Northeastern IPM Center – IPM Partnership Grants – 2010 – Proposal
Project Description

PD(s): Eleanor Groden, Professor of Entomology, School of Biology and Ecology, University of Maine
Lois Berg Stack, Extension Professor, Ornamental Horticulture Specialist, Cooperative Extension, University of Maine

Project Title: Establishing an **IPM Working Group On Invasive Species** for New England and New York

Project Type: IPM Working Group

b. Project Summary

Invasive plant and animal species have caused considerable problems in both natural and managed landscapes, with resulting damage, losses, and efforts to manage them estimated to cost the United States economy over $120 billion per year (Pimentel et al. 2005). These problems do not conform to political boundaries, and are thus best addressed with interstate coordination. Regional efforts to address invasive species in the NE have generally been fragmented by target species, taxa, or ecosystems impacted with little coordination across species and taxa or between the many instate and regional groups working on these issues. Individual states and the NE region could benefit greatly from more coordination among the individuals, agencies and organizations working in this area, both within and among states. Because of the shared geographic characteristics (including climate, landscape and land-use features) in New England and parts of New York, it will be most productive for those working with invasive species in these states to coordinate and assess the threats to this subregion. This project will establish an IPM Working Group (IWG) on Invasive Species for New England and New York in order to exchange information among the states on within state coordination of invasive species efforts via councils, advisory boards and/or networks, and assist each other with instate coordination efforts and assessing the needs of stakeholders within individual states. The IWG will then prioritize specific regional IPM outreach and research needs for invasive species that reflect the input from each of the state invasive species councils.

c. Background and Justification.

Invasive plant and animal species have been responsible for considerable problems in both natural and managed landscapes, with resulting damage, losses, and efforts to manage them estimated to cost the United States economy over $120 billion per year (Pimentel et al. 2005). In agricultural systems alone, it has been estimated that about one fourth of the country's agricultural gross natural product is lost each year to foreign plant pests and the costs of controlling them (Schmitz and Simberloff 1997). Currently, most of our federal, state and many private and local agencies involved in managing lands have established programs to address the myriad of issues associated with research, prevention and management of invasive species (Simberloff and Schmitz. 1999). Although many of the program goals and activities of private and public groups have common or similar objectives, and there is frequently some coordination

among groups addressing the same problem species, there are a considerable number of individuals and groups whose activities and efforts have not benefited from collaborations, or have only had limited connections with others dealing with similar issues. Regional efforts to address these problems in the NE have generally been fragmented by target species, taxa, or ecosystems impacted, with little coordination across species and taxa. However, many of the approaches for monitoring, management, and research, but particularly outreach and public education, of invasive species are common across taxa and ecosystems. We feel that our individual states and the NE region could benefit greatly from more coordination among the individuals, agencies and organizations working in this area, both within states and among states. As these issues deal directly with the management of pestiferous species, the Northeast IPM Center is an appropriate organization to facilitate development of a framework across the region for more coordinated activities, including information sharing, assessment of priorities, and collaboration on research, monitoring, management and outreach efforts.

The U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), with their mission to protect the health and value of American agriculture and natural resources, work with states to monitor and survey federally quarantined invasive pests and regulate the interstate transport of goods associated with those species. With growing public concern and state responsibilities for regulation and enforcement, several states have now formed their own invasive species councils or advisory boards. Some of these address concerns of all invasive species and some are limited to invasive plants only. One of Maine's groups, for example, focuses specifically on invasive aquatic plant species. Some of these groups are regulatory, others advisory, still others educational; some serve multiple functions. Most represent a combination of individuals working with state agencies, private conservation groups, University/Land Grant research scientists and extension faculty, industry representatives and others. Such groups in the NE states include:

STATE COUNCILS/ADVISORY BOARDS/NETWORKS:

Connecticut: Connecticut Invasive Plant Council
http://www.hort.uconn.edu/cipwg/news/news.html

Delaware: Delaware Invasive Species Council (DISC)
http://www.delawareinvasives.net/home

District of Columbia: none known

Maine: Maine Invasive Species Network (MISN): Individuals across organizations within the state of Maine who work with invasive species, first convened in October 2009.

