2021
NEW YORK
INVASIVE SPECIES
SUMMIT

November 16<sup>th</sup> & 17<sup>th</sup>, Albany NY











**CONNECTING, COLLABORATING, & COOPERATING** 

AGENDA

## Acknowledgement

Thank you to the many individuals, agencies and organizations that made the 2021 NYS Invasive Species Summit a reality.

A special thank you to all who helped plan the summit: the steering committee, the logistics committee, and the content committee.

Steering Committee	<b>Content Committee</b>	<b>Logistics Committee</b>
NYS DEC, Lead	NYNHP, Co-lead	NYNHP, Lead
Capital Region PRISM	NYS AGM, Co-lead	NYISRI
NYISRI	Capital Region PRISM	NYS DEC
NYNHP	NYISRI	NYS OPRHP
NYS AGM	NYS DEC	
NYS OPRHP	NYS OPRHP	

**Thank you** to all attendees for following COVID-19 protocols so we could meet in person.

## NYS Environmental Protection Fund (EPF)

The 2021 NY Invasive Species Summit was supported by funding from the New York State Environmental Protection Fund.



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## **List of Acronyms**

APA Adirondack Park Agency

BISEH Bureau of Invasive Species and Ecosystem Health

**EPF** Environmental Protection Fund

**ISAC** Invasive Species Advisory Committee

ISC Invasive Species Council IPM Integrated Pest Management

NYISRI New York Invasive Species Research Institute

**NYNHP** New York Natural Heritage Program

NYS New York State

NYS OPRHP NYS Office of Parks, Recreation, and Historic Preservation

NYS AGM
NYS Department of Agriculture and Markets
NYS DEC
NYS Department of Environmental Conservation

NYS DOE NYS Department of Education NYS DOS NYS Department of State

NYS DOT NYS Department of Transportation

PRISM Partnerships for Regional Invasive Species Management

**SUNY** State University of New York

**SWCD** Soil and Water Conservation District

**USDA-APHIS**US Department of Agriculture-Animal and Plant Health Inspection Service

**USFWS** US Fish and Wildlife Service

## **Tables at the Summit**

- Invasive Species Advisory Committee (ISAC)
- ISC, NYS Department of Agriculture and Markets (AGM)
- ISC, NYS Department of Environmental Conservation (DEC)
- ISC, NYS Department of State (DOS)
- ISC, NYS Department of Transportation (DOT)
- ISC, NYS Office of Parks, Recreation and Historic Preservation (OPRHP)
- ISC, NYS Thruway Authority
- NY Natural Heritage Program (NYNHP), iMapInvasives (iMap)
- NY Invasive Species Research Institute (NYISRI)
- PRISM, Adirondack Park Invasive Plant Program (APIPP)
- PRISM, Capital Region (CRP)
- PRISM, Catskill Regional Invasive Species Partnership (CRISP)
- PRISM, Finger Lakes
- PRISM, Long Island Invasive Species Management Area (LIISMA)
- PRISM, Lower Hudson
- PRISM, St. Lawrence Eastern Lake Ontario (SLELO)
- PRISM, Western NY (WNY)

