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THE DOCENT NEWS



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New Ecological Research Station Opens

- Dennis Bires

On May 20th the Tallgrass Prairie Ecological Research Station was dedicated in an informal ceremony at the site, just about a half mile east of the Preserve Headquarters. Over 100 friends, donors, and employees of both the Tallgrass Prairie Preserve and The University of Tulsa attended. Tim Grogan, Director of the Oklahoma Chapter of The Nature Conservancy, expressed his gratitude to The University of Tulsa, and particularly to Chemical Engineering Professor Kerry Sublette, for making the project possible. In fact one could say it was Kerry Sublette's day, as a decade of planning, fund raising, then more planning and even more fund raising on his part came to impressive fruition.

TU President Bob Lawless introduced representatives of most of the major donors, including The Leta Chapman Memorial Trust, ConocoPhillips, The Mabel Hildreth Crook Charitable

Trust, the law firm Gardere Wynne Sewell, The Oxley Foundation, the law firm Rogers and Bell, The Williams Companies Foundation, Inc., The Anne and Henry Zarrow Foundation, and our own Jenk and Jerri Jones.

Preserve Director Harvey Payne outlined the protracted history of the Research Station project, and Science Director Bob Hamilton described some of the research currently under way on the Preserve, all of which will be facilitated by the new building. And Kerry Sublette, who holds the Sarkeys Chair in Environmental Engineering at The University of Tulsa, explained the oil and brine spill remediation research he and his students have done at the Preserve, as well as the environmental benefits which that work has spawned across the country and around the world.

The Research Station includes a large classroom, where the dedication was held, which can be divided to become two traditional sized classrooms. There is a large laboratory and a small laboratory, a specimen room, a library, and two offices. The women's

restroom is constructed as a safe room for severe weather. The entrance and lobby are spacious and bathed in prairie light through large windows. The design was by Selser-Schaefer Architects, from Tulsa, and construction was by Magnum Construction, from Broken Arrow. The attractive and comfortable facility is certain to make researchers' work a great deal easier and more pleasant.

Living conditions for researchers are much improved too. The Research Station project included renovation of the Foreman's House, known to many as the Stucco House. The 50-year-old structure retains its white stucco exterior and its hostel style living arrangement, but it now features new doors and windows, a new heating and air conditioning system, new interior paint, and all new kitchen appliances. Concern has been expressed that visiting graduate students may not want to return to their university apartments.

The Tallgrass Prairie Ecological Research Station
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(Continued from page 1) will doubtless further raise the profile of an already high-profile nature preserve. And the knowledge accumulated by researchers there will continue to advance the preservation and restoration of prairie ecosystems both at the Tallgrass Prairie Preserve and elsewhere.



Classroom Experience Antidote for the Blues

Andrew Donovan-Shead

At the beginning of May, I was feeling A-minus and unfocused as one does from time to time, when I received a Sunday evening telephone call from Mrs. Westfield who is a parent of a child at Mayo School. It seems Dick Baker, if I remember correctly, gave her my name as someone who could talk to the 3rd, 4th, and 5th Grade students about the Tallgrass Prairie on Tuesday afternoon, a day and a half later. Despite the short notice, I said that I would make a presentation to the school at 12:30 pm, Tuesday.

At Mayo, I met Lucy Piper, the principal. She gave me a quick tour of her school. Mayo is a charter-school on the open-plan model, apparently very successful. During my tour, I noted glass tanks containing brown tarantulas, a python of some kind that Lucy reported as being friendly,

and an aquarium containing a coral reef. I got the feeling that the children would be well-informed.

Usually, I make presentations to hostile government audiences. Lucy gave me a very brief introduction. I stepped forward and looked into a pool on the floor of up-turned faces alight with interest in this latest spectacle before them. Holloa! I thought, this isn't so bad.

We talked about docents and what they do; a docent being one who knows, guides, and helps visitors to find out things for themselves. We discovered in what kinds of things the students are interested, and what they expected to find on the prairie. Someone thought that they might find rattlesnakes; I said that I hadn't heard of there being any, an opinion I have since abandoned in light of Van Vives' eye-witness account of double headed rattlesnakes, appearing in last month's issue.

We talked about working as a team. I surveyed the group and found persons capable of listening, drawing, seeing, thinking, and talking; encouraging them to help each other by playing to the strengths of each other. We talked about science on the prairie; these children knew what biologist, botanists, entomologists, and geologists do, not just one or two children, lots of them; I had to pick persons from a forest

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of upraised hands, all eager to give me answers. We agreed that science is a team sport and that they were going to be a research team out on the prairie, to be observant and to collect data.

