



Published by the Tallgrass Prairie Preserve Docent Program

Distributed to Volunteers and Supporters of the Oklahoma Chapter of The Nature Conservancy

NATURE CONSERVANCY CHANGES

—Andrew Donovan-Shead

The Nature Conservancy has announced some changes in the organization of its Oklahoma office. Position of *Director of Environmental Affairs* has been eliminated in Oklahoma, which means that Grant Gerondale departed to fresh fields of endeavor. Also, we have a new State Director in Michael Fuhr; expect more details on our new leader in a future edition of the newsletter.



Creek Area in Winter – by Van Vives

NEWSLETTER CHANGE

Change from a three- to a two-column layout with larger font, that you see here, is in response to comments that the print edition is difficult to read because of the small type.

DOCENT MEETING

On Saturday, 12 February 2005, our docent meeting was attended well enough to require extra chairs from another room. We met in Room-206 of John Rogers Hall at the University of Tulsa College of Law.



Dried Plant in Winter – by Van Vives

Dennis Bires opened the meeting, conducted the introductions and then asked John Fisher for news from the State Chapter. John said that Michael Fuhr, the new State Director, is a well-respected aquatic biologist¹ from Missouri who is lately aquatic director in Arkansas. Michael is in process of removing himself to Tulsa where he will soon take up his new duties; his arrival is eagerly awaited as he is considered to be

¹ Presumably he doesn't have webbed hands and feet, is just expert in the biology of aquatic systems. - Editor.

something of a force of nature that will do wonders for The Nature Conservancy's scientific efforts in Oklahoma.

John said that the Conservancy is planning to reintroduce Elk at the Nickel preserve starting with a herd of ten head in the holding pen at Sawmill Hollow. Release of the herd is expected on 19 March 2005; no visitors will be permitted at the release, either docent or general public, because the animals are skittish and easily spooked. If all goes well this year, the plan is to release another ten-head next year.



Moss on Log in Winter – by Van Vives

John said that Oklahoma Chapter field trips will be reintroduced to members and the general public, covering subjects such as geology, ornithology, butterflies, and botany.

John announced a volunteer program for the Keystone Ancient Forest Preserve in which trail guides will be needed two or three times each year. If you are interested in being a trail guide at Keystone, send email to John expressing your

interest.

Dennis reported that the opening date for the Visitors' Center will be Tuesday, 1 March 2005.

We received news of the bison herd. Dennis said that last year 554 new calves joined the herd, which is a calving-rate² of 73-percent. Number of animals that attended the round-up was 2,367; number sold at auction was 384. None were purchased. Year-round bison unit acreage is now at 21,045 acres. Number of cattle in pasture is 4,050 on 12,759 acres.



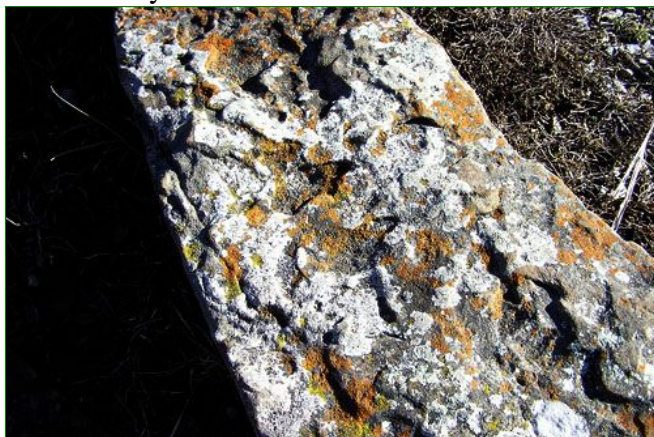
Prairie in Winter – by Van Vives

Dennis said that Jim Thayer will conduct a Bird Identification Workshop in May and a Butterfly Identification Workshop in June; exact dates will be announced closer to the event. You should plan to attend these events if you have any interest at all.

David Turner, abetted by Betty, discussed plans for New Docent Orientation. This event will

² Calving-rate is the number of calves divided by the number of females of calving-age.

be held at the Tallgrass Prairie Preserve Ecological Research Station on Saturday, 9 April 2005 and Saturday, 16 April 2005. A new twenty-minute segment is planned in which the wider effects of the Tallgrass Prairie Preserve work will be discussed; topics planned for this event are oil remediation efforts and the joint effort with Oklahoma State University on the viability and wider application of the patch-burn experiments. Other speakers will include Steve Forsyth talking on the ecosystem and John Fisher on bison.



