2018 DISC Annual Meeting Agenda

Ashland Nature Center

Tuesday, October 30, 2018

Invasive Species in Delaware…. Something Truly Terrifying!

Agenda	
8:00	**Registration & Networking** – ***Ashland Nature Center***
8:30	**Welcome and Opening Remarks** Marcia Fox, DISC Chair Ann Harper, Delaware Nature Society Executive Director
Morning Presentations	
8:40	**"Delaware Native Species Commission Update"** – *Senator Stephanie Hansen*
9:10	**"New Castle County's Green Group"** – *Kendall Sommers*
9:15	**"Spotted Lantern Fly Update"** – *Stephen Hauss*
9:30	**"Update on Invasive Plant List"** – *Bill McAvoy & Marcia Fox*
9:45	**"Integrated Aquatic Vegetation Management"** – *Mike Steiger*
10:05	**Break**
10:20	**"Native Plant Nursery Inventory"** – *George Coombs*
10:40	**"Starting Backward, Moving Forward - Meadows 101"** – *Nathan Shampine*
11:00	**"Monarch Highway Habitat Projects in Sussex County"** – *Mike McFarlin*
11:20	**"Invasion of Delaware's Small/Urban Forests"** – *Vince D'Amico*
11:35	**"Wavy Leaf Basket Grass ID"** – *Ashley Kroon*
11:45	**Lunch and Business Meeting**
12:15	**Lunch Guest Speaker -** *Gregg Tepper, Delaware Botanic Garden on Pepper Creek*
1:00	**Depart for Field Tours** Please make your way to the field tour you registered for prior to the conference. Plan on arriving at the indicated location no later than 1:30 to begin the tour. Tours will last approximately 2.0 hours.

"Delaware Native Species Commission Update" – *Senator Stephanie Hansen*

Delaware Senator Stephanie Hansen will provide an update on her work with the newly-established Delaware Native Species Commission. The Delaware Native Species Commission was formed by the Delaware General Assembly to continue the work started by the Statewide Ecological Extinction Task Force and to implement recommendations made in the final report of the Task Force. The Commission, made up of a diverse group of 15 individuals reflecting a balance of interests between environmental professionals, government, and business stakeholders, began its work in the summer of 2018.

"New Castle County's Green Group" – *Kendall Sommers, New Castle County*

Kendall Sommers, Parks Development Planner, will provide an update on New Castle County's role in protecting the environment. In May 2018, the County signed a native species executive order to encourage the use of native plant species on County land and promote native species County-wide. In addition to the executive order, the County established a GreeNCC working group. GreeNCC is a collaboration with county and individual environmental groups to collaborate with the environmental community in developing and implementing the county's land use planning and public works policies.

"Spotted Lantern Fly Update" – *Stephen Hauss, Delaware Dept of Agriculture*

Spotted Lanternfly, *Lycorma delicatula,* a native species of Southeast Asia, is a new pest to the United States and a dangerous insect to forests, ornamental trees, orchards, and grapes. It is not yet widely prevalent or distributed within or throughout the United States. The presence of the Spotted Lanternfly was first confirmed in Pennsylvania in 2014 and in Delaware in 2018. This presentation will be an overview of Spotted Lanternfly biology and actions being taken to contain and control them wherever they are found.

"Update on Invasive Plant List" – *Bill McAvoy & Marcia Fox, DE Fish & Wildlife and DNREC*

Marcia Fox and Bill McAvoy will provide an update on DISC's efforts to update the official DISC Invasive List. The original list contained only plant species and was last updated in 2003. Each species, on the original list, was chosen by a committee of experts in environmental science and botany after an intensive environmental assessment. Marcia and Bill will update the membership on the steps taken to develop a new list and include categories like vertebrates, aquatics, pathogens, and invertebrates.

