

## **Speaker Abstracts**

### **All Lawn to No Lawn: A 10–year Adventure in Native Plant, Herb, Vegetable, and Xeriscape Gardening in North Texas**

Trinity Forks husband–and–wife members Becca Dickstein and Lon Turnbull will discuss the transformation of their backyard from a boring all grass lawn to a lower maintenance no–lawn landscape containing native plants, herbs, vegetables and adapted exotics. The backyard now has something in bloom almost all the time. The transformation was done using organic methods and plants purchased small or plants grown from seed and therefore was done at low cost. There will be plenty of pictures that help show the transition and how beautiful a backyard can look when it has a large number of native plants.

**Dr. Becca Dickstein,\* Professor of Biochemistry, University of North Texas**

**Dr. Lon Turnbull,\* Staff Scientist, Department of Biological Sciences, University of North Texas**

### **Conservation Subdivisions: Adding the Human Component to a Natural Habitat**

This presentation looks at the importance of establishing a guiding vision and like minded project partners in this type project. It looks at the economics of a conservation subdivision; fewer and smaller building lots, development necessities, marketing the open space as an amenity, and future homeowners association management costs.

What does a Conservation Subdivision mean for the homeowner? What restrictive covenants are necessary for the developer to establish? The landscape of the homeowner becomes important in this development because invasives from the private land can easily invade the preserved natural areas. This presentation will also include an overview of sustainable certifications, such as LEED, that are available.

**Carol Feldman,\* ASLA, Landscape Architect**

### **Creating and Maintaining Healthy, Energy & Water Efficient Roadside Landscapes**

The North Texas Tollway Authority's (NTTA) landscape design practices incorporate xeriscape principles, utilizing native and adapted plants, to maximize water conservation. A sophisticated central irrigation control system is linked to a weather station along with moisture sensors to accurately monitor and schedule the proper amount of irrigation according to the plant's needs, not a set schedule. The natural landscapes screen unwanted elements and views and mitigate traffic noise impacts.

**Tony Lucido, RLA, Design Guidelines Manager, North Texas Tollway Authority**

### **Creating Native Aquatic Plant Communities in Constructed Ponds**

Ponds and wetlands are often constructed or modified to create areas that attract wildlife, promote improved water quality, or enhance natural areas with the aesthetic setting a water body provides. Introducing native aquatic plants can shape the aquatic community structure, provide water quality and clarity benefits, control erosion, utilize excess nutrients, and provide habitat and food for wildlife. Techniques to establish a successful native aquatic plant community will be discussed. Selection of native plants which provide beneficial functions as well as aesthetics will be presented.

**Joe Snow, M.S., Research Scientist, University of North Texas;  
Owner, Joe Snow Aquatic Plants**

### **Determining a Pure Live Seeding Rate for Harrison germplasm *Florida paspalum***

Planting rates are an important part of a successful establishment of native warm season grasses. Planting recommendations in pounds of pure live seed (PLS) compensate for the normal variations in purity and germination of individual seed lots. Harrison germplasm *Florida paspalum* was released to the commercial market in 2004 by the East Texas Plant Materials Center. This study was conducted to determine an optimum planting rate which is both economical and promotes successful stand establishment. The effect of five PLS lb/acre planting rates (4,6,8,10 and 12) on percent cover of Harrison germplasm *Florida paspalum* (*Paspalum floridanum*) was investigated on an Attoyac fine sandy loam at the East Texas Plant Materials Center. Plots were planted each spring from 2004 to 2006 and percent cover was measured three years after planting. Percent cover three years after planting ranged from 29 to 75%. There was statistically no significant difference in percent cover between the 8 PLS lb/acre planting rate and the higher rates of 10 and 12 PLS lb/acre three years after planting. Results from this study suggests 8 PLS lb/acre for plantings of Harrison germplasm *Florida paspalum*.