Orange Lichen on Rock – by Van Vives

David said that portions of the Docent Manual have been revised, in particular the gift shop procedures, with special attention paid to working the credit card machine, and the guide to interpreting the preserve for visitors.

Dennis said that Docent Reorientation is scheduled for Saturday, 5 March 2005, from 9am until 2pm at the Ecological Research Station. Be sure to bring your own lunch this year.

Andrew Donovan-Shead said that he wasn't

planning on any radical departure from the newsletter format designed by Kim Hagan. He asked if anyone was really interested in the gift shop sales; general consensus was to remove the sales summary from the newsletter. Andrew suggested that the newsletter be uploaded to the web-site and then an email sent to notify readers of a new issue, including a link to the file; Andrew said that the large files and all-points broadcast caused delivery of the newsletter to be blocked by spam filters; general consensus accepted this suggestion. Another suggestion received from the floor was to eliminate docent events from the newsletter since this information is readily available on the web-site and usually announced in the body of the newsletter well in advance. A request for a paper copy of the newsletter at the Visitors' Center was mooted; Andrew said that he had assembled a set of back issues that date from the beginning of Kim Hagan's editorship and would deliver the folder to the gift shop next time he is on duty.

David Turner said that new docent recruitment would take place in Bartlesville on Tuesday, 15 February 2005. David and Betty have developed a slide presentation entitled "What is a Docent?" for new recruits. David gave Dennis a copy of the slide show on CD-ROM for use in the March recruitment in Tulsa. Dennis reported that Harvey Payne asked for a recruiting day to be conducted in Pawhuska to encourage local people to participate in the preserve.

Dennis announced the spring work days. Road cleanup will begin on 26 February from 10 a.m. until 3 p.m.; participants should bring their own lunch. Another road cleanup is scheduled for the morning of 14 May, followed by lunch and an afternoon hike on Wild Hog Creek in the south east part of the preserve. Oilfield cleanup will be on 16th April offering participants the opportunity to see unusual places normally closed to docents and public alike.



Woodpecker – by Van Vives

Dennis said that Bob Hamilton asked us to construct picnic tables for use at the Ecological Research Station. We agreed that this would be an excellent project for Eagle Scouts; however, we need someone to oversee the project, so if you are interested and able then please let Dennis know who you are.

Dennis said that we have the following vacant positions waiting for good persons to step forward and take up the challenge:

- Docent Scheduler – We discussed this and decided that it is more someone being designated to remind docents to sign-up for vacant days in order to keep the gift shop open. We thought that this position could be filled by sending out an email broadcast in the third week of each month, to remind everyone to look at the on-line schedule and take any available days. We have enough docents to cover an entire year if everyone signs up for at least three days.
- New Docent Recruitment in Tulsa – We need someone to do this in future as Dennis has several other things to do already.
- Docent Awards & Dinner Coordinator – We still need someone for this job. We talked about awards and thought that something smaller that can be mailed to recipients might be more workable, such as enamelled pins; one possibility is to commission William Spear Designs of Juneau to produce pins for us.
- Docent Reorientation Coordinator – Don Bruner is unable to continue with this, so we need someone to fill this position.
- Work Day Coordinator – we need a new person for this job too.

George Pierson showed how the web-site has been restructured. Go to www.nature.org, begin with the “Where we Work” tab and follow the links to Oklahoma to see how the web-site looks now.

We discussed some final topics such as

avoiding closed days at the Visitors' Center, volunteer activities at other preserves, directions to special visitors, a virtual chat-room to share docent knowledge, a research project information board in the Visitors' Center, a video area, and publicity to increase the number of visitors. You will learn more about these later.

Our meeting was productive and closed at about half past four in the afternoon.

BEAUTY EVEN IN WINTER

—Van Vives

We tend to avoid trips to the Tallgrass Prairie when winter invades it and the colors turn to the more subdued tones of gray and brown. A walk I took recently this February on the short trail showed that there is still beauty in winter and colors range much wider than gray and brown. It may take a little extra effort to find the beauty, but it is well worth it.



