

The Newsletter of Lubbock Lake Landmark

Spring 2007

Conversations: preparing tomorrow's teachers

During the past four summers, the Landmark has partnered with Texas Tech University's College of Education to provide opportunities for future teachers to get some real-world experiences with young people. A recent conversation with Dr. Reese Todd, Assistant Professor for Social Studies Education, offers insight into this program and its benefits for all participants.

Q: How has this program been of value to the College of Education and its students?

Dr. Todd: For the College of Education, the big benefit in the summer is connecting children and certification students. During the academic year, we ask our post-baccalaureate students to spend time in classrooms to gain practical professional skills. In June and July, those classrooms are not available because kids are not in school. The partnership offers our students a challenging opportunity to be part of the network of informal education in our region where kids choose to attend programs that are fun as well as focused on learning. As a university faculty member, I value the opportunity to contribute to the network of educational programs offered within the community. Working together, we can do so much more to nurture our children than when we work separately.

Q: What did your students do to prepare for their experience?

Dr. Todd: Last summer, my students used a simulation on the Homestead Act as a basis for one week of class and then developed lessons about the early trails for the second week. They received guidance from a university faculty, a museum educator, and experienced lead teachers, but the real evaluators of their lessons were the children. With that in mind, the teams of certification students kept a high level of energy, enthusiasm, creativity, and professional skills for the whole session. Positive comments from children and parents let us know our university students had done a good job.

Q: How did your students evaluate their experiences?

Dr. Todd: All of the certification students said we should continue the partnership and talked about bringing their own children, nieces & nephews, and friends in the future. Meeting at the Landmark for the one-week classes had a further benefit to future teachers. Many had little knowledge of the wealth of resources available to them through community organizations until they spent time at one of the sites. Throughout the time of planning, teaching, assessing, and evaluating their experiences, the future teachers

were overwhelmingly appreciative of the support they received from the Landmark staff and the flexibility that encouraged them to explore a wide variety of teaching/learning options. In addition to gaining valuable practical skills in their teacher certification program, they saw themselves as community citizens who contributed their teaching skills to the benefit of the larger community.

Note: Students participating in Dr. Todd's summer course presented the results of their Landmark summer experiences at the 2006 Texas Council for the Social Studies conference in Fort Worth.

Other university faculty participating in this program are Dr. Julie Thomas, Associate Professor of Science Education, and Dr. Ratna Narayan, Assistant Professor of Science Education.



Preservice teachers and their students learn about westward expansion during the Landmark's summer youth classes.

Notes from the field

Discover What's Happening Now!

Archaeology Talk Sunday, April 29 2:00 pm

Working at the Crossroads of Landscape Ecology and Archaeology: A Space Odyssey

How do people interact with the land on which they live? Archaeologists and landscape ecologists have worked together in recent years to gain a deeper understanding of how people live in, and relate to, their particular environment. Landscape ecology and archaeology both search for spatial patterns and try to explain them. This program explores how these sciences complement each other by examining hunter-gatherer sites in the forests of Patagonia in Argentina dating as early as 3,000 years ago, and will be presented by Dr. Vivian Scheinsohn, a researcher at the Institute of Anthropology and Latinamerican Thought in Buenos Aires, Argentina.

National Trails Day

Saturday, June 2 10am - 4 pm

This year, the American Hiking Society celebrates the 15th Anniversary of National Trails Day – a long standing dedication to the celebration, promotion, and protection of America's magnificent trail system. This year's celebration at the Landmark features bird and flower walks along our hiking trails, and ways to plan for a great looking garden or landscape in your own backyard. Bring the kids - we've got plans for them, too!

So put on your sneakers and a cap, come ready to learn about our wonderful West Texas natural resources, and sign up to help us build our new wildflower trail!

Archaeology Family Day

Saturday, July 14 10am - 4pm

Here's your chance to get up close and personal with our scientists!

Did you know that only about 5 percent of an archaeologist's work is excavation? If we think about the objects collected as bits of data, then there's lots of work to do in order to identify, preserve, analyze, and report about them. We'll have special morning and afternoon tours of the areas we're working at this summer, along with a peek into the inner workings of the Landmark's Quaternary Research Center and some of the technology used in conducting field and lab work. There also will be plenty of fun activities for kids of all ages, so bring the family and spend the day with us!

