



PROTECTING POLLINATORS IN
URBAN LANDSCAPES

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October 9-11, 2017

Park Place Hotel

300 E State St.

Traverse City, MI 49684

Hosted by: Michigan State University & North Carolina State University

<http://protectingpollinators.org>

MICHIGAN STATE
UNIVERSITY | **Extension**

NC STATE
UNIVERSITY

Conference Agenda

Monday, Oct. 9th

- 5:30—6 p.m. Registration Open
- 7—7:45 p.m. Welcome— Ron Bates
- Opening Keynote— Laurence Packer
- 7:45—10 p.m. Mix-N-Mingle

Tuesday, Oct. 10th

- 7—8 a.m. Registration Open
- 8—8:45 a.m. Breakfast
- 8:45—10:20 a.m. **Session 1: Function of Pollinators in Ornamental Landscapes**
- 8:45—9:30 a.m. *The Human Dimensions of Urban Pollinator Conservation*, Damon Hall
- 9:30—9:50 a.m. *The Role of Lepidopterans in the Urban Landscape*, Duke Elsner
- 9:50—10:10 a.m. *Just a Small Town Bee*, Paul Glaum
- 10:10—10:20 a.m. Session 1: Discussion Panel
- 10:20—10:30 a.m. Break
- 10:30 a.m.—12:05 p.m. **Session 2: Pesticides and Pollinators**
- 10:30—11:15 a.m. *Integrating Pest and Pollinator Management for Urban Lawns and Landscapes*, Dan Potter
- 11:15—11:35 a.m. *A Nationwide Analysis of Pollen Collected by Honey Bees (*Apis mellifera*) in Urban and Suburban Environments*, Pierre Lau
- 11:35—11:55 a.m. *Urban Wild and Domesticated Pollinators, What Do They Face?* Audrey Muratet
- 11:55 a.m.—12:05 p.m. Session 2: Discussion Panel

Conference Agenda

Tuesday, Oct. 10th

1—3:15 p.m.	Session 3: Pollinator Health and Habitat in Urban Landscapes
1—1:45 p.m.	<u><i>A Growing Conservation Focus in Shrinking Cities: How Vacant Land Ecology Structures Bee Communities,</i></u> Mary Gardiner
1:45—2:05 p.m.	<u><i>Functional and Phylogenetic Filtering of Urban Wild Bee Diversity,</i></u> Scott MacIvor
2:05—2:25 p.m.	<u><i>Too Hot Downtown? The Effect of Urban Warming on Bee Communities,</i></u> Elsa Youngsteadt
2:25—2:45 p.m.	<u><i>Habitat for Bees: The Conservation Value of Residential Yards,</i></u> Susannah Lerman
2:45—2:55 p.m.	Discussion Panel
2:55—3:15 p.m.	Break
3:15—5 p.m.	Session 4: Best Management Practices in Ornamental Landscapes
3:15—3:35 p.m.	<u><i>Systemic Insecticides in Urban Landscapes IPM: Impacts and Benefits,</i></u> Joe Chamberlin
3:35—3:55 p.m.	<u><i>Pesticide Regulation and Stewardship for Pollinator Protection,</i></u> Caydee Savinelli & Frank Wong
3:55—4:15 p.m.	<u><i>Practical Implications for Current and Future Research Activites,</i></u> Cristi Palmer
4:15—4:30 p.m.	<u><i>The Critical Need for Industry-wide BMP Adoption,</i></u> Jill Calabro
4:30—4:50 p.m.	<u><i>Publishing of Regional BMPs for Landscapers & Arborists,</i></u> Dave Smitley
4:50—5 p.m.	Discussion Panel
5—6 p.m.	Break/Poster Set-Up
6—6:45 p.m.	Dinner on your own
7—10 p.m.	Poster Session

Conference Agenda

Wednesday, Oct. 11th

8—8:45 a.m.	Breakfast
8:45—10:20 a.m.	Session 1: Boots on the ground— Efforts, Challenges and Opportunities for Protecting Pollinators
8:45—9:30 a.m.	<u><i>Back Forty to the Backyard: 15 Years of Pollinator Conservation</i></u> , Mace Vaughan
9:30—9:50 a.m.	<u><i>Zoo's Best Plants for Pollinator Programs</i></u> , Steve Foltz
9:50—10:10 a.m.	<u><i>A Monarch's View of the City: Developing a Conservation Design for Monarchs in Urban Areas</i></u> , Abigail Derby-Lewis
10:10—10:30 a.m.	<u><i>Struggling to Get Beyond Best Management Practices: Urban Pollinator Protection in Oregon</i></u> , Andony Melathopoulos
10:30 a.m.—Noon	Session 2: Educating the Public
10:30—11:15 a.m.	<u><i>Understanding Urban Bees at Local to Continental Scales</i></u> , Gretchen LeBuhn
11:15—11:35 a.m.	<u><i>Smart Gardening for Pollinators: A State-wide Campaign with Far-reaching Impact</i></u> , Rebecca Finneran
11:35—11:55 a.m.	<u><i>Perspectives on Education, Outreach, and Advocacy for Plants and Pollinators</i></u> , Casey Sclar
11:55 a.m.—12:05 p.m.	Session 1 & 2: Discussion Panel
12:05—12:45 p.m.	Lunch
1 p.m.	Adjourn for those not on the tour
1—5:30 p.m.	Tours

