

Lower Hudson PRISM

Partner Meeting

November 16th, 2016 – 10:00 am-3:00 pm

Teatown Lake Reservation. Ossining, NY

DESIRED OUTCOMES

1. Get to know each other better
2. Finalize 2017 action plan
3. Organize working groups for winter
4. Hear reports from partners on contracted projects

WELCOME AND INTRODUCTIONS

Linda Rohleder took the floor, and we began by going around the room with introductions.

LOWER HUDSON PRISM UPDATES

Promoting LH PRISM Events

Carrie Sears of The Invasives Project – Pound Ridge made an announcement about promoting our events and speakers. If you have an upcoming event, let us help you promote it! She emailed a form around to partners that can be filled out and emailed to Carrie to have your event publicized. With this form, we will post your event to the Lower Hudson PRISM calendar, Facebook page, and a press release will be written. A list of media contacts is being compiled and will be made available for partner use.

Oak Wilt Found on Long Island, NY

Linda spoke briefly about how oak wilt was recently found in Long Island, New York. Those close to Long Island should take the time to learn about this fungus that is spread through nursery stock and possibly by beetles. She brought some outreach materials back from Cornell (poster, postcard)

NYSDEC Prioritization Map

The New York State Natural Heritage Program is working on a statewide invasive species prioritization project. It is similar to the project done in New Hampshire. Three composite layers will be produced: Risk of spread which includes highways, trails, and other corridors, Ecological Significance based on various sources of biodiversity information and rare and endangered species information, and Protected Areas. At the Cornell invasive species conference Linda was able to look at drafts of these layers (some maps were displayed at this meeting too). We have been gathering information on parcels missing from the state Protected Areas Database (PAD) in order to add them to the Protected Areas

layer. Our additional layer combines data sourced from various entities including: NYNJTC, CCEDC, NYC Parks, Orange County Gov., Orange County Land Trust, Rockland County Gov., Scenic Hudson, The Nature Conservancy, Westchester Land Trust, and Winnakee Land Trust.

Partners were asked to take a look at the map and ensure their properties are identified as protected. Further information on this effort will be discussed during the monthly state-wide invasive species call at the end of November. [Note: the state-wide webinar was recorded and will be available. They asked for updates to the Protected Areas by the end of December.]

Revamping the LHPRISM Website

Charlie Pane from CCE Rockland is revamping our Lower Hudson PRISM website to be more public user friendly. The new site will feature a search box, a rearranged menu, all pages will have a content-related visual at the top, and the front page will feature an image carousel with content relevant to what's currently going on through the Lower Hudson PRISM. Charlie had a color mock-up for everyone to look at and asked for feedback. Charlie thanked the members of the working group who are helping with this redesign.

The new website will also be split so that there will be one side of the website for public use and information, and then another side of the site for partner use. Please let Charlie know if you would like to be kept updated on these website developments. You can reach Charlie Pane at cap295@cornell.edu.

PRESENTATIONS

BlockBuster Survey Protocol – Jonathan Rosenthal and Radka Wildova: Ecological Research Institute

Jonathan Rosenthal and Radka Wildova from the Ecological Research Institute gave a presentation about how they designed this year's BlockBuster Survey protocol. They first started by assessing the feedback gathered from when the BlockBuster Survey program started in 2015. It was determined that the protocol needed to be made to be more scientific and user-friendly. Volunteer involvement in the BlockBuster Survey program will increase community participating in the Lower Hudson PRISM through recruitment, outreach and educational tools.

Jonathan took the floor to explain protocol design. The hope it will help discern the PRISM-wide gross distributions of the focal species. The design will help assess the HPA's (high probability area) as sources and corridors for proliferation and spread of focal species, and identify the penetration of focal species into natural areas -- the potential impact is greatest for these areas, and detection can yield on-site management responses. And analyzing the broad patterns of invasion to natural areas by particular focal species can aid in prioritizing species management. The protocol was also designed to document

the absence of focal species in potential Invasive Species Prevention Zones (ISPZ's). This absence data can be yielded by establishing rigorous protocol with well-trained surveyors, and this is especially important for determining possible ISPZ's.

The protocol design was broken down into two aspects: site selection and surveying protocol. There are four different types of survey options based on site selection of multi-use areas. The surveying protocol design also addresses how data is reported. For example, emerging species require more documentation (e.g. photos) to confirm a positive identification. Mapping and exercise phone applications were used to document territory visited, and these applications tend to be the best things to track the route traveled.

Site selection uses the BlockBuster gridlines to spread surveying efforts across the Lower Hudson PRISM region. There were four types of sites, and surveyors are required to do at least one of each of the following sites: HPA, Natural Area Trail, and Natural Area Trailhead Parking Lot. While Opportunistic surveys are optional.

