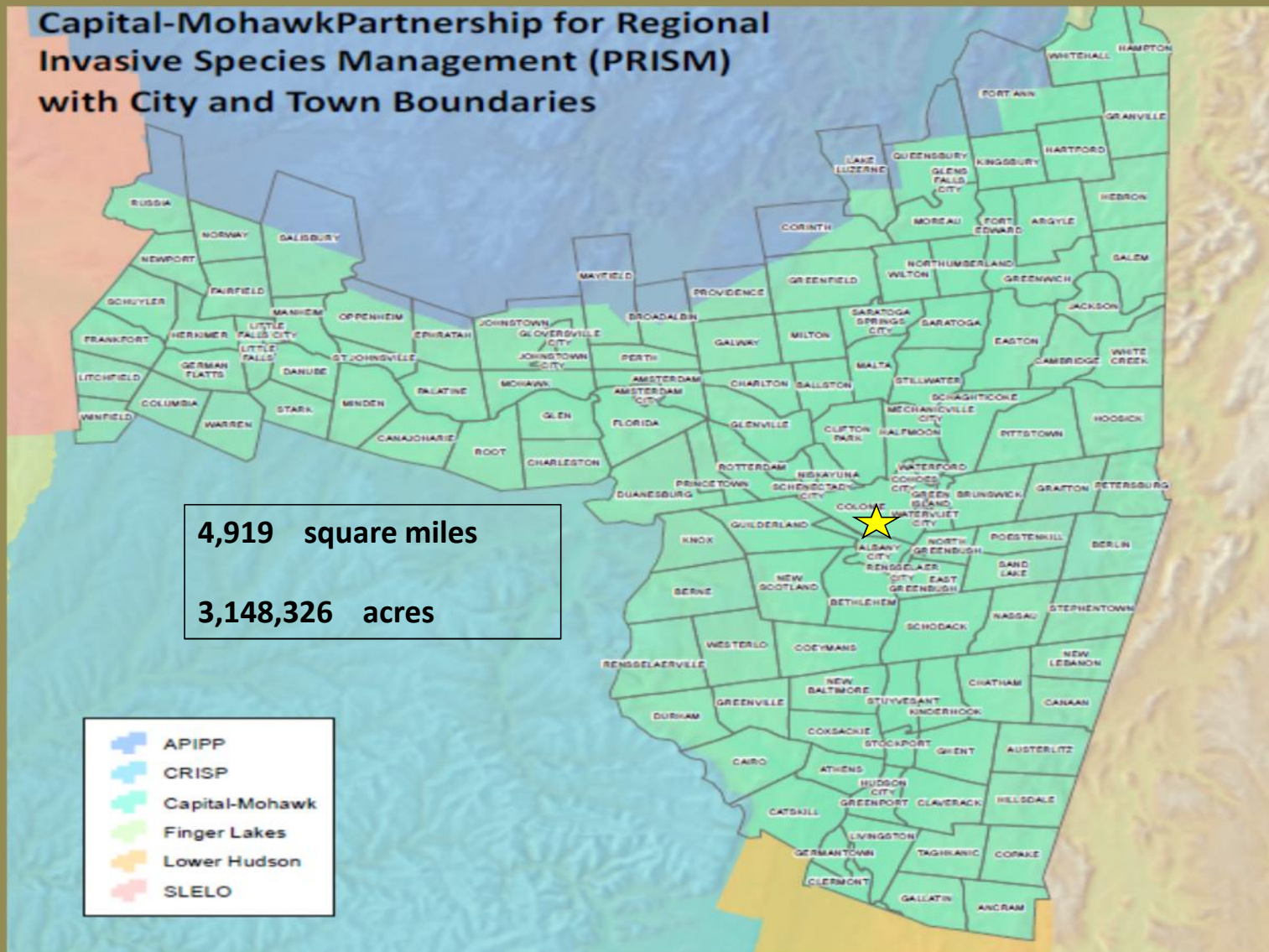
Includes:

- Albany
- Columbia
- Montgomery
- Rensselaer
- Schenectady

Portions of :

