Gaillardia

Oklahoma Native Plant Society

The purpose of the Oklahoma Native Plant Society is to encourage the study, protection, propagation, appreciation and use of Oklahoma's native plants.

Volume 31, Number 3

Fall 2016

INSIDE THIS EDITION

Upcoming Events/Activities

(check the ONPS website for more details)

Fabulous Wildflower Fridays, at 5:30, third Friday of each month at Panera, 41st St and Hudson Ave, Tulsa.
August 27– 2:00, SW Chapter joint meeting with OK Archeological Society, Museum of the Great Plains.
September 12– 6:30 NE Chapter Tulsa Garden Center, speaker Jay Pruett of the Oklahoma Nature Conservancy, "Wind Energy and Wildlife."
September 25-10:00-3:00, Butterfly Habitat Tour OKC
October7-9-Annual Meeting Wichita Mountains Wildlife Refuge, see page 4 and the ONPS website for more info

ONPS website: www.oknativeplants.org
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Gaillardia email: thegaillardia@gmail.com

COPY AND ART DEADLINE FOR NEXT ISSUE IS November 5th, 2016

"I would be converted to a religion of grass. Sleep the winter away and rise headlong each spring. Sink deep roots. Conserve water. Respect and nourish your neighbors and never let trees get the upper hand. ...Bow beneath the arm of fire. Connect underground. Provide. Provide. Be lovely and do no harm."
Louise Erdrich

Sorghastrum nutans Indian Grass

Photo: Ken Stewart

WELCOME TO THESE NEW MEMBERS

Abigail Moore, Norman
Anna and Ron Bennett, Sawyer
Mary Byrne, Tulsa
Adam Sarmiento, Norman

THANKS FOR THE DONATION

Pearl ands Joe Garrison, General Fund

Betty Culpepper
October 6, 1932—July 27, 2016

We are saddened to tell of the passing of our beloved Betty Culpepper, a long time member of ONPS, Central Chapter, who was always ready to greet everyone with a smile and cheerful word. She was a gifted garden writer for the Norman Transcript and an avid gardener who loved to plant natives and watch for birds and butterflies.

A celebration of life and memorial service will be held on September 3rd in Norman at 1:30 at Holiday Inn Express, 2500 Conference Dr.

2016 Annual Meeting

Wichita Mountains Wildlife Refuge

October 7-9

Friday, October 7, from 3:00 on will be at the Medicine Park Aquarium and Natural History Center in Medicine Park. We will see the wildflowers there, followed by cocktail hour and dinner at the Plantation Restaurant.

Saturday, October 8, we will meet at the WMWR at 8:30 and spend part of the day botanizing, Business and Board meetings start at 2:00. Banquet at 5:45, David Redhage from the Kerr Center for Sustainable Agriculture is speaker.

Sunday, October 9, Board meeting at 8:15 followed by a guided hike through "The Narrows".

You may register at oknativeplants.org

Contact event Coordinator:
Helen Riley
helen57riley@gmail.com

President's Paragraph

Joe Roberts

Have you ever heard a particular talk or lecture that, having heard it, absolutely changed the way you think? A lecture that opened your eyes to something invisible, and which, after that point, you could not ignore? In the early 80's I heard such a talk at the OU Biological Station. Having been told Mammalogy was full, I was a reluctantly put in the Field Botany course taught by Dr. Ron Tyrl. Consistency my strength, I settled in for my usual nap during lecture. But this day was different, as Dr. Tyrl was teaching about grasses, his specialty. It's hard to describe, but he started off low and slow, and as he progressed he became more charismatic, like a preacher building up his audience. Facts about the grasslands, ecology, grasses themselves, and human dependence on grasses just flowed in this kind of rising cadence that, by the end of the class, had me completely hooked. The grad assistant was a friend of mine, and years later we both still talk about how much that lecture meant. Grasses are the invisible pillar of our state. Even plant people rarely learn to ID many. But to know the grasses is to draw nearer to the very heart of being an Oklahoman. I hope you will join me in a salute to the Poaceae, the grasses, in this special issue. Then come and enjoy them at one of the most beautiful places in the state to do so, at our annual meeting Oct 7-9th at the Wichita Mountains Wildlife Refuge.

