

# The Newsletter of Lubbock Lake Landmark

## Spring 2006

### A Family That Plays Together Learns Together!

Informal learning is something we all have engaged in. It is voluntary and self-directed, driven by curiosity, discovery, free exploration, and sharing experiences with family and friends. Most importantly, informal learning is focused on process rather than outcome. Neither tests nor grading put pressure on your learning experience, just the satisfaction of knowing you have learned something new. This informal learning process is part of the fun of visiting museums. It also adds to the appeal of sharing your experiences with someone. Research has shown that family groups are the primary learning environments for humans.



Family learning has many benefits, both for the individual and the family as a whole. While working with an adult, children can perform tasks that they are not capable of completing on their own. Aside from the immediate results of completing a more complicated task, it also begins to instill the skills necessary for independent problem solving in the future. As a parent is learning with their child, they are modeling lifelong learning practices. Not only is the adult able to demonstrate the need to learn from new experiences, but they also instill the value of life-long learning in their child. Learning patterns that are implemented in childhood will carry over into adulthood, thus establishing an important pattern of continuing educational practices for generations to come.

Adults can benefit from museum visits with their children because children are much more likely to interact with all that museums have to offer, engaging the parents to explore. More ideas and concepts are discussed between parent and child through a child's inquisitive nature. Questions such as "what is it?", "where did it come from?", and "is it real?" can be explored and discussed among families. It is in simple interactions such as these that learning occurs.



The Landmark recently launched Family Discoverdays programs on Saturday afternoons. These programs are in a come-and-go format, interactive, and aimed at family learning. In March and April, our theme was recycling. Families participated in activities such as creating art with recycled materials, making safe household cleaners with everyday products, and making new paper out of old paper. Wildflowers is the focus of programs in May and June. Families will be able to plant wildflowers at the Landmark, participate in guided tours of the nature trails, make paper flowers, and other activities. Each week is different, so come and join us every Saturday at 1:30! Please see the schedule on page 2 for a detailed listing of the activities offered each week.

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- **regional research**
- **fire ecology**
- **regional partnerships**

*Emily Arellano*  
Museum Education Intern

Notes from the field.

## Family Discoverdays in May: Wildflowers!

Drop-in program topics are listed below and take place from 1:30 - 3:30 pm each afternoon. Guided trail walks each Saturday begin at 1:00 pm. Wear your walking shoes and plan to be on the trails for about an hour.

### May 6 - Plant It!

Help us plant some of our flower beds around the Interpretive Center with native wildflowers and learn about flowers that you can eat! Bring a gardening trowel with you if you have one!

### May 13 - Plant It!

We'll finish up our wildflower planting and learn about some plants that help treat human illness. Don't forget to bring your gardening trowel!

### May 20 - The Sum of the Parts

Everything has parts, so just what are the different parts of a flower? Let's do some dissection and in-depth explorations of what makes plants grow.

### May 27 - Wildflower Helpers

What helps flowers to grow? Why bugs of course! Come and learn more about bugs and other things that help little seeds grow into beautiful wildflowers.

### June 3 - Empty that shredder and grow some plants!

What in the world does one have to do with the other? Join us as we make some handmade paper greeting cards that you can plant!

## Summer Programs for Young People

*Amazing Afternoons* - ages 6-7 (July/August)

*AM Adventures* - ages 8-10 (June/July)

*Elevens and Twelves* - ages 11-12 (June)

Registration begins May 9. Call 742-1116 for a full brochure or visit us on the web!

## Summer Educators Academy

*Learning History and Culture Through Traditional Arts and Crafts*

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.

## Campus Partnerships

An institutional goal that the Landmark shares as part of Texas Tech University is to engage a broader, more diverse group of students in its research and educational activities. For the past four years, the Landmark has worked with the College of Education to provide opportunities for future teachers to work with young children during its summer classes and festivals. These students are responsible for developing and teaching classes as part of their coursework toward teacher certification.

A number of undergraduate and graduate level courses use the natural resources present at the Landmark as a learning laboratory. These include Ornithology, Ecology, and Mammalogy (Biological Sciences), Fieldcraft (Natural History & Humanities/Honors College), and Teaching Environmental Sciences (College of Education).