*Poster Session

The poster session scheduled for Tues. Oct. 10th is an opportunity for individuals to share their research, findings and achievements with their colleagues. If you would like to display a poster at this year's conference please fill out the poster information section during registration. Poster submissions must be received by **Sept. 1st 2017** in order to be considered. Conference organizers will notify authors via e-mail if their submission is accepted by **Sept. 15th 2017**.

Travel & Lodging

Hotel & Conference

The Park Place Hotel- 300 E State St. Traverse City, MI 49684

<https://park-place-hotel.com/>

To make room reservations call the Park Place Hotel at 231-946-5000 and reference the Pollinators Conference to receive the conference group room rate. The Pollinator Conference room block rate ends on 9/9/17.

If you would like to extend your stay in beautiful Traverse City, the Park Place Hotel is happy to extend the Pollinator Conference group room rates for the dates of Sunday, Oct. 8th, Wednesday, Oct. 11th and Thursday, Oct. 12th. Friday or Saturday accommodations must be booked together as a two night minimum is required for weekend accommodations during peak season. The Park Place Hotel is offering a higher discounted rate for the Pollinators Conference should attendees want to make weekend accommodations for Friday, Oct. 6th and Saturday, Oct. 7th.

Airport

Cherry Capital International Airport- 727 Fly Don't Dr, Traverse City, MI 49686

The Park Place Hotel offers a complimentary airport shuttle to hotel guests. To arrange a shuttle pick-up to/from the airport contact the hotel at 231-946-5000.



Optional Afternoon Tour 1

Sleeping Bear Dunes National Lakeshore & Winery Tour

1:00 pm to 5:30 pm, October 11, 2017

Participants on the tour will enjoy the fantastic vistas of the Sleeping Bear Dunes National Lakeshore, which was voted the most beautiful place in America by Good Morning America in 2011. Miles of sand beach and 450' bluffs provide stunning views of Lake Michigan. Guests will travel the Pierce Stocking Scenic Drive, a 7.4 mile loop, through the park and enjoy the Glenn Lake and Lake Michigan Overlooks. Please note that participants will not have time to do the dune climb which can take 2-3 hours. Participants will then travel to Rove Estate Vineyard & Winery and will enjoy an hour of wine tasting and relaxation, which offers guests a view of the Leelanau countryside.

To learn more, take the virtual tour of Pierce Stocking Scenic Drive: <https://www.nps.gov/slbe/planyourvisit/psvirtualtour0.htm>

To learn more about Rove Estate Vineyard visit: <http://www.roveestate.com/>

This tour will include some mild to moderate walking. Please wear the proper attire. Due to the wine tasting event, all participants on the tour must be over 21 years in age to participate.

Itinerary:

1:00 Depart Park Place Hotel

1:00-1:40 Travel to Sleeping Bear Dunes National Lakeshore – Stop at Visitors Center before Scenic Drive

1:40-3:40 Drive through Sleeping Bear Dunes National Lakeshore – stopping at overlooks

3:40 Depart Sleeping Bear Dunes

3:40-4:20 Travel to Rove Estate Vineyard & Winery

4:20-5:20 Wine Tasting

5:20 Depart Rove Estate Vineyard & Winery

5:30 Arrive back at the Park Place Hotel



Optional Afternoon Tour 2

Grand Traverse Butterfly House, Botanic Gardens and Winery Tour

1:00 pm to 5:30 pm, October 11, 2017

Participants on the tour will be fascinated by a wide array of live butterflies, moths, beetles, bees and numerous other creatures at the Grand Traverse Butterfly House and Insect Zoo. The proprietors strive to provide a meaningful educational experience to all visitors. The next stop will be the Botanic Garden at Historic Barns Park, on the grounds of the former state hospital in Traverse City. This budding young garden, nestled on a 25-acre site is still in development, which emphasizes on plant species native to North-west Michigan and the enhancement of habitats for various forms of wildlife. A number of historic buildings on the site have been saved and restored, providing architectural interest to the gardens. The tour ends at the Left Foot Charlie Winery, also on the former state hospital grounds. Featuring low-volume production of wines and ciders made from unique local vineyards and orchards, participants will be able to taste the “terroir” of the Grand Traverse region.