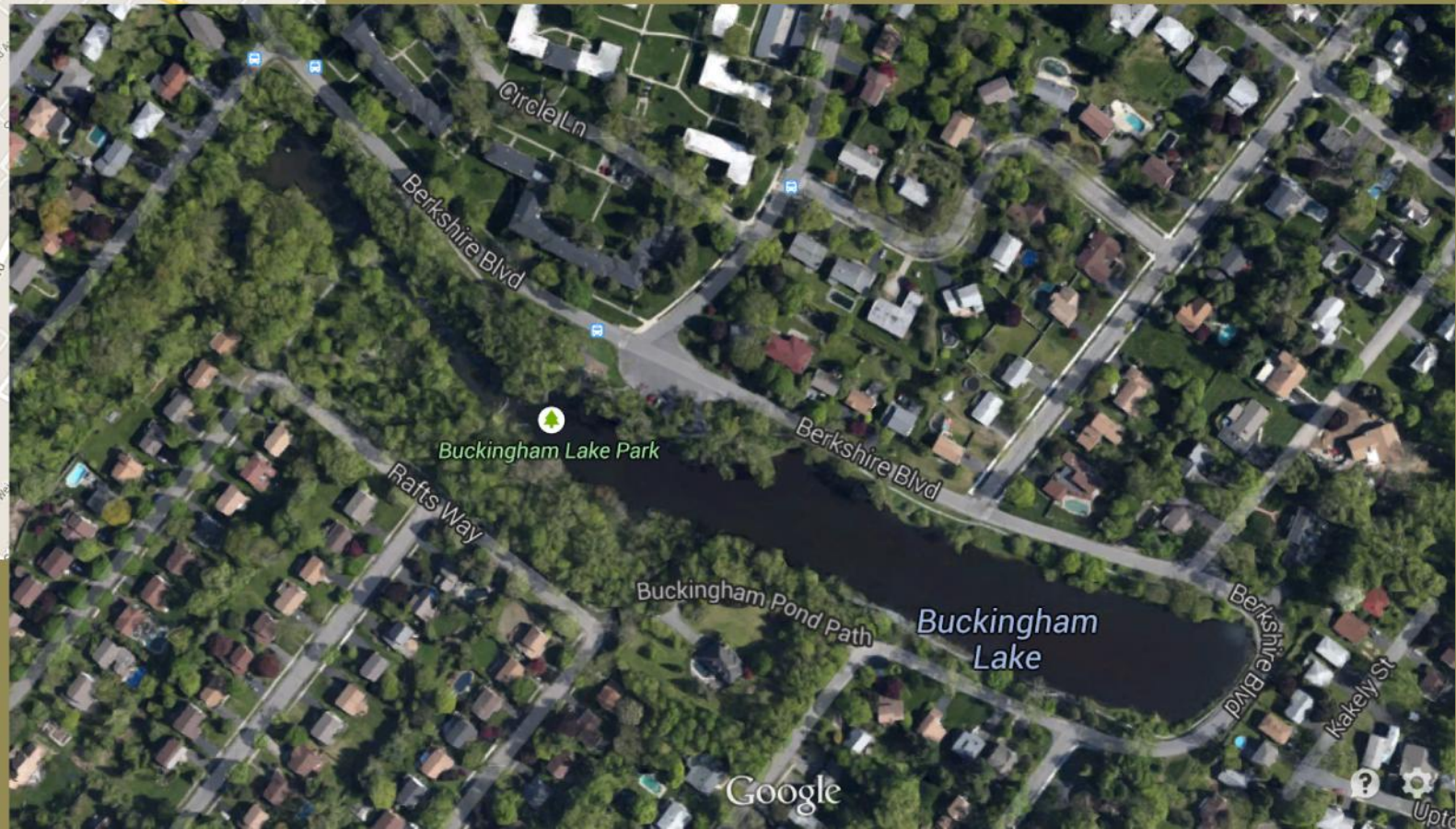
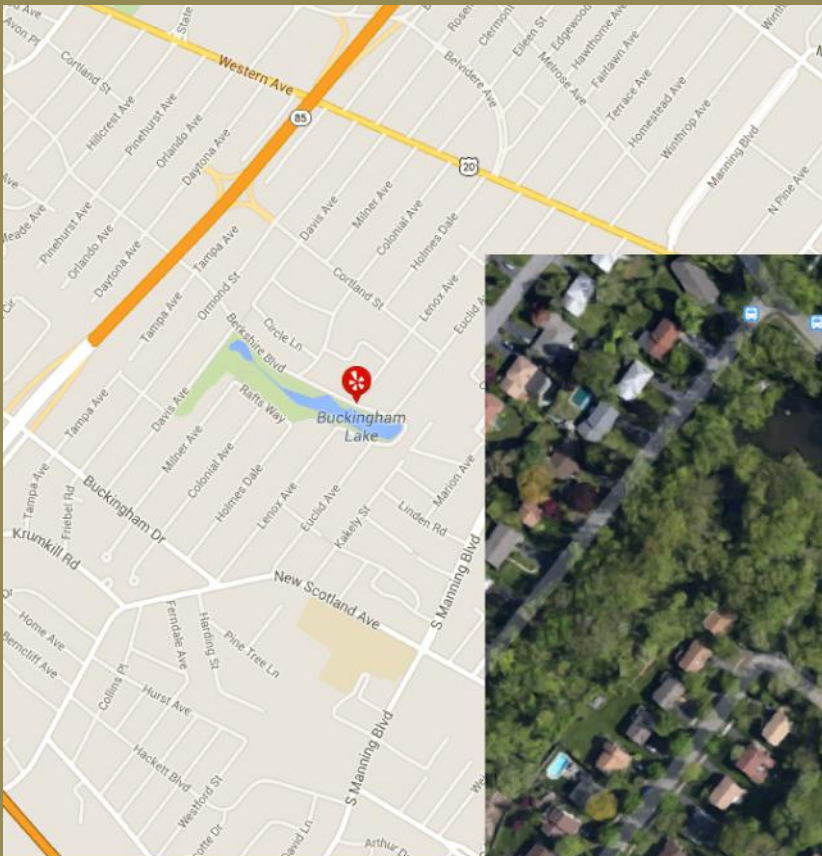
- Fulton
- Greene
- Herkimer
- Saratoga
- Warren
- Washington