Maryland: Maryland Invasive Species Council (MISC)
http://www.mdinvasivesp.org/about_misc.html

Massachusetts: Massachusetts Invasive Plant Advisory Group (MIPAG)
http://www.massnrc.org/MIPAG/
Massachusetts Aquatic Invasive Species Working Group:
http://www.mass.gov/czm/invasives/

New Hampshire: Invasive Species Committee
http://www.nh.gov/agric/divisions/plant_industry/plants_insects.htm

New Jersey: New Jersey Invasive Species Council - The purpose of this Council is to develop uniform policies and coordinate a response to the threat of invasive plant and animal species in our state

New York: New York Invasive Species Council and Advisory Committee
http://nyis.info/
Pennsylvania: Pennsylvania Invasive Species Council
http://www.invasivespeciescouncil.com/HomeHistory.aspx
Rhode Island: The Rhode Island Invasive Species Council is an outreach program of the Rhode Island Natural History Survey, The Rhode Island Agricultural Experiment Station, and The University of Rhode Island Cooperative Extension.
http://www.rinhs.org/what-we-do/invasives/riisc/
Vermont: *Vermont* Invasive Exotic Plant Committee

Regional Councils/Advisory boards/Collaborative Working Groups:
Mid-Atlantic: Mid-Atlantic Exotic Pest Plant Council (MA-EPPC) provides regional leadership to effectively address the threat of invasive plants to the native flora, fauna, and natural habitats of the Mid-Atlantic. The council coordinates regional efforts to gather and share information on the identification, management and prevention of invasive species, provide training and volunteer opportunities and to identify research needs. The Council is represented by members from Delaware, Maryland, New Jersey, Pennsylvania, Virginia, West Virginia, and the District of Columbia.
New England: Invasive Plant Atlas of New England (IPANE)
http://nbii-nin.ciesin.columbia.edu/ipane/index.htm

WITHIN STATE COORDINATION:
The level of coordination of individuals within states and the role of the councils/advisory boards/networks varies with each state. Most take on an educational role through the maintenance of a website distributing information on issues of concern within the state, activities within the state, and links to other projects and information on invasive species. Most also provided leadership in development of definitions and lists of species of concern for the state, whether regulated or not. For many of the states, the interests in coordinating activities and providing outreach information on invasive species originated with specific concerns for invasive plants, both terrestrial and aquatic. With concerns for Asian long-horned beetles, emerald ash borers, hemlock wooly adelgid, and now several invasive marine crabs, several states' councils address all invasive species. The success of these organizations in capturing the diversity of interests and activities focused on invasive species within their state probably varies based on the membership of the councils/advisory boards and their funding bases. New York state has established a particularly effective within-state organization of groups working with invasive species issues through their interconnected New York Invasive Species Research Institute (NYISRI) (a state-sponsored institute located at Cornell University with the mission of coordinating research to prevent and manage the impacts of invasive species), the New York Invasive Species Clearinghouse (Cornell Cooperative Extension and New York Sea Grant outreach and coordinating arm for all information regarding invasive species), and the Partnerships for Regional Invasive Species Management (PRISMs) (regional groups coordinated through Cornell Cooperative Extension's Invasive Species Program, which coordinates invasive species management functions within seven regions of the state). This well networked approach may serve as a good model for the regional coordination of efforts in New England.

In Maine, several state agencies and individuals contribute on a national level to invasive species issues, including Ann Gibbs (State Horticulturist with the Maine Dept. of Agriculture, Food and Rural Resources) who is currently serving on the National Invasive Species Advisory Council and the National Plant Board; and scientists in the Maine Dept. of Forestry and Dept. of Agriculture, Food and Rural Resources who are involved in regional and national monitoring efforts for forest pests (Asian longhorned beetles, emerald ash borer, and others). In addition, many Maine scientists, land managers and educators work on projects involved in the research, monitoring, management and education about invasive species. However, Maine does not have a comprehensive invasive species council or advisory board. We compiled a database of as many individuals and organizations in the state that we could verify were working with invasive species (See appendix A), and queried all this in fall 2009 to determine their interest in participating in a state network/council. A meeting was convened of individuals interested in participating in the Maine Invasive Species Network (MISN) in October 2009 (See Appendix B for list of attendees and agenda) in which stakeholders from a variety of organizations shared with others their work and interests with invasive species. It was particularly striking that nearly half of the people we contacted, attended the October event, and that many individuals who did attend the event commented that they had met fewer than 25% of the attendees previously. Areas that were identified as needs and suggested for future activities to be coordinated via MISN included:

1. collaboration and sharing of resources and material for outreach and public education programs;
2. coordination of volunteer activities and training programs;
3. establishment of priority species lists and areas for research and management; and
4. sharing of information and updates via an annual meeting and a website and/or blog.

The educators, managers and researchers who attended this first MISN meeting felt that they would benefit from the above activities. Discussions were also initiated on databases and programs for tracking and mapping the spread of invasive species. Many Maine individuals have vouchered the locations of invasive terrestrial plants into a regional program, the Invasive Plant Atlas of New England (IPANE), and participants expressed a desire for development of a similar state or regional map for invasive animals and other organisms.