To learn more, visit these web sites:

<http://www.gtbutterflyzoo.com/>

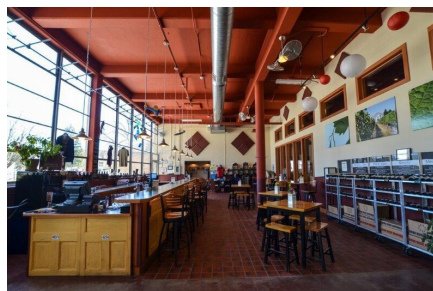
<http://thebotanicgarden.org/>

<http://www.leftfootcharley.com/>

This tour will include some mild to moderate walking at the gardens. Please wear the proper attire. Due to the wine tasting event, all participants on the tour must be over 21 years in age to participate.

Itinerary:

- 1:00 Depart Park Place Hotel
- 1:00-1:30 Travel to Grand Traverse Butterfly House and Insect Zoo
- 2:30 Depart Butterfly House
- 2:30-3:15 Travel to the Botanic Garden at Historic Barns Park
- 4:15 Depart Botanic Gardens
- 4:15-4:20 Travel to Left Foot Charlie Winery
- 4:20-5:20 Wine Tasting
- 5:20 Depart Left Foot Charlie's
- 5:30 Arrive back at the Park Place Hotel



Exploring Traverse City



Fall is All Around!

Fall is a favorite season for many locals and visitors alike. The days are warm, the nights are cool, and you won't find a prettier place to take a color tour. Rolling hills are painted in deep reds, bright oranges and sunny yellows – a striking contrast against the sapphire blue of Grand Traverse Bay.

Should you choose not to partake in one of the optional tours there's plenty to see and do in beautiful Traverse City including downtown art walks, indoor farmers markets, color tours, kayaking, hiking, winery tours and festivals.

Visit <https://www.traversecity.com/fall/> to explore all that Traverse City has to offer. Also visit <https://www.traversecity.com/area/visitor-guide/> to request a copy of the Traverse City Visitors Guide.



Speakers

Jill Calabro



Jill Calabro manages all things science-y for the American Hort and the Horticultural Research Institute (HRI), including HRI's annual grants program. She also promotes HRI-supported research results and dabbles in regulatory advocacy to help ensure success of the green industry. In her personal time, Jill chases after her five-year-old son and proudly knows the names of all the Thomas the Tank Engine friends.

Joe Chamberlin

Abigail Derby Lewis



Dr. Abigail Derby Lewis is a Senior Conservation Ecologist and Senior Program Manager for the Chicago Region at the Field Museum of Natural History. Abigail's work focuses on large landscape conservation and climate change adaptation for urban nature. She is the project manager for the U.S. Fish and Wildlife "Urban Monarch Conservation Design" effort, and a lead partner on the Monarch Priority Species Working Group for the Chicago Metropolitan region.

Duke Elsner



Duke has been employed by Michigan State University since 1990. He holds a B.S. and M.S. in Entomology from Michigan State University, and a Ph.D. in Entomology from the Pennsylvania State University. His current emphasis with MSU Extension is programming to support wild pollinator and monarch butterfly conservation, and working with commercial small fruit producers throughout northern Michigan. Duke is a frequent speaker for conservation groups, schools, garden clubs and many other entities in northern Michigan. Collecting and photographing insects, especially butterflies and moths, has been his personal passion for over 50 years.

Speakers

Rebecca Finneran



Rebecca received a Bachelor of Science in Horticulture with emphasis in landscape design from Michigan State University. She has been serving Michigan as MSU Extension Horticulture Educator since 1987 where she helps the green industry and consumers learn about horticulture, the environment and pesticide safety. Finneran teaches and sponsors numerous consumer horticulture programs across the state and is a prolific writer. Finneran previously served on the Board of Directors for the Grand Rapids based Frederick Meijer Gardens for twelve years and is currently overseeing an urban display garden in Grand Rapids known as the “Grand Ideas Garden” located at MSU Extension.

Steve Foltz



Steve Foltz, Director of Horticulture at the Cincinnati Zoo and Botanical Garden, has been with the zoo for 29 years. A graduate from the University of Kentucky with a B.S. in Ornamental Horticulture, Steve has taught the woody Landscape class at both Cincinnati State and Technical College and at the University of Cincinnati for the past 25 years. Steve has been a member of the Ohio Plant Selection Committee and is one of the original members of the Theodore Klein Plant Awards Committee in Kentucky since its beginning in 1995. Steve is a board member of the International Plant Propagators Society, Eastern Region and was honored with the 2016 Distinguished Contribution Award from the Ohio Nursery and Landscape Association.