Capital-Mohawk Partnership for Regional Invasive Species Management (PRISM) with City and Town Boundaries



Buckingham Lake/ Pond

“To coordinate existing resources and identify new resources devoted to protecting, preserving, and enhancing Buckingham Pond and its surrounding green space.”



New York iMapInvasives

*CAP/ MD TRAINING ~ May 7th
HVCC*

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New York iMapInvasives

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Sharing information for strategic management

iMapInvasives

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Welcome to iMapInvasives, New York's Online Invasive Species Database and Mapping System!

[Login Now](#)

[Training: Videos and Schedule](#)

"On a global basis...the two great destroyers of biodiversity are, first, habitat destruction, and second, invasion by exotic species..."
E.O. Wilson (Strangers in Paradise, 1987)

Report these key species to iMap:

Upcoming Training Sessions

Monday, December 9

Showing events after 12/9
[Look for earlier events](#)

Showing events until 1/15
[Look for more](#)

iMapInvasives MOBILE
protecting invasive exotic species

3:50 PM 12/9/2013

NYIS.info

NEW YORK INVASIVE SPECIES INFORMATION

The New York Invasive Species Clearinghouse

Cornell Cooperative Extension Invasive Species Program



Cornell University
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▶ Terrestrial Animals

▶ Terrestrial Plants



Emerald Ash Borer

Find out more now >>



iMapInvasives

Sharing information
for strategic management

Welcome to the New York Invasive Species Clearinghouse

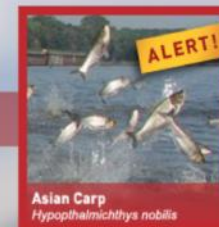
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Asian Carp
Hypophthalmichthys nobilis



Asian Carp
Hypophthalmichthys nobilis



Asian Carp
Hypophthalmichthys nobilis

SPECIES HIGHLIGHT

Asian carp

"Asian carp" refers to two species of invasive fish: the bighead carp (*Hypophthalmichthys nobilis*) and the silver carp (*H. molitrix*). Both

Search Invasive Species

Enter Species Name



News

Prohibited or Regulated?