"Integrated Aquatic Vegetation Management" – *Mike Steiger & Edna Stetzer, DE Fish and Wildlife*

The Delaware Division of Fish and Wildlife currently manages 33 impoundments totaling approximately 1,640 surface acres. These relatively small impoundments (most less than 75 acres) provide the majority of freshwater angling opportunities in Delaware. Delaware has few natural lakes; nearly all of the ponds in the State were originally created as millponds. The aquatic invasive plants most often targeted by division staff are: Hydrilla (hydrilla verticillata), Parrot Feather (myriophyllum aquaticum), and Creeping Water-primrose (Ludwigia peploides). Delaware continues to use an integrated plant management approach to control invasive species. Mechanical plant control is typically used to remove heavy concentrations of rooted aquatics that top-out at the surface. The aquatic invasive plant typically targeted with the Division's Aquatic Weed Harvester is hydrilla. Harvesters remove an average of 1,500 cubic yards of plants and algae from Delaware waters each year. Many different considerations need to be made when determining which chemical and application method to use to obtain the desired result. Chemical treatments in Delaware typically target hydrilla and creeping water-primrose. Up to 350 acres are treated for control of aquatic invasive species each year. Many different chemicals and formulations can be used to obtain control of invasive aquatic plants. From 1986-1995 Ingrams Pond in Sussex County

was targeted for the eradication of hydrilla. Triploid Grass Carp were used as an alternate to chemical treatment. At the conclusion of the study, hydrilla had been eradicated from the pond, however some positive and negative effects on the fish community were observed. While eradication of invasive aquatic plant species is the overall goal in Delaware, careful considerations of the effects on fish populations need to be made to determine if complete eradication is the proper course of action.

Michael Steiger is a Fisheries Technician with the Division of Fish and Wildlife, DNREC. He works on projects dealing with tidal largemouth bass, freshwater pond fisheries management, and anadromous species. Before working for DNREC he worked for a small lake and pond management company in Northern New Jersey for 7 years. This work included everything from small backyard pond pesticide applications to large scale reservoir applications. Mike has a B.S. in Environmental Science from Juniata College in central Pennsylvania.

"Native Plant Nursery Inventory" – *George Coombs, Mt. Cuba Center*

We all wish native plants were more readily available. However, do we really know what is currently grown by wholesale nurseries in our region? Join George Coombs as he discusses Mt. Cuba Center's recent survey of mid-Atlantic nursery growers to discover the true state of the industry as it relates to both native and invasive plants. The results might surprise you.

George Coombs manages the horticultural research programs at Mt. Cuba Center, including the trial garden where he evaluates native plants and their related cultivars for their horticultural and ecological value. To date, he has authored evaluation reports on *Heuchera*, *Coreopsis*, *Baptisia*, *Monarda,* and *Phlox*. In addition to the trials, George also evaluates plants for introduction to the nursery trade. Most recently, his work has helped bring to market four new selections of hardy *Coreopsis*. George is a graduate of the University of Delaware and prior to joining Mt. Cuba Center, he worked in the nursery industry at both the wholesale and retail level.

"Delaware Botanic Garden" – *Gregg Tepper, Delaware Botanic Gardens*

Gregg Tepper is a horticulturist who has spent his 25+ year career studying and specializing in native plants. He studied ornamental horticulture at the University of Delaware and went on to work at Mt. Cuba Center where he held the positions of Horticulturist, Woods Path Horticulturist, and Director of Horticulture. Gregg has lectured extensively in the US at various organizations such as the National Arboretum, the Smithsonian and Longwood Gardens as well as lecturing in the UK at Royal Botanic Gardens Kew and Wisley. He never misses a chance to lecture about the plants he loves…wildflowers, and is pleased to once again be back speaking to Hoe n Hope Garden Club. Gregg is now the Director of Horticulture and Board Member of the Delaware Botanic Gardens at Pepper Creek.

"Starting Backward, Moving Forward" – *Nathan Shampine*

Often habitat restoration projects fail to result in the desired outcome or have unintended consequences. A well intentioned project can turn into a maintenance nightmare or not function or develop as originally planned. Too much time, money, sweat, and sometimes tears get invested into our projects for them not to succeed. For Successful restoration projects, it's imperative to work "backward" from well-defined goals in order to move "forward" with informed land management practices.