Mary M. Gardiner



Dr. Mary M. Gardiner received her Ph.D. in 2008 and is currently an Associate Professor in the Department of Entomology at The Ohio State University. Her research program focuses on the ecological value of urban vacant land. This work is concentrated in Cleveland, Ohio—a city that has experienced significant economic and population decline. Cleveland currently contains 27,000 vacant encompassing approximately 4,000 acres of land. The Gardiner lab examines how alternative vegetation design and management regimes influence the value of vacant land for the conservation of biodiversity and the provision of ecosystem services. Mary is also a State Specialist in Extension and works with several stakeholder groups including home gardeners, Master Gardeners, Master Naturalists and urban farmers. Her extension programming focuses on identifying and attracting beneficial insects to gardens and farms to promote conservation and ecosystem services. In 2015, she released a book focused on natural enemies and their role in biological control in home gardens titled: *Good Garden Bugs: Everything You Need to Know about Beneficial Predatory Insects*. She has also embraced the use of citizen science in her research with the statewide program, *Pollination Investigators* which engages volunteers in the study of pollination services.

Speakers

Paul Glaum



Paul Glaum is a soon-to-be graduate from the University of Michigan in the Department of Ecology and Evolutionary Biology. His research focuses on wild pollinating insects and the external influences on their population dynamics in both natural and human altered settings. While honey bees may be the most well known pollinating insect, numerous pollinating insects play essential roles in agricultural systems and in the general maintenance of plant biodiversity. Paul and his collaborators study how one particular type of land use, urbanization, affects native bee communities. To that end, they have developed a multi-year and multi-faceted research project across cities in southeastern Michigan including Ann Arbor and Detroit. This research project has delivered pertinent data and allowed Glaum avenues to engage undergraduates in field work and research leading to honors theses and published work. Outside of research these projects have functioned as fantastic outreach opportunities with community gardeners, local apiarist groups and student groups. Using the connections made through this research Glaum and colleagues have held various informative talks and educational events aimed at audiences of all ages.

Damon Hall



Damon M. Hall is an Assistant Professor at Saint Louis University in the Center for Sustainability, a graduate-degree granting research institute. He Completed a Ph.D. in Wildlife and Fisheries Sciences as a Boone and Crockett Ph.D. Fellow in Conservation Policy at Texas A&M University. He holds an M.A. in Communication and a B.S. in Agriculture concentrating on Forestry And Natural resources both from Purdue University. At Purdue he was Apiary manager of Dr. Hunt's Honeybee's Genetics Lab. His research Examines the interactions between social and ecological systems where Science, policy and culture meet.

Pierre Lau



Pierre Lau is a Ph.D. student at Texas A&M University. He obtained his B.S. in Environmental Systems: Ecology, Behavior and Evolution from the University of California, San Diego. He started pollination research with Halictid bees in 2011 and transitioned to a honey bee behavioral ecology lab from 2011-2013. In 2014, he started his graduate program with Dr. Juliana Rangel and has been involved with projects involving honey bee nutritional ecology. In particular, he is interested in understanding honey bee pollen foraging preferences to improve overall colony health. He recently contributed his first peer-reviewed publication to understanding the salt preferences of honey bee water foragers (Lau and Nieh 2016) and is now using palynological tools for studying honey bee pollen foraging.

Gretchen LeBuhn



Dr. Gretchen LeBuhn is a professor of Biology at San Francisco State University and the Director of the Great Sunflower Project, a citizen science program. Her research spans the fields of ecology, biodiversity and conservation biology. She has worked on understanding and conserving plant and pollinator systems from the mountains of Ecuador and the Sierra Nevada of California to urban San Francisco.

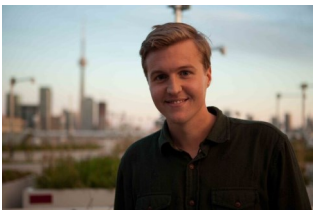
Speakers

Susannah Lerman



Dr. Susannah Lerman is a Research Ecologist in the Urban Forests, Human Health and Environmental Quality unit of the U.S. Forest Service. Susannah earned her B.A. in American History from the University of Delaware in 1994, an M.S. in Conservation Biology from Antioch University in 2005, and a Ph.D. in Organismic and Evolutionary Biology from the University of Massachusetts in 2011. Her research explores the links between human management of urban green spaces and the health and success of native wildlife populations, and how these impacts subsequently feed back to influence people due to the role of biodiversity in delivering ecosystem services. Susannah translates the application of scientific information into management tools and integrates a citizen science approach with the ultimate goal of improving the sustainability of urban environments for birds, bees and other wildlife, and advancing human well-being through reconnecting people with nearby nature. Susannah seeks opportunities to explain scientific findings to varying audiences while trying to facilitate con-

Scott MacIvor



Scott MacIvor is an Assistant Professor of Urban Ecology in the Department of Biological Sciences at the University of Toronto Scarborough. He is interested in plants and pollinators in cities and, more broadly, the biodiversity and ecosystem functioning of green infrastructure, including public and private gardens, parks and green roofs. Scott is also a researcher at the Green Roof Innovation (GRIT) lab at the University of Toronto in the faculty of Landscape Architecture, and works with the city of Toronto Planning Division on a number of projects, which have included the 'Bees of Toronto' Biodiversity Series book, and the 'Guidelines for Biodiverse Green Roofs'.