We hazarded some guesses at the size of the prairie, arriving at its current acreage of approximately 40,000, all that remains of the 100,000 that belonged to the Chapman-Barnard ranch. This led us to wonder how big the prairie was before European settlement, approximately from southern Texas to Canada, east of the Rockies and west of the Mississippi. It didn't take but a moment to get an answer to the question, who lived on the prairie before the coming of Europeans? From here it was a short step to bison as a principal source of food and material. We discussed what happened to the bison when settlers arrived and why they were driven off the land along with the Native Americans, which brought us to farming and what farmers do when they farm land. One lad was ready with John Deere's name when asked who made the first steel plow.

Now we wondered what Oklahoma was called before it became a state and why. Having found out that we are in Indian Territory, several kids were ready to volunteer information that the Tallgrass Prairie is in Osage County and that the Osage

are a tribe of plains Indians. We talked about the long relationship between the Osage and the white settlers and how the Osage became wise to the ways of Europe. At this point, I asked the open ended question: why did the Osage move to Osage County? Instead of an answer, I told the students to go look at the land and ask themselves if it could be plowed and farmed, to look and make a list of the most visible things on the prairie, of anything big or out of the ordinary, to look up in the sky, to look at the ground, to listen carefully and make a list of what can be heard, to feel and smell their surroundings. After their visit, there should be plenty of openings to explore other aspects of the prairie and why it survives in this particular place.

Luckily, there were plenty of computer experts present who could get the sound system to work, so that we could hear the recordings of birdsong that I had put onto a CD. I didn't identify the birds, just asked them to listen here and again out on the prairie to discover if they could recognize any of the songs. I felt sure they would hear the Eastern Meadowlark and the Dickcissel, if not others in the woodland areas.

In teaching, the Socratic method is by far the most interesting and fruitful, yet it is hard work. On my way out to my car, I was uplifted by my experience, but thought

that if I had to maintain all day the level of energy expended during my forty minutes presentation then I should be exhausted. Later, I checked the docent schedule and sent Jim Thayer an email warning him to expect a bus-load of kids on Friday. Later still, Lucy reported to me that they had a good time at the preserve, though they were all tired from the day and a half spent camping at Osage Hills park before their visit.

As a therapy, working with a small crowd of eager children is a fine antidote to the blues, far superior to shopping.



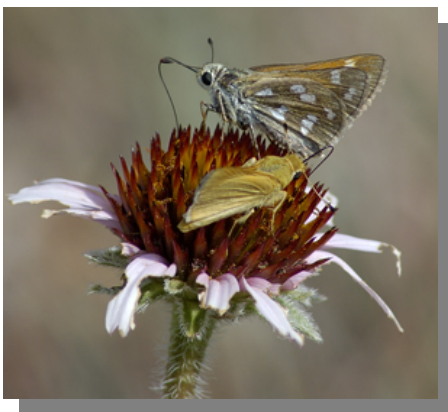
Butterfly & Moth Survey at Four Canyon Preserve - John Fisher

One week after the purchase of Four Canyon Preserve, David Edwards, John Nelson, & I met Chris Hise to make an initial survey of the butterfly and moth species on the preserve. John maintains a list of Oklahoma butterfly & moth species records by county. Since Ellis County has only been lightly surveyed, he's been quite anxious to get out to Four Canyon. Prior to our trip only 38 butterfly species were known to occur in Ellis County. Over a two day period we found 40 species of butterflies including 16 that hadn't been recorded in the county before. Considering that this year's spring rains
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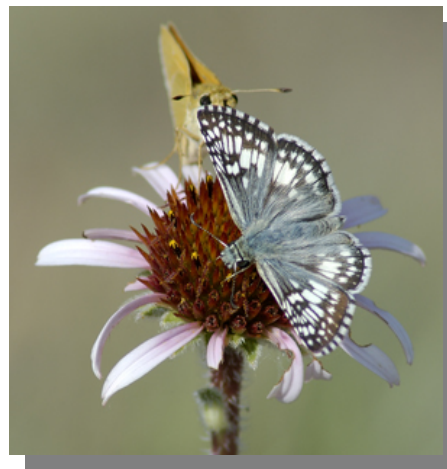
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 didn't amount to much and only a few wildflowers were blooming we were pleased with what we found. It will be interesting to see how many more species will be found over the next few years as The Nature Conservancy works to restore the prairie areas.