In the future, we hope to provide additional opportunities for students to study the complexities of the natural world.



## Welcome Emily!

Preparing educators to enter the museum field is a Landmark tradition. We are happy to welcome our newest education intern, Emily Arellano, who joined the Landmark's staff in January. Emily is a certified teacher and currently is a graduate student in the Museum Science program. She is scheduled to graduate in August, 2006, but will be with us the entire year. Be sure to read her cover story on families and museums.

## Explorations Near Post on the western Rolling Plains

One of the new research areas within the Landmark's regional research program is at a large ranch south of Post. The past fall and winter activities have been busy with experimental research, database construction, the occasional trip to the ranch, and a presentation at an international conference all resulting from the 2005 season of fieldwork. With the 2006 field season looming, a much better understanding of the Quaternary record in this landscape is being gained and a new set of research questions developed to continue to fine-tune interpretations of past peoples and environments in the Canyonlands and Rolling Plains southeast of the caprock escarpment.

A series of experiments were undertaken at Lubbock Lake during the fall. The experiments were designed to examine whether some of the rocks that were recorded during 2005 field season had been fractured due to intense heating. If they had, then it would be important as it would prove that they once had been used as components, useful for example in cooking foods, within prehistoric hearths. The experiments were a success and the results indicated that not only did the rocks break up much like those seen on the ranch, but also a red rind was produced by the heating. This characteristic, then, will be very useful in identifying which rocks were used by ancient peoples during fieldwork



*Early morning smoke as the hearths are ignited and Potter member hot-rock experiment begins.*

in the 2006 field season. A research paper in preparation communicates the results of the experimental research. The paper may help others working in this and other areas determine which rocks were once hearthstones.

The 2005 field season research was presented at the Society for American Archaeology annual meeting in Puerto Rico

this April. The presentation concentrated on characterizing the types of stone that were being selected for the production of stone tools. This information helps in understanding how people moved around the landscape in prehistory by relating the stone tools found at archaeological sites across the Llano

Estacado to particular locations such as the quarry at Post.

The upcoming 2006 field season is aided significantly by a Scholarship and Creative Activity in the Arts and Humanities grant from Texas Tech University. A second season of research at the ranch will concentrate on a detailed analysis and limited testing at the two sites previously identified during the 2005 field season. Both sites are significant to understanding prehistoric behaviors, and one site (PLK-Locality 1) in particular holds especial importance as a quarry. A heavily utilized exposure of Ogallala Fm. gravels have been quarried for the production of stone tools. Not much is known about such sites and, therefore, continued research at PLK Locality 1 should help in the understanding of why particular types of stone were being collected by people to make their stone tools. Much research is left to do and will stretch for years to come. The opportunity to examine such a large prolific area as the ranch is an exciting one. The Landmark is indebted to the landowners and thank them for the access and their interest.

*Paul Backhouse  
Research Aide*



*Local firefighter Doug Cunningham has years of experience at the ranch near Post; here, he fans the flames on experimental hearth #4.*

## Explorations at RSR Locality -1 in the upper Brazos River basin

Another new research area within the Landmark's regional research program is the Turtle Creek drainage area on the Roland Springs Ranch east of Snyder. RSR Locality 1 is a paleontological locality that may date to the middle Pleistocene, a rare occurrence in Texas. During the fall and winter months, stabilizing and processing began of the material recovered during test excavation in July 2005. Over 7,000 specimens were recovered representing nearly 30 different animals. The most impressive was the near complete tortoise shell that



Plaster jacket containing the extinct giant tortoise *Geochelone* being excavated from the bottom up.

was too large to place on any scale in the lab. In the field, the specimen was encased in a plaster jacket to get it back to the lab. Also placed in these protective jackets were a horse mandible, a coyote skull, and segments of another giant tortoise. The horse mandible was very small, about one quarter the size of a horse seen today.

Once back in the lab the plaster jackets took four weeks to excavate. Excavation involved turning them upside down and excavating from the bottom up. The excavators had to pay particular attention as turning the jackets upside down meant the coordinates would be a reversal of the field coordinates and everything was backwards.