Andony Melathopoulos



Andony is a new Assistant Professor who, since 2016, has been leading Oregon State University's efforts to design, implement and evaluate a state-wide pollinator health program. OSU's work around pollinator health comes out of a mandate from the Oregon Legislature that followed bumble bee kills around the use of neonicotinoid pesticide use on urban shade trees. Last year he provided training to over 1000 pesticide applicators on how to reduce pesticide exposure to pollinating insects, he hosts a weekly podcast on pollinator health and is currently working on a number of education products designed for helping homeowners and landscapers better understand how to manage pests while minimizing impacts to pollinators. He also sits on the steering committee of the Oregon Bee Project, which coordinates pollinator health work across state agencies. He has over fifteen years' of experience in pollinator health extension, which includes over 30 peer-reviewed papers, speaking at industry and public meetings, writing for trade journals (over 40 articles), conducting qualitative risk assessments for government agencies and developing public education activ-

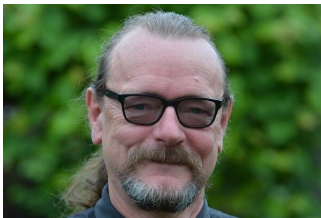
Speakers

Audrey Muratet



Audrey Muratet received her Ph.D. in Ecology from the Pierre and Marie Curie University, Paris. She has studied and explored for more than 15 years the diversity, composition and dynamics of urban biodiversity. Her main interests cover the study of invasive species, the role of urban wastelands, the impact of pesticides on biodiversity, and the evaluation of landscape connectivity in human populated areas, especially the region of Paris. Her research also stresses the importance of human perception in urban ecology and conservation, calling for more collaboration between ecologists and social scientists. Finally, she continuously gets involved in the design and the promotion of citizen science programs. She conducted her research at the Center for Ecology and Conservation Sciences (National Museum of Natural History). She then developed applications of her work within the Department of Seine-Saint-Denis and the Regional Agency for Nature and Biodiversity in Île-de-France (Natureparif).

Laurence Packer



Laurence Packer is a Professor of Biology at York University where he has worked since 1988. He teaches Entomology and Biodiversity courses. His research is on bees. He and his students have published a book "Keeping the Bees" published by HarperCollins as well as "Bees: A Close-up Look at Pollinators Around the World" with Sam Droege, Voyageur Press (both for sale in the lobby after the event). He and his team have described over 100 new species of bees. The collection that he has started at York University now includes several hundred thousand specimens with examples from well over 100 countries; it is one of the most diverse bee collections in the world. He was a member of the Committee on the Status of Endangered Wildlife in Canada and the Natural Science and Engineering Research Council of Canada's Evaluation Group for Ecology and Evolution. His research has been funded by the latter organization as well as National Geographic, Genome Canada and the Canadian Foundation for Innovation. His general public presentations reach hundreds to thousands of people each year.

Cristi Palmer

Details coming soon.

Speakers

Daniel A. Potter



Daniel A. Potter is a Professor of Entomology at the University of Kentucky, Lexington, KY, USA, he has studied the management of pests and beneficial insects in urban landscapes for more than 40 years. He teaches courses in Horticultural Entomology and Insect-Plant Relationships, and has supervised > 40 graduate students. Dr. Potter is a Fellow of the Entomological Society of America and received ESA's National Distinguished Achievement Awards in Urban Entomology (1995), Teaching (1999), and Horticultural Entomology (2006). His industry recognitions include the U.S. Golf Association National Green Section Award (2010), the Professional Land Care Networks's Leadership Award (2008), and the American Nursery and Landscape Associations Distinguished Achievement Award (2006).

Caydee Savinelli



Caydee Savinelli is the Pollinator and IPM Stewardship Lead at Syngenta. In this role, she leads the development and implementation of strategies and tactics for the pollinator health and stewardship, integrated pest management, insect resistance management and biodiversity conservation initiatives. She is also leading Syngenta's Operation Pollinator program along with its research and implementation efforts. She has focused on pest management, product development and crop production throughout her 33 year career and has worked in the U.S., Europe and Latin America. Caydee holds a Ph.D. in Entomology with a minor in Crop Science from North Carolina State University and a B.A. in Biology from Gettysburg College. Caydee's interest in agriculture and entomology started in childhood during the time spent at her grandfather's orange grove in Florida.