Creek in Winter – by Van Vives

BUTTERFLY NEWS

—John Fisher

Last spring I wrote that I hoped we would find the 'Olive' Juniper Hairstreak at Pontotoc Ridge this year and add it to the preserve species list. Well, it is on the list now but it didn't quite work out the way I envisioned it. In early December, while looking through John Nelson's specimen drawers, I located the voucher specimen for Pontotoc County. The label said it was collected at Pontotoc Ridge on June 15th, 1995, so nearly ten years later the Juniper Hairstreak is 'officially' on the list. Walter Gerard reports that he found this species at the Tallgrass Prairie many years ago, but that a burn eliminated the Eastern Red Cedars they feed on; there are a few of these cedars growing on the south side of the Preserve, so maybe the Juniper Hairstreak is still there. Who's going to be the one to find them?



'Olive' Juniper Hairstreak – by John Fisher.

*Callophrys gryneus gryneus,
Keystone Ancient Forest Preserve, Osage Co., OK*

2004 was a good year for old specimens as Jim Hoffman told me about collecting a Northern Metalmark specimen in Cedar Hollow on the J-5 Ranch while working his breeding bird survey route on June 10th, 1991. The J-5 Ranch is now the basis of the J.T. Nickel Family Wildlife & Nature Preserve.



Northern Metalmark – by John Fisher
Calephelis borealis
J.T. Nickel Preserve, Cherokee Co., OK

John Nelson confirmed later that this specimen was indeed a Northern Metalmark and only the 3rd county record for this species in Oklahoma. On August 31st, a few days after Jim & I spoke, I took a second look at an interesting little ‘moth’ in the next hollow over the hill from Cedar Creek. Turns out that it wasn’t a moth all but a Northern Metalmark and there were two of them. They were both very worn, ragged, and just about done for, but there they were. I didn’t see any others as shortly after I photographed the second one, the clouds moved in and most everything

except the Carolina Satyrs hunkered down for the rest of the afternoon. Ranked as a G3G4 species, the Northern Metalmark is a potential target species for the Nickel Preserve management plan, so Chris Wilson was understandably pleased to find it’s still around. Coincidentally, Jeri McMahon sent me a photo she had taken of a Northern Metalmark on May 31st, 2000 at the Ozark Plateau NWR in Adair County so that makes four counties in Oklahoma that have this species.



Soapberry Hairstreak – by John Fisher
Phaeostrymon alcestis
Four Canyon Preserve, Ellis Co., OK

This past summer I noticed some Western Soapberry trees, *Supindus drummondii*, growing along the road just south of the Tallgrass Prairie Preserve. Since the Soapberry Hairstreak is seldom found except on or around its namesake, I

asked Mike Palmer from OSU if they were found on the Preserve. According to Dr. Palmer, there is a grove northeast of the monument where the tornado went through the year before last. Adult Soapberry Hairstreaks only fly for a couple of weeks or so when the tree is in bloom so you have to time your search just right. Assuming they're there, next summer that should add another species to the Tallgrass Prairie Preserve and Osage County list.

BIODIVERSITY: A SPECULATION

—Andrew Donovan-Shead

Biodiversity is a word that has gained a certain buzz these days. Earlier last year I had some correspondence with Dr. Mike Palmer who had been to a conference in Maine where his talk on biodiversity got a frosty reception. Apparently, a number of envirometricians think that biodiversity isn't worth preserving, which was shocking news to me. Merriam-Websters dictionary defines biodiversity as: "biological diversity in an environment as indicated by the numbers of different species of plants and animals." I asked Dr Palmer why the envirometricians should consider biodiversity worthless; he thought that "the reason why envirometricians were skeptical of biodiversity is that they spend all their time dealing with pollution and other environmental health issues, and they see no obvious link between biodiversity and human health." All of which is of great interest because I should have thought that the degree of biodiversity is in

inverse-proportion to the degree of pollution in the environment and, therefore, a metric of profound interest since it seems to be a direct measure of environmental health. It appears to me an obvious link, but I'm not an expert in these matters and thus can't be certain. However, being a layman isn't going to stop me speculating on science.

That brief exchange with Dr. Palmer started me thinking that if biodiversity really is a direct measure of environmental health then reducing it to a number would give a useful means of gauging the general health of the environment at a top level. With a measurement like that it would be a good way of discovering trends in environmental health—a bit like blood tests do for us humans; it would tell us whether there is cause for concern and more detailed investigation. Next question, then, is: how?