# **New York Invasive Species Summit Agenda**

Tuesday (November 16)				
8:00 am 9:00 am to 12:00 pm	Registration opens Pre-meetings – Open discussion rooms on the following topics:  • Agricultural topics - Suite 112  • Aquatic managers - High Street 26  • Education/Outreach coordinators - High Street 28  • Terrestrial managers - High Street 24  • PRISM Coordinators (by invite only) - High Street 22			
12:00 pm to 1:00 pm	Lunch on your own			
	Pre-ordered lunch pick-up at Fort Orange Courtyard or visit local restaurants. No outside food in the Desmond, please!			
1:00 pm to 2:15 pm	Welcome / Keynote talks - King Street Ballroom			
	<ul> <li>Opening Remarks</li> <li>Welcome from NYS Agencies         <ul> <li>Richard A. Ball, NYS AGM Commissioner</li> <li>Katie Petronis, NYS DEC Deputy Commissioner of Natural Resources</li> <li>Tom Alworth, NYS Parks Executive Deputy Commissioner</li> </ul> </li> <li>What we are protecting in New York – Kathy Moser, Chief Conservation Officer, Open Space Institute</li> <li>NYS Framework - Invasive Species Council Co-Chair Designees – Chris Logue, NYS AGM, and Justin Perry, NYS DEC</li> </ul>			
2:15 pm to 2:45 pm 2:45 pm to 4:00 pm	Break - King Street Courtyard Invited talks - Collaboration through many scales - King Street Ballroom  • National Framework - Carrie Brown-Lima, Cornell NYISRI  • Regional - Northeast IPM Center - Deb Grantham, NE IPM  • NY PRISMs - Kristopher Williams, Capital Region PRISM  • Site-specific collaboration: Lake George Watershed - Tammara Van Ryn, APIPP PRISM			
4:00 pm to 4:15 pm 4:30 pm to 6:00 pm	Poster Session: Student Lightning Talks - King Street Ballroom Poster Session continued - King Street Courtyard Light refreshments provided; beverages available for purchase			
6:00 pm to 7:30 pm	Dinner on your own (no outside food in the Desmond, please!)			
7:30 pm to 8:30 pm	"Uninvited" Documentary viewing – Town Hall Theater			

Snacks available for purchase at the Desmond Market (near Hotel front desk)

## Wednesday (November 17)

7:30 am 7:30 am to 8:30 am

Registration opens

Breakfast (provided) - King Street Courtyard

8:30 am to 10:40 am | Invited talks - King Street Ballroom

#### **Aquatic Invasives**

- National Aquatic Nuisance Species Task Force and Recent Rapid Response Efforts – Susan Pasko, USFWS (remote presentation)
- NYS Aquatic Invasive Species Collaborations Cathy McGlynn, NYS DEC
- Investigating Combined Risk of Invasive Aquatic Plants and Toxic Epiphytic Cyanobacteria - Susan Wilde, University of Georgia

#### Agricultural Collaborations

- Regional Agricultural Connections through the Eastern Plant Board Piera Siegert, New Hampshire Dept. Agriculture, Markets & Food
- Collaborating with NYS Partners on Agricultural Invasives Thom Allgaier, NYS AGM
- Engaging volunteers with Spotted Lanternfly surveys Mitchell O'Neill, NYNHP

10:40 am to 11:10 am 11:10 am to 12:30 pm

Break - King Street Courtyard

**Collaboration Rooms** – overview presentations followed by facilitated discussions (Breakout rooms)

- Addressing Invasive Species Pathways King Street 6
- Biocontrol King Street 2
- Climate Change and Invasive Species King Street 8
- Community Science High Street 28
- Harnessing Tools for Invasive Species Information High Street 24
- Managing invasive species with eDNA High Street 26
- Society and Invasive Species Management King Street 4

12:30 pm to 1:30 pm 1:30 pm to 2:45 pm Lunch (provided) - Fort Orange Courtyard

Invited talks - Invasive Species and our Forests - King Street Ballroom

- National Perspective on Silviculture and Invasives Tony D'Amato, University of Vermont
- Statewide Early Detection Methods Jess Cancelliere, NYS DEC
- Hemlock Prioritization Tool Carri Marschner, Cornell Hemlock Initiative
- Jumping Worm Impacts on Forests Andrea Dávalos, SUNY Cortland

Wrap-up - Jennifer Dean, NYNHP - King Street Ballroom

2:45 pm to 3:00 pm

3:00 pm to 4:00 pm (with coffee and snacks)

Content specialist conversations – follow-up discussion / Q&A with presenters King Street Courtyard and King Street Ballroom

- Agricultural Corner
- Aquatic Corner
- Collaboration at Many Scales Corner
- Terrestrial / Forest Corner

## **Pre-Meetings**

### Tuesday, November 16, 2021 9:00 AM - 12:00PM

## Agricultural Topics – Suite 112

Led by Thom Allgaier, NYS AGM

This will be an informal discussion that will allow attendees to meet face to face with AGM staff to ask questions and discuss topics related to agriculture and invasive species. The range of topics could include the Cooperative Agricultural Pest Survey Program, collaboration opportunities, outreach, the invasive species work AGM Horticultural Inspectors carry out, or some of the pest specific programs we manage in New York State.