Casey Sclar



Casey is the Executive Director of the American Public Gardens Association. Their team connects, protects, and champions over 600 gardens and their 9300+ allied members located throughout the U.S., Canada, Mexico and 24 other countries. These gardens reach well over 100 million people per year, continually envisioning "*a world where public gardens are indispensable.*" His work experience in horticulture and plant science spans over three decades. Prior to Association service, he spent 15 years at Longwood Gardens (Kennett Square, PA) directing integrated pest management, soils, composting, land stewardship and other sustainability programs. He holds a B.S. degree in Horticulture from Colorado State University, and received the American Public Gardens Association's Professional Citation in 2011 for outstanding achievements in public horticulture. Casey connects plants, people and the environment through publications, presentations and service. He sits on the Advisory Council for *Seed Your Future* (a nationwide movement to promote careers in horticulture), is the Inaugural Chair of the *National Initiative for Consumer Horticulture* (a collaborative effort to set national research priorities for the end-use horticulture industry and raise awareness of its contributions to our health, economy and the environment), recently began service on the board of the Xerces Society, and is active in movements and organizations that promote pollinator and plant conservation, while mitigating the threats to endangered species.

Speakers

Dave Smitley



Dr. Dave Smitley works closely with the turf grass, nursery and floriculture industries on identifying insect pest problems, and researching best management practices to address them. Basic and applied research is followed with extension recommendations for growers. Some of Dr. Smitley's industry contributions include the introduction of *Entomophaga maimaiga*, a natural fungal pathogen of gypsy moth with decreased state and forest defoliation due to gypsy to less than 1/10th of what it was in the early 90's. Development of new strategies for emerald ash borer including product that homeowners can purchase and the most widely used professional product for landscape trees as well as the introduction of *Ovavesicula popilliae*, a natural pathogen of Japanese Beetle into Michigan in 1999. In the past four years, Dr. Smitley's lab has worked with the greenhouse and nursery industries to develop best management strategies for growing annuals, perennials, trees and shrubs that will be safe for pollinators. This led to organizing the National Protecting Pollinators Conference.

Mace Vaughan



Mace Vaughan serves as the Xerces Society's Pollinator Conservation Program Co-Director and a Joint Pollinator Conservation Specialist to the USDA's Natural Resources Conservation Service (NRCS). Mace has led Xerces' Pollinator Conservation programs since 2003. In his tenure at the Xerces Society, the pollinator program has grown from a small pilot project on California farms to the world's largest team of pollinator conservation experts. His work with other staff at the Xerces Society and the USDA NRCS has led to the implementation or protection of hundreds of thousands of acres of pollinator habitat. Through education and outreach events he has directly reached thousands of agency staff and farmers.

Frank Wong

Frank Wong, Ph.D., is a Senior Regulatory Affairs Consultant with Bayer Crop-Science. Frank has a B.S. in Biochemistry from UC Davis and a Ph.D. from Cornell in Plant Pathology. Currently, Frank is responsible for working with broad industry groups to develop solutions for pest management issues. Prior to joining Bayer, Dr. Wong was an associate professor and statewide extension specialist at the University of California, Riverside, from 2001-2011. Frank is active in numerous professional organizations including the Crop Science Society of America, American Phytopathology Society, Golf Course Superintendents Association of America, National Pest Management Association of America, American Mosquito Control Association, and National Association of Landscape Professionals.

Elsa Youngsteadt



Elsa Youngsteadt is a Research Associate in the Department of Entomology and Plant Pathology at NC State University, where she studies pollination ecology and the effects of urbanization and climate change on insects, including bees. She maintains an active native-bee outreach program at NC State and developed outreach materials that are used statewide. After completing her Ph.D. in Entomology at NC State, she worked as a science writer and editor for *American Scientist* magazine. Since returning to the world of insects in 2012, her research has taken her up and down the East Coast, from the sandhills of Fort Bragg to the streets of Boston and New York City.

Session Descriptions

Opening Keynote– Laurence Packer

Bees: Importance & Diversity

There are over 20,000 species of bee known worldwide, but only one (the western domesticated honey bee) is generally understood to be important for pollination. Laurence will outline the diversity of bees worldwide and present the results of some research that suggests that other pollinators are far more important than generally recognized.

Tuesday, Oct. 10th Session 1 Keynote– Damon Hall

The Human Dimensions of Urban Pollinator Conservation

Biodiversity losses give us insight into the long-term effects of human behaviors. The task of social science is to engage in research designed to understand the unintended consequences of intentional human actions. His talk chronicles the social, cultural, and political dimensions of wild and native bee conservation via collaborative research being conducted in St. Louis, MO.

Tuesday, Oct. 10th Session 1 Talk 1– Duke Elsner

The Role of Lepidopterans in the Urban Landscape

Compared to bees, butterflies and moths are very minor pollinators, but they have other significant roles in the urban landscape. Their contribution to the food web and the public's perception of insects will be presented.