Wanted

ONPS needs an IT person to update the ONPS website. If interested contact Joe Roberts at joerobertsl3@cox.net.

From the Editor

Grasses. To borrow from Star Trek perhaps we should say, *Grasses*, *the Final Frontier*. In this issue of the Gaillardia we are spotlighting a few of our many and diverse Oklahoma native grasses. Because they are not "in the trade" and suitable for the entire U.S., our native grasses get little press and are therefore vastly underused, underappreciated and unexplored.

Plus, grasses just don't seem to excite (ordinary) gardeners much. Oh, there may be a Miscanthus or Pampas Grass (both non-natives) here or there, but they are usually billed as supporting cast and rarely given center stage. So let's think about seeing them for what they can do; they are the backbone of a healthy prairie, they are a creative way to add interest, beauty and texture to a garden--all while providing food and habitat for wildlife.

We are profiling a few of our grasses in this issue. The 2015 Flora of Oklahoma lists 335 species and 102 genera of Poaceae in our state and that doesn't include the 135 species and 16 genera of Cyperacae. Some may be easy to find and others not, if you are interested you may want to ask on the ONPS facebook page if anyone knows of a local source.

Botanist's Corner
Ron Tyrl

Sorghastrum nutans

Occurring in all 77 counties of Oklahoma, *Sorghastrum nutans* (L.)Nash or Indiangrass has been designated our state grass. It is distributed throughout the eastern two-thirds of the continent and southward into central Mexico. A perennial, warm-season, C_4 photosynthetic species, it is characteristic of the mid to late stages of plant succession and is one of the "big four" dominant grasses of the tall-grass prairie. It is also encountered in clearings, glades, and open woods. Occupying in a variety of deep, moist soils, plants begin growth in mid spring and may be 1–2 meters tall at maturity. Flowering profusely, they bear their spikelets in narrow to broadly rhombic, golden, asymmetrical panicles of rames that are beautifully conspicuous in the fall landscape. Vegetatively, Indiangrass is easily recognized by its rhizomatous habit; its blue-green, glaucous foliage; and its erect, triangular ligules.

Although the binomial *S. nutans* has long been used for Indiangrass, some agrostologists have contended it cannot be used because of errors in Linnaeus' original description of the species and that *S. avenaceum* is the correct name. However, his labeling of an herbarium specimen sent to him by Peter Kalm as *nutans* and his correction of the errors in the original description in subsequent publications, clearly indicate his concept of this North American species; the continued use of *S. nutans* is thus appropriate.

Providing high-quality forage when green, Indiangrass is both grazed by livestock and cut for hay. It is considered a key management species by range managers. A prolific caryopsis producer, it is a major component of seed mixtures for prairie restoration. White-tailed deer and rabbits consume plants to a limited extent in the spring. Consumption of the caryopses by songbirds and upland game birds has not been reported. Because of their height, dense basal foliage, and clonal habit, plants provide cover for both small mammals and birds.

"Certain species of prairie grasses are so vigorous and abundant that their influence upon the habitat and effect upon other species determine to a large degree the condition under which all of the remaining species associated with them must develop. Such a species is called a dominant."

J.E. Weaver, North American Prairie

Invasive Watch
Chad Cox
Invasive Plant Council

Bothriochloa bladhii

Although *Bothriochloa bladhii*, Caucasian bluestem, is on the Invasive Plant Council's Watch List and its close relative *B. ischaemum*, yellow bluestem, is on the Dirty Dozen list, they are intrinsically about even as invasive plants. *B. bladhii* was brought to Oklahoma for evaluation as a forage crop and led to the development of the cultivar WW-B. Dahl. This cultivar was released in 1994 and promoted but fortunately, its invasive character was recognized before it was as extensively planted here. Yellow bluestem was also introduced earlier as a forage plant and was extensively planted before being restricted; hence it is listed on the Dirty Dozen list.