Prohibited: cannot be knowingly possessed with the intent to sell, import, purchase, transport, or introduced. In addition, no person shall sell, import, purchase, transport, introduce or propagate prohibited invasive species.

Regulated: are species which cannot be knowingly introduced into a free-living state, or introduced by a means that one should have known would lead to such an introduction, although such species shall be legal to possess, sell, buy, propagate, and transport.

New York State Prohibited and Regulated Invasive Plants

September 10, 2014



Effective March 10, 2015



NYS DEPARTMENT OF
ENVIRONMENTAL CONSERVATION



NYS DEPARTMENT OF
AGRICULTURE AND MARKETS

Acceptable Tags for Nursery Use (2015)

<p>NYS DEC has deemed this plant is an Invasive Species – Harmful to the Environment Alternatives include; Red Maple, Sugar Maple, Eastern Redbud, European Beech To help prevent the spread of this regulated plant into natural areas; <ul style="list-style-type: none"> Do not place this plant near wild or natural areas When possible, deadhead or remove seed debris Dispose of plant or plant debris responsibly Do not share seeds, seedlings or cuttings with others gardeners </p>	<p>Acer platanoides</p>
<p>NYS DEC has deemed this plant is an Invasive Species – Harmful to the Environment Alternatives include; Anemone Clematis, Virgin's Bower, Climbing Hydrangea To help prevent the spread of this regulated plant into natural areas; <ul style="list-style-type: none"> Do not place this plant near wild or natural areas When possible, deadhead or remove seed debris Dispose of plant or plant debris responsibly Do not share seeds, seedlings or cuttings with others gardeners </p>	<p>Clematis terniflora</p>
<p>NYS DEC has deemed this plant is an Invasive Species – Harmful to the Environment Alternatives include; Red or Black Chokeberry, Fothergilla, Virginia Sweetspire To help prevent the spread of this regulated plant into natural areas; <ul style="list-style-type: none"> Do not place this plant near wild or natural areas When possible, deadhead or remove seed debris Dispose of plant or plant debris responsibly Do not share seeds, seedlings or cuttings with others gardeners </p>	<p>Euonymous alatus</p>
<p>NYS DEC has deemed this plant is an Invasive Species – Harmful to the Environment Alternatives include; Bearberry, Cotoneaster, Aucuba, Skimmia To help prevent the spread of this regulated plant into natural areas; <ul style="list-style-type: none"> Do not place this plant near wild or natural areas When possible, deadhead or remove seed debris Dispose of plant or plant debris responsibly Do not share seeds, seedlings or cuttings with others gardeners </p>	<p>Euonymous fortunei</p>
<p>NYS DEC has deemed this plant is an Invasive Species – Harmful to the Environment Alternatives include; Feather Reed Grass, Pink Muhly Grass, Switchgrass To help prevent the spread of this regulated plant into natural areas; <ul style="list-style-type: none"> Do not place this plant near wild or natural areas When possible, deadhead or remove seed debris Dispose of plant or plant debris responsibly Do not share seeds, seedlings or cuttings with others gardeners </p>	<p>Miscanthus sinensis</p>
<p>NYS DEC has deemed this plant is an Invasive Species – Harmful to the Environment Alternatives include; Honeylocust To help prevent the spread of this regulated plant into natural areas; <ul style="list-style-type: none"> Do not place this plant near wild or natural areas When possible, deadhead or remove seed debris Dispose of plant or plant debris responsibly Do not share seeds, seedlings or cuttings with others gardeners </p>	<p>Rodinia pseudoacacia</p>