## Aquatic Managers - High Street 26

Led by Cathy McGlynn, NYS DEC

AIS managers will discuss the status of current cross-regional projects, assess obstacles to AIS management, and discover potential collaborations. Goals are 1) to assess needs and how to meet them, 2) to gain new perspectives on species management and education/outreach and possible collaborations, 3) to create a list of species that might provide opportunity for collaborations, and 4) to collect information on knowledge gaps.

#### **Education and Outreach** - High Street 28

Led by Megan Pistolese-Shaw, SLELO PRISM, and Andréa Nieves, NYS DEC

Raising awareness of invasive species is the first step in preventing their introduction and spread. This meeting will provide opportunities to showcase various invasive species education and outreach initiatives being led by PRISMs across the state and opportunities to collaborate, in addition to exploring ways to engage the public using behavioral science techniques.

## Terrestrial Managers - High Street 24

Led by Brittany Hernon, WNY PRISM and Bob Slocum, NYS DEC

Opportunity for resource managers to convene and discuss terrestrial invasive species issues. Topics will include but are not limited to:

- Cross boundary collaboration
- Spotted Lanternfly updates
- Best Management Practices (BMP) research
- iMap Mobile Advanced (iMMA) use and troubleshooting

### **Collaboration Rooms**

#### Wednesday, November 17, 2021 11:10 AM - 12:30PM

#### Addressing Invasive Species Pathways - King Street 6

Led by Meredith Taylor, NYC DEP, and Thom Allgaier, NYS AGM

The cornerstone of invasive species prevention is managing pathways of introduction and spread and New York State has relied on tactics such as outreach efforts like "Don't move firewood" and "PlayCleanGo", survey and trapping across the state, and legislation restricting the sale and trade of listed invasive plants and animals. Also, the international border New York shares with Canada is a management challenge as far as invasive species that make their way over that invisible line. Join this session for an overview of accomplishments, a few examples of work that is currently underway across the state and at the border and help guide the discussion on the next priorities that need to be addressed.

#### Biocontrol - King Street 2

Led by Sarah Travalio, NYS Parks

Each year, more research is being done into the use of biocontrol agents for the management of invasive plant and insect species. Many biocontrol species are already available in New York, and several new ones are on the horizon. This discussion group aims to provide land managers with a comprehensive look at some of the species that are currently available, provide information on species that may be available in the near future, and facilitate the development of connections between land managers and agency officials who can provide access to biocontrol agents.

#### Climate Change and Invasive Species - King Street 8

Led by Carrie Brown-Lima, NYISRI, and Annette Evans, University of Massachusetts Amherst This breakout session will delve into the complicated interactions of climate change and invasive species. We will discuss current research as well as challenges faced by managers and initiatives from New York and the broader northeast region. Participants will be invited to share any climate smart invasive species management strategies they are currently using as well as perceived information gaps related to invasives and climate change.

#### Community Science: Leveraging and Empowering Our "Eyes on the Ground" - High Street 28

Led by Mitchell O'Neill, NYNHP

With so much area to cover and species to monitor, conservation professionals rely on volunteers from the general public to be our "eyes on the ground". Known as community scientists or citizen scientists, these volunteers report observations that are integral to early detection and monitoring efforts. But what leads to successful community science initiatives, and what are the challenges? How do we recruit & retain community scientists, and can we equip them with the tools and skills they need? How can we maximize data quality? Join us to share ideas and experiences, as well as build a consensus on these questions and more.