Currently, *B. bladhii* is listed in Woods and Kay counties on the national plant database but BONAP's maps show it in Alfalfa and Texas counties as well. The Oklahoma bordering states, with the exception of Arkansas, have counties that border Oklahoma that are infested with *B. bladhii*. It is now a problem in every state where it was planted as a forage crop, including Hawaii.

B. bladhii is a perennial neotropic grass primarily native to tropical Africa and tropical and temperate Asia, Australia and New Zeeland. It has been extensively planted for forage elsewhere and become naturalized on all continents.

Both of these bluestems have the bluestem (Andropogon) characteristic of paired spikelets with a fertile, sessile spikelet and a pedicellated, male or neutral spikelet. They are also bunch type grasses with a mound of blades and panicles well above this mound. The panicles of Caucasian bluestem top out at up to 3 feet and yellow bluestem has larger mounds and taller panicles. Yellow bluestem has yellowish green blades and Caucasian bluestem has blue green blades. They are better differentiated by the panicle arrangement: the lowest branch of the panicle of *B. bladhii* is shorter than the rest of the stem, whereas *B. ischaemum*'s lowest branch is longer than the remaining part of the central stem.

B. bladhii blooms in late June through July and earlier than the native bluestems but the same as johnsongrass. The inflorescence is shiny and reddish purple. The mound has a blue-gray appearance. The crushed leaves have a characteristic and unpleasant odor described by some as like turpentine.

Control for these invasive bluestems is the same: a 2 year spraying with herbicide with a burn or mowing before the first spraying. Although imazapyr is the more effective herbicide for these bluestems, glyphosate will probably be used more often because a glyphosate resistant crop can be planted for the third year. There is no statewide effort to control *B. bladhii* in Oklahoma.

Muhlenbergia capillaris
Purple Muhly Grass
Susan Chambers
Rose Rock Landscaping

As a horticulture professional, specializing in native plants, I'm not supposed to have a favorite grass. Every grass has it's place in the landscape, just not every landscape. But if I were to have a favorite, it would be purple muhly grass. Even though it is supposed to do well in medium to dry soil, I've grown it in loam with a high water table, heavy clay on a slight slope, clay loam with an irrigation system that puts out 1-1/2" of moisture per week and mixed clay/loam with no supplemental water. Of course, the plant has responded differently in all those conditions. It establishes very slowly with no supplemental water. With irrigation or high water table, the plants were established by the second year and in full bloom by late summer.

The 1-3' height doesn't seem to change with the amount of water available. Time of bloom doesn't seem to be affected by availability of moisture, either. The width of the plant gradually increases over the years as the crown multiplies, but watch out for seedlings under and around the skirts of the parent. They don't seem to have any trouble germinating that close to the established plants.

As with every grass that is recommended for part to full sun, the more sun it's in, the stronger the grass blades will be and will stand up better. Not enough sun will cause the grass to lay over.

When the grass comes into bloom in late summer to early fall, it is a true showstopper. Imagine a filmy, mauve haze drifting atop slender blue-green grass blades waving in the breeze.

A clump of mature purple muhly grass may be one of the best fences ever grown. The foliage is dense and has tiny hairs that cause the grass blades to knit together into one large, impenetrable mass. When cutting the grass back in late January to early February, be sure to wear leather gloves, long pants and long sleeves. You may also want a dust mask or bandana over your nose, as those leaf hairs go everywhere when disturbed.

So, to recap, it tolerates most any soil; is drought tolerant after establishment, but appreciates moisture; will have a better profile if planted in full sun; will form an impenetrable mass for all but the smallest creatures in your garden and if planted in your front garden, is sure to stop traffic.

"A garden without grasses is like a face without eyebrows."

William Cullina

Andropogon ternarius
Splitbeard Bluestem
Steve Owens
Bustani Plant Farm

I find beauty in so many of Oklahoma's native grasses that grace our prairies and meadows. A lot of them are excellent choices for their use in native plant gardens. One I am particularly fond of is Splitbeard Bluestem (*Andropogon ternarius*).