Invaders in our Area

- Norway Maple
- Black Locust
- Common Buckthorn
- Winged Burning Bush (Euonymus)
- Japanese barberry
- Autumn olive
- Multiflora rose
- Oriental Bittersweet
- Garlic Mustard
- Shrubby Honeysuckles
- Japanese Knotweed
- Swallow wort



Norway Maple *-regulated*

(*Acer platanoides*)

- o Native to Europe and Western Asia;
- o Introduced as an ornamental landscape plant;
- o Forms monotypic stands that creates dense shade;
- o Leaf similar to sugar maple, but a milky white sap oozes out of leaf veins and stalk.



Black Locust - *regulated*

(*Robinia pseudoacacia*)

- Native of eastern North America from Pennsylvania, south to Georgia;
- Has been planted beyond its range, and grows wild throughout the U.S. and Canada;
- The seedlings displace native vegetation;
- Seeds, leaves, and bark are toxic to humans and livestock.
- Alternatives: Oaks, Pines, Cedar.



Common Buckthorn (*Rhamnus cathartica*) *prohibited*



- Native of Eurasia;
- Introduced to North America in 1800's for shelterbelt plantings;
- Grows very dense thickets, and will displace native species;
- Can cause vomiting and diarrhea if eaten.

Control:

- Plants > two inches in diameter or larger, cutting the stem at the soil surface and then cover (black plastic or tin can or treat the stump to prevent re-sprouting.
- stumps should be treated immediately after cutting (within 2 hours) with a herbicide containing Glyphosate to prevent re-sprouting.
- Treat late summer and throughout the fall. Avoid treating buckthorn in May and June when the tree is putting out leaves as the herbicide will be less effective at this time then during the rest of the year.

Shrubby Honeysuckles – *prohibited*

(*Lonicera* spp.)



- Natives of Eurasia, Japan, China, Turkey and southern Russia.
- Introduced for use as ornamentals, wildlife cover and soil erosion control
- Range from 6-15 feet high
- White, pink or yellow flowers bloom in pairs around late spring
- Leaves: egg shaped, 1-2.5", opposite
- Branches of non-native varieties are often hollow; most natives are solid
- Orange-red berries ripen midsummer
- One of the first shrubs to leaf out in the spring



Control:

- Started in late-summer or early-fall before seeds are ready to be dispersed.
- In early stages of invasion, or in cases where populations are at low levels, hand removal of honeysuckle seedlings.
- Systemic herbicides can be utilized in cases of heavy infestation.

Japanese & Bohemian Knotweed - *prohibited*

(*Fallopia japonica* & *F. x behemica*)

- Shrub-like perennial that can get to 10 feet in height
- Stems are smooth with bamboo-like nodes and are hollow
- Oval to triangular leaves are alternate
- Cascading white flowers bloom late summer/early fall



Control:

- *Small initial populations, or in environmentally sensitive areas herbicides cannot be used, grubbing.*
- *Bag and disposed all pieces in a secure location.*
- *It is best if knotweed not be mown or cut with weed trimmers.*
- *Chemical controls glyphosate and triclopyr herbicides to freshly cut stems, foliage, or by stem injection.*

Garlic Mustard - *prohibited*

(*Alliaria petiolata*)



- Biennial, cool season herb
- 1st year plants: rosette of heart-shaped, toothed leaves, no flowers
- 2nd year plants: 2-4 ft. tall stalks emerge from rosette of leaves, clusters of white flowers
- Plants emerge in early spring; by May seed pods form
- When crushed, leaves smell like garlic
- Puts phytotoxins into the soil

Oriental Bittersweet - *prohibited*

(*Celastrus orbiculatus*)



- Native of Japan, Korea, and China;
- Brought to North America in the mid 1800's, but by 1974 it had escaped cultivation;
- Climbs neighboring plants-shading and constricting;
- This flowers at the leaf axils, rather than the stem tips.
- Truly considered a menace.