BETWEEN STATE (REGIONAL) COORDINATION:

Coordination of invasive species efforts among NE states appears to thus far be of two models. First, many collaborative efforts focus primarily on invasive plants. The Invasive Plant Atlas of New England (IPANE; http://nbii-nin.ciesin.columbia.edu/ipane), coordinated through the University of Connecticut, trains a large group of trained volunteers to generate extensive maps of invasive terrestrial plants in the region. The data are used to support research projects, develop management strategies, raise public awareness and educate the general public. The Mid Atlantic Exotic Plant Pest Council (MA-EPPC; http://www.ma-eppc.org) coordinates regional efforts for DE, MD, NJ, PA, VA, WV and the District of Columbia. MA-EPPC coordinates regional efforts to identify, prevent, and remove invasive exotic plants.

Second, many collaborative regional projects address threats posed by individual invasive species (e.g., Hemlock Wooly Adelgid and Asian longhorned beetle,). These have largely been

coordinated by the U.S. Forest Service and/or other federal agencies such as USDA-APHIS.

Some U.S. states, such as New York, have taken a very comprehensive and coordinated approach to addressing invasive species issues and activities of all taxa and ecosystems within their boundaries, but these comprehensive efforts have not developed in New England.

The USDA-NE region from West Virginia to Maine includes a continuum of geographic conditions. Within that region, the New England states share many attributes that greatly impact establishment and spread of specific invasive species, including climate conditions, landscape and land use. These attributes limit the success of some invasive species found in the mid-Atlantic region, such as wavy leaved basket grass (*Oplismenus hirtellus*) but contribute to the success of others, such as the European fire ant *(Myrmica rubra)* that thrives in northern climates. New York, being a large, diverse state, has some regions with conditions similar to those of the New England states, and other regions in which the geography is more similar to its southern and western neighbors. The fact that efforts to track the spread of invasive plants in the NE region appears to be split between IPANE in New England and MAEPPC in the mid-Atlantic states probably reflects the somewhat different threats to the two subregions due to their geographic differences (although there are of course common problems thoughout the NE region). Because of the shared geographic characteristics (including climate, landscape and land-use features) in New England and parts of New York, it will be most productive for those working with invasive species in these states to consider the specific invasive species threats to the area and the research and outreach efforts needed to address these threats, as well as coordinate subsequent activities aimed at addressing common problems.

References:

Pimentel, D., R. Zuniga, and D. Morrison. 2005. Update on the environmental and economic costs associated with alien-invasive species in the United States. Ecological Economics. 52:273-88.

Schmitz, D. C., and D. Simberloff. 1997. Biological invasions: A growing threat. Issues in Science and Technology 13(4): 33-40.

Simberloff, Daniel, and Don C. Schmitz. 1999. Update: As invasive species threat intensifies, U.S. steps up fight. Issues in Science and Technology 15(3).

d. Objectives and Anticipated Impacts.

This project proposes the following objectives:

1. To establish an IPM Working Group (IWG) on Invasive Species for New England and New York.
   Anticipated Impacts: Researchers, outreach/extension educators and managers from seven states will meet. They will increase their awareness of work being done in other states, across taxa, disciplines, organizations and methods.
2. To exchange information among IWG members and evaluate current models for within state coordination of invasive species efforts via councils, advisory boards and/or networks.
   Anticipated Impacts: Researchers, outreach/extension educators and managers from the seven states will increase their awareness of other states' organizational structures. Representatives from states without current organizational structures will learn from other states' experience, and return home with information that will enable them to

implement councils/advisory boards/networks.

3. To assist within-state coordination efforts for participating states.
   Anticipated Impacts: Researchers, outreach/extension educators and managers will learn methods by which groups are formed, the various forms and responsibilities of those groups, and the groups' scope and mission. All participants will learn what each of the other states is doing, and will learn new ideas to incorporate into their in-state organizations, whether new or existing.
4. To identify and prioritize specific regional IPM outreach and research needs for invasive species that reflect the input from each of the state invasive species councils.
   Anticipated Impact: Researchers, outreach/extension educators and managers from all seven states will compare their needs from their individual states, and develop a prioritized list of research/outreach/management needs for the seven-state region.

e. Approach and Procedures.

Objective 1: To establish an IPM Working Group (IWG) on Invasive Species for New England and New York.

Project directors (PDs) will work with primary contact people in each state to develop a list of two collaborators per state. This group of 14 people will meet as the IWG in summer 2010. These collaborators will represent a diversity of stakeholders (researchers, extension educators, IPM practitioners, state and federal agencies employees and environmental group professionals. One individual from each state will represent the state's land grant institution. PDs will organize an initial face-to-face full-day meeting of the IWG at a central location within the region to exchange information and discuss current organizations and coordination models (i.e. councils, advisory boards and networks) for within-state activities pertaining to the identification, mapping, monitoring, research, management, and education on invasive species.
IWG membership to be completed by April 30, 2010.