This southeastern US native gets its name from its inflorescences, made up of pairs of silvery-white rames borne along tall stems. Up close, these floral tufts, or "divided beards" look almost cotton like. From a few paces back however, they remind me of small white sparkling Christmas lights, especially when backlit by a late autumn sunset. This showy floral/seed display usually begins in August or September and can last well into winter even after the plants have gone dormant.

A clump-forming (non-running) perennial bunchgrass, it looks a bit like Little Bluestem in its vegetative form. Its leaves are bluegreen from spring through summer but turn an attractive coppery red-bronze in fall. Splitbeard Bluestem grows in a variety of soil types from sand to clay and usually reaches 2-3 feet in height but can get 4 feet or more. Cattle will occasionally graze it early on but it is generally considered a poor choice for forage. Deer and rabbits will feed on the foliage and its seeds are eaten by a number of bird species.

To grow this native beauty in the home garden, give it a sunny spot in a poor soil that hasn't been enriched with compost or other organic matter and keep it on the dry side. Cut the clump back to about 6 inches before new growth begins each spring.

The Narrows

Wichita Mountains Wildlife Refuge

Dr. Paul Buck and the Paul Buck Award

Sue Amstutz, Chairman
ONPS Awards Committee

Foreword: This is the fourth and final article highlighting the individuals for whom the awards presented by the Oklahoma Native Plant Society are named. Newest of the awards, the Paul Buck Award, was instituted by the State Executive Board in 2012. it is presented to a graduate or undergraduate college student whose presentation of a botany-related paper is judged most outstanding during the Technical Meeting of the Oklahoma Academy of Science. The award includes a cash prize of $250.00.

Dr. Paul Buck was a charter member of ONPS. He was a founding member of the State Executive Board, author of the Society's first state bylaws, frequent and prolific contributor to the Society's newsletter, *The Gaillardia*, and along with Betty Kemm, the originator of the concept of local chapters for the Society. Second recipient of the ONPS Service Award (now called the Betty Kemm Service Award), Paul was the Northeast Chapter's "go-to guy" for identification of plants and other botanical items. As a field trip leader, he was unparalleled, providing insights into interesting field specimens with comments regularly exceeding simply saying, "Oh, that's Such-and-Such".

Our ONPS website's bio of Paul includes this opening sentence which aptly characterizes him: "Over the course of his life, Paul Buck inspired a love of botany and the natural world in thousands of Oklahomans". Paul received his PhD from the University of Oklahoma. His teaching career, 1964 - 1987, was centered at the University of Tulsa where he and his own mentor, Dr. Harriet Barclay, worked side by side in creating one of the premier field botany programs in Oklahoma. He and Dr. Barclay journeyed each summer to the Rocky Mountain Biological Laboratory in Gothic, Colorado, where their tutelage reached scores of other young scientists eager to follow in the footsteps of these two remarkable Tulsans in botanical knowledge, environmental stewardship, and appreciation of the natural settings around them.

Paul received numerous awards for his involvement with botany in Oklahoma, including several prestigious honors from the Oklahoma Academy of Science of which he was a member. He was a co-founder of the *Flora of Oklahoma* project, the Mary Kay Oxley Nature Center, and Color Oklahoma. He was instrumental in the establishment of the Redbud Valley Nature Preserve in Rogers County and in the Tall Grass Prairie Preserve in Osage County.

Paul left this life in January of 2008; during his memorial service which was held at Redbud Valley, a small smoke tree sapling was planted near the Visitor Center as a living, long-lasting tribute to his memory.

Recipients of the Paul Buck Award and their universities:

2012	Ben Haack	OSU
2013	Ben Haack	OSU
2014	Helen Holmlund	OCU
2015	David Thomas	OU

The Society always appreciates donations to the Paul Buck Fund from those who wish to financially support the award bearing his name.