HPA (high probability area) sites where invasive species are presumably most likely to occur. Examples of HPAs are roadsides, powerlines, lot edges, etc., and these are likely to reveal presence and absence data in a block and thus show gross regional distributions. Surveyors select their block's HPAs based on their local knowledge.

The Natural Area surveys allow for us to determine how much our focal invasive species have penetrated into parks and preserves by revealing already present threats. Surveyors are given discretion to survey a trail of their choice. A survey is then done for the Natural Area Trailhead Parking Lot of that selected Natural Area survey. This survey approach can reveal threats on the doorstep of natural areas. The data comparison of the Trailhead Parking Lot to the interior of the Natural Area can reveal the natural area's resistance to invasion.

Radka then took the floor to explain the justification of how this protocol would produce valid data. The species accumulation curve (number of invasives present) typically plateaus after 300 meters, and you've found all the species you're going to find along that path. An exception of this would be a change of habitat, which could add 1-2 species. The invasive species distribution in the blocks shows that urban settings tend to have high levels of invasion. In a comparison of different HPA surveys, it was found that malls and railroads have the highest levels of invasion, and powerlines were on the lower side of invasion. The next steps for the Lower Hudson PRISM are to analyze the data provided by the BlockBuster Survey program and to tweak the protocol, forms and training as needed based on feedback from our 2016 survey season.

CAP INVASIVES CALENDAR: COMMUNITY ACTION PLAN FOR MANAGING INVASIVE SPECIES

Next, Nicole Wooten from Hudson Highlands Land Trust took the floor to give us updates on the phenological calendar project. This is a tool for reminders and alerts about the lifecycle of invasive species in our area. It was developed based on information collection from LHP partners about when our 27 focal terrestrial invasive plants are sprouting, blooming, germinating, etc. The calendar itself is a Google Calendar layer that will be available for use among partners and shared with those we work with.

The Google Calendar layer includes layers for each species and then individual sightings that can be added as flags by LHP partners. If you click on a layer, you will have a brief description of when to pull the plant, attached with a link on identification and management. These layers can be altered to best fit the life cycles of invasive plants in our region. The link attached to each layer will take you to page tailored to the life stage that plant is in based on when you selected the species within the calendar. So far, the dirty dozen invasive species have been added, and Nicole is working on adding the rest of our 27 focal terrestrial invasives. The phenological calendar will be public and editable.

REVIEW OF 2017 PROPOSED ACTION PLAN

The comments made during our September partner meeting for our 2017 action plan are available in the September meeting minutes. Our steering committee designed the 2017 action plan based on those comments. Linda asked partners: If there is anything you'd like to work on that is not represented in this action plan, please ask for it to be added. We will discuss modifications and vote on the action plan after lunch.

LUNCH BREAK & NETWORKING

WORKING GROUPS

The LHPRISM partners broke into groups divided by the 6 goals to review the 2017 action plan and suggest working groups to be formed. Each group then shared their recommended changes to the action plan and what working groups they thought should form. (See Appendix 1).

We then called a vote to approve the updated action plan. The plan was approved: 30 yays, 0 nays, and 2 abstentions.

The final 2017 action plan is posted on our web site at:

<http://www.lhprism.org/document/2017-lhprism-action-plan>

BEST MANAGEMENT PRACTICES PROJECT

Erik Kiviat from Hudsonia gave a presentation about the work he is doing on the Best Management Practices (BMP) project. This project focuses on best use practices that are non-herbicidal, classical biological controls. The BMPs being gathered emphasize nonchemical methods for small-scale management of certain species. Herbicides are not necessarily effective and require follow up monitoring; timing for herbicidal treatments can be crucial based on treatment and application time during the growing season.

It is important to set reasonable and realistic goals since sometimes resources and time needed for management are often unrealistic. Another aspect to keep in mind with management is cost benefit analysis when setting goals. This should be done estimating the negative impact the species has on a habitat's value at your site, and whether it has a good chance of returning to a natural community following treatment and removal. We need to document our management practices more for analysis and improvement.

A majority of invasive species respond favorably to any sort of soil disturbance, canopy disturbance and overabundant deer. Removal of invasive species under these conditions or if removal causes these conditions may be counterproductive. For example, *Ailanthus* is wind-dispersed and needs a bare soil canopy environment; removals on a slope could invite an *Ailanthus* invasion.