**Melinda Brakie, Soil Conservationist, USDA, NRCS, East Texas Plant Materials Center**

### **Eastern Gamagrass Cultivar Improvement for Conservations Plantings and Commercial Seed Production**

Two eastern gamagrass [*Tripsacum dactyloides* (L.)] cultivars, 'Jackson' and 'Medina', and one accession (9043629, Nacogdoches, County, TX) were comparatively evaluated for seed production characteristics. Plant morphology was recorded in 2007–2009 from a randomized complete block design with three replications at the East Texas Plant Materials Center (ETPMC) on an Attoyac fine sandy loam. The number of vegetative and reproductive tillers were recorded from three random plants within the interior of each plot and reported as a percentage of the tiller type. The number of axillary inflorescences per primary reproductive tillers was also recorded. Seed quality parameters of percent fill, percent germination, and seed yield were also collected from plants within the interior of each plot. Accession 9043629 showed significant increases in the number of reproductive tillers with a mean of 40 as compared to 22 and 19 for 'Jackson' and 'Medina.' Significant increases in the number of axillary inflorescences per reproductive tiller, seed fill, and PLS yield were also detected for accession 9043629. Accession 9043629 will be elevated to release status under the name "Nacogdoches", and serve as a replacement for 'Medina' and 'Jackson' for commercial growers and conservation plantings in the ETPMC service area.

**R. Alan Shadow, USDA, NRCS Soil Conservationist; East Texas Plant Materials Center**

### **Encouraging Landscapes That Conserve Water, Save Money and Help the Environment: Dallas Water Utilities' Water-Wise Landscaping Educational Efforts**

Through its Water-Wise landscaping educational programs, the City of Dallas Water Utilities demonstrates the beauty of Water-Wise and EarthKind™ gardening and promotes outdoor water conservation. An annual Water-Wise Landscape Tour and its Water-Wise landscaping and turf seminars serve to educate the public on how to convert their landscapes to use less water by showing examples of landscapes that use native and drought-tolerant plants and reduced turf areas. The free, self-guided tour showcases Water-Wise landscapes throughout Dallas and surrounding cities and is a practical example of “conservation in action.” The seminars, taught by Water-Wise landscape designers and turf experts, teach homeowners common-sense principles to plan, design and plant quality, lush, beautiful landscapes that save water, time, money and energy and prevent water pollution and water waste. Other educational efforts to reach the public include production and dissemination of in-print and online literature such as “Natural Beauties” – a guide to native and drought-tolerant plants that thrive in Dallas with minimal watering, a brochure on “How to Save Water Outdoors” and resources that include nurseries specializing in native and drought-tolerant plants, Dallas-area designers specializing in Water-Wise landscapes, list of books on Water-Wise Landscaping and Water-Wise landscape websites.

**Noel Nielson, Program Coordinator, Conservation Division, Dallas Water Utilities**

### **Ferns & Lycophytes of Texas: Surprises in Diversity, Distribution, and Ecology**

Texas has the most native ferns and lycophytes of any state in the continental United States. Some are extremely rare, occurring in one Texas county and nowhere else in the entire country. The various species thrive in some of the most extreme conditions—in crevices on huge exposed granite outcrops, underwater on the bottoms of ponds or lakes, in deserts, and in cave entrances. One Texas species has leaves reaching nearly 13 feet in length. Another is a tiny floating aquatic often less than 1/2 inch in total size—a person can hold hundreds of such plants in a cupped hand. This paper will explore the surprises in their diversity, distribution, and ecology and discuss conservation issues.

**Dr. George M. Diggs, Jr.,\* Professor of Biology, Austin College; Research Associate, Botanical Research Institute of Texas.**

### **The Flower Mound, The Last 30 Years**

Thirty years ago The Flower Mound, prominent native prairie remnant, was officially put under protection by creation of The Mound Foundation, a nine member board of trustees charged with the mission of preserving this prairie for generations to come, and gathering and dispersing information of scientific, historic and educational interest.

This report documents the trials and tribulations, successes and failures, of a small dedicated group of volunteers in their ongoing attempts to fulfill that mission. In the end the Mound is still there, virtually unchanged, going through its annual cycle of flowering and seeding and renewal, as it has for the last 10,000 years or so.