Contributions may be sent to the following address:

Paul Buck Fund
% Oklahoma Native Plant Society
P O Box 14274
Tulsa OK 74159

Grass Reference Books

Wildflowers and Grasses of Kansas by Michael Haddock, University Press of Kansas

An Annotated List of Ferns, Fern Allies, Gymnosperms and Flowering Plants of Oklahoma by John and Connie Taylor

Common Texas Grasses, An Illustrated Guide by Frank Gould,

Field Guide to Oklahoma Plants by Ron Tyrl, Terrence Bidwell and Ronald Masters, Oklahoma State University

Field Guide to the Common Grasses of Oklahoma, Kansas, and Nebraska by Iralee Barnard, University Press of Kansas

Grasses of Southern Oklahoma and North Texas by Chuck Coffey and Russell Stevens, Noble Foundation

Manual of Grasses by A.S. Hitchcock, Dover Publications

Native Ferns, Moss and Grasses by William Cullina, New England Wildflower Society

Native Grasses, Legumes and Forbs; Pasture and Range Plants, published by the Phillips Petroleum Co.

Andropogon ternarius

Splitbeard Bluestem

Photo: Steve Owens

Buchloe dactyloides

Buffalo Grass

Photo: Courtesy Dr. Dennis Martin, OSU

Muhlenbergia capillaris

Purple Muhly Grass

Photo: Susan Chambers

Tridens flavus

Purpletop

Photo: Marilyn Stewart

Schizachyrium scoparium

Little Bluestem

Photo: Adam Sarmiento

Arundinaria gigantea

River Cane

Photo: C.R. Ledford

Bothriochloa bladhii

Caucasian Bluestem

Photo: Courtesy Sam Noble Foundation

Typha sp.

Common Cat-tail

Photo: Marilyn Stewart

Diarrhena americana

American Beakgrain

Photo: Courtesy Prairie Moon Nursery

Chasmanthium lateriflorum

Inland Sea Oats

Photo: Marilyn Stewart

Schizachyrium scoparium
Little Bluestem
Adam Sarimento
Eco Landscaping

With its range covering every state except Oregon and Nevada, Little Bluestem (*Schizachyrium scoparium*) may have the right to the title 'America's grass'. For me, nothing symbolizes the aesthetics of the prairie quite as much as this beautiful and graceful grass. Its versatility, four season interest and habitat value make it an all-star native grass for landscaping and restoration.

Early explorers referred to many of the prairie grasses as bluestems and indeed Little Bluestem was once in the same genus as its prairie sibling Big Bluestem (*Andropogon gerardii*). Its Latin name has been thought to derive from 'Schizein' meaning to split and 'achyron' meaning chaff. Others have suggested that the split refers to its split from the *Andropogon* genus. Native Americans recognized the value of the prairie grasses as forage for Bison and other animals but also for other practical applications like insulation in sandals and moccasins, switches for sweat lodges and even as building material in the construction of earth lodges. To a native inhabitant of the plains, these grasses would have been so common as to be the foundation of their world, both functionally and aesthetically.

Little Bluestem is quite varied in appearance and adaptable to many different soil and growing conditions. Its coloration ranges from blues, purples and reds to more grass green. Its feathery seed heads are very striking and seem to glow when backlit by the late summer sun. As cold weather approaches and the grass goes dormant the leaves and stalks can take on some bold fall colors of red, purple and orange.

Due to its smaller stature Little Bluestem fits well in most gardens and landscapes. It is very drought tolerant once established and although it can spread some from seed it is generally a good companion to other prairie plants and perennials. Its fine foliage and habit; add a graceful feeling of movement to a landscape. When used en masse there is a soothing symmetry that is imparted, which is particularly effective at contrasting and softening the hard edges of the concrete, wood and metal of modern architecture and infrastructure. If I could choose just one grass to garden with, Little Bluestem would be my choice.