For several species, biological control agents may be approved within the next 1-3 years. Classical biological control is being developed for widespread invasives in our area including mile-a-minute, purple loosestrife, phragmites, Japanese knotweed, garlic mustard, and water chestnut. When thinking about landscape and a longer time frame, you have to consider biological controls. Improper treatment often worsens the problem. For example, for some perennial species, cutting them back once a year, or even three times a year will only make the plants grow more vigorously (even after multiple years of treatment.)

Most control methods focus on herbicides. There is a lot less literature about what happens if your herbicidal treatment doesn't work as intended or if you have non-target impacts on other plants or animals. It is important that we begin documenting our treatment efforts the best we can, so we can

learn what works best and also learn from what doesn't work at all. Regulators and policy makers need this information, so we can have a better shot of being successful.

Best Management Practices Species List

Norway maple (<i>Acer platanoides</i>)	Purple loosestrife (<i>Lythrum salicaria</i>)
Tree-of-heaven (<i>Ailanthus altissima</i>)	Japanese stilt-grass (<i>Microstegium vimineum</i>)
Garlic mustard (<i>Alliaria petiolata</i>)	Mile-a-minute (<i>Persicaria perfoliata</i>)
Japanese barberry (<i>Berberis thunbergii</i>)	Common reed (<i>Phragmites australis</i>)
Oriental bittersweet (<i>Celastrus orbiculatus</i>)	Knotweeds (<i>Polygonum cuspidatum</i> and <i>P. x bohemica</i>)
Black swallow-wort (<i>Cynanchum louiseae</i>)	Multiflora rose (<i>Rosa multiflora</i>)
Smooth buckthorn (<i>Frangula alnus</i>)	Water-chestnut (<i>Trapa natans</i>)
Bell's honeysuckle (<i>Lonicera x bella</i>)	

HYDRILLA SURVEYING AND TUBER MONITORING

Chris Doyle from SOLitude Lake Management presented about the *Hydrilla* Delineation and Tuber Monitoring at Black Rock Park along the Croton River. The goals of this project were to conduct point intercept SAV (submerged aquatic vegetation) mapping at Black Rock Park, conduct tuber monitoring, collect *Hydrilla* voucher specimens.

The *Hydrilla* project began with a point intercept aquatic plant survey where two rake tosses were done at each site. This was developed by ACEO and modified by Cornell; the methodology was accepted by the NYSDEC and was based off of the Cayuga Inlet protocols. A rake toss survey is done by dragging a rake in the water and then accessing the plant mass density of the amount of plant matter pulled. Plant mass densities are assigned using the following criteria: no plants, trace, sparse, medium or dense.

In 2014, 29 sites were sampled at Black Rock Park in August using a 40-meter grid, and 12 different aquatic plants were found; 18 of the 29 sites had *Hydrilla*. During the 2014 field sampling, water milfoil was the dominant plant. In 2016, 93 sites were sampled in October using a 20-meter grid. The 20-meter grid will allow for the 2014 data to be directly compared to the 2016 data. *Hydrilla* was flowering at the time of the October field sampling. 93 sites were sampled, and 16 different aquatic

plants were found. In 2016, *Hydrilla* was the dominant aquatic plant and was found at 87% of the sites (81 of 91 sites.) *Hydrilla* was more common than water milfoil. 54% of the sites had medium or dense rake toss plant mass densities.

Tuber monitoring began in 2015, where 2 sites at Black Rock Park were monitored. The monitoring was done in partnership with North Carolina State University and as a part of the Hudson SAV mapping. In 2016, 6 sites were selected for tuber monitoring; 4 of these sites were new and 2 are the same sites monitored from 2015. 3 core samples were taken from each site. The data analysis revealed that tuber counts (per square meter) increased threefold from 2015 to 2016. 2015 counts were in the 100's to 200's, and 2016 counts ranged from 500-2000 tubers per square meter. *Hydrilla* monitoring at Black Rock Park will need continue for at least six years as treatments progress.

2016 AQUATIC PROGRAM FINAL REPORT

Samantha Epstein from Hudson River Sloop Clearwater gave an overview presentation of the 2016 aquatic program. The program has three main aspects: the watercraft inspection steward program, education and outreach, and volunteer training and surveying.

The watercraft inspection steward program began in 2015, where there were 2 stewards working 2 days a week at the Croton and Staatsburg boat launches. In 2016, the program had 3 stewards working 4 days a week at the Haverstraw, Newburgh and Staatsburg boat launches. In 2017, the program will have 4 stewards plus 1 traveling/lead steward working 3 days a week at the Staatsburg boat launch as well as 3 permanent locations and 4 traveling locations to be determined.

In 2015, the watercraft inspection steward program inspected 792 boats. 94% of boaters were willing to participate, 4.7% of boats had hitchhikers, 50.3% of boaters knew about invasives and 63.5% of boaters took precautions to clean their boats. In 2016, 1,317 boats were inspected and the stewards spoke with 3,300 boaters (not including passersby.) The Haverstraw launch was a very quiet boat launch.