Nate is Mt. Cuba Centers Natural Lands Manager responsible for implementing land conservation practices and developing healthy and functional ecosystems on their 1000 plus acres. He is a graduate

of the SUNY College of Environmental Science and Forestry, and is a Certified Ecological Restoration Practitioner through the Society for Ecological Restoration.

"Monarch Highway Habitat Project in Sussex County" – *Mike McFarlin*

Michael retired after 28 years in the U. S. Army as a Colonel and then went on to work as a Government Contractor for DynCorp in Northern Virginia for 21 years.

Michael has a BS in Forestry with a Minor in Biology. He grew-up in Minnesota and it was during these early years that the monarch played an important part of his summers.

While in Virginia he became involved in the efforts to save the monarch butterflies. So for the last 7 years (3 in Virginia and 4 years in Delaware) he has been actively involved in the education, raising and releasing of monarchs to help re-establish the population.

Since moving to Delaware he has gained traction each year in his efforts to provide habitats for the monarch butterfly. He has lectured at Prime Hook, Abbots Mill, the Seaford Library, the Lewes Library, at several local Garden and Flower Clubs and provided a resource information table at a Bombay Hook event. All of which have help educate the people of Delaware about the struggles/challenges facing the monarch here in Delaware and throughout North America.

And he is actively involved with Abbotts Mill Nature Center, DelDOT Roadside Beautification Administration office and US Fish & Wildlife General Natural Resources Management team resulting in the Monarch Highway Habitat Project in Sussex County.

Michael is married to Susan who supports his monarch efforts and enjoys seeing the caterpillars grow into beautiful Queens of the Sky. Since moving to Delaware the McFarlin's have raised and released over 1400 monarchs.

Michael is an avid cyclist riding many miles around the DELMARVA area always on the lookout for potential milkweed plots for his beloved monarchs.

Alice Mohrman an Environmental Educator since 1986, I have had the opportunity to explore the flora and fauna of coastal communities from Massachusetts to Georgia. I enjoyed eight years as a Teacher/Naturalist, with the Massachusetts Audubon Society, on Martha's Vineyard sharing land and bay natural history with residents and visitors of all ages.

A Delaware resident since 2005, I am currently the Education Coordinator with the Delaware Nature Society at Abbott's Mill, in Milford, DE. The Delaware Nature Society is a state affiliate of the National Wildlife Federation for the Certified Wildlife Habitat program. I coordinate an active group of volunteer Habitat Stewards, for Kent and Sussex Counties. Our program shares information about the benefits of landscaping with native plants, which includes attracting birds and butterflies and improving water quality in our communities.

I live at the center of three watersheds, on an urban homestead, in Georgetown, Delaware with my husband Rich and son Troy. We grow a garden of berries, support our local pollinators, enjoy native flowers and we have space for a whiffle ball field. I enjoy the challenge and benefits of bringing the natural world home to my backyard and community.

"The Importance of Monitoring and Managing Small Urban Forests" – *Vince D'Amico*

To track changes and current conditions in small urban and suburban forests, FS scientists in cooperation with University of Delaware researchers are working in the FRAME (Forests in Managed Ecosystems), a network of small forests in the eastern US. Each FRAME site has been mapped on a grid and data has been gathered on soil, understory and overstory vegetation, invasive plants, insects, birds,

and mammals. Our research on ticks (Adalsteinsson et al., 2016, 2018a) has shown that nonnative plant invasion increases the numbers of ticks in small forests and the chance they can transmit the bacteria that causes Lyme disease. Work with breeding birds in these forests underscores the role they play in supporting species like Wood Thrush and Gray Catbirds (Ladin et al. 2015, 2016a, 2016b, Duren et al. 2017).