## Collaboration Rooms, continued

# Harnessing Tools for Invasive Species Information: Resources for Field Managers and a Discussion of What Works - *High Street 24*

Led by Kristopher Williams, Capital Region PRISM, and John Marino, NYNHP
Are you a resource manager looking to better leverage invasive species data and information?
Participants in the collaboration meeting will receive updates on current data services like accessing the NYS PRISM Tier List, exploring digital tools for identification, reporting observations, and decision making. Members of the collaboration room will then have the opportunity to share their best practices with one another.

### Managing Invasive Species With eDNA: Opportunities and Challenges - High Street 26 Led by Jess Cancelliere and Steve Pearson, NYS DEC

Environmental DNA (eDNA) is a tool that managers can use to detect invasive species at the earliest stages of an invasion enabling rapid response efforts. The past, present and future of eDNA as an important detection tool will be covered. The broader discussion will revolve around the issues and practicalities that surround utilizing these tools at the local, regional and statewide levels. Participants should expect to actively participate in the discussion with conceptual and technical questions.

## Society and Invasive Species Management - King Street 4

Led by Cathy McGlynn and Naja Kraus, NYS DEC

This breakout session features Dr. Sarah Crowley (lecturer at the University of Exeter, UK) who will provide the foundation for our discussion with a presentation focused on her research into conflict in invasive species management. We will then discuss local and regional examples of when conflict has occurred and examine what worked and did not work in those situations. We will seek to gain insight into the perspectives of invasive species management from both the management and the public sides.

## Poster Presentations (non-student)

Impacts of recreation trails on invasive species presence

Matthew Aiello-Lammens, Pace University; Mathyas Papp, Pace University

Developing a Citizen Science Web GIS Application for Reporting Invasive Plants in Cortland County, NY

Christopher A. Badurek, SUNY Cortland; Connor Brierton, SUNY Binghamton

2021 Finger Lakes Institute Watercraft Steward Program Results

**Sam Beck-Andersen**, Finger Lakes Institute, Finger Lakes PRISM, Hobart and William Smith Colleges; Hilary Mosher, Finger Lakes Institute, Finger Lakes PRISM; Dr. Lisa Cleckner, Finger Lakes Institute, Finger Lakes PRISM

Invasion of the Round Goby (Neogobius melanostomus) in the Hudson River Estuary Russell Berdan, NYS DEC; Richard Pendleton, Cornell / NYS DEC

Developing Monitoring & Outreach Tools to Support Implementation of Swallow-wort (Vincetoxicum spp.) Biocontrol in New York State

**Audrey Bowe**, New York Invasive Species Research Institute; Carrie Brown-Lima, New York Invasive Species Research Institute, Cornell University; Sharon Bachman, Cornell Cooperative Extension of Erie County; Laura Bailey, Cornell Cooperative Extension of Yates County; Arlene Wilson, Cornell Cooperative Extension of Yates County; Margaret Mahr, Cornell Cooperative Extension of Yates County

A Model to Prioritize Watercraft Steward Coverage at Public Boat Launches

Morgan Crouch, Finger Lakes Institute, Finger Lakes PRISM; Sam Beck-Andersen, Finger
Lakes Institute, Finger Lakes PRISM; Hilary Mosher, Finger Lakes Institute, Finger Lakes
PRISM; Dr. Lisa Cleckner, Finger Lakes Institute

Solarization of Phragmites australis in a Hudson River Tidal Marsh **David Decker**, Constitution Marsh Audubon Center and Sanctuary

Establishing Invasive Species Education in the Girl Scouts of Northeastern New York Mary Greagan, NYS DEC, UAlbany

Finding a Fluffball in a Sea of Hemlocks: Surveying a 5,800 Acre Park With a Staff of Three **Katherine Jones**, NYS OPRHP; Casey Holzworth, NYS OPRHP; Andrew Damon, NYS OPRHP

Undergraduate Student and Local Community Partnerships to Inform Invasive Species Awareness and Management Priorities

Mary Beth Kolozsvary, Siena College; Dept. Environmental Studies and Sciences

## Poster Presentations (non-student), continued

Early detection of the oak wilt fungus using trapped nitidulid beetle vectors **Kelsey McLaughlin**, NYS DEC; Jessica Cancelliere, NYSDEC; Robert Cole, NYS DEC; Karen Snover-Clift, Cornell Plant Disease Diagnostic Clinic