Objective 2: To exchange information among IWG members and evaluate current models for within-state coordination of invasive species efforts via councils, advisory boards and/or networks.

IWG members will share information about successful models and programs in their states, and where appropriate and needed, work with state groups to advance their coordinating efforts. IWG members from Maine, for example, will likely share updates of the MISN database, discuss progress on MISN's website, and ask IWG colleagues for suggestions on defining MISN's mission and goals.

Project PDs will work with other IWG members to compile a document that:

1. outlines potential structures for states that do not currently have invasive species research/outreach groups;
2. describes actions that might be accomplished by such groups, following protocol that would support future integration of data from all seven states.

Face-to-face meeting of IWG will be schedule during June 2010.
Document for potential structures for in-state stakeholder organizations will be completed by early Fall 2010.

Objective 3: To assist within-state coordination efforts for participating states.

Each collaborating state will be provided with funds to facilitate communication among

stakeholders within each state. These funds might be used for partial support of a within-state meeting (virtual or face-to-face) or other electronic networking. This support will lead to either establishment of an in-state organization in the states where no such organization currently exists, or to the incorporation of ideas generated by the IWG in those states with pre-existing organizations.
Fall 2010 – January 2011.

Objective 4: To identify and prioritize specific regional IPM outreach and research needs for invasive species that reflect the input from each of the state invasive species councils.

Following the face-to-face IWG meeting, the IWG will hold a virtual meeting to discuss common methodologies for surveying stakeholders (invasive species councils, advisory boards, networks) with each state. Members will then communicate with stakeholders within their state to assess outreach and research needs to address problems associated with IPM of invasive species within the state. The IWG will convene a second virtual meeting to exchange survey results and identify priorities and needs for research and outreach activities on invasive species that are shared across New England. Finalization of the list of priorities will be accomplished via e-mail.
Within state networking: Fall 2010 – January 2011.
IWG Video conference: September 2010, January 2011.
List of New England and New York priorities for invasive species IPM will be prepared January 2011-March 2011.

f. Evaluation Plans

Objectives of this project will be evaluated as follows. See logic model included in the Appendices.

Objective 1: To establish an IPM Working Group (IWG) on Invasive Species for New England and New York.

This objective will be achieved if two representatives from each of the seven states are selected, and if the face-to-face meeting at a central location is held.

Objective 2: To exchange information among IWG members and evaluate current models for within-state coordination of invasive species efforts via councils, advisory boards and/or networks.

A survey will be conducted in the summary session of the face-to-face meeting to assess participants' increase in awareness of other states' organizational structures, and whether participants from states without current organizational structures learned from other states' experience. An email survey conducted at the end of the grant cycle will determine if IWG members took part in efforts to implement councils/advisory boards/networks within their home states.

Objective 3: To assist within-state coordination efforts for participating states.

IGW members will be surveyed near the end of the grant cycle to determine if they used the provided funding to support communication within their home states, whether this communication led to establishment of a new in-state organization or to the incorporation of ideas generated by the IWG into an existing organization.

Objective 4: To identify and prioritize specific regional IPM outreach and research needs for invasive species that reflect the input from each of the state invasive species councils.

At the end of the first virtual meeting, participants will report the groups within their states whose input they plan to solicit. At the start of the second virtual meeting, participants will report which groups were successfully contacted, and which groups provided input to the process. At the end of the second virtual meeting, a list of prioritized regional IPM outreach and research needs will be compiled.

g. Cooperation, Institutional Units, and Key Personnel Involved.

The **University of Maine is the lead institution** on this project and **project directors**, **E. Groden, and L. Stack**, and their administrative assistant at UMaine (Ms. Jennifer Lund), will organize the establishment of the IPM working group and their meetings, the follow-up communications between the group, and the compilation of outputs (priorities for the region). Collaborators include individuals from the following institutional units from each of the New England states and New York, and will assist the project directors in the selection of an additional working group member from each of the collaborating states. The working group members will represent the **stakeholders in each state, which include members of the state invasive species councils, advisory boards, and/or networks and other public and private individuals, groups and organizations working with invasive species within the participating states**, and develop priorities for IPM extension and research programs for invasive species in New England and New York.

