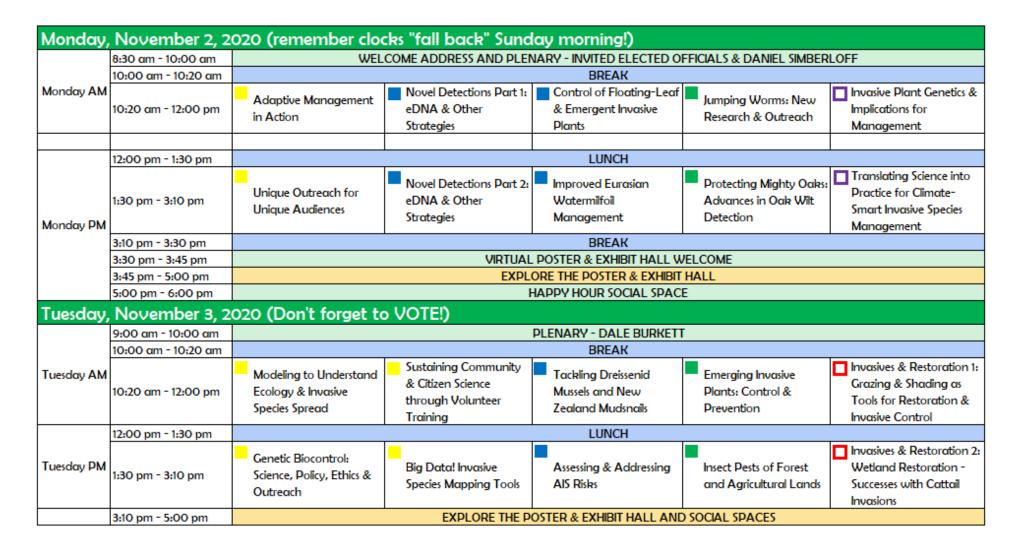
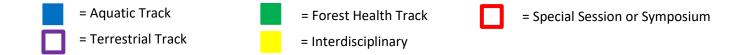
## Pathways to Success: Partnerships & Purpose At-a-Glance Schedule and Full Program (9/29/2020)

#### **Note: All times are Central Standard Time**

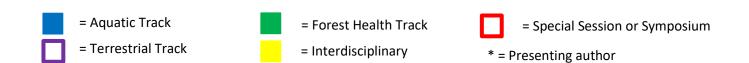






## **Note: All times are Central Standard Time**

Wedneso	lay, November	4, 2020				
T GGITGJC	9:00 am - 10:00 am	PLENARY - MAMIE PARKER				
Wednesday AM	10:00 am - 10:20 am	BREAK				
	10:20 am - 12:00 pm	Cooperative Invasive Species Management Area Round-Table	WORKSHOP: Why Diversity, Equity & Inclusion are Vital to Conservation Goals	Ballast Water: New Policies, Actions & Findings	Legends of Forest Health: New Answers to Old Questions	Invasives & Restoration 3: Terrestrial Restoration - Successes & Pollinator Benefits
	12:00 pm - 1:30 pm			LUNCH		
Wednesday PM	1:30 pm - 3:10 pm	WORKSHOP: Bringing Divergent Views Together with Open Space Meetings	Why the Words we Use Matter	Boater Behavior: From Theory to Practice	Using Herbicides to Improve Management of Invasive Plants, Part 1	Invasives & Restoration 4: Lessons Learned - Planning & Improving Future Restorations
	3:10 pm - 5:00 pm	EXPLORE THE POSTER & EXHIBIT HALL AND SOCIAL SPACES				
Thursday, November 5, 2020						
Thursday	8:30 am - 10:10 am	Phragmites Symposium Part 1: Current Approaches to Management	Organisms in Trade: Fostering Responsible Businesses	Using Herbicides to Improve Management of Invasive Plants, Part 2	☐ WIGL Summit 1: Welcome to WIGL - Who, What, Where, Why & How?	
AM	10:10 am - 10:30 am	BREAK				
AW	10:30 am - 12:10 pm	Phragmites Symposium Part 2: Future Directions for Research & Management	Organisms in Trade: Fostering Responsible Consumers	Diversity, Equity, Inclusion & Justice: Change-makers in the Midwest	☐ WIGL Summit 2: The Importance of Biology in Managing Woody Species	
Thursday PM	12:10 pm - 1:30 pm	LUNCH				
	1:30 pm - 3:10 pm	Invasive Carp: Modeling and Collaboration	Promoting Behavior Change for Invasive Species Prevention	Diversity, Equity, Inclusion & Justice: Conversations about Racism in Conservation	WIGL Summit 3: The Trade Pathway - When Good Plants Go Bad	
	3:10 pm - 5:00 pm	EXPLORE THE POSTER & EXHIBIT HALL AND SOCIAL SPACES				





## **Note: All times are Central Standard Time**

Friday, N	November 6, 20	20			
	8:30 am - 10:10 am	Right-of-Way Invasive Plant Management	Regulatory Toolbox for Invasive Species Prevention & Management	Biological Control of Forest Pests	WIGL Summit 4: Integrated Strategies for Woody Invasive Control
Friday AM	10:10 am - 10:30 am	BREAK			
Triody Aim	10:30 am - 12:10 pm	On our Radar: New Invasive Plant Threats to the Upper Midwest	WORKSHOP: R Statistical Software for Invasive Species Applications	Silvicultural Responses to Invasive Species	WIGL Summit 5: Herbicide Use to Control Woody Invasive Species
	12:10 pm - 1:30 pm	LUNCH			
Friday PM	1:30 pm - 3:10 pm	Landscape Scale  Management  Approaches	Lessons Learned in Starry Stonewort Management		WIGL Summit 6: Public Perceptions & Engagement to be Part of the Solution!
	3:10 pm - 3:30 pm				■ WIGL Summit Wrap-up & Next Steps!





# Full Program - Plenaries, Concurrent Sessions, Symposia, and Workshops Monday, November 2, 2020 (all times are CST)

#### **WELCOME PLENARY**

#### 8:30AM Opening remarks will be provided by:

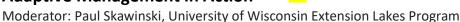
UMISC Program Co-Chair Doug Jensen, Duluth Mayor Emily Larson, and Minnesota Governor Tim Walz (invited)

#### 9:00AM The State of Invasive Species Science in 2020 and Beyond

Dr. Daniel Simberloff, Gore Hunger Professor of Environmental Science, University of Tennessee - Knoxville

#### MORNING CONCURRENT SESSIONS

#### **Adaptive Management in Action**



Session Sponsor: University of Minnesota Extension

#### 10:20AM Revising Minnesota's Invasive Species Management Plan: What Are Your Thoughts?

Chelsey Blanke\*<sup>1</sup>, James Calkins <sup>2</sup>, Doug Jensen <sup>3</sup>; Byron Karns <sup>4</sup>, Sascha Lodge <sup>1</sup>, Cori Mattke <sup>5</sup>, Kelly Pennington <sup>1</sup>, Katie Sickmann <sup>6</sup>; <sup>1</sup> Minnesota Department of Natural Resources; <sup>2</sup> Minnesota Nursery and Landscape Association; <sup>3</sup> University of Minnesota Sea Grant Program; <sup>4</sup> National Park Service - St. Croix National Scenic Riverway; <sup>5</sup> Minnesota Aquatic Invasive Species Research Center; <sup>6</sup> St. Croix River Association

**10:40AM Development, Implementation, & Evaluation of Michigan's Red Swamp Crayfish Adaptive Response Plan**Lucas Nathan\*<sup>1</sup>, Seth Herbst <sup>1</sup>, Brian Roth <sup>2</sup>, Kelley Smith <sup>2</sup>, Sara Thomas <sup>1</sup>; <sup>1</sup> Michigan Department of Natural Resources; <sup>2</sup>
Michigan State University

**11:00AM** Using Impact Collaborative Innovation to Forecast Terrestrial Invasive Species Priorities in Minnesota Matthew Russell\*<sup>1</sup>, Angela Gupta <sup>2</sup>, Regina McGoff <sup>2</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> University of Minnesota Extension

11:20AM AIS Rapid Response in Pennsylvania: Case studies of Successes and Lessons Learned Sara Stahlman, Pennsylvania Sea Grant

11:40AM Extended Panel Discussion/Q&A

## Novel Detections: eDNA & Other Strategies - Part 1



Moderator:

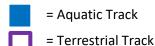
Session Sponsor: Minnesota Aquatic Invasive Species Research Center

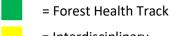
#### 10:20AM AIS and Boating Access Sites: A Study of Michigan's Inland Lakes

Christina Baugher, Michigan Department of Natural Resources

#### 10:40AM Sampling Design for Early Detection of Invasive Plants in Great Lakes Ports

Andrew Tucker\*<sup>1</sup>, Lindsay Chadderton <sup>1</sup>, Erick Elgin <sup>2</sup>, Gust Annis <sup>1</sup>, Joel Hoffman <sup>3</sup>; <sup>1</sup>The Nature Conservancy; <sup>2</sup> Michigan State University Extension; <sup>3</sup> U.S. Environmental Protection Agency Office of Research and Development









Monday, November 2, 2020 - Morning Concurrent Sessions, cont.

#### 11:00AM DNA Meta-Barcoding-Based Identification of Fish Larvae for Invasive Species Early Detection

Joel Hoffman\*<sup>1</sup>, Christy Meredith <sup>2</sup>, Erik Pilgrim <sup>1</sup>, Anett Trebitz <sup>1</sup>, Chelsea Hatzenbuhler <sup>1</sup>, John Russell Kelly <sup>1</sup>; <sup>1</sup> U.S. Environmental Protection Agency Office of Research and Development; <sup>2</sup> Montana Department of Environmental Quality

#### 11:20AM AIS Aerial Detection Pilot Project

Tony Brough, Hennepin County, Minnesota, Jim Hughes, Laetitia Moreau

#### 11:40AM Survey 123 for Fisheries Data Collection: Benefits Realized and Lessons Learned

Grace Loppnow, U.S. Fish and Wildlife Service

#### **Control of Floating-Leaf & Emergent Invasive Plants**



Moderator: Meg Duhr, University of Minnesota Session Sponsors: 4-Control, Inc. & Nutrien Solutions

#### 10:20AM Update on Promising Biological Control Options for Flowering Rush (Butomus umbellatus)

Jennifer Andreas\*<sup>1</sup>, Patrick Haefliger <sup>2</sup>, Hariet Hinz <sup>2</sup>; <sup>1</sup> University of Washington Extension; <sup>2</sup> CABI

#### 10:40AM The Phenology of Flowering Rush (Butomus umbellatus) in the Western United States

John Madsen\*, USDA - Agricultural Research Service, Kurt Getsinger, U.S. Army - Engineer Research and Development Center

#### 11:00AM European Frogbit - An Emerging Concern in the Great Lakes Region

Mark Warman\* and Jennifer Hillmer, Cleveland Metroparks

#### 11:20AM Glyceria maxima (Gly-max) Eradication in a Wisconsin Lacustrine Wetland

Kyle Duquaine, Eco-Resource Consulting, Inc.