Weekend Guided Tours

Beginning in May, interpreters will provide tours of the Landmark each Saturday at 11:00 am, and each Sunday at 2:00 pm. No reservations or minimum group size is required, just drop-in and enjoy the story of life on the Southern High Plains. We hope to see you soon!

Summer Programs for Young People

AM Adventures, 10:30 - noon, ages 8-10

Amazing Afternoons, 1:20-3:00, ages 6-7

June 12-15	Beneath Our Feet
June 19-22	Water, Water Everywhere
July 10-13	Build a Biome
July 17-20	Burrowing Beasts
July 24-27	Trail Blazers
July 31-Aug 3	Amigos!

Registration begins May 15. Call 742-1116 for a full brochure or visit us on the web!

Visit us at the Lubbock Arts Festival, April 20-22 at the Civic Center!

Lubbock Lake Landmark would like to thank the following entities for their generous support:

Educational programming

Helen Jones Foundation, Inc.
U.S. Environmental Protection Agency
Texas Association for Environmental
Education

Trails construction and interpretation

Texas Parks and Wildlife Department,
Texas Recreational Trails Fund.
Lubbock Council of Garden Clubs

Landscaping assistance

Texas Master Naturalists

Quaternary research

TTU Arts and Humanities grant
TTU Research & Development grant
Anonymous contributions

Thinking Globally, Acting Locally

Lubbock Lake Landmark is dedicated to the conservation and stewardship of natural and cultural resources. In keeping with this mission, we are working to develop the preserve as a world-class learning laboratory for environmental education that serves K-12 and University teachers and students as well as other visitors to the site.

Summer Educators Academy

Science and Civics: Sustaining Wildlife June 25-29

Each summer, a week-long academy gives teachers the opportunity to examine a topic intensively, and gain new knowledge and skills that can be applied in the classroom. This year, the Landmark teams up with nationally recognized Project WILD to present a new program, Science and Civics: Sustaining Wildlife. Science and Civics serves as a guide to involve student in environmental action projects aimed at benefiting the local wildlife found in a community. Designed for teachers in grades 7-12, it involves young people in decisions affecting people, wildlife, and their shared habitat in the community.

The program consists of four major components: 1) *Awareness*: alerts students to the impact of human and individual activities on habitat quality and quantity; 2) *Participatory Democracy*: develops principles related to government structures and is appropriate for government and civics units of social studies courses; 3) *Habitat Exploration*: studies biotic and abiotic parameters of a site and is appropriate for ecology and environmental science units of science courses; and 4) *Taking Action*: guides both science and social studies students in designing, implementing, and communicating projects to enhance a particular site.



Teachers in the 2004 Educators Academy go in search of the Brazos River near Post during the summer drought.

Environmental Education Workshop Series

School-year workshops

The Environmental Education Workshop Series provides a well-rounded introduction to EE principles and practices, and introduces West Texas educators to a series of nationally-recognized programs that emphasize environmental awareness, stewardship, responsibility, and action through hands-on activities that incorporate all the major curriculum areas. While many teachers include environmental topics in their curriculum, most have never had training in the fundamental principles and theory behind environmental education. Because of this, it can be difficult to determine what constitutes quality environmental educational materials. This program introduces teachers to the basic concepts and ideas that make up environmental education, the national guidelines for learning and evaluating EE materials, and a variety of curricula that exemplify these standards. Workshops include Projects WET, WILD, Learning Tree, Food Land & People, and the Leopold Education Project.

Teaching Environmental Sciences

As part of our partnership with Texas Tech University's College of Education, the Landmark serves as home base for the summer graduate course, Teaching Environmental Science (TES). This course emphasizes the importance of understanding the air, water, and waste issues that affect a community's environmental and economic health. Originally developed in collaboration with the Texas Commission on Environmental Quality, TES is designed to provide balanced information and to promote partnerships among teachers, government agencies, businesses, and community organizations, so that students are prepared to take their place as citizens committed to environmental protection, using critical thinking skills in environmental decision making and career opportunities.

Information about any of these programs may be obtained by contacting Sue Shore, Education Program Manager, at 806-742-1116 or emailing lubbock.lake@ttu.edu.

professional programs for educators . . .