Collaborators, who have all provided supporting letters stating their willingness to participate on the IPM working group for invasive species (see attached letters) include:

Massachusetts: Randall G. Prostak Extension Specialist UMass Extension Landscape, Nursery and Urban Forestry, University of Massachusetts

New Hampshire: Douglas Cygan, Invasive Species Coordinator, **New Hampshire Department of Agriculture**, Markets & Food, Plant Industry Division

New York: Holly L. Menninger, Ph.D., Coordinator, NY Invasive Species Research Institute, Senior Extension Associate, **Cornell University**

Charles R. O'Neill, Jr., Sr. Extension Specialist, Director, NY Invasive Species Clearinghouse, Coordinator, Cornell Invasive Species Program, **Cornell University**

Rhode Island: Richard A. Casagrande, Professor of Entomology, Department of Plant Sciences, **University of Rhode Island**

Vermont: Sharon Plumb, Invasive Species Coordinator, **The Nature Conservancy of Vermont**

(For **Connecticut:** Initial contacts have been made (Mark Brand, Professor of Ornamental Horticulture, University of Connecticut; and Les Mehrhoff, Director of Invasive Plant Atlas of New England, University of Connecticut), but the final decision of primary collaborator has not yet been determined. For **Maine:** PDs, Groden and Stack will serve on the Working Group)

