Including Landscape Elements That Innately Support Our Human Nature

Scott Beuerlein, Manager of Horticultural Outreach
Cincinnati Zoo & Botanical Garden, 9:00AM-9:50AM

A wide-ranging look at how and why engagement with nature is so innately critical to human well-being and how and why mankind has consistently chosen a certain type of landscapes in which to live (or has in fact created that landscape from other ecosystems) throughout its evolutionary history and how humans have portrayed the “ideal” landscape in art. This will inform concepts on which design elements best support our human nature and foster greater well-being. Don’t worry. The talk is much lighter and more fun than all of that sounds. Finishes with a rousing call to make gardens!

Scott Beuerlein is the Manager of Botanical Garden Outreach at the Cincinnati Zoo & Botanical Garden. He is heavily involved in running the Zoo’s Botanical Garden educational programs, various plant trialing programs, the Zoo’s Best Plants for Pollinators brand, and the Plant for Pollinators Challenge.

Scott is also a garden writer and horticultural speaker. He has published hundreds of articles and columns in publications such as Horticulture Magazine, State by State’s Ohio Gardener (and other related State and regional magazines), and American Nurseryman. He is currently the author of the Deeper Roots column found on the back page of Horticulture Magazine. Scott is a Partner in the influential Garden Rant blogsite and posts at least monthly. In 2019, Scott was awarded gold medals by the International Association of Garden Communicators for two of his articles.

He is the current Chair of the Boone County Arboretum Collections Committee, past Chairman of Taking Root, past President of the Cincinnati Flower Growers Association, and Past Chairman of the Northern Kentucky Urban and Community Forestry Council. In 2019, he received the Civic Garden Center of Cincinnati’s Building Community Award.

Scott is a 1982 graduate of Xavier University. He is an ONLA Certified Landscape Technician and an ISA Certified Arborist. He lives and gardens with his wife, Michele, who has procrastinated 36+ years on divorcing him!

Success Stories in Storm Water Retention & Beyond at the Cincinnati Zoo & Botanical Garden

Mark Fisher, Vice President of Facilities, Planning, & Sustainability
Cincinnati Zoo & Botanical Garden, 9:50AM-10:40AM

From struggling to figure out how to recycle aluminum bottles to becoming the greenest zoo in world, the Cincinnati Zoo’s sustainability journey has been sincere, aggressive, and unapologetic. Hear some intriguing, funny, and at times embarrassing examples of how the zoo turned it all around and finally lived up to its mission as a conservation-based organization; breaking rules and pushing back against the status quo every step of the way, and of course, saving boat loads of cash in the process.
A product of the University of Cincinnati’s Civil and Environmental Engineering program, Mark Fisher spent the first twelve years of his professional career working as a project manager for Turner Construction Company. Many of those years were spent at the Cincinnati Zoo, overseeing the construction of several major exhibits. In 2006, he came on board with the Zoo as the Senior Director of Facilities and Planning.

His role at the Zoo is diverse, including overseeing the development and execution of the Zoo’s master plan, leading the visioning efforts and supporting the operations of the Zoo’s 800 acres of farmland in Warren and Clermont counties, supporting a large team of employees that maintain the Zoo’s grounds and infrastructure, and being ever present in the Zoo’s neighborhood of Avondale, working to heal old wounds and establish authentic relationships with the people that call Avondale home.

Mark is also the driving force behind the Zoo’s nationally recognized sustainability movement. By implementing the most aggressive green building program in the nation, along with producing dramatic reductions in natural resource consumption, the Zoo has transformed itself from an organization that barely had a recycling program, to becoming the greenest Zoo in world.

Mark is involved with several non-profit organizations, in various capacities, including SonLight Power, Gabriel’s Place, Reds Community Fund, Habitat for Humanity, the Aquarium and Zoo Facilities Association, among others.

Over the years, Mark’s work in the world of sustainability and his outreach efforts in the community have been recognized by awards such as the Cincinnati Business Courier 40 Under 40 Award, US Green Building Council – Cincinnati Chapter – Person of the Year, AZFA Conservation Award, Hamilton County Soil & Water Conservation Partner of the year, among others.