All the material was very fragile and needed conservation that consisted of chemical cleaning and stabilizing treatments with a polyvinyl acetate (PVAC) solution.

Immersion of the larger specimens in a 0.5% PVAC solution took place outside in a very large basin using custom-made baskets. A safety protocol was followed, including a fit test and fitted masks for the people doing the immersions. After treatment, the material was cleaned, cataloged, and labeled. Currently, over 1600 specimens have been treated and processed so far, with around 5800 left to be treated.



Extinct giant tortoise after excavation from the plaster jacket.

## Geographic Information Systems: New Ways to Map the Llano Estacado

Features, objects, and samples help researchers build a context from which to understand further past climates, ecosystems, and past peoples. Associated with each object is a multitude of data called attributes. These attribute data when compiled can create a powerful database from which to query variables based on scientific method. Attribute data can range from descriptions or measurements of artifacts to bar codes. The generation of these databases creates a static digital representation of the information. The incorporation of a GIS (Geographic Information System) to either utilize or manage this database creates a dynamic relationship between objects, object attributes, and/or their spatial relationship in three-dimensional space.

The Lubbock Lake Landmark regional research program maintains a central database that forms the foundations for further analysis. Over time, the upkeep and management of the database necessitates overhauling and upgrading to keep current with changing technology, methods, and techniques. Computer or human error can lead to marked discrepancies in the database. These discrepancies become quite evident when submitted for analysis into a GIS. The inconsistencies in the database are corrected by retracing the chain of information beginning with field paperwork and ultimately resulting in their correction in the central database.

A focus of the spring research was to reassess and verify the locations of objects in space and their correlation to existing site boundaries, both at the Lubbock Lake Landmark and at San Jon, a well-stratified playa site on the northwestern periphery of the Llano Estacado. The purpose of this was to address whether current site boundaries needed to be expanded to incorporate new material recovered in subsequent field work, or to create new collecting within the larger site boundaries.

Once the discrepancies in the database were identified and corrected, spatial analysis was conducted. The results of that analysis created a few new area boundaries, and extended existing ones to where they began to merge with previously identified areas, thus creating one larger area in some instances. The new areas and their relationship with objects then could

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## Lubbock Lake Landmark Lab Activities

Spring is always a time of reflection and renewal at the Lubbock Lake Landmark. Several major research efforts have been going on in the lab. Sorting the matrix concentrates from 41LU118 has been a priority. This site, with its various stratified occupation levels, has produced over 1300 bags of matrix concentrates from water processing of sediments through nested screens. Matrix sorting is an activity that requires lots of patience and sharp eyes. A matrix sample of bagged concentrate is poured through three separate colanders of varying sizes and then placed on a tray where sharp-eyed lab assistants pluck out tiny bits of cultural and biological materials with tweezers. These materials consist of tiny hearthstone bits, lithic debris produced by tool making techniques, shells, seeds, and bone. This material is cataloged and added to the information for each occupation level.



*Matrix concentrates being sorted by Lab Assistant Julie Guerrieri, using tweezers to find tiny bits of cultural and biological material.*



*Lab Assistant Katherine Bell and student assistant Cody Thompson bag dried sediments (voucher specimens) generated from the Yellowhouse system research.*

Sediment samples from the Yellowhouse system research are being organized both physically and electronically. These samples are dried, rebagged, bar-coded, retagged, boxed, and moved to the Museum where they will be archived in corrugated acid-free, lignin-free standardized bar-coded boxes on bar-coded shelves in the new Collections Room. All the information will be entered into the sample database where it will be available for research.

In February, the lab hosted six area high school students for Shadow Day, an activity where students “shadow” a mentor for a day. The students took turns learning about the activities in the field using survey equipment and in the laboratory such as identifying floral and faunal remains and processing artifacts. Afterward, everyone enjoyed a pizza party.