Thanks to C.R. Ledford for ethnobotanical information

"Carl sat musing until the sun leaped above the prairie, and in the grass about him all the small creatures of the day began to tune their tiny instruments. Birds and insects without number began to chirp, to twitter, to snap and whistle, to make all manner of fresh shrill noises. The pasture was flooded with light; every clump of ironweed and snow-on-the-mountain threw a long shadow, and the golden light seemed to rippling through the curly grass like the tide racing in."

Willa Cather O Pioneers!

Tridens flavus
Purple Top, the purple yellow grass
Kim Shannon
Botanist

There are a suite of plants that signify the pending arrival of fall to me and of the grasses, purple top is a favorite. I especially like noticing it for the first time each year. It reminds me that the heat of summer will soon fade into the shorter, crisp days of autumn. I also like this plant (and many others) for the oxymoron that exists between its common and scientific name. When you see this plant in abundance you automatically know why it's called Purple top. But its Latin based specific epithet, *flavus*, means yellow. So why is this purple-colored grass described as yellow? According to the grass goddess, Agnes Chase, the most likely reason is because the type specimen is the rare form with a yellow panicle. Go figure.

A member of the Lovegrass tribe, Erigrostideae, the genus *Tridens* is also interesting. I always think of Poseidon's trident when I see this grass or hear its name and remember its useful three-themed diagnostic character. The lemmas of members of the genus *Tridens* have 3 nerves which extend to small awns. Imagine a very tiny, green, Greek god with a lemma-topped trident; I know I do. But my favorite diagnostic character for this species is its greasy culm. I relish that first time each late summer or early fall when I find myself walking thru a purple tinged prairie, running my hand over the tops of the delicate panicles of this grass and double checking my identification skills by rubbing a greasy culm between my fingers. This is a fun and easy ID skill to share with others. Happy hunting this fall for your first greasy culm of the season!

Diarrhena americana
American Beakgrain
By Donna Horton

Is your garden shady? Do you have bare ground under a walnut tree due to the its use of chemical warfare? A low place prone to flooding? Here's an ornamental grass that can handle all of that. American Beakgrain (*Diarrhena americana and D. americana var obovatus*) thrives in eastern Oklahoma's riparian forests. This attractive native perennial copes with all those difficult landscaping conditions, gradually sending out runners to form clumps or stands. It is easy to grow, and tolerates a wide range of conditions.

Glossy, intensely green foliage shoots 2-3 feet tall and then arches over in graceful curves during spring and summer. The flowers aren't much, but rarely are in a grass. Soon though, golden brown seed spikes appear. The literature doesn't say if wildlife eats those seeds, but they are the right height for turkey. Perhaps cardinals and finches would be interested, too. Eventually the vegetation fades to tan, but the clumps of stems with arching leaves are pleasing shapes and textures for a winter garden.

So why is American beakgrain not commonly found, either in the wild or in gardens? Well, riparian forests are becoming rare. *And,* we gardeners should ask for beakgrain from retailers.

Chasmanthium latiflorum

Inland Sea Oats

Dave Seat

With a name like "Inland Sea Oats", *Chasmanthium latifolium* seems out of place in land-locked Oklahoma. But this shade-tolerant native grass is right at home in our state.

Inland Sea Oats, also called Northern Sea Oats, fills an important niche in our native landscapes by thriving in those pesky shady spots that don't receive enough sun to support many other natives.

Chasmanthium latifolium grows readily in about 80-percent shade in my home garden. Its bamboo-like habit, lime-green foliage and giant seed pods brighten a spot that would otherwise be a dark area in my landscape. Give it a little water at establishment and then watch this low-maintenance native take off!

Inland Sea Oats is found in all of Oklahoma except our western-most counties. I've seen it in the wild from the banks of Lake Tenkiller in Sequoyah County to the canyons of Red Rock Canyon State Park in Caddo County. It thrives in the understory of the Cross Timbers and other woodland areas in our state.

Inland Sea Oats' native range extends from the Mid-Atlantic to the Midwest, and south to Oklahoma, Texas and the Gulf coast. Its blades are highly deer resistant and are the larval host plant for the numerous skipper butterflies.