**Alton Bowman, Chairman, The Mound Foundation, Flower Mound, Texas**

## **The Importance of “Pollinator Gardens,” How to Create Them, and the Importance of Botanical Gardens in their Promotion.**

“Pollinator Gardens”, as opposed to purely “Butterfly Gardens,” are of critical importance in today’s environment of development, of maintaining all non– developed areas as clean landscapes, and the trend toward agricultural monocultures. These lead to increasingly fewer nectar sources for pollinator populations. Homeowners can augment nature’s supply of flowers with flower gardens created where they live. But just providing flowering plants in one’s landscape is not enough. Since native (and some non–native) pollinators respond best to cues produced by native plant species, planting mostly, if not exclusively, native plant species should be a high priority (among several others) in planning a home landscape. Botanical Gardens are the natural place to promote these ideas and educate the public as the how’s and why’s of Pollinator Garden creation.  
**Roger Sanderson, Director, Heard Natural Science Museum & Wildlife Sanctuary**

## **Kansas State University, Seaton Hall Green Roof Research Project**

This presentation will review the KSU Seaton Hall Green Roof research design and note lessons learned up to this phase of the project. The discussion of how applied research projects influence facility operations and management will be central to the presentation. The primary goal for the project is to test the viability and growth of native grasses and forbs on a small integrated green roof with a soil profile of three to seven inches. The plan is to completely eliminate supplemental watering after the third growing season (2011) and observe what plants survive over time. Stormwater runoff and a range of climatic variables (including air and soil temperatures, rainfall, humidity, wind speed and direction) are being monitored every five minutes using a solar–powered data logger. As a result of this green roof demonstration and research project decision–making related to new facility design at the university is expected to be meaningfully influenced.

**Lee R. Skabelund, ASLA, MLA; Assistant Professor of Landscape Architecture, Kansas State University**

## **Keeping Texas Looking Like Texas: A Grower Initiative**

How growers that are based in Texas should do their part in keeping Texas looking like Texas. Developing Texas natives, keeping inventory, developing cultivars and educating the landscape designers. Urban sprawl, over grazing, mining has destroyed ecosystems and micro climates for native plants. How growers could help with programs for Texas Highways, state parks and state buildings, corporate & university campuses to be developed with Texas Native Plants. Keeping the native landscape preserved for future generations.

**Douglas Temple**

### **Monarchs Ask: Where Is My Garden?**

In 2010, the World Wildlife Fund listed the monarch butterfly on their Top Ten Most Threatened Species list because of loss of habitat. Monarchs that overwinter in Mexico and return to Texas in the spring need milkweed, their host plant, for their life cycle. Monarch Watch (University of Kansas) has proposed creating Monarch Waystations to help make up for the loss of habitat. What is a Monarch Waystation? It is a butterfly garden with nectar plants and milkweed.

**Dr. Ridlon (Kip) Kiphart,\* Retired cardio–vascular surgeon turned Texas Master Naturalist, Monarch Larval Monitoring Project trainer; Citizen Scientist of the Month (May 2010) by MonarchNet.**

### **Native Myco–heterotrophic Orchids as Conservation Indicators**

The ecology of native myco–heterotrophic orchids creates unique problems for understanding their survival and distribution, and challenges for their conservation. Mycoheterotrophic orchids show very different ecology from other orchid species, due to the fact that they maintain a relationship with mycorrhizal fungi in order to obtain carbon and nitrogen. The distribution of such orchids in the *Hexalectris* genus throughout Texas and the southwest may reflect the specificity of such species for habitats that adequately support the relationship with the mycorrhizal fungi. Past work in my laboratory has indicated that soil relationships may be important for this genus and this may suggest that these orchids may be described as bioindicators of habitats deserving protection.

**Dr. Marcy Brown Marsden, Department of Biology, University of Texas at Dallas**

### **Nature Nights: Effective Family Collaborative Programs**

There is a national public awareness campaign to support nature immersive programs and to reconnect children and families to nature. For more than 8 years, the Lady Bird Johnson Wildflower Center has been hosting immersive nature based family evening programs called Nature Nights. Experience an engaging look into program development, management and learn tips to develop partnerships for effective collaborative programming in support of your urban community.

**Stephen Brueggerhoff,\* Programs Manager, Lady Bird Johnson Wildflower Center**

### **The Pollinator Garden at Mesquite Creek Wildlife Habitat Area**

The development of this pollinator garden in New Braunfels will be discussed. The garden, begun in March 2009, is 1/3 acre and contains over 100 species of plants, mostly native to Central Texas.