Life is the living and breathing species of plants, animals, insects, and bacteria. Nature, to use the old adage, "abhors a vacuum" and so life will develop and adapt to fill all the available space in nature. But life cannot adapt very quickly, which means that a sudden change in the environment can cause a dramatic reduction in biodiversity.

It seems to me that an increase in biodiversity can be equated to an increase in information in the environment. Independent scientist James Lovelock had an insight along these lines when he was helping to devise experiments to detect life on other planets for the Viking Mars spacecraft. He

realised that life increases the information in an environment because organisms change and order their surroundings by extracting and rearranging materials and depositing waste. He used the term *waste* carefully. What is waste to one organism is food to another. He compared human consumption of oxygen and exhalation of carbon dioxide with plant consumption of carbon dioxide and exhalation of oxygen waste; with these two there is an apparent symbiotic relationship. Life on Earth produces a “rich, anomalous atmosphere.” A dead planet will have an atmosphere that is “close to a state of chemical equilibrium.” We know now that Mars has a tenuous atmosphere “dominated by carbon dioxide with traces of other gasses.” Earth is vibrant and alive in a tight-coupled feedback loop between life and its environment. One principal indicator of this is the chemical composition of the atmosphere.

Were I to design an experiment to measure biodiversity, I think I should analyse the chemical composition of the atmosphere using spectroscopic analysis or something similar. The Tallgrass Prairie Preserve would be a good place to perform the experiment because it contains an entire watershed, so I would measure the water run-off too. I would ring the preserve with sensors and detect direction of the wind to measure the composition of the air flowing on and off the preserve and compare the difference between the two; the difference being the effect exerted on the

environment by the prairie. I would do the same for the water flowing in and out. My working hypothesis would be that over time I could monitor changes in the overall biodiversity of the Tallgrass Prairie Preserve. A grandiose scheme, don't you think? Well, there's nothing like thinking big! I think I would try to find a way to automate the whole process for continuous measurement too.

DOCENT NEWS PUBLICATION SCHEDULE

The Docent News is scheduled for publication on the 15th of each month. Deadline for submission of articles is on the 10th of each month. Send your contributions to awd-s@cloistral.net as a plain-text email with any pictures included as attachments.

DISCUSSION GROUP

—John Fisher

At the Winter docent meeting it was suggested that we create a chat room-discussion list to help us share ideas, experiences, and questions we have about the Tallgrass Prairie Preserve. We have set up a discussion list on Yahoo Groups to fill this need. Point your web-browser to <http://groups.yahoo.com/group/tgpdocents>. This discussion list is not sponsored or authorized by The Nature Conservancy and participation is restricted to Tallgrass Prairie Preserve Docents. Active Docents will receive an invitation to join in the next few days.

Tallgrass Prairie Docent Coordinators

Program Coordinator	Dennis Bires	918-341-3908	dennisbires@lycos.com
Newsletter Editor	Andrew Donovan-Shead	918-688-7502	awd-s@cloistral.net
Docent Scheduler	Karen Harris	918-663-8306	kharris@hollandhall.org.com
New Docent Recruitment	Dennis Bires (Tulsa)	918-341-3908	dennisbires@lycos.com
	Betty Turner (Bartlesville)	918-333-7864	bbturner999@aol.com
Reorientation & Kick-off	Don Bruner	580-237-4199 Home 580-213-5327 Work	dbruner@groendyke.com
Docent Awards			
Nature Room	Doris Mayfield	918-743-6922	dmayfield@mindspring.com
Web Coordinator	George Pierson	918-744-0554	zglp01@cox.net

The Nature Conservancy Coordinators

Tulsa Office	State Director	Michael Fuhr	918-293-2929
	Director of Conservation	Jay Pruett	918-293-2917
	Director of Operations	Eileen Jobin	918-293-2920
	Director of Philanthropy	Deirdre McArdle	918-293-2912
Oklahoma City Office	Associate Director of Philanthropy	Keven Virgilio	405-858-8557
	Land Protection Specialist	Chris Hise	405-858-8557
Tallgrass Prairie Preserve	Preserve Director	Harvey Payne	918-287-4803
	Director of Stewardship	Bob Hamilton	918-287-4803
J.T. Nickel Family Nature & Wildlife Preserve	Preserve Director	Chris Wilson	918-456-7601
Pontotoc Ridge Preserve	Preserve Director	Jim Erwin	580-777-2224