Think about replacing common non-natives like Nandina, Liriope and Hosta with this true Okie native!

Arundinaria gigantea

River Cane

C.R. Ledford

Numerous times I visited a cane brake in the Fourche Maline floodplain by way of a swamp rabbit path. The crowded evergreen plants with jointed woody stems were ten feet tall and higher, bearing lanceolate leaves, but rarely flowers. I was harvesting for fishing poles and hoping to find the nest of the rare Swainson's warbler, one of many wildlife species which find *Arundinaria* important to their survival. It is also a food source for the butterfly caterpillars of some skippers (Amblyscrites) and two pearly eye species (Enodia).

North America's native bamboo ecosystem has declined approximately 98 percent due to the impact of man. This colony forming perennial can be found in the northeastern and southeastern counties of Oklahoma. The Cherokee, Choctaw, and Seminole people have an historical record of the use of River Cane for arrows, split cane basketry, blowguns and darts, construction, flutes, knives and medicine. Cane continues to be used in traditional art forms.

In regard to landscaping I offer this advice: it prefers low-lying moist to wet sites, mesic slopes; part shade to sun; sandy loam to clay loam soils. Division of the rhizomatous root system is the main form of propagation and it can be a challenge to contain on favorable sites. Natural history, ethnobotany, and resources on cultivation are not difficult to find

Editor's note: The Fourche Maline is a 70 mile tributary of the Poteau River in eastern Oklahoma

Bouteloua dactyloides

Buffalo Grass

Bill Farris

Prairie Wind Nursery

Buffalo Grass was once a dominate and much utilized grass of the Great America Prairie. This highly nutritious grass was a primary forage for American Bison as well as a food source for deer, antelope, jack rabbits, and prairie dogs and, with the settling of the west, cattle. It cured well and held its nutrient value throughout the winter.

Buffalo Grass is a host plant of the Green Skipper butterfly caterpillar and on the Western high plains is used for nesting by the Mountain Plover.

Because of its thick fibrous root system Buffalo Grass was used by Native Americans to build earthen lodges and early pioneers borrowed the idea to build sod houses.

As with most native grasses, Buffalo Grass does not tolerate overgrazing. With the invention of barbed wire in the late 1800's came the ability to contain cattle and other livestock on relatively small amounts of range. Overgrazing was common in drier years which have led most ranchers in areas that receive sufficient rainfall to replace native pasture with introduced (non-native) grass species.

Today Buffalo Grass is making a comeback as a low maintenance turf grass. Buffalo Grass prefers a clay soil, can do well on twenty inches of water per year, and requires no fertilizer and very little mowing. It is virtually disease and pest free, has a beautiful silver green color and very interesting seed heads.

Buffalo grass can be purchased as sod, plugs, or seed. Several turf type cultivars have been developed in recent years.

While it may not have the classic astro-turf look so many have become accustomed to today, Buffalo Grass is an attractive alternative to the high maintenance, fertilizer, chemical, and water usage requirements of traditional turf grasses.

Northeast Chapter

The next formal meeting of the Northeast Chapter of ONPS will be Monday, September 12, 2016 at the Tulsa Garden Center, 2435 South Peoria Avenue at 6:30 in the basement. Our speaker will be Jay Pruett of The Nature Conservancy. Dessert will be served.

We continue our *Fabulous Wildflower Fridays*, at 5:30 the third Friday of each month at Panera at 41st Street and Hudson Avenue. We plan field trips and events, identify wildflowers and share fellowship between quarterly speaker meetings. Regardless of your Chapter, please feel free to join us!

