



Published by the Tallgrass Prairie Preserve Docent Program

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

IN THIS ISSUE

- Autumn Work Days by Dennis Bires.
- What's Blooming by Van Vives.
- Eastern Red Cedar by Bob Hamilton.
- Eastern Red Cedar by Van Vives
- Interesting Visitors by Van Vives
- Newsletter Publication.
- Back Issues.



Rough Blazing Star, Liatris aspera, by Van Vives

AUTUMN WORK DAYS ON THE PRAIRIE

—Dennis Bires

Comfortable fall weather means it's time to roll up our sleeves and get some work done at the Tallgrass Prairie Preserve. Here are some outdoor

opportunities for docents and friends.

- Saturday, September 24, Easy Painting Job:

The garage door on the shed immediately adjacent to the Visitors Center hasn't been painted since before statehood. We need just two or three volunteers to help scrape off what remains and apply a new coat, hopefully to last another hundred years. Call Dennis Bires at 918-341-3908. We'll meet at the Visitors Center at 10:00 a.m.

- Saturday, October 1, Prairie Road Crew

Let's get the Preserve roads in pristine condition for the heavy fall visitation period. No need to reserve a place on this exclusive crew. Just show up at the Visitors Center at 10:00 a.m. Bring a lunch and we'll relax on the Bunkhouse porch from noon till 1:00, then we'll all go home around 3:00 p.m. feeling good about ourselves.

- Saturday, November 5, Oilfield Cleanup

For our more adventurous volunteers who like to get off the county roads and into the Tallgrass "back country," this work day serves to clear away some scrap metal and old wood that is an annoyance to bison and detracts from the landscape. Participate in restoring the Prairie. No advance sign-up. Meet at the Visitors Center at

10:00 a.m. Do bring a lunch. We'll finish up around 3:00 p.m.

WHAT'S BLOOMING

—Van Vives

We have a few new wildflowers blooming this month as we get into the fall season. You can spot the *Rough Blazing Star* with its bright purple flowers. The *Large-flowered Gaura* is in full bloom, as well as *Blue Sage*. In the yellow category is the *Jerusalem Artichoke*. One of the less spectacular plants is the *Woolly Plaintain*, with its green spikes. The Indian Grass has headed and is beautiful in the sunshine. Some of the August flowers are still blooming, such as *Snow-on-the-Mountain*, *Partridge Pea*, *Thistle*, *Sunflowers*, and *Rosin-weed*.



Large-Flowered Gaura, Gaura longiflora, by Van Vives

Rough Blazing Star, *Liatris aspera*: This is primarily a single-stemmed plant with the flower head at the top. The leaves are longest at the bottom of the stem and get progressively shorter toward the top. The flower head is wand-like and

has alternate rounded purple clusters. As with so many prairie plants, the Blazing Star was used for medicinal purposes. Mesquakies used it for bladder and kidney problems. Pawnees boiled the leaves and root together and the tea to children with diarrhea. The tea was also used for gonorrhea, colic, and sore throats. The root was mashed and used for snakebites.



Blue Sage, Salvia azurea, by Van Vives

Blue Sage, *Salvia azurea*: Blue Sage is a member of the Mint family. It is unbranched or has few branches and can grow to five feet. The leaves are narrow and opposite usually with toothed edges. There are raised veins on the underside of the leaves. The flowers are bright blue with white centers. This plant is pollinated by bumblebees.

Large-Flowered Gaura, *Gaura longiflora*: This is a member of the Primrose family and is sometimes called Wild Honeysuckle. This is a highly branched plant that can grow to seven feet. The leaves are alternate and the stems have a very fine hairy surface. The flowers have four petals

that range from pink to almost white. It grows on rocky dry prairies and likes disturbed areas like roadsides.

Jerusalem Artichoke, *Helianthus tuberosus*: This is a tall sunflower that often has some reddish color in the stems. Stems and leaves have rough hairs covering the surfaces. Leaves are opposite on the lower part of the stem and usually alternate on the upper part. The stems have numerous branches with a flower at the top of each. The yellow flowers are up to four inches in diameter with ten to twenty petal-like rays. It is found in areas that collect some moisture, such as roadside ditches. If the plant grows in good soil the roots form tubers that are edible and can be cooked like potatoes and added to salads. Jerusalem artichokes are grown commercially¹.



Jerusalem Artichoke, Helianthus tuberosus, by Van Vives

Common Boneset, *Eupatorium perfoliatum*: This is a member of the Aster family and it can grow to four feet in height. The leaves are opposite

¹ Artichoke soup made from the Jerusalem Artichoke is good to eat, but can induce gut-wrenching flatulence — Editor.

and join and circle the stem. Leaves are up to 8 inches long and are toothed on the edges. Stems and leaves are somewhat hairy. The white flower clusters have nine to twenty-three small disk flowers. The early settlers called it “Indian Sage” because the Native Americans considered it a cure for all aches, pains, and ills. The term “Boneset” is confusing, because it was not used for broken bones, but was used for treating the flu, which the settlers called a “breakbone fever” due to the severe body aches it caused.