#### 11:40AM Successful Removal of Yellow Floating Heart (Nymphoides peltata)

Chris Hamerla, Golden Sands RC&D Council, Inc.

#### **Jumping Worms: New Research & Outreach**



Moderator: Erin Buchholz, University of Minnesota

Session Sponsor: Minnesota Invasive Terrestrial Plants and Pests Center

#### 10:20AM Jumping Worms: Impacts, Identification, Actions, and Public Outreach

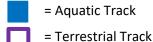
Laura Van Riper\*, Minnesota Department of Natural Resources, Angela Gupta, University of Minnesota Extension

#### 10:40AM Jumping Worms: Become a Worm Ranger!

Ryan Hueffmeier\* and Stephan Carlson, University of Minnesota

#### 11:00AM Jumping Worms - Ecology and Management Research

Lee Frelich\*, Yoo Kyungsoo, Tyler Baumann, Shuai Yang, Erin Buchholz, University of Minnesota









Monday, November 2, 2020 - Morning Concurrent Sessions, cont.

11:20AM Response of two Pheretimoid Earthworms, *Amynthas tokioensis* and *A. agrestis*, to Different Litter Types Bradley Herrick\* and Marie Johnston, University of Wisconsin - Madison Arboretum

11:40AM Extended Panel Discussion/Q&A

## Invasive Plant Genetics & Implications for Management

Moderator:

Session Sponsor: Minnesota Invasive Terrestrial Plants and Pests Center

#### 10:20AM Diversity and Introgression of Knotweed (Fallopia spp.) in Minnesota

Dallas Drazan\*, Alan Smith, Neil Anderson, Roger Becker, Matt Clark, Andrzej Noyszewski, Marie Abbey, University of Minnesota

#### 10:40AM Improvements in Genetic Testing for the Identification of Palmer Amaranth in Seed Mixtures

Anthony Brusa\*<sup>1</sup>, Eric Patterson <sup>2</sup>, Todd Gaines <sup>3</sup>, Philip Westra <sup>3</sup>, Don Wyse <sup>1</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> University of Michigan; <sup>3</sup> Colorado State University

# 11:00AM Regional Patterns of Reed Canarygrass (*Phalaris arundinacea* L.) Genetic Structure along Six Major Minnesota Rivers

Andrzej Noyszewski\*<sup>1</sup>, Neil Anderson <sup>1</sup>, Alan Smith <sup>1</sup>, Andrzej Killan <sup>2</sup>, Diana Dalbotton <sup>3</sup>, Emi Ito <sup>1</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> Diversity Arrays Technology; <sup>3</sup> St. Anthony Falls Laboratory

# **11:20AM Trait Based Approach Showing Variations of Reed Canarygrass along Urbanization Gradient** Leah Weston\*<sup>1</sup>, Charles Day <sup>2</sup>, Stephen Hovick <sup>1</sup>; <sup>1</sup>The Ohio State University; <sup>2</sup> Cornell University

11:40AM Extended Panel Discussion/Q&A

#### AFTERNOON CONCURRENT SESSIONS

## **Unique Outreach for Unique Audiences**



Moderator: Megan Weber, University of Minnesota Extension

Sessions Sponsor: Minnesota SeaGrant, Wisconsin Department of Natural Resources

#### 1:30PM Don't Pack a Pest for Academic Travelers - Minnesota

Doug Jensen\*<sup>1</sup>, John Vreyens<sup>2</sup>, Sam Chan<sup>3</sup>, Tania Siemens<sup>3</sup>; <sup>1</sup> University of Minnesota Sea Grant Program; <sup>2</sup> University of Minnesota Extension Global Initiatives; <sup>3</sup> Oregon State University Sea Grant Extension

# 1:50PM A Survey of Practitioners of Buddhist "Life Release" Residing in the United States and how such Information may lead to Reducing Invasion Risk

Tim Campbell\*<sup>1</sup>, Bret Shaw <sup>2</sup>, Evelyn Hammond <sup>3</sup>, Luye Bao <sup>2</sup>, Shiyu Yang <sup>2</sup>, Peter Jurich <sup>2</sup>; <sup>1</sup> University of Wisconsin Sea Grant; <sup>2</sup> University of Wisconsin Department of Life Science Communication; <sup>3</sup> University of Wisconsin Division of Extension



= Aquatic Track



= Forest Health Track



= Special Session or Symposium

= Terrestrial Track = Interdisciplinary

\* = Presenting author



Monday, November 2, 2020 - Afternoon Concurrent Sessions, cont.

#### 2:10PM Invasive Species Outreach to Waterfowl Hunters and Furbearer Trappers

Chris Hamerla, Golden Sands RC&D Council, Inc.

# 2:30PM Managing Aquatic Plants Together: Programs and Policies to Support Collaborative Natural Resource Management

Alison Mikulyuk\*, Madison Johansen, Michelle Nault, Wisconsin Department of Natural Resources

#### 2:50PM Fostering Informed Consumers of Aquatic Invasive Species Management

Megan Weber\*, Daniel Larkin, Patrick Mulcahy, University of Minnesota

#### Novel Detections: eDNA & Other Strategies - Part 2

Moderator: Courtney Larson, University of Minnesota - Duluth

#### 1:30PM Dispersal Dynamic and Recruitment of a Freshwater Invader using Otolith Chemistry

Olivier Morissette\*<sup>1</sup>, Frédéric Lecomte <sup>1</sup>, Nathalie Vachon <sup>1</sup>, Annick Drouin <sup>1</sup>, Pascal Sirois <sup>2</sup> <sup>1</sup> Ministère des Forêts, de la Faune et des Parcs; <sup>2</sup> Université du Québec à Chicoutimi

#### 1:50PM Spatial Comparison of eDNA vs. Physical Fish Data from a Complex Freshwater Estuary

Anett Trebitz\*, Chelsea Hatzenbuhler, Joel Hoffman. Jon Barge, Greg Peterson, Erik Pilgrim, U.S. Environmental Protection Agency Office of Research and Development

#### 2:10PM Tracking the Invasion Front of Round Goby using eDNA and Traditional Methods

Scott George\*<sup>1</sup>, Barry Baldigo <sup>1</sup>, Christopher Rees <sup>2</sup>, Meredith Bartron <sup>2</sup>; <sup>1</sup> U.S. Geological Survey; <sup>2</sup> U.S. Fish and Wildlife Service

#### 2:30PM eDNA for Early Detection of AIS: Where are We and Where are We Going?

Justin Townsend, Ramsey County Parks

2:50PM Extended Panel Discussion/Q&A

## Improved Eurasian Watermilfoil Management



Moderator:

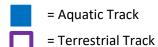
Session Sponsor: Minnesota Aquatic Invasive Species Research Center

#### 1:30PM Advancements in Eurasian Watermilfoil Research and Management in Wisconsin

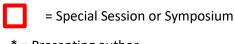
Michelle Nault, Wisconsin Department of Natural Resources

#### 1:50PM Assessment of Two Large-Scale ProcellaCOR EC Treatments in Northern Indiana

Reid Morehouse\*<sup>1</sup>, Willey Leif<sup>2</sup>, Mark Heilman<sup>1</sup>; <sup>1</sup>SePRO; <sup>2</sup>Aquatic Control









Monday, November 2, 2020 - Afternoon Concurrent Sessions, cont.

# 2:10PM In-lake Evaluation of Florpyrauxifen-benzyl (ProcellaCOR) on Invasive Hybrid Watermilfoil in a Central Minnesota Lake

Keegan Lund\*, Kylie Cattoor\*, April Londo, Minnesota Department of Natural Resources

2:30PM Integrating Genetics and Herbicide Studies to Improve Watermilfoil Management Outcomes

Ryan Thum\*<sup>1</sup>, Gregory Chorak <sup>1</sup>, Raymond Newman <sup>2</sup>, Jo Latimore <sup>3</sup>, Erick Elgin <sup>3</sup>; <sup>1</sup> Montana State University; <sup>2</sup> University of Minnesota; <sup>3</sup> Michigan State University

2:50PM Extended Panel Discussion/Q&A

#### **Protecting Mighty Oaks: Advances in Oak Wilt Detection**



Moderator: Eli Sagor, University of Minnesota - Cloquet Forestry Center

Session Sponsors: Invasive Species Centre, Minnesota Invasive Terrestrial Plants and Pests Center

#### 1:30PM Spectral Reflectance Detects Oak Wilt Decline in Oaks at the Landscape Scale

Gerard Sapes\*<sup>1</sup>, Cathleen Lapadat <sup>1</sup>, Jennifer Juzwik <sup>2</sup>, Rebecca Montgomery <sup>1</sup>, Nanfeng Liu <sup>3</sup>, Phillip Townsend <sup>3</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> USDA Forest Service; <sup>3</sup> University of Wisconsin - Madison

1:50PM Seasonal and Regional Distributions, Degree-Day Models, and Phoresy Rates of the Major Sap Beetle (Coleoptera: Nitidulidae), Vectors of the Oak Wilt Fungus, *Bretziella fagacearum*, in Wisconsin

Stephanie Jentz\*<sup>1</sup>, Jennifer Juzwik <sup>2</sup>, Patrick Tobin <sup>3</sup>, Kenneth Raffa <sup>4</sup>; <sup>1</sup> Wisconsin Department of Agriculture and Consumer Protection; <sup>2</sup> USDA Forest Service; <sup>3</sup> University of Washington; <sup>4</sup> University of Wisconsin - Madison (emeritus)

#### 2:10PM Novel Rapid Detection Technology for Oak Wilt Disease

Vinni Thekkudan Novi\*<sup>1</sup>, Melanie Moore <sup>2</sup>, Quichen Dong <sup>1</sup>, Jennifer Juzwik <sup>2</sup>, Abdennour Abbas <sup>1</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> USDA Forest Service

2:30PM Oak Wilt Outreach in Ontario: A Model for Educating Communities on Invasive Species

Mackenzie DiGasparro, Invasive Species Centre

2:50PM Extended Panel Discussion/Q&A

## **Translating Science into Practice for Climate-Smart Invasive Species Management**

Moderator: Julie Weisenhorn, University of Minnesota Extension

Session Sponsor: University of Minnesota Extension

1:30PM Translational Invasion Ecology: Bridging Research and Practice to Address One of the Greatest Drivers of Global Change

Toni Lyn Morelli\*<sup>1</sup>, Carrie Brown-Lima <sup>2</sup>, Jenica Allen <sup>3</sup>, Audrey Barker Plotkin <sup>4</sup>, Evelyn Beaury <sup>4</sup>, Emily Fusco <sup>4</sup>, Bridget Griffin <sup>4</sup>, Brittany Laginhas <sup>4</sup>, Lara Munro <sup>4</sup>, Bethany Bradley <sup>4</sup>; <sup>1</sup> U.S. Geological Survey; <sup>2</sup> New York Invasive Species Research Institute; <sup>3</sup> Mount Holyoke College; <sup>4</sup> University of Massachusetts - Amherst

= Aquatic Track

= Terrestrial Track







Monday, November 2, 2020 - Afternoon Concurrent Sessions, cont.