Maine Invasive Species Network Members November 2009

Attended Mtg?	Last Name	First Name	Stakeholder Category	Organization	Title	Department/Program/Unit
N	Alyokhin	Andrei	Researcher/Univ Faculty/Staff	University of Maine	Associate Professor of Applied Entomology	School of Biology and Ecology
N	Arnett	Amy	Researcher/Univ Faculty/Staff	Unity College	Professor of Ecology	
N	Auger	Michael	Non-Governmental Organization	Androscoggin Land Trust	Director of Land Protection and Steward Group	
Y	Bohlen	Curtis	Collaboration (Federal, State, NGO, Municipalities, Business and Public Sector, Educational Institutions)	Casco Bay Estuary Partnership	Director	University of Maine, Muskie School
Y	Bostwick	Richard	State Government	Maine Department of Transportation	Supervisor of Field Services	Environmental Office
Y	Bourgoin	Terry	Federal Government	U.S. Department of Agriculture	State Plant Health Director	APHIS Plant Protection and Quarantine
N	Cameron	Don	State Government	Maine Department of Conservation	Botanist/Ecologist	Maine Natural Areas Program
Y	Coats	Vanessa	Researcher	University of Maine	Graduate Research Assistant	Department of Biochemistry, Microbiology, and Molecular Biology
Y	Coluzzi	Karen	State Government	Maine Department of Agriculture	State Survey Coordinator, Cooperative Agricultural Pest Survey (CAPS)	Division of Plant Industry
N	Crowe	John	Federal Government	U.S. Department of Agriculture	Pest Survey Specialist	APHIS PPQ
Y	D'Auria	Danielle	State Government	Maine Department of Inland Fisheries and Wildlife	Wildlife Biologist	Bird Group
Y	Dayton	Alexa	Non-Governmental Organization	Gulf of Maine Research Institute	Vital Signs Community Specialist	Vital Signs Program
Y	Dembeck	Joe	State Government	Maine Department of Inland Fisheries and Wildlife	Fisheries Management Supervisor	
Y	Dill	James	Cooperative Extension	UMaine Cooperative Extension	Pest Management Specialist	Insect and Plant Disease Diagnostic Laboratory
N	Donahue	Charlene	State Government	Maine Forest Service	Forest Entomologist	Insect & Disease Laboratory
Y	Finlayson	Christy	Researcher/Univ Faculty/Staff	University of Maine	Postdoctoral Research Associate	School of Biology and Ecology
Y	Fish	Gary	State Government	Maine Board of Pesticides Control	Program Manager, Pesticide Programs	Maine Department of Agriculture
Y	Geng	Fang	Researcher	University of Maine	Ph.D. Student	Department of Plant, Soil, and Environmental Sciences
Y	Gibbs	Ann	State Government	Maine Department of Agriculture	State Horticulturalist	
Y	Goettel	Beth	Federal Government	U.S. Fish and Wildlife Service	Refuge Manager	Maine Coastal Islands National Wildlife Refuge
Y	Gregory	Paul	State Government	Maine Department of Environmental Protection	Environmental Specialist	
Y	Groden	Eleanor	Researcher/Univ Faculty/Staff	University of Maine	Professor of Entomology	School of Biology and Ecology
N	Hadlock Seeley	Robin	Researcher/Univ Faculty/Staff	Cornell University	Assistant Director for Academic Advising; Senior Research Associate	Shoals Marine Laboratory
Y	Hahnel	Karen	State Government	Maine Department of Environmental Protection	Environmental Specialist	Bureau of Land and Water Quality
Y	Hazen Connery	Judy	Federal Government	National Park Service	Natural Resource Specialist (Park IPM and Acting Vegetation Program Coordinator)	Acadia National Park
Y	Hill	Roberta	Non-Governmental Organization	Maine Volunteer Lake Monitoring Program Center for Invasive Aquatic Plants	Program Director	
Y	Hopper	Colin	Student		Law Student	
Y	Kanoti	Allison	State Government	Maine Forest Service	Forest Entomologist	Insect & Disease Laboratory
Y	Kinsman	Sharon	Researcher/Univ Faculty/Staff	Bates College	Associate Professor of Biology	Department of Biology
N	Kirn	Sarah	Non-Governmental Organization	Gulf of Maine Research Institute	Program Manager	Vital Signs Program
Y	Kolodnicki	Bill	Federal Government	U.S. Fish and Wildlife Service	Refuge Manager	Moosehorn National Wildlife Refuge
N	Lary	Sandra	Federal Government	U.S. Fish and Wildlife Service	Senior Fishery Biologist	Gulf of Maine Coastal Program
Y	Latty	Erika	Researcher/Univ Faculty/Staff	Unity College	Assistant Professor of Botany	
Y	Lickus	Mark	State Government	Maine Department of Transportation	Environmental Scientist/Project Manager	Environmental Office
Y	Lilieholm	Rob	Researcher/Univ Faculty/Staff	University of Maine	Associate Professor	School of Forest Resources
Y	Livingston	Bill	Researcher/Univ Faculty/Staff	University of Maine	Associate Professor of Forest Resources	School of Forest Resources
N	Loftin	Cyndy	Researcher/Univ Faculty/Staff	University of Maine	Assistant Unit Leader-Wildlife and Associate Professor	USGS Maine Cooperative Fish and Wildlife Research Unit
Y	Lund	Jen	Researcher/Univ Faculty/Staff	University of Maine	Instructor and Laboratory Technician	School of Biology and Ecology
Y	Lyle	Betty	Federal Government	National Park Service		
Y	Mays	Jonathan	State Government	Maine Department of Inland Fisheries and Wildlife	Wildlife Biologist	
Y	McKeage	Aleta	Federal Government	National Park Service	Lead Biological Technician	Acadia National Park
Y	McNaught	Doug	Researcher/Univ Faculty/Staff	University of Maine at Machias	Assistant Professor of Marine Ecology	
Y	McPhedran	John	State Government	Maine Department of Environmental Protection	Biologist	Bureau of Land and Water Quality
N	Mehrhoff	Leslie	Researcher/Univ Faculty/Staff	University of Connecticut	Director, Invasive Plant Atlas of New England	Ecology and Evolutionary Biology Department
Y	Michaud	Sylvia	Non-Governmental Organization	Pine Tree State Arboretum	Arboretum Volunteer	
Y	Miller	Kate	Federal Government	National Park Service	Plant Ecologist	Acadia National Park
Y	Mills	Maurice	Federal Government	U.S. Fish and Wildlife Service	Wildlife Biologist	Moosehorn National Wildlife Refuge
Y	Moosmann	Robert	State Government	Maine Department of Transportation	Statewide Vegetation Manager	Bureau of Maintenance and Operations
N	Murray	Kathy	State Government	Maine Department of Agriculture	IPM Entomologist	Food and Rural Resources
Y	Norden	Wendy	Researcher/Univ Faculty/Staff	University of Maine at Machias	Assistant Research Professor of Marine Conservation Science	
Y	Oliveri	Steve	Non-Governmental Organization	Pine Tree State Arboretum	Executive Director	
Y	Phillippi	Aimee	Researcher/Univ Faculty/Staff	Unity College	Assistant Professor of Conservation Biology/Director of the Center for Biodiversity	
N	Ranco	Darren	Researcher/Univ Faculty/Staff	University of Maine	Associate Professor of Anthropology	
Y	Rawinski	Thomas	Federal Government	U.S. Department of Agriculture	Botanist	Forest Service
Y	Rumpho	Mary	Researcher/Univ Faculty/Staff	University of Maine	Professor of Biochemistry	Department of Biochemistry, Microbiology, and Molecular Biology
Y	Schultz	Hillary	Non-Governmental Organization	Pine Tree State Arboretum	Arboretum Board of Directors	
Y	Sferra	Nancy	Non-Governmental Organization	The Nature Conservancy	Director of Science and Stewardship	Maine Chapter
Y	Slemmons	Caleb	Researcher/Univ Faculty/Staff	University of Maine	Research Assistant	School of Marine Science
N	St. Hilaire	Lisa	State Government	Maine Department of Conservation	Information Manager	Maine Natural Areas Program
Y	Stack	Lois	Cooperative Extension	University of Maine	Horticulture Specialist	Cooperative Extension
N	Stone	Judy	Researcher/Univ Faculty/Staff	Colby College	Associate Professor of Biology	Department of Biology
N	Treanor	Sarah	Researcher	University of Connecticut	IPANE Volunteer Coordinator; PhD Student	Invasive Plant Atlas of New England
Y	Zhang	Donglin	Researcher/Univ Faculty/Staff	University of Maine	Associate Professor of Ornamental Horticulture	Department of Plant, Soil, and Environmental Sciences