Common Boneset, Eupatorium perfoliatum, by Van Vives

EASTERN RED CEDAR AND THE TALLGRASS PRAIRIE

—Bob Hamilton

Eastern Red Cedar is a native species, but it was likely limited to naturally fire-protected sites in pre-settlement times. Altered fire regime is thought to have allowed it to become an aggressive invasive species. Its ability to germinate and grow under a closed woodland canopy allows it to eventually grow up through other native forest species and replace them. The result is a closed

canopy cedar forest with a sterile understory, and greatly reduced biodiversity and agricultural (grazing) utility. Only the most severe wildfires can penetrate such a cedar forest, so mechanical methods (cutting, dozing, chaining) or herbicides are needed to re-open them, which is quite expensive. OSU has a brochure on the control and management of Red cedar (*Terrence G. Bidwell and John R. Weir, F-2876, Eastern Red Cedar Control and Management - Best Management Practices to Restore Oklahoma's Ecosystems*).

We do have eastern red cedar lightly scattered around the preserve, but our fire program pretty well controls their expansion. However, it is surprising how those little devils start popping up in the prairie if you go longer than four to five years between fires. Birds are thought to be the primary dispersers of the seeds — notice how the first cedars invading an area often start in fence lines where birds frequently perch. Fortunately, with adequate fine fuels a burn will either consume or scorch and kill most cedars that are two metres or less in height. An added bonus is that they smell so nice when they burn! Also, if the canopy of the tree is removed mechanically or by fire, this species of cedar cannot re-sprout (in contrast to some of the cedar species in the southwest U.S. that do resprout).

The only place on the preserve where we have an eastern red cedar concentration is in our very northeast corner along the South Pond Creek drainage. There were a number of cedar stands of

mature (eighteen- to twenty-four-inch trunks) trees on bottomland soils that were so dense it was difficult to crawl through them. Since fire could not effectively open up these stands (at least under “prescribed burn” conditions), we hired a local contractor about five years ago to come in and cut the trees. He used two “Bobcat” skidsteer machines with front hydraulic clippers. We had him “pinch” all the cedars he could get to with his machines, but we left the cedars on the rough slopes and sandstone cliffs, which is their historic refugia.

EASTERN RED CEDAR, *JUNIPERUS VIRGINIANA*

—Van Vives

As you can see from the scientific nomenclature the Red Cedar is not a cedar but a juniper. It grows throughout the eastern states and from North Dakota to Texas. It will grow in almost any type of soil, other than wet, swampy areas. The average tree size is fourteen to sixteen inches in trunk diameter and twenty to fifty feet in height. It has lacelike fronds rather than needles. The reddish brown bark can be easily stripped from the trunk. The wood is mid-weight (thirty-three pounds per cubic-foot) and the wood strength is about eighty-percent that of white oak. Red Cedar develops pale, blue-green berries that can be readily distributed by birds.

Red Cedar wood has a fine grain and soft texture. Among the uses for the wood are: boat trim, cedar chests, closet linings, house siding, exterior trim, boxes, carvings, and wafer board.

The Oklahoma Redcedar Association works to find new commercial uses for the tree and promotes known uses. Perhaps one of the reasons for the rapid spread of the Red Cedar is the absence of large scale commercial exploitation of the wood.

Red Cedar trees produce an aromatic-smelling oil, commonly known as oil of red cedar or cedar oil. The oil content of the wood is 2.94-percent. A tree twelve inches in diameter can produce seventeen pounds of cedar oil, valued at about \$120. If you buy a quart can of processed cedar oil it will cost \$50. A concentrated form, known as essential oil of cedar, can cost \$5 for a small vial.

The Natural Resources Conservation Service (NRCS) estimates that the Red Cedar is increasing at the rate of 762 acres per day or 300,000 acres a year. A survey in 1985 estimated that 3.5 million acres of rangeland, pasture and forest land had been invaded by the Red Cedar. In 2004 that acreage increased to 12.6 million. By the year 2013 it is estimated that 28-percent of the Oklahoma landscape will be invaded by Red Cedar if there are no control measures taken. It has become a problem in all of Oklahoma except the panhandle and a small part of the southwest.

What has caused the increase in numbers? Native Americans started fires in the spring and fall to improve wildlife habitat. Fires were also set by lightening strikes. These two things helped limit the spread of cedars into grasslands. The coming of the settlers brought fire control and

heavy grazing, both benefitted the spread of the cedar. Wild fires set by lightening strikes were extinguished when possible. Man-made fires on the prairie were considered hazardous to homesteads, cattle, and farm crops.

The encroachment of Red Cedar trees into grasslands and other native plant communities affects the composition of wildlife habitats. Studies by OSU scientists indicate that only three cedar trees per acre can displace sensitive song birds. They also said that 5,000 quail coveys per year can be lost due to the spread of Red Cedars.