1:50PM Biological Control Programs as a Model of Translational Invasion Research Carrie Brown-Lima, New York Invasive Species Research Institute

**2:10PM Resilient and Connected: Our Vision for Protecting Biodiversity** *Shaun Howard, The Nature Conservancy* 

**2:30PM Stakeholder-Driven Tools for Visualizing and Listing Climate-Driven Range Shifts in Terrestrial Invasive Plants**Jenica Allen\*<sup>1</sup>, Jeff Garnas <sup>2</sup>, Chuck Bargeron <sup>3</sup>, Joseph LaForest <sup>3</sup>, Bethany Bradley <sup>4</sup>; <sup>1</sup> Mount Holyoke College; <sup>2</sup> University of New Hampshire; <sup>3</sup> University of Georgia; <sup>4</sup> University of Massachusetts - Amherst

2:50PM Building a Regional Collaboration of Northeast State Invasive Species Councils to Proactively Address Range-Shifting Invasive Plants

Bethany Bradley\*<sup>1</sup>, Carrie Brown-Lima <sup>2</sup>, Toni Lyn Morelli <sup>3</sup>, Jenica Allen <sup>4</sup>, Evelyn Beaury <sup>1</sup>, Emily Fusco <sup>4</sup>, Brittany Laginhas <sup>1</sup>; <sup>1</sup> University of Massachusetts - Amherst; <sup>2</sup> New York Invasive Species Research Institute; <sup>3</sup> U.S. Geological Survey; <sup>4</sup> Mount Holyoke College







## Tuesday, November 3, 2020 (Election Day, U.S.) (all times are CST)

#### MORNING PLENARY

#### 9:00AM Opening remarks and announcements will be provided by:

Clair Ryan, UMISC Administrative Lead and Mark Renz, UMISC Program Co-Chair

#### 9:10AM Actions Taken and Lessons Learned Along the Journey: Six Decades of Sea Lamprey Control

Dale P. Burkett, Sea Lamprey Control Director, Great Lakes Fishery Commission

#### MORNING CONCURRENT SESSIONS

### Modeling to Understand Ecology & Invasive Species Spread

Moderator:

Session Sponsor: Minnesota Invasive Terrestrial Plants and Pests Center

#### 10:20AM Developing Phenological Models to Improve Management of Pesky Plants

Rebecca Montgomery\*, Abigail Anderson, Byju Govindan, Stephan Carlson; University of Minnesota

## 10:40AM Assessing Eastern U.S. Forest Susceptibility to Four Invasive Insect Pests in the Context of Landscape Connectivity

Jason Reinhardt\* and Matthew Russell; University of Minnesota

#### 11:00AM Making Better MaxEnt Models for Invasive Species

Amy Morey\*; University of Minnesota, Rob Venette; USDA Forest Service and University of Minnesota

# 11:20AM Improving Predictions of Range Expansion for Invasive Species using Joint Species Distribution Models and Surrogate Co-occurring Species

Ryan Briscoe Runquist\*, Thomas Lake, David Moeller; University of Minnesota

#### 11:40AM Terrestrial Eutrophication and Afforestation as Major Driver of Invasion

Stephen Thomforde; Stantec Consulting Environmental Services

## **Sustaining Community & Citizen Science through Volunteer Training**



Moderator: Anne Pearce, University of Wisconsin - Madison

Session Sponsor: University of Minnesota Extension

#### 10:20AM Invasive Species and Community Action

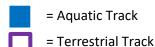
Lauren Bell; Invasive Species Centre

#### 10:40AM Managing Invasive Species with the Help of Citizen Scientists and Experienced Mentors

Christopher Gaetzke; Lower Chippewa Invasives Partnership, Inc.

#### 11:00AM EmpowerU: Energizing Citizens with the Skills to Affect Change in their Communities

Gail Epping Overholt\*1, Anne Pearce\*2; 1 University of Wisconsin - Arboretum, 2 University of Wisconsin - Madison







\* = Presenting author



Tuesday, November 3, 2020 - Morning Concurrent Sessions, cont.

11:20AM Online Volunteer Program: Increasing Accessibility, Flexibility, and Engagement in Rural Communities Lindsay Peterson; Wild Rivers Invasive Species Coalition (WRISC)

#### 11:40AM Successfully Inheriting an Invasive Species Outreach Program

Rachel Carroll\*, Rebekah Wallace, Chuck Bargeron; University of Georgia

#### Tackling Dreissenid Mussels and New Zealand Mudsnails

Moderator: Megan Weber, University of Minnesota Extension

#### 10:20AM Lake Michigan Quagga Mussel (Dreissena rostriformis bugensis) Control Demonstration Project

Erika Jensen\*<sup>1</sup>, Doug Bradley <sup>2</sup>, Harvey Bootsma <sup>3</sup>, Vincent Denef <sup>4</sup>, Kathryn Schmidt <sup>4</sup>, Brenda Moraska Lafrancois <sup>5</sup>; <sup>1</sup> Great Lakes Commission; <sup>2</sup> LimnoTech; <sup>3</sup> University of Wisconsin - Milwaukee; <sup>4</sup> University of Michigan; <sup>5</sup> National Park Service

#### 10:40AM Eradicating Invasive Mollusks (Dreissena and NZMS) when Fish are Present

David Hammond\*, EarthTec QZ, Gavin Ferris, Solitude Lake Management, Inc.

#### 11:00AM Field Studies on Low-dose Copper Treatments for Dreissenid Mussel Control

Angelique Dahlberg\*<sup>1</sup>, Diane Waller<sup>2</sup>, James Luoma<sup>2</sup>, Nicholas Phelps<sup>1</sup>, Matthew Barbour<sup>2</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> U.S. Geological Survey

#### 11:20AM The Great Lakes New Zealand Mud Snail Collaborative

Jeremy Geist; Trout Unlimited, Inc.

#### 11:40AM Conservation Dogs Locate AIS Infestations: A Collaborative Project Overview

Amy Wagnitz\* and Laura Holder; Midwest Conservation Dogs, Inc.

## **Emerging Invasive Plants: Control & Prevention**



Moderator:

Session Sponsor: Wisconsin Department of Agriculture, Trade and Consumer Protection

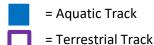
#### 10:20AM Japanese Stiltgrass (Microstegium vimineum) Management in Southern Indiana

Emily Finch; Dubois County Soil & Water Conservation District

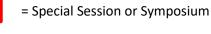
**10:40AM** EDDMapS Pro Mapping Applications Aid in Early Detection and Rapid Response to Potential Pest Threats *Tricia Bethke; The Morton Arboretum* 

#### 11:00AM Biocontrol of Tree of Heaven (Ailanthus altissima) in an Integrated Management Plan

Francesca Marini\*<sup>1</sup>, Massimo Cristofaro <sup>1</sup>, Enrico de Lillo <sup>2</sup>, Radmila Petanović <sup>3</sup>, René Sforza <sup>4</sup>, Biljana Vidović <sup>3</sup>, Philip Weyl <sup>5</sup>; <sup>1</sup> Biotechnological and Biological Control Agency; <sup>2</sup> University of Bari Aldo Moro; <sup>3</sup> University of Belgrade; <sup>4</sup> USDA-ARS European Biological Control Laboratory; <sup>5</sup> CABI









Tuesday, November 3, 2020 - Morning Concurrent Sessions, cont.

11:20AM NAISMA Certified Weed Free Mulch Standards: A New Tool for a Critical Invasive Species Pathway Elizabeth Brown\* and Belle Bergner; North American Invasive Species Management Association

11:40AM Extended Panel Discussion/Q&A

# Invasives & Restoration 1: Grazing & Shading as Tools for Restoration & Invasive Control Moderator: Justin Townsend, Ramsey County, MN

Session Sponsor: Minnesota Invasive Terrestrial Plants and Pests Center

#### 10:20AM Cover it Up! Four Years of Restoring Herbs to Control Common Buckthorn

Peter Wragg\*<sup>1</sup>, Michael Schuster <sup>1</sup>, Lee Frelich <sup>1</sup>, Alex Roth <sup>2</sup>, Paul Bockenstedt <sup>3</sup>, Shawn Schottler <sup>4</sup>, Mike Goodnature <sup>5</sup>, Paul Kortebein <sup>6</sup>, Peter Reich <sup>1</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> Friends of the Mississippi River; <sup>3</sup> Stantec; <sup>4</sup> St. Croix Watershed Research Station; <sup>5</sup> Ramsey County; <sup>6</sup> Three Rivers Park District

**10:40AM** The Effectiveness of using Targeted Grazing for Vegetation Management: A Meta-Analysis Katherine Marchetto\*, Tiffany Wolf, Daniel Larkin; University of Minnesota

**11:00AM Using Sheep to Control Buckthorn, Honeysuckle, and Garlic Mustard** *Angela Miner; The Nature Conservancy* 

**11:20AM Suppression of** *Phalaris arundinacea* by Assisted Succession: A **16-Year Restoration Experiment** Kattia Palacio-Lopez\*, Steve Hovick, Kali Mattingly, Leah Weston, Nathaniel Hofford, Logan Finley; The Ohio State University

11:40AM Extended Panel Discussion/Q&A

#### **AFTERNOON CONCURRENT SESSIONS**

Genetic Biocontrol: Science, Policy, Ethics & Outreach

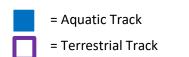
Moderator: Justin Townsend, Ramsey County, MN

1:30PM Engineering Genetic Biocontrol Agents for Terrestrial and Aquatic Invasive Species Michael Smanski; University of Minnesota

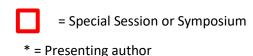
1:50PM Gene Drive: A Novel Tool for Non-Native Invasive Plant Management

Alan Smith\*, Nicholas Johnson, Roger Becker, Neil Anderson; University of Minnesota

**2:10PM U.S.** and Other Policy Considerations Relevant to Invasive Species Control Stas Burgiel, National Invasive Species Council









Tuesday, November 3, 2020 - Afternoon Concurrent Sessions, cont.