Meeting Agenda

Considerations for a Maine Invasive Species Network (MISN):

Statewide Management, Monitoring, and Research Needs and Collaborations

October 21st, 2009

Pine Tree State Arboretum, 153 Hospital Street, Augusta, ME

8:00 am - 9:00 am	Poster and Display Set-Up
9:00 am - 9:40 am	Welcome and Introductions Ellie Groden, School of Biology and Ecology, University of Maine
9:40 am - 10:00 am	"National Invasive Species Council: Overview, Goals, and Accomplishments" Ann Gibbs, Maine Department of Agriculture, Food and Rural Resources, and the National Invasive Species Advisory Committee
10:00 am - 11:00 am	Poster and Information-Sharing Session I: Research and Monitoring
11:00 am - 12:00 pm	"Managing Purple Loosestrife and Other Exotic Plants in Acadia National Park" Judy Hazen Connery, Acadia National Park
	"Biosurveillance for Emerald Ash Borer in Maine" Allison Kanoti, Maine Forest Service
	"Building and Managing an Invasive Species Network and Database" Les Mehrhoff, University of Connecticut & Invasive Plant Atlas of New England Lois Berg Stack, University of Maine Cooperative Extension
12:00 pm - 12:30 pm	Lunch
12:30 pm - 1:30 pm	Poster and Information-Sharing Session II: Education and Management
1:30 pm - 2:45 pm	Addressing Invasive Species in Maine I: - Summary of Needs Expressed in Questionnaires - Brainstorming Session to Identify & Prioritize Goals Necessary to Address Needs
2:45 pm - 3:00 pm	Break
3:00 pm - 3:30 pm	Addressing Invasive Species in Maine II: - Brainstorming Session to Match Goals with Resources and Actions
3:30 pm - 4:00 pm	Conclusions, Next Steps, and Closing Remarks

SHARE YOUR INTEREST IN INVASIVES
DISPLAY YOUR INFORMATION AT THE MISN MEETING!

Responses from attendees have indicated an interest in developing collaborations. Please consider bringing posters, handouts, brochures, etc., showcasing your work. Please let us know the format of your materials (handouts, brochures, poster/size/freestanding, etc.) so that we can prepare appropriate display equipment.

Meeting Co-organizers: Christy Finlayson and Ellie Groden, University of Maine, School of Biology and Ecology, and Lois Berg Stack, Mary Rumpho-Kennedy, and Donglin Zhang, University of Maine/New England Invasive Plant Center.

Contact Information:
Christy Finlayson
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This meeting is being sponsored by:

New England Invasive Plant Center (http://www.invasivecenter.uconn.edu/)

University of Maine Cooperative Extension (http://www.umext.maine.edu/)

University of Maine School of Biology and Ecology (http://biology.umaine.edu/)

Maine Agricultural Center (http://www.mac.umaine.edu/)

New England Grows! (http://www.newenglandgrows.org/)

Directions

The Pine Tree State Arboretum
153 Hospital Street, Augusta, Maine 04330
(207) 621-0031

From I-95 North: Take the new Augusta/Belfast Exit # 113. Proceed east straight through traffic light and over the new bridge crossing the Kennebec River. After the bridge, at the traffic light, turn right onto Route 201 South. Follow directions below from Routes 201, 202 - East bank of the Kennebec River.

From 1-95 South: Take the Augusta-Winthrop-202 Exit # 109 (Western Avenue); head east towards Augusta on Western Avenue to the rotary. Go 180 degrees around rotary to the 2nd exit. Go over the Memorial Bridge crossing the Kennebec. At the next rotary, take the first, immediate exit onto Stone Street. Follow Stone Street though the lights (now Hospital Street). The turn to the Arboretum's Visitors Center is approximately 0.7 mile past the lights on the left.