Aquatic Invasive Plant Distribution Around Waterbody Access Points in the Finger Lakes. **Kathryn Monacelli**, Finger Lakes Institute at Hobart & William Smith Colleges; Hilary Mosher, Finger Lakes Institute at Hobart & William Smith Colleges; Lisa Cleckner, Finger Lakes Institute at Hobart & William Smith Colleges

Water Chestnut Biomass Estimates Using Density as a Proxy Jacob Moore, SUNY ESF; Steven Pearson, NYS DEC

Department of State Assistance to Local Communities to Combat Invasive Species **David Newman**, NYS Department of State

Pledge to Protect

Megan Pistolese-Shaw, SLELO PRISM

Three Years of Water Chestnut (Trapa natans) Management in New York's Lower Hudson Valley

**Maya Thompson**, LH PRISM; Lindsay Yoder, Teatown Lake Reservation; Caleigh Millette, NY/NJ Trail Conference; Claire McMahon NY/NJ Trail Conference, Sudha Petluri NY/NJ Trail Conference

Detection Range of Hydrilla verticillata eDNA in a Lotic System

Daniel Weber, NYS DEC/SUNY Albany; Steven Pearson, NYS DEC; Michael Tessler,
American Museum of Natural History

Assessing the Settlement and Distribution of Aquatic Invasive Invertebrates in the Lower Hudson River: A Lesson in Efficacy for Two Sampling Methods

**Lindsay Yoder**, Teatown Lake Reservation, Lower Hudson PRISM; Brent Boscarino, Ph.D., New York-New Jersey Trail Conference, Lower Hudson PRISM; Kathleen Bezik, New York-New Jersey Trail Conference; Erin Carrus, Lower Hudson PRISM, Kathleen Cooper, Lower Hudson PRISM, Conor Harrington, Lower Hudson PRISM, Elinor Stapylton, Lower Hudson PRISM

Efficacy of Clearcast and ProcellaCOR EC on European Frogbit Bin Zhu, University of Hartford; Mark Heilman, SePRO

Note: Poster abstracts available at nyisri.org/summit

### **Student Poster Presentations**

Genetic Variation between invasive Myriophyllum heterophyllum and native Myriophyllum heterophyllum populations in New York State

**Jack Andrews**, NYS DEC / University at Albany; Steven Pearson, NYS Department of Environmental Conservation

The success and impact of slender false brome (Brachypodium sylvaticum) in New York State **Megan Aubertine**, SUNY Brockport; Kathryn Amatangelo, SUNY Brockport; Andie Graham, SUNY Brockport

Influence of round gobies on VHSV disease ecology in the upper St. Lawrence River Anna Conklyn, SUNY ESF; Rod Getchell, Cornell University; John Farrell, SUNY ESF

The "Hits" Analysis in NY Waterbodies: Leveraging Data from iMapInvasives & Watercraft Steward Programs

**Jonathan Kappel**, NYS DEC / University at Albany; John Marino, New York Natural Heritage Program

Monitoring invasive plants on roadsides using computer vision and Google Street View imagery Liam Megraw, Rochester Institute of Technology; Manoj Acharya, Rochester Institute of Technology; Arturo Flores, University of California San Diego; Christopher Kanan, RIT; Christy Tyler, RIT

Impacts of urban land cover on the distribution of emerald ash borer associated parasitoids **Tim Morris**, SUNY ESF; Juli Gould, USDA APHIS; Melissa Fierke, SUNY ESF

Developing a Web GIS Dashboard and Geodatabase for Invasive Plant Management at Finger Lakes National Forest, NY

Shelby Soule, SUNY Cortland; Christopher Badurek, SUNY Cortland

Collecting, organizing, and analyzing post-treatment data to communicate invasive species management effectiveness