# 2:30PM Thinking Beyond the Federal Framework Governing Genetic Biocontrol: Legal and Policy Considerations from the International to Local Scale

Stephanie Otts; National Sea Grant Law Center, University of Mississippi

#### 2:50PM Engaging the Public when Biotechnology Goes "Wild"

Jason Delborne; North Carolina State University

## **Big Data! Invasive Species Mapping Tools**



Moderator: Jason Granberg, Wisconsin Department of Natural Resources Session Sponsor: Center for Invasive Species and Ecosystem Health, University of Georgia

#### 1:30PM Wild Spotter - Mapping Invasives in America's Wild Places

Mike Ielmini \*1, Pat Conzemius 2, Dane Huinker 2, Chuck Bargeron 3, Rachel Carroll 3; 1 USDA - Forest Service; 2 Wildlife Forever; 3 University of Georgia

#### 1:50PM The USGS NAS Database: Actionable Tools and Data for AIS Management

Matthew Neilson\*, Daniel Wesley, Ian Pfingsten; U.S. Geological Survey

#### 2:10PM ISMTrack: Easing Coordination for Long-term Management of Invasive Knotweeds (Polygonum ssp.)

Christina Basch\*<sup>1</sup>, Monika Chandler <sup>1</sup>, Chuck Bargeron <sup>2</sup>, Barb Perry <sup>3</sup>, Edward Dittmer <sup>4</sup>, Dustin Looman <sup>4</sup>; <sup>1</sup> Minnesota Department of Agriculture; <sup>2</sup> University of Georgia; <sup>3</sup> Minnesota Department of Natural Resources; <sup>4</sup> Conservation Corps of MN & IA

#### 2:30PM Focus on the Audience, Not the Technology

Chuck Bargeron\*, Rebekah Wallace, Rachel Carroll, Joe LaForest; University of Georgia

2:50PM Extended Panel Discussion/Q&A

## **Assessing & Addressing AIS Risks**



Moderator: Jo Latimore, Michigan State University

#### 1:30PM Aquatic Plant Pathway Risk Assessment for the Laurentian Great Lakes

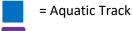
Ceci Weibert\*<sup>1</sup>, Erika Jensen <sup>1</sup>, Lindsay Chadderton <sup>2</sup>, Andrew Tucker <sup>2</sup>, Kate Wyman-Grothem <sup>3</sup>; <sup>1</sup> Great Lakes Commission; <sup>2</sup> The Nature Conservancy; <sup>3</sup> U.S. Fish and Wildlife Service

#### 1:50PM Online Decision Support Tool to Prioritize AIS Surveillance and Watercraft Inspection Activities

Nicholas Phelps\*<sup>1</sup>, Amy Kinsley <sup>1</sup>, Robert Haight <sup>2</sup>, Petra Muellner<sup>3</sup>. Ulrich Muellner <sup>3</sup>, Zoe Kao <sup>1</sup>, Eva Enns <sup>1</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> USDA - Forest Service; <sup>3</sup> Epi-Interactive

#### 2:10PM Assessing the Risk of Fish Pathogen Introduction via Illegal Release of Live Baitfish in Minnesota

Meg McEachran\*, Janice Mladonicky, Catalina Picasso, Nicholas Phelps; University of Minnesota











Tuesday, November 3, 2020 - Afternoon Concurrent Sessions, cont.

2:30PM How "Hidden Mitten" Exposed an Illicit Invasive Species Threat

Sharon Gary\* and Holli Polansky\*; U.S. Fish and Wildlife Service

2:50PM Potential Sources of Infectious Disease Introduction: An Overview of the U.S. Live Exotic Aquatic Animal Trade from Asia

Alexander Primus\*<sup>1</sup>, Amy Kinsley <sup>1</sup>, Tiffany Wolf <sup>1</sup>, Kristine Smith <sup>2</sup>, Carlos Zambrana <sup>2</sup>, Nicholas Phelps <sup>1</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> EcoHealth Alliance

#### **Insect Pests of Forest and Agricultural Lands**



Moderator: Julie Weisenhorn, University of Minnesota Extension

Session Sponsors: Wisconsin Department of Agriculture, Trade and Consumer Protection and Wisconsin Department of Natural Resources

1:30PM Host Preferences of Velvet Longhorned Beetle, Trichoferus campestris

Grace Haynes\*<sup>1</sup>, Marissa Streifel<sup>2</sup>, Angie Ambourn<sup>2</sup>, Brian Aukema<sup>1</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> Minnesota Department of Agriculture

1:50PM The History of Gypsy Moth (*Lymantria dispar*) Management in Wisconsin: From Weather Balloons to iPhones Christopher Foelker; Wisconsin Department of Agriculture, Trade & Consumer Protection

**2:10PM Gypsy Moth (***Lymantria dispar***) Program Updates on Surveys and Treatments** *Natasha Northrop; Minnesota Department of Agriculture* 

2:30PM Cost-effective Organic Controls for Spotted-wing Drosophila: Bio-pesticides and High Tunnel Exclusion Matthew Gullickson\*, Gigi DiGiacomo, Mary Rogers; University of Minnesota

2:50PM The Parasitoid Aphelinus certus as a Biological Control Agent of the Soybean Aphid James Miksanek\* and George Heimpel; University of Minnesota

#### Invasives & Restoration 2: Wetland Restoration - Successes with Cattail Invasions



Moderator: Megan Weber, University of Minnesota Extension

Session Sponsors: 4-Control, Inc. & Nutrien Solutions

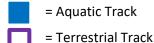
1:30PM Invasive Species Before, During and After Restorations

Gina Quiram\* and Wade Johnson; Minnesota Department of Natural Resources

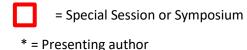
1:50PM Restoration of Wetlands Infested with Hybrid Cattail in Voyageurs National Park

Reid Plumb\*<sup>1</sup>, Steve Windels <sup>1</sup>, Chandra Wiley <sup>1</sup>, Bryce Olson <sup>2</sup>; <sup>1</sup> National Park Service; <sup>2</sup> Russurs Consulting LLC

**2:10PM Wetland Restoration Implications of Invasive Plants and High Water Levels in the St. Louis River Estuary** Dustin Haines\*<sup>1</sup>, Anna Hall <sup>2</sup>, Hannah Ramage <sup>1</sup>; Lake Superior National Estuarine Research Reserve; <sup>2</sup> U.S. EPA





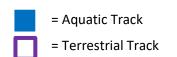




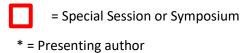
Tuesday, November 3, 2020 - Afternoon Concurrent Sessions, cont.

2:30PM Removing Invasive Cattail to Restore Wild Rice in Allouez Bay Kelly Beaster\*and Amy Eliot; University of Wisconsin - Superior

2:50PM Extended Panel Discussion/Q&A









## Wednesday, November 4, 2020 (all times are CST)

#### MORNING PLENARY

#### 9:00AM Opening remarks and announcements will be provided by:

Clair Ryan, UMISC Administrative Lead

#### 9:10AM Closing Gaps and Building Bridges in our Socially Distant World

Dr. Mamie Parker, President of M.A. Parker & Associates and former Assistant Director of Fisheries and Habitat Conservation, U.S. Fish & Wildlife Service

#### MORNING CONCURRENT SESSIONS

### **Cooperative Invasive Species Management Area Round-Table**

Moderator: Kelly Kearns, Wisconsin Department of Natural Resources Session Sponsor: Wisconsin Department of Natural Resources

**10:20AM - 12:00PM -** Lightning talks by CISMA representatives focused on what's new, what has been successful, and what has been particularly challenging.

## Workshop: Why Diversity, Equity and Inclusion are Vital to Conservation Goals



Instructor: C. Parker McMullen Bushman; EcoInclusive Strategies, LLC

10:20AM - 12:00PM - Please register here if you plan to attend (included with UMISC registration)

## **Ballast Water: New Policies, Actions & Findings**



Moderator: Jeff Stollenwerk, Duluth Seaway Port Authority

Session Sponsor: Duluth Seaway Port Authority

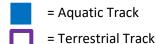
## 10:20AM Predicting the Risk of Pathogen Introduction from Ballast Water Discharge into the St. Louis River Estuary, Minnesota

Julia Zimmer\*, Randall Hicks, Chan Lan Chun; University of Minnesota - Duluth

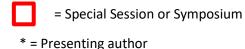
**10:40AM Great Waters Research Collaborative's Journey to Find Effective Ballast Water Management Strategies** Kelsey Prihoda\*<sup>1</sup>, Meagan Aliff<sup>2</sup>, Kimberly Beesley<sup>1</sup>, Lana Fanberg<sup>1</sup>, Steven Gebhard<sup>1</sup>, Holly Wellard Kelly<sup>2</sup>, Marylee Murphy<sup>1</sup>, Christine Polkinghorne<sup>1</sup>, Euan Reavie<sup>2</sup>, Elaine Ruzycki<sup>2</sup>, Heidi Saillard<sup>1</sup>, Heidi Schaefer<sup>1</sup>, Tyler Schwerdt<sup>3</sup>, and Matthew TenEyck<sup>1</sup>; <sup>1</sup> University of Wisconsin - Superior; <sup>2</sup> University of Minnesota - Duluth; <sup>3</sup> AMI Consulting Engineers

#### 11:00AM Bench-scale Evaluation of Ballast Water Treatment for Bacterial Communities

Lisa DeGuire\*<sup>1</sup>, Matthew TenEyck<sup>2</sup>, Heidi Saillard<sup>2</sup>, Christine Polkinghorne<sup>2</sup>, Chan Lan Chun<sup>1</sup>, Randall Hicks<sup>1</sup>; <sup>1</sup> University of Minnesota - Duluth; <sup>2</sup> University of Wisconsin - Superior









Wednesday, November 4, 2020 - Morning Concurrent Sessions, cont.