Large populations of Red Cedar can reduce the amount of useable grazing land through shade that hinders grass propagation. In addition, cedars can decrease the amount of available water and threaten water sources. OSU research shows that one acre of cedar trees absorb 55,000 gallons of water per year. Also contributing to water "usage" is the fact that snow and rain falling upon the leaves and branches have a good chance of evaporating rather than seeping into the soil.

In 2000 it was estimated that Red Cedars cost Oklahoma \$218-million annually through wild fires, loss of forage, loss of wildlife habitat, and water yield. Without adequate control measures that figure may rise to \$447-million dollars by year 2013.

Further information can be found at the following: Oklahoma Living, www.ok-living.coop; Oklahoma Redcedar Association, www.okredcedar.org;

Oklahoma House of Representatives Media Division, www.lsb.state.ok.us/house/NEWS6423.html; OSU (Oklahoma State University), Rangeland Ecology and Management, www.osuextra.com.

INTERESTING VISITORS

—Van Vives

Bob Hamilton asked me to meet with two people from the United Kingdom. They really wanted to meet with Bob, but he was out of state at a conference. The visitors were Rupert Nowlin, his wife Dorit Albertsen, and their young daughter.

Mr. Nowlin is an Arapaho from western Oklahoma and he and his wife and daughter were in Oklahoma for a powwow. His education is in Range Management and he works on a salt prairie near Salisbury Plain, U.K. He manages a relatively small area of 1200 acres of salt prairie. The problem he has is encroachment by Hawthorn shrubs. Hawthorns can exist as a shrub or tree and are very fast growing. There is some concern about Juniper encroachment also. He is very interested in the possible use of scheduled burns to try to control the shrubs. The fact that the area is ecologically sensitive and perhaps politically sensitive has caused the government to feel very negative about burning. This area in the southwest U.K. is home to the Marsh Fritillary butterfly, which has declined 62-percent in Britain. Salisbury Plain is considered the most important of the habitat areas. There is fear by some that regular burns may destroy more of the butterflies

since they lay their eggs on leaves of certain plants between May and July.

There is another block to the use of burns. The area has been a major military training site and there are remnants of shells everywhere. The military contends that burns may set off some of these “duds”. Mr. Nowlin does not think that that is a problem since the area has been well traveled by heavy trucks and other vehicles and no explosions have been occurred. The fact is that the military does have a weighted position in allowing or preventing the use of burns in the area.

Ms. Albertsen is a veterinarian originally from Germany. Her interests lie in the preservation of the European bison, *B. bonasus*, of which there are only 3000 remaining in Europe. It is a smaller animal, much more narrow in body width and with seemingly longer legs. She said that the European bison have made their home in the forested areas because when they come out the farmers shoot them. She visited a sizable herd in Poland. There is a refuge of a small herd of these bison where people are trying to propagate the species, but she said they are using typical methods used on cattle. They wean the calves after two or three months and separate the calves from the adults. She wanted to know if any family studies are being made on our bison, but admitted that it would be impossible to know what bull sired each calf. When she saw the smaller groups of our bison forming after the rut, she was curious if there was some form of family influence dictating how the

groups formed. She planned to go to OSU to see if there were any studies made there.

Ms. Albertsen also has an interest in possibly introducing the American bison to Europe.

These are more interesting visitors that we docents have the privilege of meeting.

NEWSLETTER PUBLICATION

—Andrew Donovan-Shead

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, and university scientists are welcome submit articles and pictures about the various preserves in Oklahoma, but of course the Tallgrass Prairie Preserve in particular.

BACK ISSUES

—Andrew Donovan-Shead

You can find back issues of the Docent Newsletter in the green zip-binders in the Visitors' Center, on top of the filing cabinet under the name-tag board. All issues that were published in color are printed in color. The pictures look good.

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	Van Vives	918-333-3840	vcarlv@aol.com
New Docent Recruitment	Dennis Bires (Tulsa)	918-341-3908	dennisbires@lycos.com
	Betty Turner (Bartlesville)	918-333-7864	bbturner999@aol.com
New Docent Training	David Turner	918-333-7864	drenrut@aol.com
Docent Reorientation	Steve Forsythe	918-914-3320	ms@msforsythe.com
Docent Recognition Dinner	Deana Brewster	918-865-2799	xswbysgirl@aol.com
Nature Room	Doris Mayfield	918-743-6922	dmayfield@mindspring.com
Web Coordinator	George Pierson	918-232-1904	gpierson@tnc.org



The Nature Conservancy Coordinators

	State Director	Michael Fuhr	918-293-2929
Tulsa Office	Director of Conservation	Jay Pruett	918-293-2917
	Director of Operations	Eileen Jobin	918-293-2920
	Director of Philanthropy	Deirdre McArdle	918-293-2912
	Associate Director of Philanthropy	Janet Studnicka	405-858-8557
Oklahoma City Office	Associate Director of Philanthropy	Janet Studnicka	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
Four Canyon Preserve	Preserve Director	Chris Hise	580-488-2657