



THE DOCENT NEWS

Of The Tallgrass Prairie Preserve Docent Program



The Nature Conservancy

SAVING THE LAST GREAT PLACES ON EARTH

For the Volunteers and Supporters of the Oklahoma Chapter of The Nature Conservancy

JANUARY 2007

1

IN THIS EDITION

- ▶ **DOCENT WINTER MEETING**
by Dennis Bires
- ▶ **DOCENT REORIENTATION**
by Dennis Bires
- ▶ **GECKOS**
by Van Vives
- ▶ **WHERE SCIENCE AND ETHICS MEET**
by Gregory M. Lamb
- ▶ **WHERE UNDESIRABLE DNA ROAM...**
by Jim Robbins
- ▶ **SCHOOL OF SUSTAINABILITY**
by RON SCHERER
- ▶ **GLUT OF ETHANOL REFINERIES**
By Mark Clayton
- ▶ **BACK ISSUES**
- ▶ **NEWSLETTER PUBLICATION**

DOCENT WINTER MEETING

—Dennis Bires

Tallgrass Prairie Docents—Make plans to attend the Docent Winter Meeting on Saturday, February 3, at 2:00 p.m., at The University of Tulsa College of Law, John Rogers Hall, Room 203, on the TU campus. Please bring ideas, questions, and enthusiasm, and we'll make plans for the 2007 season at the Preserve.

John Rogers Hall is at the corner of Florence Avenue and East 4th Place on the north edge of the TU campus. Parking is across 4th Place—visitors are welcome despite signs indicating STUDENT, FACULTY, AND STAFF PARKING. The building is named after the late John Rogers, Dean of the TU College of Law, and the personal attorney of James Chapman, a founder of the Chapman-Barnard Ranch, now the Tallgrass Prairie Preserve.

DOCENT REORIENTATION

—Dennis Bires

Mark your calendar—Tallgrass Prairie Docent Reorientation will be held on Saturday, March 3, at the Ecological Research Station at the Preserve. Please check the February Docent News for more details.

Anita Springer is developing a fascinating Reorientation program, including a talk by James P. Ronda, Ph.D., the H. G. Barnard Professor Of Western American History at The University of Tulsa. Professor Ronda is a leading authority on Native American history, the Lewis and Clark Expedition, Washington Irving's western travels, and many other aspects of the American West. Professor Ronda holds the H.G. Barnard chair at TU, named after Horace G. Barnard, a founder of the Chapman-Barnard Ranch.

GECKOS

—VAN VIVES

Anyone who watches television is probably familiar with that cute, computer-animated, green gecko that speaks with a London accent for the Geico Insurance Company. What about the real geckos slithering around the moist leaves and rocks at the Tallgrass Prairie?

Being from south Louisiana I am very aware of the green lizards or chameleons that can quickly change color from green to brown, depending on the color of the surface upon which they stand. What is the difference between them and the many species of geckos found around the world? A distinct difference is that the gecko can vocalize, making chirping sounds when associating with other geckos. There are over 700 species of geckos, some of which can emit a very irritating liquid from their tails for protection against enemies.

Some species have the gift of parthenogenesis, which means that the females can reproduce without the aid of a male. So if a female finds herself on a distant island where there are no other geckos, she can reproduce successively and populate that island.

Many people have a great fascination for this little creature. There is a group called the Global Gecko Association, which one can join to learn all there is to know about them. Children often have them as house pets. There is a Gecko Chat and Gecko Network on the Internet. People in the tropics welcome them in their homes because they feed upon unwanted bugs and insects. One organization states, "The best average age for a youngster to start out with their first gecko is about 8 years old. Match the gecko to the youngster. Learning to care for a gecko can be a very rewarding experience. They can live up to



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2

thirty years.”

Geckos have the ability to climb up walls, slither across ceilings, and even walk up polished surfaces like glass. One would attribute that skill to the fact that the underneath of their toes have a sticky substance or something like vacuum cups. But they can walk on fine sand and then climb up a mirror. So much for the sticky substance. They can climb up smooth surfaces under a vacuum. So much for vacuum cups. Scientists have been fascinated with the gecko’s toes. The explanation for their mobility up and down smooth surfaces centers upon the actual makeup of the foot pads and the principle of van der Waals forces.

Only recently have scientists discovered the answer to the gecko’s “stickiness.” The pad on each toe has tiny scales covered with millions of hair-like bristles and each bristle has about a thousand microscopic pads. Each of these tiny pads is only about 200-billionths of a meter wide. They are so small that they can bond to actual molecules on the surface material. If all the toe pads were in contact with the skin of a person, it could hold up a man weighing 265 pounds. What a powerful little fellow!

You can understand why scientists are eager to fabricate a material with similar microscopic hairs. Someday there may be a real live Geikoman. Manchester University in the UK has claimed to be able to fabricate a tape from a material called Kapton which has hairs measuring 2.0 microns in height and 0.2 microns in diameter—the same as geiko hairs. The tape is made by a lithographic process. One square centimeter of the tape has about 100 million artificial hairs and can support one kilogram.

WHERE SCIENCE AND ETHICS MEET

—Gregory M. Lamb

Physicist Freeman Dyson explores the ability of science to help us make sense of the world. Click on this link to read the full article:

<http://www.csmonitor.com/2006/1219/p14s01-bogn.html>

WHERE UNDESIRABLE DNA ROAM...

—Jim Robbins

Wild bison have returned, but cattle genes have spread into many of the remaining herds, meaning the battle for long-term

preservation is not over. Click on this link to read the full article; registration is required for free access to the NY Times.

http://www.nytimes.com/2007/01/09/science/09bison.html?_r=1&oref=slogin&pagewanted=all

SCHOOL OF SUSTAINABILITY

—Ron Scherer

One of the best examples of the ivory tower’s effort to tread lightly on the land is at Arizona State University. Next month, ASU will inaugurate the nation’s first SCHOOL OF SUSTAINABILITY—whose classes will look at everything from water scarcity to urban air quality problems. Click on this link to read the full article.

<http://www.csmonitor.com/2006/1219/p01s03-ussc.html?s=wklyenv>

GLUT OF ETHANOL REFINERIES

—Mark Clayton

Unlike the other plants, Mr. Smith’s Canton, Ill., facility is nowhere to be found on a key industry tally, which the US government and Wall Street analysts use to track ethanol plants under construction. A study released Thursday reports that at least 14 new biorefineries—representing nearly 1 billion gallons of extra fuel—are not on that tally. That oversight could mean problems ahead for the food supply and the “green fuel” industry, some analysts say. Click on this link to read the full article:

<http://www.csmonitor.com/2007/0105/p01s04-wmgn.html?s=wklyenv>

NEWSLETTER BACK ISSUES

Back issues of the Docent Newsletter, to October 2006, can be found in the two green zip-binders, stored in the Perspex rack by the file cabinet in the office of the Visitor’s Center.

NEWSLETTER PUBLICATION

Deadline for submission of articles for inclusion in the newsletter is the 10th of each month. Publication date is on the 15th. All docents, Nature Conservancy staff, university scientists, and philosophers are welcome to submit articles and pictures about the various preserves in Oklahoma, but of course the Tallgrass Prairie Preserve in particular.



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3

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