Control:

- *Manage in the early stages of infestation whenever possible.*
- *Monitoring and early control of new outbreaks. preventing seed dispersal.*
- *Frequent cutting, mowing, or grubbing before fruiting.*
- *For cut-stem treatments, best soon after stems are cut or mowed.*
- *Cut the stems about 2 inches (5 cm) above the root crown. A second treatment may be needed to control sprouts.*
- *Mid-October application of triclopyr gave better control of Oriental bittersweet than spring application.*

Multiflora Rose - *prohibited*

(Rosa Multiflora)

- Native to East Asia (Japan, Korea, East China)
- First introduced to N.A., late 1700's as a garden plant and root stock for ornamental roses.
- Widely planted in Northeast in 1940's – 1960's for erosion control and as a living fence.
- A single, mature plant can produce up to a half million seeds annually.
- Seed remain viable for at least 20 years in the soil.
- Infestations have been known to lower land values.

Control:

- *Do not plant, chemical, manual, or mechanical means.*
- *Cutting or mowing 3-6 times per year; over a 2-4 year period. Followed by a systemic herbicide.*



Winged Burning Bush - *regulated*

(*Euonymus alata*)

- Native to Northeastern Asia, Japan & Central China;
- Introduced as an ornamental about 1860;
- Threatens a variety of habitats;
- Hundreds of seedlings are often found below the parent plant –“seed shadow”;
- Look- a-likes: native sweet gum, native strawberry bush.



Control:

- Foliar, cut-stem and basal bark treatments.
- Early summer most effective.
- Foliar spray is the best option.
- For stems too tall for foliar sprays, cut stem applications can be effective as well.



Purple Loosestrife (*Lythrum salicaria*) - **prohibited**
One plant so ornamental.....



....Many plants a desolate habitat.

Purple Loosestrife and Introduced Biological Control Agents





Japanese Barberry - *prohibited* (*Berberis thunbergii*)

Control:

- Can be achieved in a single growing season with a two-step approach (mechanical or heat); killing above ground tissue.
- Followed by a mid-season treatment of a targeted herbicide (or second heat treatment)