**Fate Syewoangnuan**, SUNY ESF; Jennifer Dean, New York Natural Heritage Program; Dylan Parry, SUNY ESF

Crossing the Great Divide: Bridging the Researcher-Practitioner Gap to Maximize the Utility of Remote Sensing for Invasive Species Monitoring and Management

Kelsey R. Parker, ASRC at CUNY; Arthur Elmes, School for the Environment, University of Massachusetts; Richard Hallett, Forest Service Northern Research Station; John Thompson, Catskill Regional Invasive Species Partnership (CRISP); Zachary Simek, The Nature Conservancy; Justin Bowers, Environmental Sciences Initiative, The City University of New York Advanced Science Research Center; Andrew Reinmann, Environmental Sciences Initiative, The City University of New York Advanced Science Research Center, Earth and Environmental Sciences, Graduate Center, The City University of New York, Department of Geography and Environmental Science, Hunter College.

## **NOTES**

## **NOTES**

## **Invasive Species Network in New York State**

#### Lead IS Organizations

Formed under ECL Article 9. Title 17

## Contract Partners Funded by EPF

Formed based on recommendations of IS Task Force, 2005

#### **Invasive Species Council**

Assesses IS issues, prioritizes funding,

recommends legislation

Co-chairs: NYS Dept. of Environmental Conservation

NYS Dept. of Agriculture and Markets

Adirondack Park Agency Members:

NYS Canal Corporation NYS Dept. of Education NYS Dept. of State

NYS Dept. of Transportation

NYS Office of Parks, Recreation, & Historic Preservation

NYS Thruway Authority

#### NY Invasive Species Research Institute Communicates and coordinates invasive species research Based at Cornell University

NYSDEC IS COORDINATION SECTION

Coordinates partners across the state

**iMapInvasives** Online invasive species database and mapping tool

Based at New York Natural Heritage Program

## **Invasive Species Advisory Committee**

Provides information and guidance to IS Council

Permanent: Boating organization

Cornell University

Darrin Freshwater Institute

Lake Association (NYS Federation of Lake Associations) Nursery Business (NYS Nursery and Landscape Assoc.)

NY Natural Heritage Program

NY Sea Grant

NYC Dept. of Environmental Protection NYS Biodiversity Research Institute, SUNY Albany

Soil and Water Conservation Districts

Statewide agricultural org. (NY Farm Bureau)

Statewide land conservation org. (The Nature Conservancy) Statewide local gov. org. (NYS Association of Towns) Statewide org. formed to address invasive species SUNY College of Environmental Science and Forestry

Additional American Society of Landscape Architects

Audubon New York (2017):

Empire State Forest Products Association Environmental Energy Alliance of NY New York Botanical Garden

NYS Flower Industry NYS Turfgrass Association

PRISMs (Capital Region currently represents)

USDA APHIS Wildlife Services

Central Website/Information Clearinghouse [Website at NYIS.info intermittently funded/maintained]

#### Partnerships for Regional **Invasive Species Management** 8 regional organizations covering NYS

- Plan regional IS management
- Develop early detection and rapid response capacity
- Support research through citizen science
- Recruit and train volunteers
- Implement projects

Coordinate partners Educate Capital-Mohav Catskill

Reproduced from: New York State Invasive Species Comprehensive Management Plan - 2018. https://www.dec.ny.gov/docs/lands forests pdf/iscmpfinal.pdf

## **PRISM Map and Websites**

# NY Partnerships for Regional Invasive Species Management (PRISMs)



PRISM Name	Abbreviation	Website
Adirondack Park Invasive Plant Program	APIPP	adkinvasives.com
Capital Region PRISM	CRP	capitalregionprism.org
Catskill Region Invasive Species Partnership	CRISP	catskillinvasives.com
Finger Lakes PRISM	FLPRISM	fingerlakesinvasives.org
Long Island Invasive Species Management Area	LIISMA	liisma.org
Lower Hudson PRISM	LHPRISM	<u>Ihprism.org</u>
St. Lawrence & Eastern Lake Ontario PRISM	SLELO	sleloinvasives.org
Western NY PRISM	WNYPRISM	wnyprism.org