The education and outreach program reached 2,700 people. There were 13 tabling events, 7 presentations, 8 trainings, 1 invasive species removals, and 10 workshops. The program worked to refine the education materials created last year. The Aquatic Invasive Species trainings trained 52 surveyors. The program is currently looking for new places to hold trainings. Surveying was done at 40 different locations; Beacon, Croton, Fishkill, Haverstraw and Peekskill were surveyed along the Hudson River, and inland water bodies were surveyed in Dutchess, Orange, Putnam, Rockland, Ulster and Westchester counties.

Funding for the 2016 Aquatic Invasives Program was provided by the Lower Hudson PRISM (53.8%) and the NYSDEC (46.2%). Funding for 2017 will be provided by the Lower Hudson PRISM (January-March 36%), the NYSDEC AIS Spread Prevention Program (19%), and the US Fish and Wildlife ANS Management Plan (45%).

CONCLUSION

The next meeting will be on Thursday, January 26th, 2017 at CCE Rockland in Stony Point, NY

LHP Partner Meeting Schedule for 2017:

Thursday, January 26, 2017	Cornell Cooperative Extension Rockland, Stony Point, NY
Tuesday, March 21, 2017	Teatown Lake Reservation, Ossining, NY
Wednesday, July 26, 2017	Orange County Land Trust, Mountainville, NY
Thursday, September 28, 2017	Scenic Hudson's Rivercenter, Beacon, NY
Wednesday, November 15, 2017	Teatown Lake Reservation, Ossining, NY

Notes written by: Heather Darley

ATTENDEES:

Amy Karpati	Teatown Lake Reservation
Andy Thompson	
Bob DeTorto	Bronx River Parkway Reservation Conservancy
Carol Capobianco	Native Plant Center
Carrie Sears	The Invasives Project – Pound Ridge
Charlie Pane	CCE Rockland County
Chris Doyle	SOLitude Lake Management
Christopher Mangels	Consultant
David Decker	Audubon NY

Diane Alden	Friends of Old Croton Aqueduct
Emily Mayer	SOLitude Lake Management
Eric Roberts	Orange County Land Trust
Erika Boetsch	NYCDEP
Erik Kiviat	Hudsonia
George Profous	NYSDEC
Heather Darley	New York – New Jersey Trail Conference
Hillary Siener	Teatown Lake Reservation
Jen Stengle	CCE Putnam County
Jessica Schuler	New York Botanical Garden
Jonathan Rosenthal	Ecological Research Institute
Kali Bird	Hike NY
Karalyn Lamb	Saw Mill River Audubon
Katie Terlizzi	Black Rock Forest Consortium
Krista Munger	Pound Ridge Land Conservancy
Kristen MacFarlane	Wave Hill
Lauri Taylor	Putnam County Soil & Water
Linda Rohleder	Lower Hudson PRISM Coordinator
Lizzie Triano	Master Gardener – Putnam County
Mary Rice	Friends of the Great Swamp
Matt Aiello-Lammens	Pace University
Meredith Taylor	NYCDEP
Mike Fargione	Cary Institute for Ecosystem Studies
Naja Kraus	NYSDEC
Nate Nardi-Cyrus	Scenic Hudson
Nicole Wooten	Hudson Highlands Land Trust
Radka Wildova	Ecological Research Institute
Samanatha Epstein	Hudson River Sloop Clearwater
Tait Johansson	Bedford Audubon
Taro Ietaka	Rye Nature Center
Tate Bushell	Westchester Land Trust
Tierney Rosenstock	Winnakee Land Trust

Tim Wenskus	NYC Parks/Natural Areas Conservancy
Tom Lewis	Trillium Invasive Species Management

Appendix 1: Working groups

- Publicity – Carrie Sears, Janis Butler, Charlie Pane, Heather Darley,...
- Conservation Targets – Tate Bushell, Jonathan Rosenthal, Eric Roberts, Tom Lewis, Matt Aiello-Lammens,...
- Rapid Response Plan – Tom Lewis, Chris Doyle,...
- Education & Outreach – Carol Capobianco, Jen Stengle, Lauri Taylor, Hillary Siener, George Profous, ...
- Advocating for listing additional prohibited/regulated species in Part 575 – Tierney Rosenstock, Jessica Schuler, Tait Johansson
- Summit (group to form in January/February) – Daniel Atha, Tim Wenskus, ...
- Website – Charlie Pane, Samantha Epstein, Kristen MacFarlane, Colleen Lutz,...