*Terri Carnes  
Collections Manager*

### In Memoriam

On March 20, 2006, we lost Tara Wilson (Intern/ Technician I) in a freak accident at a local restaurant. Tara was vivacious, hardworking, and loved Lubbock Lake Landmark. She had been working on the 41LU118 sorting and recently assigned to the Roland Springs processing effort. Her strength of spirit will be sorely missed and we ask for your prayers during this difficult time. Tonya Brown, Lab Coordinator, also was



*Being an intern at the Landmark involves many different tasks in both the lab and field. Tara Wilson is on the Landmark's skidsteer, using it to help clean up debris in erosional control efforts around the old reservoir cut.*

hurt in that accident and recuperated at home. Tonya returned to work on April 3, 2006, and everyone was very happy to have her back. Our thoughts and prayers are with Tara's family.

## Wildfires Raise Awareness About Prescribed Burns

The recent deadly and destructive range fires that occurred in the Texas Panhandle have brought grassland fires to the forefront of public consciousness. It is very unfortunate that people have lost their lives and property. These events should prompt us to look beyond the headlines and take a closer look at this issue. News stories on the subject have focused on the loss of life and property, the brave efforts of the men and women who fought the fires, and the massive amount of money and equipment used. Now that the fires are out, we will no longer see stories in the news, yet this is a critical time to look at the conditions that led up to these events and examine the possibilities for preventing it from happening again.

It has been widely reported that drought, the lack of recent rainfall, is much to blame for the fires. While there is truth in this, perhaps an even bigger factor is above average rainfall that these areas received the year before. The abundant rainfall caused grassland plants to grow, increasing forage for animals. Everyone was happy. However, the rain stopped and the grassland went dormant leaving a large amount of fuel for wildfires. Even around towns and farmsteads, heavy fuel loads of grass, brush, and weeds around buildings and vacant lots became an accident waiting to happen. It is possible that the catastrophic nature of these fires could have been prevented with prescribed fire or at the very least, the mechanical removal of fuels built up around buildings and towns.

Prescribed fire sometimes receives bad publicity when a so-called controlled burn gets away. Most often, the fires that get out of hand were not conducted using a prescription at all or someone made the mistake of going ahead and lighting a fire without meeting some of the required conditions. A prescription is a very specific set of conditions that must be met in order to light a prescribed fire safely. These conditions include weather parameters such as temperature, relative humidity, wind, and the conditions expected in the next forty-eight hours. Prescriptions include calculating fuel moisture, fuel load, and fuel type. It may take weeks or months to meet the proper prescription for burning but when the prescription is met, a professional prescribed burn manager can conduct a burn safely, that can reduce hazardous fuel loads and prevent the kinds of catastrophic fires that recently occurred.

Once we learn to prevent catastrophic loss of life and property, we examine the ecological benefits that can be reaped through the use of fire. Plains grassland plants are adapted to fire and fire makes for a healthier grassland. Fire reduces competition from brush, reduces fine dead fuels, and improves forage for animals. Following a fire, increased flowering in plants usually occurs that in turn attracts insects. At Lubbock Lake Landmark, plans are eventually to institute a regular program of prescribed burning and incorporate an educational component as part of the program. Many resources are available for those interested in prescribed burning. For more information and links to various agencies and organizations, visit the Texas Panhandle Prescribed Burn Association at <http://ranches.org/tppba.htm> and <http://ranches.org/Wildfire.htm>. The Texas Tech Fire Ecology Center also is a valuable source at <http://www.rw.ttu.edu/fec>.

*Blake Morris  
Historic Maintenance Technician*



## On the Natural Side

The historic maintenance division is planning for another growing season. The Landmark acquired a new native grass and wildflower broadcast seed planter. This equipment will enable us to seed selected sites with native grasses and wildflowers. Brush control again is on the agenda, but less attention will be spent on our mesquite as we have almost completed the initial phase of gaining control over this species. More attention will be placed on controlling the Siberian Elm population around the reservoir area. Preparations also are underway to complete the remainder of the Llano Estacado Wildflower trail. The Landmark is still enthusiastic about getting a prescribed burn accomplished, but due to county burn bans, it will probably have to wait until next year.

## Marketing Partnerships Help Promote Cultural Heritage

The staff at the Lubbock Lake Landmark spends a lot of our day talking with our visitors. Last year, over 21% of them were from outside of the city. Thirteen percent were from other places in Texas, while 8% were from other states or outside of the country. If the Landmark were a commercial business, we would spend thousands of dollars to market our “product” to people from such diverse locations. While we may not have those types of resources, the Landmark collaborates with many other organizations to help market the Landmark, Lubbock, and the region.