**John Siemssen,\* Past President of the Lindheimer Chapter of NPSOT (Comal County) and a certified Texas Master Naturalist**

## **Prairie Restoration as a Tool for Landscape Scale Conservation in the Blackland Prairie**

The Texas Blackland Prairie has been reduced from its original extent of twelve million acres, to approximately four to five thousand acres. The Blackland Prairie is one of the most altered ecoregions in North America. Remnant prairies tend to be small in size and disjunctive, making communication of species and genetic material between patches difficult at best. Landscapes in the region are highly fragmented, and basic hydrologic, nutrient cycling and resource capture processes are damaged.

Prairie restoration has long focused on the establishment of small, highly diverse plantings. In order to accomplish process repair and to increase landscape level communication between patches, advantages may be found in combining intensive and extensive restoration strategies. Lower diversity plantings can be used as an extensive approach where plant species are selected for their abilities to repair process. Within the extensive approach, intensive, small, high diversity plantings may be used as propagule donor sites.

**James A. Eidson, The Nature Conservancy of Texas, Adjunct faculty in conservation, TAMU–Commerce; M.S., Rangeland Ecology and Management, Texas A&M University**

## **Protecting Pollinators Using Native Plants In Landscape Design**

In our cities and towns, where most of the native plant communities have been displaced by pavement, buildings and lawns, native landscapes can become important refectories for local populations of native bees and other pollinators. Designing landscapes using native plants can do much to promote good landscape diversity while providing food for the pollinators.

**Lisa Lennon,\* Landscape Architect**

## **Protection Of Natural Habitats On Privately– Owned Lands In Texas**

Private landowners own more than 95% of the land in Texas. This land is often composed of environmentally important parcels of natural habitat that need to be protected from fragmentation and development. This talk will look at some of the tools such as conservation easements that are available to landowners who are interested in conservation of these natural resources, while maintaining the private ownership of the lands for continuation of those desired lifestyles and land uses. The landowners can place a voluntary land use restrictions on land holdings, yet continue to use the land for ranching, hunting, passive recreation and other activities. The donation of a conservation easement can also have potentially significant tax benefits to the landowner.

In areas where development is taking place, a more sustainable “Conservation Development” design can be considered to develop the land for housing and commercial services in a way that preserves the open space and important habitats for future generations.

**R. J. Taylor,\* Connemara Land Trust; Director, Connemara Conservancy**

### **Rain Gardens: A Cutting Edge Sustainable Landscaping Technic**

*A rain garden is an artificial depression in the landscape that collects and stores stormwater runoff until it can infiltrate the soil—Justin Mechell and Bruce Lesikar, TX A&M*

Adding long lived, deep rooted, drought and wet tolerant plants adapted to local weather extremes and soil conditions increases the rain garden's sustainability. Native, sustainable landscapes featuring rain gardens, coupled with rain harvesting systems, drip and soaker hose irrigation are the cutting edge for landscape design. In the long run, rain gardens save money by saving water, maintenance, and energy. In addition the reduction or absence of chemical controls in gardens and sustainable landscapes make them a healthier environment for children and adults and provide a greater exposure to nature.

**Note:** As a follow-up to her talk, Carrie Dubberley will lead participants in building a rain garden at a local Denton site. **See workshops.**

**Carrie Dubberley,\* President, Dubberley Landscape, Inc.**

### **Reconnected: Understanding the Landscape Through Ecological Assessment**

The Texas landscape has been under human management for thousands of years. Pre-Columbians, like the Coahuiltecan and Caddoans, shaped the productivity of the landscape using the broad ecosystem as a partner. However, today's default landscape is an inert, resource-intensive concoction of awkward spaces and exotic vegetation, compelled to over-perform to the delight of chemical lawn purveyors, hustling lawn clippers, and water spraying specialists. Despite our advanced technologies, we have generally failed to read, understand, and accept the load-carrying capacity of the land, where our predecessors had enjoyed such abundance. Performing an Ecological Assessment allows designers and other stake-holders to reconnect to a site's landscape mosaic. The assessment evaluates macro-environment, hydrology, surface, soil, vegetation, peak shade, urban factors, views, light, space, and wildlife.