Research continues with new funding, new staff members

Things are always happening, sometimes so quickly that it is good to step back for a moment to assess the situation. Over the past 15 years, the Landmark's regional research program has grown by leaps and bounds. The upper Brazos River basin is a major focus of that program and the investigations near Post are a recent addition. Two successful short field seasons have led to a planned third field season for this coming summer. Given the extensive nature of the ranch and its varied topography, years of fieldwork are ahead. But fieldwork takes funding as does the requisite laboratory work, analysis and publication, and care of the collections. Always in a fund raising mode, we have been fortunate to receive Arts & Humanities grants from Texas Tech University to fund the 2006 investigation at Post and now the 2007 work. The Arts & Humanities program is a new initiative for Texas Tech to encourage research and act as seed money in developing programs. Certainly competitive, only a few have been awarded each year. Another new research initiative at Texas Tech is the Research & Development grant program, only in its second year as well. Proposals can be for up to \$1 million dollars and are very competitive. The University has created an extensive peer-review process at both the campus and national level. For the 2006 round, the award rate is 4% — much more competitive than for some divisions of the National Science Foundation where award rates are around 18%.



Regional research crew members recording a large hearth feature near Post.

In the most amazing of news, in mid-December 2006, we received notice that a sizeable 3-year R&D grant had been awarded for the investigations on the ranch near Post. The Post grant is the largest one awarded of the three selected (for a grand total of over \$1.5 million). The proposed investigation is interdisciplinary in nature and involves three co-principal investigators – Drs. B.L. Allen (Soils) and Tom Lehman (Geology) from campus and Vance Holliday (University of Arizona and long time research partner). The grant is titled *Late Quaternary Landscape and Hunter-Gatherer Land Use Strategies at the Edge of the Llano Estacado*. Among other things, the investigation involves pedestrian survey of a ca. 31,000 acre cross-section of the 83,000 acre Post ranch that stretches from the High Plains uplands through the canyonland to the Rolling Plains. A focus is on detailing landscape development over the past ca. 20,000 years and landforms, mapping resource distributions and possible refugia (sheltered

areas from a past time), more intensive recording of selected sites, as well as recording and characterizing all sites and isolated finds in general. This type of research provides a solid foundation for understanding how past peoples utilized the landscape and interacted with and were a part of the ecosystem at the time and how they coped with changes in resource distribution, environment, and climate through time. It also provides a relevant framework for examining modern issues that have arisen with changing ecosystems today and devising coping strategies.

This investigation begins in September 2007 and will have some crew members in the field year-round and provide for an extended 3-month summer field season each year beginning in 2008. Equally important, it forms the basis for an expanded program beyond the three years as we look to explore the majority of the ranch property. Excitement is strong and anticipation great as we venture into this major development.

Staff opportunities equally have been progressing rapidly. Dr. Stance Hurst joins the regional research program in a post-doctoral position where he will be the Field Manager with major responsibilities in the Post endeavor. Stance successfully defended his dissertation this spring at the University of Oklahoma and joins the program in May as we head to San Jon, New Mexico. Doug Cunningham also joins the program as the Field Technician responsible for the reconnaissance survey and field logistics with the Post investigations. Tonya Brown has been promoted to Lab Coordinator/Tech III. She will lead the lab team and supervise students and volunteers in the processing of the collections generated from the regional research program.

*Dr. Eileen Johnson
Director*

Find your niche as a Landmark volunteer!

Volunteers always have been an integral part of Lubbock Lake Landmark. They have participated in field excavation and laboratory research, guided tours for groups large and small, presented special programs and demonstrations, helped with special events, taught children's classes, organized our reference library, and beautified our landscape.

Interpreters

We would like to welcome the most recent graduates of our volunteer interpreter program - Robert Buscher, Jackie Driskill, Elizabeth Linder, and Kim Shank. You are sure to meet them this summer on one of your visits as they and other interpreters will be hosting drop-in tours on Saturday and Sunday afternoons.

Volunteer interpreters participate in an intensive training program in order to prepare to present quality programs. Another training session is planned for this fall, dates and information will be available soon on our website. But a bounty of opportunities exist for those who would like to volunteer and may not have the time for in-depth instruction, nor the inclination to do a great amount of public speaking.



New volunteer interpreters Elizabeth Linder and Kim Shank prepare to present public tours.