Connections

Marilyn Stewart

Common Cattail ,Bulrush, Punks, Corn dog Grass

Typhaceae

Many years ago my parents built a pond on their cross-timber property in Seminole County. Within a year it was full and by spring cat-tails, their seeds borne by the wind, had already started to sprout. Anyone who has a patch of water just about anywhere in the U.S. and in much of the world has cat-tails and I would venture to guess that few of those have been deliberately planted. There are three species of *Typha* native to Oklahoma; *angustifolia, domingensis* and *latifolia.*

Kevin Duffy writing in Backwoods Home Magazine wrote, "I can think of no other North American plant more useful than the cat-tail…It is a four-season food, medicinal, and utility plant. What other plant can boast eight food products, three medicinals, and at least 12 other functional uses? " Euell Gibbons devoted an entire chapter to cat-tails in Stalking the Wild Asparagus entitled "Supermarket of the Swamp."

The corms and shoots of cat-tail can be eaten raw or cooked while the roots must only be eaten cooked. The bloom spikes, when young, are also edible and are eaten much like corn on the cob. The male flowers produce large quantities of pollen which is high in protein. Rhizomes are rich in edible starch and have also been used in the making of breads and converted to sugar to make beverages and in fermenting fuel alcohol. Cat-tail root flour contains gluten. The Iroquois Indians boiled the roots to make syrup and also parched the tiny seeds found in the fluff to make gruel.

The fluff of the cat-tail has been also been used in a variety of ways. It is water-repellant and a good insulator; during WW2 cat-tail floss, as well as milkweed floss, was used in the making of life jackets. Through history it has also been used to stuff pillows and mattresses, although don't smoke in bed if your bedding is made from this as it is also an excellent fire starter.

The leaves have long been used to make baskets (think Moses), chair seats, paper, wound dressings and textiles.

Few of us will be eating cattails or stuffing mattresses or using them as bandages, but the benefits of cattails in the environment are worth noting. *Typha* fixes nitrogen, prevents erosion, and reduces soil salinity. It is truly a living biofilter, removing wastes from polluted water and preventing fertilizers from entering waterways. Wildlife are especially fond of cat-tails as they provide cover and nest material for many ducks, geese and songbirds.

For further reading about cat-tails:
Edible and Useful Plants of the SW, Delena Tull
Field Guide to OK Plants, Tyrl, Bidwell, Masters
Stalking the Wild Asparagus, Euell Gibbons

ONPS to vote on Bylaws amendments during 2016 Annual Meeting - Sue Amstutz, 2015-2016 Bylaws Committee

In accordance with ARTICLE XIV, Section 1, of the Oklahoma Native Plant Society Bylaws, "These bylaws may be amended by an affirmative vote of two-thirds of the members present at any duly constituted meeting. Proposed amendments shall be submitted to the membership by the Executive Board along with notification of the meeting.
Such notice is to be in the hands of the members at least two weeks before the scheduled meeting", the Bylaws Committee (Sheila Strawn, chairman, Helen Riley and Sue Amstutz) presents the following changes to the Society Bylaws. The proposed amendments will be voted on by the membership during the Annual Member Meeting on October 8, 2016. Amendment 10 which is here published is a synopsis of the proposed changes to be voted on.

Amendment 10 - 10-8-2016

- Office of Historian is changed to standing committee chair rather than being elected.
- Members of Executive Board and Executive Committee are clarified in that only the President, Vice-president, Secretary, and Treasurer are members of the Executive Committee while the Executive Board consists of the Executive Committee, Past President, Board of Directors, Membership Coordinator, and all Chapter and Appointed Chairs. The President can serve only two consecutive years. Vice-president and Secretary can serve 6 consecutive years. Treasurer serves until replaced by election.
- The Executive Board meets in person three times per year.
- Executive Committee can use electronic communication to transact emergency business between Board meetings .
- Appointment of Parliamentarian by President.
- Chair of a standing committees can appoint members for that committee as needed, and the Chair can appoint a committee member to vote at Executive Board meetings in their absence.

"The bulk of a prairie grass plant, it turns out, exists out of sight, with anywhere from eight to fourteen feet of roots extending down into the earth. Why should we care? Besides being impressively large, these hidden root balls accomplish a lot—storing carbon, nourishing soil, increasing bioproductivity, and preventing erosion."

Becky Harlan, National Geographic, 10-15-15

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