**Steve Shelton,\* MLA, ASLA, Principal CEO, Ecotopes: Landscape + Living Systems**

### **Saving and Reusing Native Trees on a Large Scale**

Before the development of Watters Creek Crossing at Montgomery Farm, over 2,000 trees were dug from the site and saved from the bulldozers. These trees have been used throughout the Montgomery Farm Development to preserve part of the original ecosystem. Because of their better adaptability to the local soils and weather, survival rates have been over 98 percent with growth rates much better than trees brought in from other sources. Over \$1,000,000 in mitigation fines were saved and the value of the trees exceeded the cost to save them.

**Rosa Finsley,\* ASLA, Landscape Architect**

**Melissa Gerstle, SASLA, graduate student in landscape architecture, University of Texas, Arlington**

### **Saving North Central Texas, One Landscape at a Time**

North Central Texas is the largest water user in Texas and maybe the United States. A brief program will describe what north central chapters are doing to change local residents one landscape at a time. From 2005 through 2009, one chapter member has spoken to over 3,000 residents of garden clubs, home owner associations, and civic organizations.

**Gailon Hardin,\* Immediate Past President, Native Plant Society of Texas**

### **Soils Alive: Establishing Underground Soil Communities to Support Native Plants**

Understanding and establishing the make-up of below-ground soil communities allows us to be more successful growing native plants on any scale. Native plants can make up beautiful, spectacular and colorful landscape symphonies. In addition, learn how to feed these below-ground communities; initiate cultural practices for managing their growth and maintenance; and catch the thrill of growing plants with soils that are alive!

**Betsy Ross,\* CEO, Sustainable Growth Texas, LLC**

### **Soil Physical Properties, A Foundation for Living Soil**

Soil chemical and biomass performance is supported by soil physical characteristics. As an example, calcium as a physical component may be more important than the nutrient benefits as calcium supports a "Living Soil."

**Steve Trotter, Soil agronomist providing advisory services to foil, sand and fertilizer suppliers, manufacturers, farming operations; landscape consultant to Frito Lay, Plano**

### **Sustainability by Design**

How Texas homeowners can simultaneously achieve a visually pleasing, comfortable garden, reduce maintenance and improve the environment. The lecture places great emphasis on landscaping with native plants and suggests public gardens, parks and nature preserves they might visit to appreciate the "feel" of their region. It's arranged in the order a landscape architect progresses: designing, constructing, planting and furnishing the garden. It begins with helping a homeowner find a garden "style" that is not only appropriate for the region, but also complementary to the architecture of the home and the lifestyle of its owners. Before getting into the principles of planting design, it insists that Texas gardens require three essential elements: good drainage, good soil preparation and a dependable irrigation system. (Even native plants need sufficient water to become established and occasionally maintained through severe droughts.) It ends with the necessity for educating homeowners about ongoing maintenance, which includes proper pruning, and water conservation.

**Nan Booth Simpson, MLA, Texas registered landscape architect; author, *Texas Gardening for the 21<sup>st</sup> Century***

### **Texas Seeds of Success: A Partner in Global Conservation**

The Seeds of Success (SOS) project is the United States' component of the [Millennium Seed Bank \(MSB\)](#), an international conservation program developed and managed by the Royal Botanic Gardens, Kew. The Texas Seeds of Success (TxSOS) program has committed to collecting the native flora of the Lone Star State as a partner in the Seeds of Success project. The TxSOS program works with institutions and volunteers across the state to collect, process, and store seeds of targeted species and to make the collections available for use in restoration and reintroduction projects, and to researchers interested in particular species.

**Florence M. Oxley, Director of Plant Conservation and Education, Lady Bird Johnson Wildflower Center, University of Texas**

### **Wildscaping and Wild Cultivation of Native Texas Edible and Medicinal Plants**

Wildscaping and Wild Cultivation of native plants offer areas for wildlife and habitat preservation. This article explores several native Texas plants that may be used in Wildscapes or even Wild Cultivated as sources of food and first aid remedies, or even a potential wild crop. The uses come not just from ethnobotanical information, but modern day research and personal experience. Ecological considerations are given to how plants are selected and how they are harvested so that any management for human use has the potential of being beneficial to the wild land or Wildscape.

**Nicole Telkes, LMT and Registered Herbalist (AHG), The Wildflower School of Botanical Medicine, Wildflower Botanicals and Bodywork**

*\*Member of the Native Plant Society of Texas*