Kelli Stumbo, Marketing Director for the Lubbock Chamber of Commerce, laughs, but she means it when she says, “The biggest phrase we want to get rid of is, ‘There is nothing to do in Lubbock.’” Starting this month, the Chamber is inviting local residents to grab a *Passport* and see the sites. The program promotes the things to see and do in Lubbock to local residents by encouraging them to take one of four themed tours, turn in their stamped “passports,” and qualify for prizes. “Whether they are participating in the competition or if they are just interested in exploring,” Kelli says, “we want them to take the time to visit all of these interesting places that are almost literally around the corner.” Passports are available at all of the locations on the tour (like the Lubbock Lake Landmark!) or at [www.lubbockchamber.com](http://www.lubbockchamber.com).

In extensive survey of visitors to Lubbock in 2004, the staff at Visit Lubbock learned that folks coming to our area are interested in seeing “the real West.” That, and the fact that Lubbock’s musical heritage is known all over the world are two of the things that make Lubbock easy to promote according to Brian Thomas, Marketing Director of Visit Lubbock, the Convention and Visitors Bureau. “England loves us because of Buddy Holly, and Germany loves us because of Karl May, and his fictional hero whose adventures take place on the Llano Estacado.” He adds, that, in the tourism business, “even the things we take for granted like no waiting in lines and no traffic jams are attractive to visitors, and selling points for our city.” Visit Lubbock’s ads in publications like *Texas Monthly*, *Southwest Spirit Magazine*, *People*, and this month, *Redbook*, help promote Lubbock and draw thousands of responses from potential visitors asking for additional information about our museums and attractions. For more information on Visit Lubbock’s activities, or to make use of their extensive events calendar, check out [www.visitlubbock.org](http://www.visitlubbock.org).

Glenn Barnett, Trail Coordinator for the Texas Plains Trail Region, is still amazed, even after six months on the job. “This area is HUGE,” he says, adding, “there is still so much I want to see and do - and I travel somewhere in these 52 counties almost

every week.” The Texas Historical Commission’s Texas Plains Trail Region debuted its brochure recently with a lively launch party at the American Wind Power Center. A simultaneous ceremony in Amarillo underscored the regional character of this effort to promote heritage tourism. Be sure to pick up one of the new brochures during your next visit to the Landmark, and browse the information on dozens of cities and attractions in the area at [www.texasplainstrail.com](http://www.texasplainstrail.com).

Kelli, Glenn, and Brian may focus on promoting business, developing heritage tourism, or attracting visitors to the city but they are each part of three exciting efforts to market Lubbock. The Landmark is happy to be a part of each of them.

*Deborah Bigness  
Manager of Site Operations*

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## Explorations at RSR Locality-1, cont.

The Roland Springs Ranch 2005 exploration and conservation has been funded by two foundations that wish to remain anonymous. A grant proposal has been submitted and plans for the 2006 field season are shaping up. Thanks are due the landowners for access, their interest and support, and preservation of the locality.

*Amy Whycott  
Intern/Technician I*

## Geographic Information Systems, cont.

be updated in the current database, thereby lending themselves to further archaeological interpretation and land management in the future.

*Joel Martinez  
Student Assistant*



*Computer screen exemplifying database relations with mapped features and area boundaries at the Lubbock Lake Landmark.*

# Notes from the field...

Museum of Texas Tech University  
Lubbock Lake Landmark  
Box 43191  
Lubbock, TX 79409-3191

Non-Profit Organization  
U.S. Postage  
**PAID**  
Lubbock, Texas  
Permit #719



## Visitor Information

### Bob Nash Interpretive Center

- Exhibition Galleries
- Learning Center
- Landmark Gift Shop

### Sculpture Garden

- Ancient Bison • Giant Pampathere
- 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

<http://www.museum.ttu.edu/lll>



*One of the rim sites at the edge of the caprock looking east over the Rolling Plains near Post. See story on page 3.*

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

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