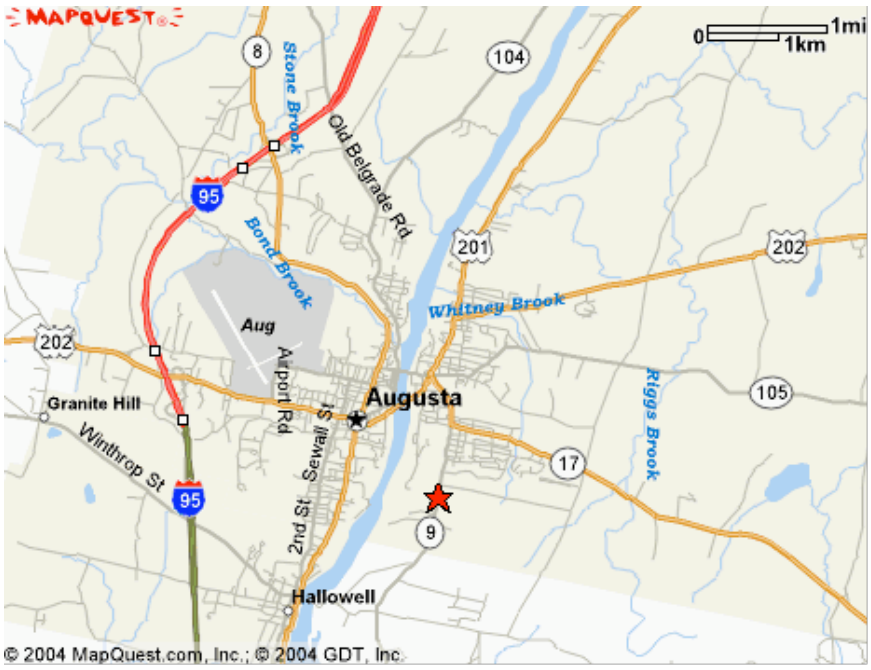
From Gardiner: Follow Route 201 North to the light at the Gardiner Bridge. Go across the bridge into Randolph. Turn left at the light. (Follow directions below from Randolph.

From Randolph: Follow Route 9 East towards Augusta. The turn for the Arboretum's Visitors Center is on the right hand side about 5 miles from the intersection of Routes 126, 27, and 9.

From Routes 201, 202, (from the East bank of the Kennebec River): Follow signs to Augusta. Take the 3rd exit off the Cony Rotary onto Stone Street (Route 9). Go up hill and straight through the traffic lights. The turn to the Arboretum's Visitors Center is approximately 0.7 mile past the lights on the left.

From Belgrade Lakes Area: Follow Route 27, approximately 2 miles past the Civic Center. Turn left onto Bond Street at the Cumberland Farms on the left. Turn right at the end of Bond Street. Turn left at the lights (1/4 mile) and cross the Kennebec River on the Father Curran Bridge. Go up the hill to the rotary. Go 1/2 way around the rotary to the 2nd exit. Follow Stone Street through the traffic lights (approximately 1/2 mile). The turn to the Arboretum's Visitors Center is about 0.7 mile up on the left.

From Route 17: Follow Route 17 west to the traffic lights at the intersection of Stone and Hospital Streets, (where Route 17 turns right). Turn left at the traffic light onto Hospital Street. Stay on Hospital Street and the turn to the Arboretum's Visitors Center is approximately 0.7 mile up on the left.



Program: Invasive Species Working Group Logic Model
Situation:

Inputs	Outputs		Outcomes -- Impact		
	Activities	*Participation*	*Short*	*Medium*	*Long*
Funding: · Grant funds · Matching funds People: · 2 PDs (Groden, Stack) · 6 primary state contact people representing multiple agencies in New England states plus New York · 14 members of the IPM Working Group	Identification of IWG members by PDs and 6 primary state contact people	2 PDs and 6 primary state contact people	Identification of 14 members of IWG		
	Face-to-face meeting of IWG	IWG members (14 people from 7 states)	Gain knowledge of successful models and programs in each state	Document outlining (1) potential structures for state without current invasive species research/outreach groups and (2) list of actions that such groups could accomplish	In-state communication among stakeholders to establish structure, or incorporate ideas generated by the IWG into existing structures
	Virtual meeting #1 of IWG	IWG members (14 people from 7 states)	List of methods for surveying stakeholders in each state	IWG members survey stakeholders in their states to assess outreach and research needs.	
	Virtual meeting #2 of IWG	IWG members (14 people from 7 states)	Survey results from the participating states are shared	Research and outreach needs shared by New England states and NY are prioritized	Prioritized list of research and outreach needs for New England and New York are shared with NE-IPM

Assumptions
Invasive species problems are increasing; invasive species problems are largely shared by the states involved; expertise exists in the involved states to identify and prioritize research and outreach needs; we can achieve common goals more effectively by working together.

External Factors
Structural and economic restrictions suggest a great need for collaboration; programs and agencies outside of region offer excellent models; continual influx of invasive species into the region requires constant vigilance and updating of both base documents and outcomes of this project (this project must be ongoing to be effective)