11:20AM Vessel Incidental Discharge Act (VIDA) – The U.S. Regulatory Framework for Discharges from Commercial Vessels

Jack Faulk; U.S. Environmental Protection Agency

11:40AM Ballast Water Management in the Great Lakes

Thomas Rayburn; Lake Carriers' Association

## **Legends of Forest Health: New Answers to Old Questions**

Moderator: Eric Otto, University of Minnesota

**10:20AM American Chestnut (***Castanea dentata***) as a Model for Tackling Introduced Pests and Pathogens** *Keith Gilland; University of Wisconsin - Stout* 

**10:40AM Butternut Canker Disease: 50 years of Study and We Still Have Questions** *James Jacobs; USDA - Forest Service* 

**11:00AM** The Resurgence of Larch Casebearer in the Great Lakes Region

Brian Aukema\*<sup>1</sup>, Spencer Stout <sup>1</sup>, Samuel Ward <sup>2</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> Mississippi State University

**11:20AM** Winning the Dutch Elm Disease Battle by Developing Resistant Elms for Minnesota Benjamin Held\*<sup>1</sup>, Chad Giblin <sup>1</sup>, Ryan Murphy <sup>1</sup>, Garrett Beier <sup>2</sup>, Robert Blanchette <sup>1</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> Farmingdale State College

11:40AM Extended Panel Discussion/Q&A

#### Invasives & Restoration 3: Terrestrial Restoration - Successes & Pollinator Benefits

Moderator: Julie Weisenhorn, University of Minnesota Extension Session Sponsors: 4-Control, Inc. & Nutrien Solutions

10:20AM Influence of Landscape, Establishment Practices and Management on Invasive Plants and Native Forbs when Establishing Pollinator Habitat

Mark Renz\*, Yuebo Su, Jasmine Wyant, Erin Warner, Laura Judge; University of Wisconsin - Madison

**10:40AM Restoration of Native-Dominated Plant Communities on a Spotted Knapweed-Infested Site** *Neil MacDonald, Grand Valley State University* 

11:00AM Best Management Practices for Pollinator-friendly Invasive Species Management Baerbel Ehrig\* and Michele Sadauskas; Oneida County Land & Water Conservation Department

11:20AM Long-term Impacts of Organic Soil Amendments on Urban Prairie Restoration Leah Weston\*, Stephen Hovick, Scott Demyen, Nicholas Basta; The Ohio State University

#### 11:40AM Extended Panel Discussion/Q&A

= Aqua

= Aquatic Track= Terrestrial Track

= Forest Health Track



= Special Session or Symposium

= Interdisciplinary

\* = Presenting author



Wednesday, November 4, 2020 cont.

#### AFTERNOON CONCURRENT SESSIONS

#### **Workshop: Bringing Divergent Views Together with Open Space Meetings**

Instructors: April Rust and Brian Stenguist, Minnesota Department of Natural Resources

1:30PM - 3:10PM - Please register here if you plan to attend (included with UMISC registration)

#### Why the Words We Use Matter



Moderator: Jeanne Scherer, University of Wisconsin Extension

Session Sponsor: Minnesota SeaGrant

#### 1:30PM Disconnects between Communicated Impact and Ecological Impact of Biological Invasions

Kali Mattingly\*, Tara Pelletier, Jessie Lanterman, Danielle Frevola, Benjamin Stucke, Kaitlin Kinney, Ross Schwartz, Drew Spacht, Graham Dixon, Stephen Hovick; The Ohio State University

#### 1:50PM What's In a Name? Thoughtful Nomenclature Makes a Difference

Angela Gupta\*<sup>1</sup>, Megan Weber <sup>1</sup>, Doug Jensen <sup>2</sup>; <sup>1</sup> University of Minnesota Extension; <sup>2</sup> University of Minnesota Sea Grant Program

#### 2:10PM Outreach in a Digital World

Rebekah Wallace\*, Chuck Bargeron, Rachel Carroll; University of Georgia

#### 2:30PM Seeing, Hearing and Feeling: The Clean Drain Dry Partnership Message

Dane Huinker; Wildlife Forever

#### 2:50PM PlayCleanGo®: Upper Midwest Partnerships and How Your Organization Can Participate

Krista Lutzke; North American Invasive Species Management Association

#### **Boater Behavior: From Theory to Practice**



Moderator: Meg Duhr, University of Minnesota

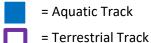
Session Sponsors: Wisconsin Department of Natural Resources, CD3 Systems

#### 1:30PM Lake Public Access Observations for Aquatic Invasive Species Prevention Behaviors

Tony Brough \*1, Carolyn Dindorf 2, Katie Farber 2; 1 Hennepin County; 2 Fortin Consulting, Inc.

**1:50PM A Comparison of Watercraft Decontamination Methods: Invasive Species Removal, Boater Outreach, and Cost** Maria Bleitz\*<sup>1</sup>, Jo Latimore <sup>1</sup>, Kevin Walters <sup>2</sup>; <sup>1</sup> Michigan State University; <sup>2</sup> Michigan Department of Environment, Great Lakes, and Energy

# **2:10PM Online Boater Led Check-In/Check-Out Alternative to In-Person Inspections: A COVID-19 Response Pilot** *Mark Apfelbacher\* and Edgar Rudberg; CD3, General Benefit Corporation*









Wednesday, November 4, 2020 - Afternoon Concurrent Sessions, cont.

#### 2:30PM AIS Prevention During COVID-19

Erin McFarlane\*<sup>1</sup>, Jeanne Scherer<sup>2</sup>; <sup>1</sup> University of Wisconsin Extension Lakes; <sup>2</sup> Wisconsin Department of Natural Resources & University of Wisconsin - Madison Extension

2:50PM Extended Panel Discussion/Q&A

Using Herbicides to Improve Management of Invasive Plants, Part 1	
Moderator: Justin Townsend, Ramsey County, MN	

Session Sponsor: Corteva Agriscience

**1:30PM Introduction to Rinskor™: A New Molecule for Increased Control of Broadleaf Weeds and Brush** *Scott Flynn; Corteva Agriscience* 

1:50PM TerraVue - A New Standard for Broadleaf Weed Control: Use Sites and Effectiveness Jerome Otto\* and Karissa Floerchinger\*; Corteva Agriscience

**2:10PM Comparison of Effectiveness of TerraVue to Standards on Roadsides in Wisconsin** *Mark Renz; University of Wisconsin - Madison* 

2:30PM Desirable Forb Tolerance to Applications of Rinskor®-containing Herbicides (Duracor™ & TerraVue™) in Rangeland, Pastures and Non-Crop Sites

Chad Cummings; Corteva Agriscience

2:50PM Extended Panel Discussion/Q&A

## Invasives & Restoration 4: Lessons Learned - Planning & Improving Future Restorations

Moderator: Kari Hagenow, The Nature Conservancy

#### 1:30PM The Effects of Dams on Minnesota Fish Communities

Amy Childers\* and Luther Aadland; Minnesota Department of Natural Resources

#### 1:50PM Reed Canarygrass: Implications for Control of an Invasive Species When It Is Native

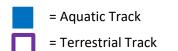
Neil Anderson\*<sup>1</sup>, Andrzej Noyszewski <sup>1</sup>, Alan Smith <sup>1</sup>, Diana Dalbotten <sup>1</sup>, Emi Ito <sup>1</sup>, Anne Timm <sup>2</sup>; <sup>1</sup>University of Minnesota; <sup>2</sup>USDA - Forest Service

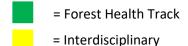
#### 2:10PM Diversity Makes the World Go Round: Resisting Invasion by Design

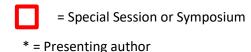
Megan Benage; Minnesota Department of Natural Resources

#### 2:30PM Reducing Risk of Exotic Plant Introduction in Native Prairie Seed Provenancing

Jennifer Larson\*<sup>1</sup>, Diane Larson <sup>1</sup>, Rob Venette <sup>2</sup>; <sup>1</sup> U.S. Geological Survey; <sup>2</sup>USDA - Forest Service & University of Minnesota







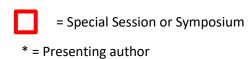


Wednesday, November 4, 2020 - Afternoon Concurrent Sessions, cont.

#### 2:50PM Improving Ecological Restoration to Curb Biotic Invasion

Diane Larson\*<sup>1</sup>, Qinfeng Guo<sup>2</sup>, Dale Brockway<sup>2</sup>, Deli Wang<sup>3</sup>, Hai Ren<sup>4</sup>; <sup>1</sup> U.S. Geological Survey; <sup>2</sup> USDA - Forest Service; <sup>3</sup> Northeast Normal University; <sup>4</sup> Chinese Academy of Sciences







## Thursday, November 5, 2020 (all times are CST)

#### EARLY MORNING CONCURRENT SESSIONS

# **Phragmites Symposium 1: Current Approaches to Management**

Moderator: Jason Granberg, Wisconsin Department of Natural Resources

Session Sponsor: The Great Lakes *Phragmites* Collaborative

#### 8:30AM Great Lakes Phragmites Collaborative: Working Towards a Common Agenda

Erika Jensen\*<sup>1</sup>, Samantha Tank <sup>1</sup>, Patrick Canniff <sup>1</sup>, Kurt Kowalski <sup>2</sup>; <sup>1</sup> Great Lakes Commission; <sup>2</sup> U.S. Geological Survey

#### 8:50AM Non-native Phragmites (Phragmites australis subsp. australis) Management in Coastal Southwestern Lake Superior

Travis Bartnick; Great Lakes Indian Fish & Wildlife Commission

#### 9:10AM Coordinated Response to Invasive Phragmites in Minnesota

Julia Bohnen\*, Daniel Larkin, Susan Galatowitsch; University of Minnesota

## 9:30AM Semi-Automated Identification and Monitoring of Phragmites australis Using Drones and Satellites

Connor Anderson\*, Daniel Heins, Keith Pelletier, Joseph Knight; University of Minnesota

#### 9:50AM Mapping invasive Phragmites Treatment Outcomes with UAS Imagery

Charlotte Weinstein\*, Colin Brooks, Andrew Poley, Amanda Grimm, Nicholas Marion, Dana Hansen; Michigan Tech Research Institute

## **Organisms in Trade: Fostering Responsible Businesses**

Moderator: Emily Cook, Northwest Michigan Invasive Species Network

#### 8:30AM Recent Trade-Pathway Invasive Species Prevention Efforts in Minnesota

Chelsey Blanke; Minnesota Department of Natural Resources

#### 8:50AM Preventing Aquatic Invasive Species Introductions through Retailer Engagement

Paige Filice\*1, Jo Latimore 2; 1 Michigan State University Extension; 2 Michigan State University

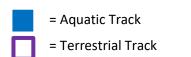
#### 9:10AM "Don't Let It Loose" - Building an Outreach Campaign to Prevent Aquatic Invasive Species

Sara Cowell\*<sup>1</sup>, Stephanie Sardelis <sup>1</sup>, Julie Carpentier <sup>1</sup>, Jeff Brinsmead <sup>2</sup>, Laureen Janusz <sup>3</sup>, Martina Beck <sup>4</sup>; <sup>1</sup> Fisheries and Oceans Canada; <sup>2</sup> Ontario Ministry of Natural Resources and Forestry; <sup>3</sup> Government of Manitoba; <sup>4</sup> Government of British Columbia

#### 9:30AM Be PlantWise - Making a Difference to Reduce the Spread of Horticulturally Invasive Plants in British Columbia

Danielle Toperczer; Invasive Species Council of BC

9:50AM Extended Panel Discussion/Q&A



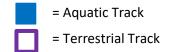


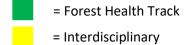


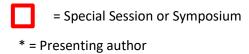


Thursday, November 5, 2020 - Early Morning Concurrent Sessions, cont.