A stray California Sister made a fly-by but it won't be listed on the official Ellis County list since we couldn't catch it or get a photo for documentation. Some of the western specialties we did find were the Acmon Blue, Fulvia Checkerspot, Red Satyr, Uncas Skipper, Green Skipper, and Dotted Skipper. Missing were the Bordered Patch, Juniper Hairstreak, Ladys, and Swallowtails. I suppose that means we have to go back and look some more. An updated list of butterfly species found on Oklahoma TNC Preserves can be found at:

http://members.cox.net/rgs455/tnc-ok_butterfly_list.pdf



*Green Skipper & Arogos Skipper on Pale Purple Coneflower
 Photos courtesy of John Fisher*



Common Checkered-Skipper & Arogos Skipper on Pale Purple Coneflower



Fulvia Checkerspot on a very pretty little yellow flower



Gift Shop Receives New Book from Retiring Docents - Mary Ellen Johnston

Retiring docents Mary Ellen and Dean Johnston have presented The Nature Conservancy Tallgrass Prairie Preserve Visitor Center gift shop several copies of their recently published

book **Up the Creek by Highway**. The book is a paperback of 104 pages, with photographs, with one chapter devoted to the prairie. It is an essay-type travelogue covering the roads and towns and bridges in taking a car trip from the mouth of Bird Creek at Catoosa on up to its triple-fork origins north and west of Pawhuska and the Preserve. Those who like rivers, old bridges and bits of Native American and European American history will enjoy this book.'



What's Blooming? - Van Vives

The prairie is painted in large splashes of yellow and purple. There are large vistas of Black-eyed Susan and Claspingleaf Coneflowers. Most people assume that the yellow flowers blooming in large groupings are the Black-eye Susan, but in the south end of the preserve, near the road, the flowers are the Claspingleaf Coneflowers. If one gets close enough to the plants the identification becomes quite easy. The Black-eyed Susan has hairy stems and leaves, while the coneflower is smooth. There are also large groupings of the lavender and purple Lemon Mint. The pink Common Milkweed is blooming near the new Science Building. Here are

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 some pictures of blooming
 plants.
 (Photos courtesy of Van Vives.)



Indian Blanket
Gaillardia pulchella



Golden Coreopsis
Coreopsis tinctoria



Butterfly Milkweed
Asclepias tuberosa



Lemon Mint (Horse Mint)
Monarda citriodora



Hairy Wild Petunia
Ruellia humilis



Pale Purple Coneflower
Echinacea pallida



Pale Indian Plantain
Amoglossum atriplicifolium



Prairie Dogbane
Apocynum cannabinum



Clasping-leaved Coneflower
Rudbeckia amplexicaulis



Common Milkweed
Asclepius syriaca



Lead Plant
Amorpha canescens
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Wavy-leaved Thistle
Cirsium discolor

Visit my web site for more information at www.okprairie.com.



Shortleaf Pine

- George Pierson

Shortleaf pine is the only pine native to northeastern Oklahoma. In the Ozarks it occurs mainly on dryer south and west facing slopes. The Nickel Preserve is restoring areas of pine woodlands and savanna throughout the preserve. This spring the staff and volunteers planted several hundred seedlings in savanna areas on Pumpkin Flats.

In the 1930's the Oklahoma Historical Society teamed with the University of Oklahoma. Using a Works Progress Administration (WPA) grant they interviewed about 11,000 early Oklahoma settlers. The following is an interview that describes the

logging of the native Shortleaf Pine (apparently called the Cherokee Yellow Pine) during the period between the Trail of Tears (1838) and Oklahoma statehood.

April 1, 1938
An Interview with Mr. S. W. Ross
Tahlequah, Oklahoma
Cherokee Yellow Pine

Along some of the steepest and most rugged slopes of the Cherokee Hills, principally east of the Illinois River, small groves of yellow pine trees may be seen. In the winter season when the deciduous trees which grow upon the hills are devoid of leaves the green foliage of the pines is visible at long distance. These comparatively few specimens are all that are left of what were once numerous large and lofty pines.

When the Cherokee established their nation in Indian Territory nearly one hundred years ago, the far flung hills were covered with large oak, hickory and walnut and extensive groves of hardy yellow pine. Within a few years an occasional sawmill was established and workmen became engaged in felling numbers of pine trees which were sawed into lumber. These few mills were miles apart and access to them was over narrow and rugged trails or roads through prairies and woodlands. Persons who were able to purchase lumber built homes which were more

commodious that the log houses usually were and thereafter the sawmills for many years were busy and gradually increased in number. The sawmills were established on the banks of unfailing streams as near as possible to the pine trees. So numerous were the pines in some sections that sawmills were sometimes maintained at one location for a number of years. But when at length no more pine logs were available, except by hauling them a long distances, a new site was selected and the sawmill was removed to that place.