Tuesday, Oct. 10th Session 1 Talk 2– Paul Glaum

Just a Small Town Bee: How Increased Urbanization Drives Compositional Changes in Native Bee Communities Through Unique Effects on Specific Functional Groups

Much of the decline in native bees stems from human land use change, yet there are numerous unanswered questions regarding how wild bees interface with one particular type of human land use, urban development. By integrating specific natural history characteristics involving nesting behavior into our analysis, we describe key changes in bee community composition driven down by urbanization.

Tuesday, Oct. 10th Session 2 Keynote– Dan Potter

Integrated Pest and Pollinator Management for Urban Lawns and Landscapes

Dan will summarize the recent research on the extent and duration of bees' exposure to insecticide residues in lawn and landscape settings, and research-based best management practices (BMPs) by which landscape managers can safeguard bees when controlling pests. Opportunities for how the "bee issue" can help educators, garden centers and land care providers promote more diversified and sustainable landscapes will be discussed.

Session Descriptions

Tuesday, Oct. 10th Session 2 Talk 1 – Pierre Lau

A Nationwide Analysis of Pollen Collected by Honey Bees (Apis mellifera) in Urban and Suburban Environments

Poor nutrition is one of the main drivers of poor colony health. Understanding the types of plants honey bees are foraging for in developed areas is essential for growing urban beekeeping community. This talk will discuss the recent findings from the pollen and nectar we have collected from Michigan, California, Florida and Texas.

Tuesday, Oct. 10th Session 2 Talk 2 – Audrey Muratat

Urban Wild and Domesticated Pollinators, What Do They Face?

Natureparif is a biodiversity agency that regularly publishes states of biodiversity in relation with citizen practices regarding nature in the Paris region. They are based on monitoring programs from the National Museum of Natural History using participation of thousands of volunteers and professionals and yielded indicators that inform decision-makers on more nature friendly public policy. For several decades, trends of pollinators are alarming in anthropogenic areas. Here, we assessed the effect of private garden management on butterflies and bumblebees in more than 3,000 gardens in France. We showed the correlation between butterflies and bumblebee abundance and use of pesticides is significant but the direction of the correlation depended on the family of products (insecticide, herbicide, fungicide). We also studied apiculture practices on bees healthiness using a sample of 300 apiaries located in the Paris region. Those results permitted us to infer some recommendations to gardeners and beekeeper amateurs in order to maintain and enhance pollinator's community cities.

Tuesday, Oct. 10th Session 3 Keynote – Mary Gardiner

A Growing Conservation Focus in Shrinking Cities: How Vacant Land Ecology Structures Bee Communities

Mary will examine how the design, management, contamination legacy, and landscape context of urban greenspaces influence their conservation value for bee communities.

Tuesday, Oct. 10th Session 3 Talk 1 – Scott Maclvor

Functional and Phylogenetic Filtering of Urban Wild Bee Diversity

Cavity-nesting bees were sampled in Toronto, Ontario over three years and species richness, functional and phylogenetic diversity were calculated for each site across multiple spatial scales along habitat heterogeneity and urbanization gradients. RLQ analysis revealed that bees respond most strongly to urbanization based on nesting material, body size, and feeding specialization, and we conclude that phylogenetic and functional approaches offer additional insight into biodiversity filtering by urbanization compared to species richness.

Tuesday, Oct. 10th Session 3 Talk 2 – Elsa Youngsteadt

Too Hot Downtown? The Effect of Urban Warming on Bee Communities

Cities are almost always warmer than surrounding natural areas. As ectotherms whose metabolism depends largely on environmental temperature, bees should be sensitive to warming. This talk asks how urban warming affects bee communities in Raleigh, NC, and aims to predict which species will be winners and losers in hotter habitats.

Session Descriptions

Tuesday, Oct. 10th Session 3 Talk 3 – Susannah Lerman

Habitat for Bees: The Conservation Value of Residential Yards

Backyard habitats support a surprising number of bees. In addition to providing pollinator gardens, households can reduce some typical landscaping activities such as mowing lawns less frequently to contribute to urban bee conservation.

Tuesday, Oct. 10th Session 4 Talk 1– Joe Chamberlin

Systemic Insecticides in Urban Landscapes IPM: Impacts & Benefits

Systemic insecticides are an important element of IPM programs in urban landscapes. Economic, environmental and human health benefits will be discussed along with the need for proper stewardship.

Tuesday, Oct. 10th Session 4 Talk 2– Caydee Savinelli & Frank Wong

Pesticide Regulation & Stewardship for Pollinator Protection

This session will discuss current public policy issues for pollinator protection including how EPA assesses risk to pollinators, practical pesticide risk mitigation and how current pesticide labels help address these. This session will also discuss the requirements for pesticide registration and why we need to maintain current insecticide uses. Resources for pesticide stewardship and pollinator protection will be highlighted.