Improved Herbicide Control of Invasive Plants 2
Moderator: Sessions Sponsors: 4-Control, Inc. & Nutrien Solutions
8:30AM Protecting Valuable Native Plants and Reducing Herbicide Use while Controlling Non-native Invasive Plants John Lampe*1, Taylor Bokman*2; 1 Green Shoots, LLC; 2 Minnesota Native Landscapes
8:50AM Is there a Magic Bullet? Greenhouse Screening of Herbicides on Bohemian Knotweed (Fallopia x bohemica) Roger Becker*, Alan Smith, Neil Anderson, Jeanie Katovich, Mary Marek-Spartz, Ryan Mentz; University of Minnesota
9:10AM How can Adjuvants Improve Herbicide Efficacy?  Joe Vaillancourt; Loveland Products, Inc.
9:30AM Effectiveness of Herbicides when Controlling Golden Creeper (Thladiantha dubia) Leo Roth* and Mark Renz; University of Wisconsin - Madison
9:50AM Extended Panel Discussion/Q&A
WIGL Summit 1: Welcome to WIGL - Who, What, Where, Why & How?  Moderator: Kari Hagenow, The Nature Conservancy Session Sponsor: The Woody Invasives of the Great Lakes Collaborative
8:30AM Welcome to WIGL!
Clair Ryan; Midwest Invasive Plant Network
8:50AM Restoring Invaded Forests: Ecological Impacts of Woody Shrubs Sara Kuebbing; University of Pittsburgh
9:10AM Woody Invasives of the Future Great Lakes - EDDMapS Predictive Tools Demo Clair Ryan; Midwest Invasive Plant Network
9:30AM The WIGL Collaborative's Tools for Understanding and Managing Woody Invasive Species of the Great Lakes Kasandra Richardson*, Clair Ryan; Midwest Invasive Plant Network
9:50AM Extended Panel Discussion/Q&A









Thursday, November 5, 2020

#### LATE MORNING CONCURRENT SESSIONS

Phragmites Symposium 2: Future Directions for Research & Management  Moderator: Jason Granberg, Wisconsin Department of Natural Resources
<b>10:30AM The </b> <i>Phragmites </i> <b>Adaptive Management Framework: Managing </b> <i>Phragmites </i> <b>with Science on Your Side</b> <i>Samantha Tank*</i> <sup>1</sup> , <i>Erika Jensen</i> <sup>1</sup> , <i>Christine Dumoulin</i> <sup>2</sup> , <i>Patrick Canniff</i> <sup>1</sup> , <i>Clinton Moore</i> <sup>2&amp;3</sup> , <i>Kurt Kowalski</i> <sup>3</sup> ; <sup>1</sup> <i>Great Lakes Commission;</i> <sup>2</sup> <i>University of Georgia;</i> <sup>3</sup> <i>U.S. Geological Survey</i>
<b>10:50AM Introducing Biological Control of Introduced Common Reed (</b> <i>Phragmites australis</i> <b>) in Ontario</b> <i>Michael McTavish*</i> <sup>1</sup> , <i>Sandy Smith</i> <sup>1</sup> , <i>Rob Bourchier</i> <sup>2</sup> ; <sup>1</sup> <i>University of Toronto</i> ; <sup>2</sup> <i>Agriculture and Agri-Food Canada</i>
<b>11:10AM Targeting Gene Expression to Develop Species-specific Approaches to Manage Non-native </b> <i>Phragmites Kurt Kowalski*</i> <sup>1</sup> , <i>Ping Gong</i> <sup>2</sup> ; <sup>1</sup> U.S. <i>Geological Survey</i> ; <sup>2</sup> U.S. <i>Army Engineer Research and Development Center</i>
<b>11:30AM Microbial Intervention for </b> <i>Phragmites</i> <b>Management: Progress and Possibilities</b> Wesley Bickford* <sup>1</sup> , Kurt Kowalski <sup>1</sup> , James White <sup>2</sup> , Keith Clay <sup>3</sup> ; <sup>1</sup> U.S. Geological Survey; <sup>2</sup> Rutgers University; <sup>3</sup> Tulane University
11:50AM Is there a New Wetland Invader in Ontario? Assessing Potential Hybridization in <i>Phragmites</i> Joanna Freeland* and Abagail Warren; Trent University
Organisms in Trade: Fostering Responsible Consumers  Moderator: Session Sponsors: Minnesota SeaGrant, Wisconsin Department of Natural Resources
10:30AM Incidence of Red-eared Slider ( <i>Trachemys scripta elegans</i> ) Surrender to Minnesota Herpetological Society  Jorge Polanco* and Jeff LeClere*; Minnesota Herpetological Society
<b>10:50AM Expanding Invasive Species Prevention through Unique Community Partnerships</b> Doug Jensen* <sup>1</sup> , Randy Carey* <sup>2</sup> , Jeff LeClere* <sup>3</sup> , Bartley Blume* <sup>4</sup> ; <sup>1</sup> University of Minnesota Sea Grant Program; <sup>2</sup> Minnesota Aquarium Society; <sup>3</sup> Minnesota Herpetological Society; <sup>4</sup> Bent Brewstillery

#### 11:10AM Plant-Smart Water Gardening

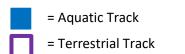
Janet Schreier; Minnesota Water Garden Society

#### 11:30AM A Trusted Spokesperson Can Amplify Your AIS Prevention Message

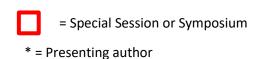
Jeanne Scherer\* and Melinda Myers\*; 1 University of Wisconsin - Madison Extension

#### 11:50AM Invasive Crayfish Enforcement in the Live Food and Pet Industries

Robert Stroess; Wisconsin Department of Natural Resources Bureau of Law Enforcement



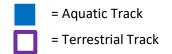


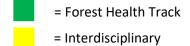


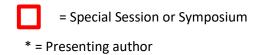


Thursday, November 5, 2020 - Late Morning Concurrent Sessions, cont.

Diversity, Equity, Inclusion & Justice: Change-makers in the Midwest  Moderator: Kasandra Richardson, National Wildlife Federation
10:30AM Removing Social Biases from Conservation by Addressing Internal Cultures and Changing the Hiring Pipeline August Ball; Cream City Conservation
10:50AM Environmentalists of Color, Catalyzing Racial Equity in the Environmental Field through A Member-Driven Network Raquel García-Álvarez; Forest Preserves of Cook County
11:10AM Conversations about Racism, Creating Dialogue within Ourselves and Our Organizations to Catalyze Change Rowzat Schipchandler; Minnesota Department of Natural Resources
11:30AM Additional Talk TBA
11:50AM Extended Panel Discussion/Q&A
WIGL Summit 2: The Importance of Biology in Managing Woody Species  Moderator: Session Sponsor: The Woody Invasives of the Great Lakes Collaborative
10:30AM Nonnative Invasive Woody Species: What Makes Them So Successful?  Lauren Pile; USDA - Forest Service
10:50AM Biology of the Callery pear ( <i>Pyrus calleryana</i> ) and Why it is so Difficult to Eradicate  Theresa Culley; University of Cincinnati
11:10AM Interactions between the Invasive Amur Honeysuckle, <i>Lonicera maackii</i> , and Overabundant White-tailed Deer, and Implications for Management  David Gorchov; University of Miami
11:30AM Some Native Shrubs can Mitigate Phenological Advantages of Invasive Buckthorn ( <i>Rhamnus cathartica</i> )  Michael Schuster*, Peter Wragg, Peter Reich; University of Minnesota
11:50AM Extended Panel Discussion/Q&A









Thursday, November 5, 2020

#### **AFTERNOON CONCURRENT SESSIONS**

**Invasive Carp: Modeling and Collaboration** 



Moderator:

1:30PM Addressing the Invasion of Grass Carp in Lake Erie

John Navarro; Ohio Department of Natural Resources

1:50PM Adaptive Grass Carp (*Ctenopharyngodon idella*) Response Actions in Lake Erie

John Buszkiewicz\*, Lucas Nathan, Seth Herbst; Michigan Department of Natural Resources

2:10PM Status of Grass Carp Spawning in Lake Erie Tributaries and Implications for Management

Nicole King\*<sup>1</sup>, Patrick Kocovsky<sup>2</sup>, Christine Mayer<sup>1</sup>, Song Qian<sup>1</sup>; <sup>1</sup> University of Toledo - Lake Erie Center; <sup>2</sup> U.S. Geological Survey

2:30PM Identification of Probable Spawning Areas for Invasive Carps using Inverse Drift Modeling

Ryan Jackson\*<sup>1</sup>, Patrick Kocovsky <sup>1</sup>, Charlie Cigrand <sup>1</sup>, Nicole King <sup>2</sup>, Christine Mayer <sup>2</sup>, Song Qian <sup>2</sup>; <sup>1</sup> U.S. Geological Survey; <sup>2</sup> University of Toledo - Lake Erie Center

2:50PM Using Collaboration to Prevent the Establishment of Asian Carps

Rebecca Schroeder\* and Brook Schryer\*2; Invasive Species Centre; Ontario Federation of Anglers and Hunters

## **Promoting Behavior Change for Invasive Species Prevention**



Moderator: Julie Weisenhorn, University of Minnesota Extension

1:30PM Utilizing Technology to Understand the Effectiveness of Outreach Initiatives

Megan Pistolese\* and Brittney Rogers\*; The Nature Conservancy

1:50PM Wisconsin Boaters' and Anglers' Perceptions of Aquatic Invasive Species Prevention

Evelyn Hammond\*, Ayse Okur-Ozdemir, Tim Campbell, Jeanne Scherer; University of Wisconsin - Madison

2:10PM Developing a Clean Drain Dry Behavior Change Strategy in New York State

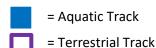
Ken Donnelly; Beyond Attitude Consulting

2:30PM Bridging the Gap: State and Local Behavior Change Initiatives for AIS Prevention in Minnesota

Tina Fitzgerald; Minnesota Department of Natural Resources

2:50PM Pathways to Partnership: How Three CISMAs Collaborated for Consistent Messaging

Rosie Page\*<sup>1</sup>, Lindsay Peterson <sup>2</sup>, Alix Bjorklund <sup>3</sup>, Tracy Beckman <sup>4</sup>; <sup>1</sup> Wisconsin Headwaters Invasives Partnership; <sup>2</sup> Wild Rivers Invasive Species Coalition; <sup>3</sup> Timberland Invasives Partnership; <sup>4</sup> Lumberjack RC&D Council









Thursday, November 5, 2020 - Afternoon Concurrent Sessions, cont.