Dr. Vince D'Amico is a research scientist in the USDA Forest Service. He is stationed in the Department of Entomology and Wildlife Ecology at the University of Delaware in Newark, DE. He is a team leader in Unit NRS-08, "Urban Forests, Environmental Quality and Human Health". Dr. D'Amico is currently working with collaborators to: 1) quantify the effect of exotic plant invasion in forested riparian corridors in urban and suburban landscapes, 2) explore the effects of plant invasion on human disease risk, like Lyme disease, and 3) learn how the herbivorous insects that underlie food webs are impacted by invasive replacement of native plants in urban and suburban landscapes.

"Wavy Leaf Basket Grass ID" – *Ashley Kroon*

Delaware State Parks identified wavyleaf basket grass on its property, in 2018, at White Clay Creek State Park. Ashley Kroon will guide you through the steps that were taken to correctly identify and control with mechanical and herbicidal methods to successfully eradicate the grass from Delaware!

Afternoon Field Trips (2 hours each):

Brandywine Creek State Park: Come along with us through meadow and forest at Brandywine Creek State Park. Hop a hay wagon at the nature center and learn about meadow management in the park and how we are working to control invasive species in the meadows using tools including mowing, herbicide, fire, and grazing. We will hike through Tulip Tree Woods and explore the restoration of the nature preserve and compare it to the younger forest outside the preserve's boundaries. Ending back at the nature center, explore the start of a pollinator garden project led by volunteers and discuss future restoration projects in the park.

Mt. Cuba: Visit Mt. Cuba's Greg Tract, lovingly referred to as Zone 9 for a guided wagon tour of their latest natural lands project. Mt. Cuba Center conserves natural lands in order to promote ecosystem health and function, to support environmental education and scientific research, and to maintain the character of the regional landscape. Mt Cuba actively turns large parcels of farmland back into native forest. The reforestation of 50 aces on this site will increase the neighboring parcels' core forests working to reducing edge habitat and increasing biodiversity. Reforestation is an effective and progressive method of invasive species control. By developing a continuous canopy, thus blocking sunlight to the ground, unwanted plant species can be controlled all while creating excellent habitat for many interior forest species, like the wood thrush. Other invasive species control methods such as fire used in open meadows will be discussed. The tour will also cover plans to increase habitat by 70 acres for ground nesting birds and there is a beautiful view of the pollinator support meadow at the top of the hill. This tour will last approximately 1.5hrs and led by Mt. Cuba Natural Lands Steward, George Schurter.

Winterthur: Join Winterthur's Natural Lands staff for a hay wagon tour of Browns Woods Meadow and Upper Armour Meadow. Browns Woods Meadow, visible from Winterthur's famous garden, is managed

using a variety of practices. A combination of mowing, herbicide treatment, seeding and planting, are used to gradually improve the meadow for wildlife- specifically pollinator- habitat. Redtail Restoration is contracted to perform much of the invasive species treatment, and the Bee Watchers program has planted pollinator plots within the meadow, in addition to monitoring pollinator activity throughout the meadow. The tour will pass by the adjacent Browns Woods, where Winterthur's herd of Boer goats have been used to control invasive shrubs. The second stop of the tour will be Upper Armour Meadow. This meadow was burned in 2017 for invasive and woody plant suppression. After the burn, there was a resurgence of uncommon orchids, specifically *Platanthera lacera* and *Spiranthes lacera*, as well as Green Milkweed, *Asclepias viridiflora.* This meadow was identified by American Birding Association staff as quality American Kestrel habitat, and a nesting box was installed in 2016. In addition, about ¼ of the meadow has been converted to a reforestation zone, which will attempt to create a corridor between two forest patches. The tour should last 1-1.5 hours. Parking is available in the main Visitor Lot.

Coverdale Farms: Visit the Coverdale Farm Preserve and tour the Burrows Run Nature Preserve. The Delaware Nature Society has managed this 200-acre Nature Preserve for native biodiversity since 1991. The group will visit open meadows, wetlands and restored woodlands where we will discuss management strategies that have been used to maintain, improve and create these important habitats. We will focus on our efforts to control invasive alien plants both mechanically and chemically. The tour will be led by Dave Pro and Jim White.