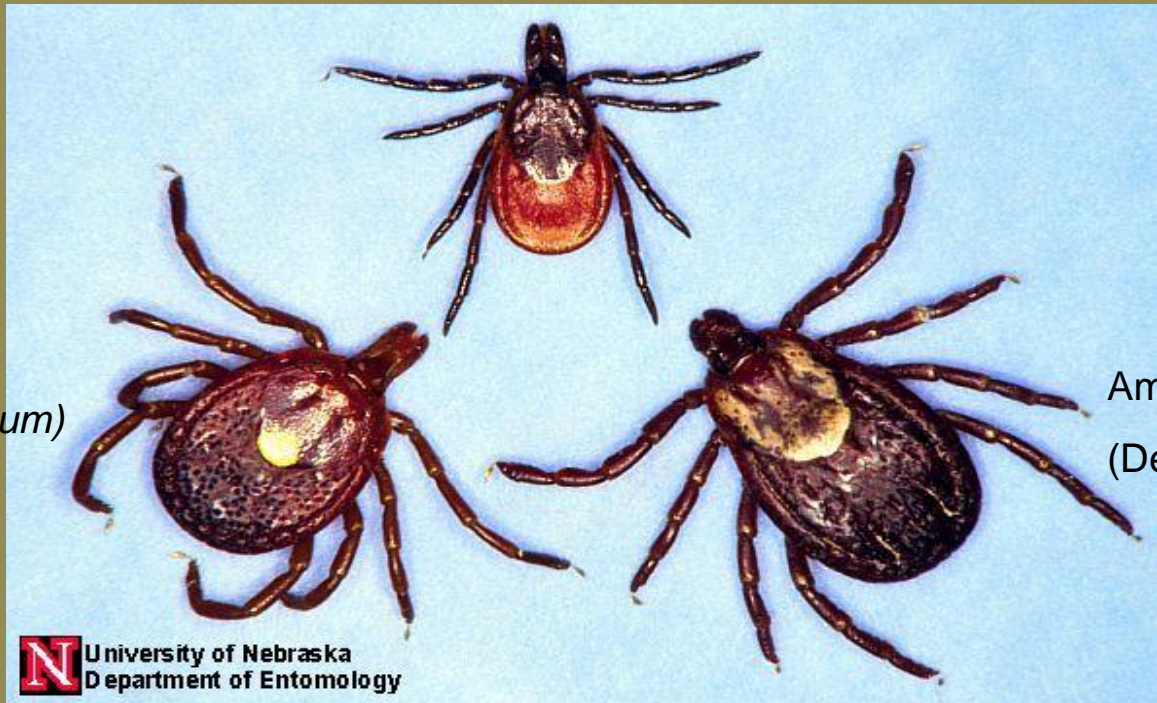


- Native to Japan;
- Introduced as an ornamental in 1875;
- Forms dense stands in a variety of habitats, but also is a host for black stem rust in wheat;
- Highly shade-tolerant.
- Grows 2-8 ft. tall

Tick Species

Three primary tick species

Black Legged or Deer Tick (*Ixodes scapularis*)



Lone Star Tick
(*Amblyomma americanum*)

American Dog or Wood Tick
(*Dermacentor variabilis*)

Photo: Department of Entomology, University of Nebraska-Lincoln - Jim Kalisch, UNL Entomology

Ticks can pass the disease on to other animals



Emerald Ash Borer (EAB)

- Larvae feed in phloem and outer sapwood that girdle and kill branches and entire tree
- Kills green, white and black ash as well as horticultural varieties
- Damage first appears in the crown





Most damage is done in the fall and early winter before pupation

- Adults emerge after 450 degree days.
- Usually in late June, when black locust start to bloom

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NEW YORK INVASIVE SPECIES INFORMATION

The New York Invasive Species Clearinghouse

Cornell Cooperative Extension Invasive Species Program



Cornell University
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Emerald Ash Borer

Find out more now >>

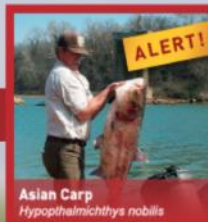


iMapInvasives

Sharing information
for strategic management

Welcome to the New York Invasive Species Clearinghouse

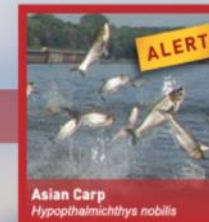
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Hypophthalmichthys nobilis



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Asian Carp
Hypophthalmichthys nobilis

SPECIES HIGHLIGHT

Asian carp

"Asian carp" refers to two species of invasive fish: the bighead carp (*Hypophthalmichthys nobilis*) and the silver carp (*H. molitrix*). Both

Search Invasive Species

Enter Species Name

News

New York iMapInvasives

**CAP/ MO TRAINING ~ May 7th
HVCC**

The screenshot shows the New York iMapInvasives website. At the top, there is a search bar and the text "New York iMapInvasives". Below this is a green banner with a leaf and insect icon, the text "Sharing information for strategic management", and the "iMapInvasives" logo. A navigation menu includes links for Home, Request a Login, Report an Invasive, Data and Maps, Training, Resources, In The News, About, and Contact us. The main content area features a welcome message: "Welcome to iMapInvasives, New York's Online Invasive Species Database and Mapping System!" with a "Login Now" button and social media icons for YouTube and Facebook. A quote by E.O. Wilson is displayed: "On a global basis...the two great destroyers of biodiversity are, first, habitat destruction, and second, invasion by exotic species..." followed by "Report these key species to iMap:". A sidebar on the right lists "Upcoming Training Sessions" for Monday, December 9, with links for "Looking for earlier events" and "Looking for more". A mobile app icon for "iMapInvasives MOBILE" is shown at the bottom left, with the tagline "geotracking invasive exotic species". The background is a map of New York State with numbered markers indicating invasive species locations.

*THANK YOU FOR HELPING TO KEEP
INVASIVE SPECIES ON THE RADAR...*



QUESTIONS ??
Laurel Gailor
lrg6@cornell.edu