## Diversity, Equity, Inclusion & Justice Panel: Conversations about Racism in Conservation

Moderator: Kasandra Richardson, Midwest Invasive Plant Network

#### 1:30PM Panelist Introductions and Participant Guidelines

Ariana Cano; University of Vermont, The Gund Institute Josh Anadu; Oklahoma State University LaTresse Snead; National Parks Foundation

1:50PM - 3:10PM Extended Panel Discussion/Q&A

# WIGL Summit 3: The Trade Pathway - When Good Plants Go Bad

Moderator:

Session Sponsor: The Woody Invasives of the Great Lakes Collaborative

1:30PM Indiana's Plant Assessment Process and its Vital Role in Development of the Terrestrial Plant Rule Dawn Slack; The Nature Conservancy

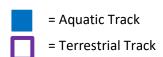
1:50PM Use of Plant Sentry™ to Educate Consumers and Provide Plants that only Benefit the Environment Tom Buechel and Rachel Stewart; Buechel Horticulture Solutions, LLC.

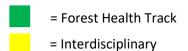
2:10PM Mislabeling and Hybridization: Untangling Invasive Bittersweet (Celastrus orbiculatus) from its Native Relative (C. scandens)

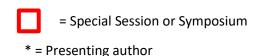
David Zaya; Illinois Natural History Survey

2:30PM Sterile Cultivars: A Plant Breeding Approach to Invasive Species Problems Mark Brand; University of Connecticut

2:50PM Go Beyond Beauty: Northwest Michigan's Approach to Invasive Ornamentals Katie Grzesiak; Northwest Michigan Invasive Species Network









## Friday, November 6, 2020 (all times are CST)

#### **EARLY MORNING CONCURRENT SESSIONS**

## Right-of-Way Invasive Plant Management

Moderator: Mark Renz, University of Wisconsin - Madison Session Sponsor: 4-Control, Inc. & Nutrien Solutions

**8:30AM Documenting Impacts of Training Municipalities to Control Invasive Plants on Wisconsin Roads** *Anne Pearce\* and Mark Renz; University of Wisconsin - Madison* 

8:50AM Lessons Learned from Plant Growth Regulator (PGR) and Invasive Weed Control Roadside Programs Jim Bean; BASF Corporation

**9:10AM Working with Counties & Municipalities to Control Invasive Plants on Roadsides** *Lee Shambeau; 4-Control, Inc.* 

9:30AM Integrating Control Methods for Wild Parsnip (*Pastinaca sativa*) in Rights of Way with Imazapic + Metsulfuron for Grass Height Suppression

Leo Roth\*<sup>1</sup>, Mark Renz <sup>1</sup>, Lee Shambeau <sup>2</sup>, Ken Schroeder <sup>3</sup>, Jerome Clark <sup>3</sup>, Leigh Presley <sup>3</sup>; <sup>1</sup> University of Wisconsin - Madison; <sup>2</sup> 4-Control, Inc.; <sup>3</sup> University of Wisconsin Extension

9:50AM Extended Panel Discussion/Q&A

## **Regulatory Toolbox for Invasive Species Prevention & Management**

Moderator: Julie Weisenhorn, University of Minnesota Extension

8:30AM Listing Noxious Weed Seeds in Minnesota: A Risk Assessment Model

Michael Merriman\*, Denise Thiede, Don Opdahl; Minnesota Department of Agriculture

8:50AM Timeline of Palmer Amaranth in Minnesota

Eric Yu\*, Shane Blair, Monika Chandler, Anthony Cortilet, Denise Thiede; Minnesota Department of Agriculture

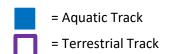
9:10AM Executive Action on Aquatic Invasive Species in the Great Lakes Basin

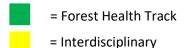
Kevin Irons; Illinois Department of Natural Resources

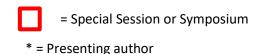
9:30AM The Success of Injurious Wildlife Listing Under the Lacey Act

Susan Jewell\*1 and Pam Fuller 2; 1 U.S. Fish and Wildlife Service; 2 U.S. Geological Survey

9:50AM Extended Panel Discussion/Q&A









Friday, November 6, 2020 - Early Morning Concurrent Sessions, cont.

Biological Control (	of Forest Pests
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Moderator:

#### 8:30AM Emerald Ash Borer Biological Control: A Management Strategy for the Forest

Chris Mallet\*<sup>1</sup>, Angie Ambourn <sup>1</sup>, Jonathan Osthus <sup>1</sup>, Brian Aukema <sup>2</sup>, Rob Venette <sup>283</sup>; <sup>1</sup> Minnesota Department of Agriculture; <sup>2</sup> University of Minnesota; <sup>3</sup> USDA - Forest Service

#### 8:50AM The Continued Search for Associational Protection against Emerald Ash Borer

Dora Mwangola\*<sup>1</sup>, Jennifer Burrington <sup>2</sup>, Angie Ambourn <sup>2</sup>, Mark Abrahamson <sup>2</sup>, Brian Aukema <sup>1</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> Minnesota Department of Agriculture

#### 9:10AM Cold Tolerance and Overwintering Mortality of Spathius galinae in Minnesota

Jacob Wittman\*<sup>1</sup>, Jian Duan<sup>2</sup>, Rob Venette<sup>183</sup>, Brian Aukema<sup>1</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> USDA - Agricultural Research Service; <sup>3</sup> USDA - Forest Service

9:30AM Is There a Way Forward for the Biological Control of Common Buckthorn, Rhamnus cathartica? Philip Weyl\* and Hariet Hinz; CABI

#### 9:50AM Crown Rust Fungus Infects Two Wetland Invaders: Glossy Buckthorn and Reed Canarygrass

Nicholas Greatens\*<sup>1</sup>, Pablo Olivera Firpo <sup>1</sup>, Yue Jin <sup>2</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> USDA - Agricultural Research Service

## **WIGL Summit 4: Integrated Strategies for Woody Invasive Control**



Moderator:

Session Sponsor: The Woody Invasives of the Great Lakes Collaborative

#### 8:30AM Choosing the Right Tools for Mechanical Control of Woody Invasive Species

Chris Evans; University of Illinois Extension

#### 8:50AM Directed Flaming to Control Invasive Plants

Jeffery Ward; Connecticut Agricultural Experiment Station

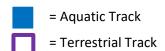
#### 9:10AM Integrated Management of Woody Invasives in a Remnant Forest Ecosystem

Kurt Dreisilker; The Morton Arboretum

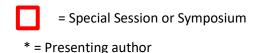
#### 9:30AM Prescribed Grazing for Managing Invasive Woody Vegetation in Eastern Hardwood Forests

Ron Rathfon; Purdue Extension

9:50AM Extended Q&A









Friday, November 6, 2020

#### LATE MORNING CONCURRENT SESSIONS

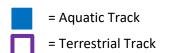
LATE MORNING CONCORNER SESSIONS
On our Radar: New Terrestrial Invasive Plant Threats to the Upper Midwest  Moderator: Monika Chandler, Minnesota Department of Agriculture
10:30AM Carrot Family Identification, Part 1 - Smaller Species  Dave Hanson; Minnesota Department of Transportation
10:50AM Carrot Family Identification, Part 1 - Larger Species  Dave Hanson; Minnesota Department of Transportation
<b>11:10AM Public Gardens as Sentinels against Invasive Plants</b> Kurt Dreisilker* <sup>1</sup> , Theresa Culley <sup>2</sup> , Clair Ryan <sup>2</sup> , Hans Landel <sup>3</sup> , Brittany Schultz <sup>4</sup> , Nadia Cavallin <sup>5</sup> , Roger Gettig <sup>6</sup> , Sai Ravichandran <sup>1</sup> ; <sup>1</sup> The Morton Arboretum; <sup>2</sup> Midwest Invasive Plant Network; <sup>3</sup> Ladybird Johnson Wildflower Center; Missouri Botanical Garden; <sup>5</sup> Royal Botanical Garden; <sup>6</sup> Holden Arboretum
11:30AM Heads Up! What we can Learn From our Neighbors - Survey Results and Lightning Talks Speakers TBD
Workshop: R Statistical Software for Invasive Species Applications Instructor: Matthew Russell; University of Minnesota
10:30AM - 12:10PM - Please register here (included with UMISC registration)
Silvicultural Responses to Invasive Species  Moderator:
10:30AM Wisconsin's Emerald Ash Borer Management Toolkit Colleen Matula* and Paul Cigan; Wisconsin Department of Natural Resources
10:50AM Native Plant Community Silviculture Strategies Managing Black Ash Forests in Minnesota Paul Dubuque* and Mike Reinikainen*; Minnesota Department of Natural Resources

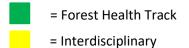
#### 11:10AM Trees and Shrubs in Current and Former Oak Wilt Pockets

Brian Schwingle\*, Rachael Nicoll, Megan O'Neil, Eric Otto; Minnesota Department of Natural Resources

11:30AM Minnesota's Dwarf Mistletoes: Investigating a Novel Invasive Through a Native System Ella Gray\*, Marcella Windmuller-Campione, Matthew Russell; University of Minnesota