Outside of work, Mark most enjoys scrambling around the mountains of the American West with his wife and four children.

Cold Climate Cities and Successful Green Infrastructure Solutions...

Peter MacDonagh, Director of Science & Design, The Kestrel Group, Minneapolis, Minnesota

Overview:
Where are the best examples of sustainable urban landscapes that can be applied to Cincinnati? What cities resemble Greater Cincinnati’s challenging glacial and clay soils, unstable steep slopes, 40” annual rainfall, with thunderstorms/flash flooding in summer and snow/frozen ground in winter? Where are the cities that speak fluent cold climate landscaping, arboriculture, horticulture? Where are the cities that have committed to putting sustainable landscape practices in place? How have these urban areas handled their challenging climate regimes, damaged soils and political will?

In the Upper Midwest, Chicago and Minneapolis have excellent examples of green infrastructure; but so do Toronto, Calgary and Edmonton in Canada; and Northern Europe has exceptional examples in Stockholm, Malmo, Munich, Stuttgart and Berlin. What do these cities have in common with Cincinnati, and which successful templates can be applied here?

Also, who/what are the enemies of successful sustainable urban landscapes? How can severe compaction be remedied? Excessive salt? High Alkalinity? Infrequent rainfall? Foolish specifications? Fully loaded pick-ups driving on site soils? Also, what are the keys to reducing or eliminating “call-backs”?

Peter MacDonagh is co-founder of The Kestrel Design Group, Inc., and its Director of Science & Design with 35 Years of innovative ecological design experience in: urban forestry, storm water management, ecosystem restoration and green infrastructure. Peter has applied his sustainable design skills improving: urban forests,
downtowns, parks, soils, lakes & rivers on public lands for: school & university campuses; watershed authorities; and city, county, state & provincial governments in North America and Europe. Under his leadership, Kestrel received 35 regional, state, national & international awards.

Peter MacDonagh is a recognized authority on: urban forests; soil bio-engineering; sustainable green & blue infrastructure. He is adjunct professor at the University of Minnesota in landscape architecture, architecture and forestry. He has currently served 6 years as a commissioner on the Minneapolis Tree Advisory Commission and served two terms as a Soil & Water Conservation commissioner in the Chicago region. He has authored Minnesota’s: sustainable site & water guidelines; and the state’s storm water chapters on: green roofs; urban trees; filtration & remediation of damaged soils; and state manuals on native seeds for roadsides; and soil bioengineering. Peter has had many peer-reviewed papers and chapters published; and presented at over 200 conferences, symposia, and workshops in: USA, Canada, Costa Rica, UK, Ireland, Norway, Sweden, Portugal, Hong Kong and Singapore.

**Part 1: Steep Slopes, Green Roofs, Rain Gardens**

11:10AM-12:00PM

**Steep Slopes/Soil Bioengineering:** When are speed bumps on slopes needed? How and when to use tube socks: rock vs. wood-chip? What is compost slope spackle?

**Greenroofs:** Are trays or sedum sod best? Irrigate or not? What’s best for leak testing: EFVM or flood? Which weeds must be removed? What’s the best long term media: compost or mineral?

**Raingardens & Bioinfiltration:** Do you plant less 1/2 gallon pots or more liner stock? What about slash mulch? Do you use toothed or smooth backhoe buckets? What’s the very best silt fence?

**Part 2: Shoreline Stabilization & Urban Forests**

1:00PM-1:50PM

**Shorelines/Soil Bioengineering:** What are the best wave breaks? When to use root wads & snags? What’s the right level of species vigor in live stake species? What kind of backhoe bucket works best?

**Urban Forests:** How do we avoid the next Chestnut Blight or DED or EAB tree plague that wipes out an entire genera citywide? How can we employ rapid soil sampling & soil testing? How do structural soils compare to native amended soils? What’s the role of BioChar and biosolids? Which is best for site vehicles: tracks or tires? How is decompaction best achieved: v-rippers or para-plows or vegetation? When are tree grates necessary? What can we do to prevent sidewalk repairs that butcher tree roots? Is stormwater the answer to tree irrigation? What about bare root trees in gravel bed nurseries? How do auger vs. shovel planting of trees compare?