Tuesday, Oct. 10th Session 4 Talk 3– Cristi Palmer

Practical Implications for Current and Future Research Activities

Tuesday, Oct. 10th Session 4 Talk 4– Jill Calabro

The Critical Need for Industry-wide BMP Adoption

Come learn about the Horticultural Research Institute's (HRI), pollinator protection efforts, including establishment of the Grow Wise, Bee Smart initiative and involvement with the Million Pollinator Garden Challenge. HRI is a wholly industry-funded and directed organization that supports sound, scientific research for the betterment of the green industry.

Tuesday, Oct. 10th Session 4 Talk 5– Dave Smitley

Publishing of Regional BMPs for Landscapers and Arborists

Discussion on the value and need for voluntary BMPs, the critical elements of the BMPs and use of the MSU regional BMPs as a national template.

Session Descriptions

Wednesday, Oct. 11th Session 1 Keynote – Mace Vaughan

Back Forty to the Backyard: 15 Years of Pollinator Conservation.

The Xerces Society has been a leader in pollinator conservation since its founding in 1971. The last 15 years have seen remarkable growth both in the work of the Xerces Society and our pollinator conservation partners nationwide. In this talk, Mace Vaughan will share stories, strategies, and lessons learned working with farmers, conservation partners, and backyard gardeners across the U.S.

Wednesday, Oct. 11th Session 1 Talk 1 – Steve Foltz

Zoo's Best Plants for Pollinator Programs

This program is a collaboration between the CZBG and local growers of annuals and perennials that are sold in 20 local garden centers throughout our region. This was all inspired by our “Buzz Troupe” which is a group of young volunteers who go out in our garden and photograph pollinators and the plants they frequent.

Wednesday, Oct. 11th Session 1 Talk 2 – Abigail Derby Lewis

A Monarch's View of the City: Developing a Conservation Design for Monarchs in Urban Areas

The Urban Monarch Conservation Design reflects a coordinated and strategic approach to help identify the best places and practices to put pollinator habitat on the ground at the local scale. A resulting product of this work is the Urban Monarch Conservation Guidebook planning tool, which reflects an integrated social, ecological and geospatial approach to prioritizing monarch conservation efforts in larger metro areas. We will share results from the four cities where the project has been piloted, and discuss how the tools and products can be applied and scaled to other municipalities across the U.S. central flyway.

Wednesday, Oct. 11th Session 2 Talk 3- – Andony Melathopoulos

Struggling to Get Beyond Best Management Practices

Although there are a number of best management practices for pollinator protection in urban settings, there remain major obstacles in having these BMPs work in the world to reduce exposure on the ground—going beyond best management practices to practices that are simply routine. This talk focuses on efforts in Oregon to make BMPs meaningful by: 1) being specific to the urban pest management context, 2) having a means to set priorities (i.e., tackle practices of highest risk first), 3) result in goals that can be acted on by extension (i.e., be “extensionable”) and 4) have measurable outcomes.

Session Descriptions

Wednesday, Oct. 11th Session 2 Keynote – Gretchen LeBuhn

Understanding Urban Bees at Local to Continental Scales

The factors that influence richness and diversity of urban bees and the services they provide vary depending on the scale at which they are observed. Using a combination of data from field research and citizen science, we will examine how biodiversity and ecosystem services change across space and time.

Wednesday, Oct. 11th Session 2 Talk 1 – Rebecca Finneran

Smart Gardening for Pollinators: A State-wide Campaign with Far-reaching Impact

Protecting pollinators is the mantra of many, but are consumers really getting the right information? Learn how Michigan State University's Consumer Horticulture team is harnessing every means available to deliver "smart" messages to consumers about plants and gardening practices to promote pollinators.

Wednesday, Oct. 11th Session 2 Talk 2 – Casey Sclar

Perspectives on Education, Outreach, and Advocacy for Plants and Pollinators

Part of the \$196B industry that makes up end-use horticulture in the U.S., public gardens must be actively involved in scientific research, conservation, land stewardship, and the most stringent principles of proper IPM. All this must be done while still educating and interpreting the importance and power of plants and pollinators to the over 121 million people who visit them, and to externally advocate this importance to their communities at the local, regional, and national level.

Conference Organizers



Duke Elsner

Consumer Horticulture Educator
Michigan State University Extension



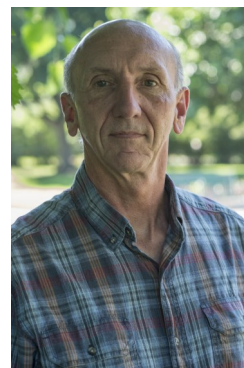
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