Summer field research

Participating in our summer field research has always been a popular and exciting way for people to volunteer some of their time at the Landmark. This year, work will be conducted on site and in the surrounding counties. In Lubbock, our lab will be operating full time, and excavations on the Landmark itself will occur during the month of July. Training is on-the-job, and because you are participating in real-world research, we do ask that volunteers commit about 60 hours of their time over the course of the summer. That may sound like a lot, but

you will find that once you start, field work can be a hard habit to break! Many of our former volunteers have contributed 100 or more hours during a single field season. Middle and high school students age 13 and older also are eligible to participate in this program. It's a great way to learn about careers or just an enjoyable way to spend some of your summer vacation! If this sounds like your cup of tea, more information and application forms are available on our website. Go to www.museum.ttu.edu/LLL/fieldresearch.html and click on Community/Youth Participants. Questions? Call Sue Shore at 806-742-1116.

Trail Building and Landscaping

We are gearing up to celebrate National Trails Day! There is much work to do on our four miles of trails including the final phase of construction on our new boardwalk path and tasks for everyone – no special skills required. Among our start-of-summer activities are inspections of all the existing trails, building the platforms that will form the boardwalk, landscaping activities, and even some painting. Trail construction will continue over the next 8 to 10 months, and landscaping and other activities occur during most months of the year.

Volunteering with our operations crew is a great way to meet new people, exercise, and make a difference. Helping on the trails is a great opportunity for groups or families to work together. Join us for our summer work days on:

Saturday, June 2	9am – 4pm
Saturday, July 21	9 am – 4pm

Additional tools make the work go faster, so when you come, feel free to bring levels, rakes, circular saws, and portable generators.

To sign up for either work day, or if you have questions, please call Deborah Bigness at 806-742-1116 for specific details.



Welcome summer in the Landmark shop

Once again, it that time of year when we start to think about the work that needs to be done to prepare our yards and gardens for summer. That is certainly the case here at the Landmark, as articles in this issue by Scott Trevey and Blake Morris illustrate. But it recently occurred to me, as I was surveying books available in the Landmark's gift shop, that it is also a wonderful time to learn more about the world around us.

Have you ever wondered about the history of the plants that grow in your summer garden? Where did they come from and how did they get here? Most of us learned in school that corn, squash, and beans are plants indigenous to the Americas that were cultivated by native peoples. But many plants that we now consider common had long and fascinating journeys to the New World.

In his book *Gardens of New Spain*, William Dunmire relates that even before the first appearance of Spanish missionaries in Texas, native tribes were growing watermelons and peaches, both European crops. It is fascinating to think that these crops spread across the continent from settlements on the East Coast to the Mississippi River Valley and on to the missions of modern-day New Mexico through trade among native tribes. Many other crops were cultivated in Texas for the first time at the fledgling settlements of European explorers.

Wheat, apples, apricots, figs, and grapes were among the crops cultivated at the missions established around El Paso beginning in 1681. The gardens of the French explorer LaSalle's ill-fated settlement at Matagorda Bay on the Texas coast still held remnants of wheat, endive and asparagus years after it was abandoned in 1687.

If vegetables are not your interest, there are many other interesting "summer" facts to learn in the variety of books available at the Landmark. Did you know that the Red Admiral butterfly, a familiar sight in our backyards, is considered a strong flyer, even though its wing-span is only 2¼ - 2½ inches? Or that the familiar hum of crickets and cicadas, commonly (and incorrectly) known as locusts, that fills our summer evenings is a sound produced by the males of the species rubbing their wings together in an effort to attract a mate?

You can explore the world around you this summer by walking the trails at the Landmark, and by reading books such as:

Gardens of New Spain by William Dunmire

Butterflies and Moths by David Carter

The Texas Bug Book by C. Malcolm Beck and John Howard Garrett

Young readers will enjoy the *One Small Square* series that explores the amazing diversity of life in different micro-environments like your backyard and the *Take-Along Guide* series that examine topics ranging from animal tracks to fossils to space. Whatever interests you – learn more about it this summer!