**Summary:** In all the example cities discussed, the speaker has done some or all the above: designed, consulted, studied, written guidelines/ordinances, waded in their streams and lakes, dug test soil pits, planted, lectured or given workshops. Be prepared to learn lots of information on sustainable urban landscaping that can be applied in the Tri-State region.

**Top 5 Gardening Trends**

**Joe Boggs, Assistant Professor OSU Extension Hamilton County and OSU Entomology, 1:50PM-2:40PM**

This presentation will cover the top 5 gardening trends Joe has observed; like a fly on the wall. They include upward trending downturns as well as a downward swooping upturn that's all the buzz in select circles. Learn
about an important group of plant pollinators that will blow through odious entomo-bias to take their rightful place in sustainable landscapes!

Joe Boggs is an Assistant Professor with OSU Extension, Hamilton County, and the OSU Department of Entomology. He specializes in tree and shrub diagnostics and pest management. Joe averages over 95 teaching presentations per year. He’s a frequent contributor to trade magazines and posted 112 blog-style BYGL Alerts in 2019. His weekly radio segment, “Buggy Joe Boggs Report,” runs from April through October on the Saturday morning show, “In the Garden with Ron Wilson,” which airs on 55KRC in Cincinnati and 610 WTVN in Columbus. The Cincinnati show is syndicated to 32 radio stations in 12 states.

Success Stories in Plant Introductions

Steve Foltz, Director of Horticulture
Cincinnati Zoo & Botanical Garden, 3:10PM-4:00PM

A lot has changed in Horticulture in the past decade. We now have many more choices of plants with tremendous value for sustainability. These range from new species in the trade that offer unique ecosystem services to more compact selections of wild species that afford us the possibility of more readily including their ecosystem contributions in typically smaller urban and suburban gardens. Never have we had a broader selection of plants to sequester carbon, hold soil, clean air, clean water, support pollinators, and more. Steve will offer a very growable and desirable palette of plants that will have you ready to plant this spring like never before!

Steve Foltz, Director of Horticulture at the Cincinnati Zoo & Botanical Garden. Steve is responsible for one of the area's largest plant collections that include 3,000 varieties of trees, shrubs, tropical plants, grasses, bulbs, perennials and annuals. His expertise is widely-known in the industry and he is frequently asked to speak to horticulture groups.

A graduate of the University of Kentucky with a B.S. in Ornamental Horticulture, he is currently teaching Horticulture at both Cincinnati State Technical and Community College and at the University of Cincinnati. In addition, each year he teaches a series of classes on "Landscaping Your Home." Steve has been a member of the Ohio Plant Selection Committee, serving as Chair of the committee for two years. He is also a member of the Kentucky Plant Selection Committee for the Theodore Klein Award and a member of the International Plant Propagators Society, Eastern Region. Steve was the 2015 recipient of the Ohio Nursery and Landscape Association’s highest award, the Distinguished Contributor Award.

The Role of Urban Landscapes in Bumble Bee Conservation

Dr. James Strange, Chair & Professor
OSU Department of Entomology, 4:00PM-4:50PM

Dr. James Strange will discuss the roles urban and suburban landscapes are playing in monitoring for threatened and endangered bumble bees with a special focus on the Rusty-Patched Bumble Bee (Bombus affinis) and the Western Bumble Bee (Bombus occidentalis). Further I will explain how urban and suburban landscapes might be affecting bee health in both positive and negative ways and how human can alter the environment in our population centers to further benefit bumble bee populations.

Jamie Strange is the Chair and Professor of the Ohio State University Department of Entomology, where he investigates the interactions of bumble bees with their landscapes. He recently moved from the USDA- Agricultural Research Service Pollinating Insects- Biology, Management and Systematics Research Unit in Logan, UT to lead the OSU department in 2019. His past work has been with bumble bees, blue orchard bees, alfalfa leafcutting bees, and honeybees, investigating genetic diversity, parasite interactions and husbandry of these species. His current projects involve understanding the impacts of pathogens, parasites and genetics on bee health across an urban to rural gradient, and understanding how elevation in the western United States can impact the genetics, physiology and parasitology of montane bumble bee species.