Shortleaf Pine in Tully Hollow

In connection with the making of lumber in the earlier period, the Hilderbrand sawmill was often mentioned. This mill was situated a number of miles north of Tahlequah; the Ross sawmill was at the mouth of Bumgarner Hollow, now called Pumpkin Hollow, on the Illinois River, eight miles northeast of the town of Tahlequah. There were a few other early day sawmills. After the close of the Civil
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War other sawmills were established among the hills and have been in operation ever since. The pine trees have been almost destroyed during the many years which have passed since the first mill was established but a few pine logs are yet obtainable in some sections. But in these days (1938) lumber from oak trees is the principal output of most of the sawmills.

Some of the notable buildings of the old Cherokee Nation were constructed of native yellow pine. The planking used in the National Seminaries, as well as in the

Capitol at Tahlequah was procured from sawmills in the hills. A number of Tahlequah residences and stores were also built of pine lumber from a mill in some instances miles away. The sites of the earliest sawmills are yet discernable. In some places there are numbers of small and slender pines, which if protected, would after the lapse of many years grow into trees of some considerable size. The ferry boats, which were maintained at several points along the Illinois River from the earliest days of the Cherokee Nation, were constructed from lumber made from the yellow pine, evidently a very durable

material, as some of the boats were in use for years before being replaced.

Before and during the 1880's and perhaps later the dried portions of yellow pine trees were often used in the rural homes as a means of providing light for reading, knitting and other occupations. The rich and oily pine gave abundant light and was also much used for fuel in the homes.



**Saturday
August 14th, 2004**

For further information call
TNC Tulsa Office
918.585.1117



Wild Brew 2004 Tulsa

A casual event offering the opportunity to sample domestic and international beers, ales and wine from outstanding microbreweries, as well as signature dishes from Oklahoma's finest restaurants.



TNC Oklahoma Chapter Preserve Updates

Feasibility Assessment Underway for Elk Reintroduction - Chris Wilson

Larry Levesque recently completed an Elk Reintroduction Feasibility Study for the Nickel Preserve. The study was undertaken to assess the biological and sociological feasibility of restoring elk to the preserve. The study covered two key objectives:

1. To determine the biological potential for restoring elk to the Nickel Preserve, including habitat suitability, range requirements, and disease risk.
2. To assess the sociological factors potentially affecting a successful elk reintroduction program, including agricultural conflicts, poaching, roads, land ownership, and public attitudes.

The reintroduction of elk to the Nickel Preserve has been identified as a potential strategy to enhance the biodiversity health of the system. North American elk, *Cervus elaphus*, were once common throughout the Ozarks. The ecological role of these large ungulates in

Ozark ecosystems is not well-understood. However, their presence would likely have contributed to high species diversity and landscape diversity. The loss of this species has been identified as a source of stress to this ecosystem that evolved and developed over millennia in the presence of elk. Elk are an important component of animal diversity, but the myriad symbiotic relationships among other plants and animals might never be fully understood. Restoring this species to its original place in this Ozark ecosystem could benefit a suite of conservation targets.

The study found that suitable elk habitat exists on the Nickel Preserve, especially in the northern and eastern areas where fire management has been used in recent years. Sparse development and low road densities were considered especially favorable. The source of an elk herd would be important to ensure disease-free status.

Several issues and concerns were identified. Operating costs could increase with an elk program. Herd management could become a significant issue, especially if animals frequently stray from the preserve and/or if poaching becomes a serious

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Jim Erwin

(Continued from page 8) problem. This would require additional staffing to address these problems. Public relations, especially with neighbors, might become increasingly important.

In addition to the ecological benefits of restoring a large herbivore to the ecosystem, an elk reintroduction may reap programmatic benefits as well. Elk would provide aesthetic values to the

preserve because people tend to respond positively to large *charismatic megafauna*, e.g. bison at the Tallgrass. Viewing opportunities could lead to greater interest in the preserve and an increased support for our conservation work.

A working group comprised of staff and Board members will develop an implementation plan to address the issues raised in the feasibility study.

The plan will establish detailed actions and timetables for a reintroduction. The Board of Directors will review the final plan to decide whether elk will be reintroduced. If approved, elk could be roaming the hills of the Nickel Preserve by early next year. Stay tuned....



Calendar of Events

June, 2004

Butterfly Counts at Oklahoma TNC Preserves



Pearl Crescent by John Fisher

Every summer since 1993 a small group of dedicated people have been counting the butterflies at the Tallgrass Prairie, Pontotoc Ridge, Nickel, and Keystone Ancient Forest Preserves. The number of different butterfly species found on these counts and other surveys aptly demonstrate the rich biodiversity and high quality habitat of the lands the Conservancy has protected.

Everyone from novice to expert is welcome. What we need most of all are lots of good eyes. Close focusing binoculars are a help but not absolutely necessary though bug spray is.

June 26th - Nickel Preserve

Time: 9:30 AM

Where: Preserve Headquarters in Sawmill Hollow

Contact: Walter Gerard 918-747-4771