11:50AM Extended Panel Discussion/Q&A

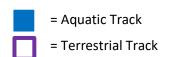


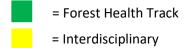


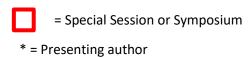




Friday, November 6, 2020 - Late Morning Concurrent Sessions, cont.
WIGL Summit 5: Herbicide Use to Control Woody Invasive Species  Moderator: Mark Renz, University of Wisconsin - Madison Session Sponsor: The Woody Invasives of the Great Lakes Collaborative
10:30AM Choosing the Right Application Method for Woody Invasives Stephen Enloe, University of Florida
10:50AM Choosing the Herbicide for Woody Invasives Stephen Enloe, University of Florida
11:10AM Application Method Lightning Round & Industry Product Updates  Low-volume foliar application - Jim Bean, BASF Corporation  Hack-and-squirt/stem-injection - Jason Belcher, Bayer  Low-volume basal bark, cut stump, dormant stem application - Scott Flynn, Corteva Agriscience
AFTERNOON CONCURRENT SESSIONS
Landscape Scale Management Approaches  Moderator: Anne Pearce, University of Wisconsin - Madison
1:30PM Lessons, Experiences and Insights on Invasive Vegetation Management  Todd Polacek*, Brandon Moore*, Fugui Wang; Applied Ecological Services
1:50PM Innovative Control Methods and Tools to Control Invasive Species on Tribal Lands Michael Arce; Oneida Nation - Environmental Health, Safety and Land Division
2:10PM The Progression of Pulling Together: Becker County Cooperative Weed Management Area Plan 2006-2020 Marsha Watland; Becker County Cooperative Weed Management Area & Becker County SWCD
<b>2:30PM Challenges of Riverside Japanese Hop (</b> <i>Humulus japonicus</i> <b>) Eradication in Southeast Minnesota</b> <i>Christina Basch*</i> <sup>1</sup> , <i>Monika Chandler</i> <sup>1</sup> , <i>Emilie Justen</i> <sup>1</sup> , <i>Shane Blair</i> <sup>1</sup> , <i>Barb Perry</i> <sup>2</sup> , <i>Edward Dittmer</i> <sup>3</sup> ; <sup>1</sup> <i>Minnesota Department of Agriculture;</i> <sup>2</sup> <i>Minnesota Department of Natural Resources;</i> <sup>3</sup> <i>Conservation Corps of MN and IA</i>
2:50PM Extended Panel Discussion/Q&A









Friday, November 6, 2020 - Afternoon Concurrent Sessions, cont.

## **Lessons Learned in Starry Stonewort Management**

Moderator: Michelle Nault, Wisconsin Department of Natural Resources

#### 1:30PM The Starry Stonewort Collaborative

David Carr; Finger Lakes Institute

1:50PM Predictive Modelling Assessment of Suitable Habitats for Starry Stonewort (Nitellopsis obtusa)

Emily Neuman\*<sup>1</sup>, Sean Woznicki <sup>1</sup>, Kenneth Karol <sup>2</sup>, James McNair <sup>1</sup>, Sarah Hamsher <sup>1</sup>; <sup>1</sup> Grand Valley State University; <sup>2</sup>New York Botanical Garden

**2:10PM Monitoring and Management of Starry Stonewort (Nitellopsis obtusa) in Wisconsin Lakes**Michelle Nault; Wisconsin Department of Natural Resources

2:30PM Multi-year Evaluation of Copper Sulfate and Hydrothol 191 to Control Starry Stonewort in a Central Minnesota Lake

Kylie Cattoor\*, Keegan Lund\*, April Londo; Minnesota Department of Natural Resources

2:50PM Large-scale Management of Starry Stonewort (*Nitellopsis obtusa*) in a Large Minnesota Lake Christine Jurek\* and Emelia Hauck Jacobs; Minnesota Department of Natural Resources

## WIGL Summit 6: Public Perceptions & Engagement to be Part of the Solution!

Moderator: Caroline Marschner, Cornell University Extension Session Sponsor: The Woody Invasives of the Great Lakes Collaborative

1:30PM Best Practices for Public Engagement

Ken Donnelly, Beyond Attitude Consulting

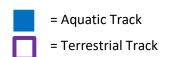
1:50PM Engaging Private Residential Neighbors in Controlling Buckthorn to Benefit a Sensitive Natural Area Mathew Ueltzen and Brett Peto, Lake County Forest Preserve District

**2:10PM "Stop the Spread" Outreach and Engagement Campaign to Fell Callery Pear** *David Dittmer, City of Columbia, Missouri* 

2:30PM Just Because it's Sold Doesn't Mean it's Good - Using Landscape Alternatives to make Good Plant Choices Clair Ryan, Midwest Invasive Plant Network

2:50PM Tweet! Post! Like! Using Social Media to Promote Forest Health and Invasive Species Awareness David Coyle, Clemson University

3:10PM WIGL Summit Wrap-up & Next Steps!









#### **UMISC 2020 Poster Hall**

#### 2021 Invasive Species Calendar from the Minnesota Invasive Species Advisory Committee

Laura Van Riper<sup>1</sup>, Missy Anderson<sup>2</sup>, Jennifer Burington<sup>3</sup>, Sascha Lodge<sup>1</sup>; <sup>1</sup> Minnesota Department of Natural Resources; <sup>2</sup> Three Rivers Park District; <sup>3</sup> Minnesota Department of Agriculture

#### A Simple(r) Method to Measure PCR Inhibition by Environmental DNA Templates

Craig Jackson, Chris Merkes, and Jon Amberg; U.S. Geological Survey

#### Advancing Host-plant Resistance for Sustainable Management of Soybean Aphid

Siddhi Bhusal, Robert Koch, and Aaron Lorenz; University of Minnesota

#### An Update: Biological Control of Garlic Mustard with Crown-Boring and Seed-Feeding Weevils

Elizabeth Katovich<sup>1</sup>, Roger Becker<sup>1</sup>, Ghislaine Cortat<sup>2</sup>, Hariet Hinz<sup>2</sup>, Laura Van Riper<sup>3</sup>, Mary Marek-Spartz<sup>1</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> CABI; <sup>3</sup> Minnesota Department of Natural Resources

#### **Biological Control of Emerald Ash Borer in Minnesota**

Patrick Walrath <sup>1</sup>, Angie Ambourn <sup>1</sup>, Jonathan Osthus <sup>1</sup>, Christopher Mallet <sup>1</sup>, Monika Chandler <sup>1</sup>, Brian Aukema <sup>2</sup>; <sup>1</sup>Minnesota Department of Agriculture; <sup>2</sup> University of Minnesota

#### **Building Resiliency in Black Ash in Preparation for Emerald Ash Borer**

Colleen Matula and Graham Wessberg; Wisconsin Department of Natural Resources

#### Comparison of Early Detection Survey Approaches during Two New Fish Introductions

Greg Peterson <sup>1</sup>, Joel Hoffman <sup>1</sup>, Anett Trebitz <sup>1</sup>, Chelsea Hatzenbuhler <sup>2</sup>, Jared Myers <sup>3</sup>, Erik Pilgrim <sup>1</sup>, Sara Okum <sup>1</sup>; <sup>1</sup>U.S. Environmental Protection Agency; <sup>2</sup> Badger Technical Services; <sup>3</sup> U.S. Fish and Wildlife Service

#### Developing Airborne eDNA Technology to Detect Hemlock Woolly Adelgid (Adelges tsugae)

Meg Sanders and Charlyn Partridge; Annis Water Resources Institute, Grand Valley State University

# Garlic Mustard Monitoring Efforts Inform a Coupled Weed-Herbivore Population Model for Simulating the Release of Potential Biocontrol Agents

Mary Marek-Spartz <sup>1</sup>, Roger Becker <sup>1</sup>, George Heimpel <sup>1</sup>, Lori Knosalla <sup>2</sup>, Rebecca Montgomery <sup>1</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> Minnesota Department of Natural Resources

# Global Genetic Diversity in Hydrilla (*Hydrilla verticillata*) and Evidence for a Novel Invasive Strain in North America Nicholas Tippery <sup>1</sup>, Lori Benoit <sup>2</sup>, Donald Les <sup>2</sup>, Gregory Bugbee <sup>3</sup>, Summer Stebbins <sup>3</sup>; <sup>1</sup> University of Wisconsin -

Whitewater; <sup>2</sup> University of Connecticut; <sup>3</sup> Connecticut Agricultural Experiment Station

#### Improvements to Drone Technology for Effective Pest and Noxious Weed Management

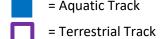
Curtis Olsen <sup>1</sup>, Kerry Sun <sup>1</sup>, Inchara Laksminaryan <sup>1</sup>, Eric Yu <sup>2</sup>, Domoz Gebre-Egziabher <sup>1</sup>; <sup>1</sup> University of Minnesota; <sup>2</sup> Minnesota Department of Agriculture

#### **Invasive Species and Citizen Science Initiatives while Social Distancing**

Angela Gupta; University of Minnesota Extension

#### **Invasive Species Signage Anyone?**

Anna Peterson <sup>1</sup>, Doug Jensen <sup>1</sup>, Christopher Filstrup <sup>2</sup>; <sup>1</sup> Minnesota SeaGrant; <sup>2</sup> Natural Resources Research Center









#### **UMISC 2020 Poster Hall (continued)**

Multi-agency Cooperation in Managing Garlic Mustard within the Northwoods Cooperative Weed Management Area Ramona Shackleford; Northwoods Cooperative Weed Management Area

#### **Native Pine Engravers Avoid Pheromones of Mountain Pine Beetle**

Zach Smith, Aubree Kees, Brian Aukema; University of Minnesota

#### Predicting Range Expansion of Invasive Species: Obtaining Biologically Realistic Projections

Thomas Lake; University of Minnesota

#### Prioritizing Minnesota's Top Terrestrial Invasive Plants & Pests for Research

Rob Venette and Amy Morey; University of Minnesota

#### **Ratings of Invasive Species of Concern to Minnesota**

Laura Van Riper <sup>1</sup>, Missy Anderson <sup>2</sup>, Jennifer Burington <sup>3</sup>, Megan Weber <sup>3</sup>; <sup>1</sup> Minnesota Department of Natural Resources; <sup>2</sup> Three Rivers Park District; <sup>3</sup> University of Minnesota Extension

#### **Reporting Northeast Minnesota Aquatic Invasive Species Sightings**

Alyssa Hagemeyer <sup>1</sup>, Doug Jensen <sup>1</sup>, Josh Dumke <sup>2</sup>; <sup>1</sup> Minnesota SeaGrant; <sup>2</sup> Natural Resources Research Institute

#### **Spotlight on ISM Track**

Mari Hardel <sup>1</sup>, Monika Chandler <sup>1</sup>, Christina Basch <sup>1</sup>, Anne Pearce <sup>2</sup>, Bob Dunning <sup>3</sup>, Chuck Bargeron <sup>4</sup>; <sup>1</sup> Minnesota Department of Agriculture; <sup>2</sup>Wisconsin First Detectors Network; <sup>3</sup> Stearns County, Minnesota; <sup>4</sup> University of Georgia

#### Using DNA Tools to Elucidate Source of Dreissena to Western Lake Superior

Jonathan Barge, Chelsea Hatzenbuhler, Anne Cotter, Joel Hoffman, Christy Meredith, Greg Peterson, Sara Okum ,Erik Pilgrim, Barry Weichman, Anett Trebitz; U.S. Environmental Protection Agency