Deborah Bigness
Manager of Site Operations



Historic maintenance

The historic maintenance division is anticipating an abundance of work related projects for the 2007 growing season. First things first, this past winter we chemically treated an estimated 60 acres of perennial broomweed. This native plant managed to dominate over other types of flora north and east of the Landmark's prairie dog town. This spring, we should begin to see native grasses and forbs out-competing the broomweed. Our primary focus for this year will be completion of the Llano Estacado Wildflower Trail. Besides trail building, we already have sown native grass and wildflower seeds in some of the "bare" areas of the draw. With good rain and a little luck, these areas should prosper this growing season. All of the necessary requirements have been completed to begin our prescribed burning program. If environmental conditions prove acceptable, we will begin with phase 1 of burning the brush piles currently visible on the trail. We also will have completed the initial phase of mesquite treatments this year as well. We hope to see you on the trails!

Scott Trevey
Historic Maintenance Supervisor

Partnership benefits Landmark and Texas Master Naturalists

The newly founded South Plains Chapter of the Texas Master Naturalist has been working with Landmark staff to prepare a 1,600 square foot native xeriscape garden. Master Naturalist volunteers put in over 150 hours of time on two Saturdays in March to complete the preparation. The first step in the preparation of the bed was to remove all unwanted plant material from the bed. The Landmark's historic maintenance crew did the majority of this work in advance of the first volunteer day. Volunteers worked to fill the bed with fresh topsoil on the first work day. The second work day was spent laying out several



Master Naturalist volunteers distribute fresh topsoil.

layers of newspaper that will act as a mulch. The newspaper was then topped with several inches of limestone gravel. The bed is designed to have an appearance similar to the caliche outcrops that are common along Yellowhouse Draw. The newspaper and gravel mulch should serve to keep unwanted plants out of the bed for years to come. The next step will be to propagate, transplant, or purchase plants native to the Llano Estacado for the bed so as to familiarize visitors with the plant life of Yellowhouse Draw as they approach the Landmark's Interpretive Center.

The Texas Master Naturalist program is a natural resource based volunteer training and development program sponsored statewide by the Texas Parks and Wildlife Department and the Texas Cooperative Extension.

Members receive training from experts in fields such as geology, weather and climate, archaeology, herpetology, and plant ecology. Lubbock Lake Landmark has hosted the newly founded chapter of the Texas Master Naturalist throughout the past year. Landmark staff also have provided training in geology, archaeology, and interpretation. The South Plains Chapter began having preliminary meetings early in 2006 and now consists of 13 trained members. The group took field trips to Caprock Canyons State Park and Muleshoe National Wildlife Refuge as well as receiving classroom training at Lubbock Lake Landmark.



Newspaper is soaked with water to prevent it from blowing away.



Landscape volunteers: front row (l-r) Susan Tomlinson, Jackie Driskill, Kim Shank, Elizabeth Linder. Back row (l-r): Marissa Blanco, Blake Morris, Stacy Esquibel, Gary Pumphrey.

communities. The Chapter currently is looking for people interested in becoming Texas Master Naturalists. The requirements for membership are 40 hours of basic training, 8 hours of approved advanced training, and 40 hours of volunteer work. Once these requirements are met, the member must maintain 8 hours of advanced training and 40 hours of volunteer work yearly. To learn more about the Texas Master Naturalist Program, visit the statewide website at masternaturalist.tamu.edu or the South Plains Chapter, website at grovesite.com/tamu/spmn. For information about becoming a member of the South Plains Chapter contact Caroline Hinkelman at carolinehinkelman@sbcglobal.net or Blake Morris at tblakemorris@yahoo.com. If you do not have access to a computer, you may contact me at (806) 742-1116 or (806) 368-7383 and leave a message. We look forward to hearing from you.

*Blake Morris
 Historic Maintenance Technician*

Notes from the field...

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Lubbock, TX 79409-3191

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Visitor Information

Bob Nash Interpretive Center

- Exhibition Galleries
- Learning Center
- Landmark Gift Shop

Sculpture Garden

- Ancient Bison • Giant Pamphthere
- Short-Faced Bear • Columbian Mammoth

Hiking Trails

- One-half mile Archaeology Trail
- Three-miles of Nature Trails

Location: 2401 Landmark Drive
(at North Loop 289 & Clovis Hwy)

Regular Hours: 9AM-5PM Tuesday-Saturday
1-5PM Sunday
Closed Monday

Program information and tour scheduling (groups of 10 or more):
(806) 742-1116

www.museum.ttu.edu/LLL

Contributors to this issue of *Notes from the field* . . .

Deborah Bigness, Dr. Eileen Johnson, Blake Morris, Susan Shore, Dr. Reese Todd, Scott Trevey

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