

3 major errors in this one:
 #1: Date for Sept. Happy Hour is Sept. 21, not 22 #2: my name misspelled on p.7
 #3: Important article on Project Tenkiller left out



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

Volume 22, Number 3
 Autumn 2007

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 15 November 2006**

Gaillardia

The Oklahoma Native Plant Society Newsletter

CALENDAR

Note: the events dated below are followed by either a page number for further descriptions or the contact person.

Sept 1: C-T Chapter Field Trip lead by Ron Tyrl, Page 8

Sept 8-9: NE Chapter Open House at Oklahoma Centennial Gardens, Page 7

Sept 10: NE Chapter Meeting, Ron Tyrl speaks on Father of Scientific Nomenclature, Page 7

Sept 15: Central Chapter Field Trip to Pat Folley's Home, Page 8

Sept 22: NE Chapter Field Trip to Lake Tenkiller State Park, Page 7

Sept 22: NE Chapter Happy Hour, Page 8 *No, Sept. 21*

Oct 5-7: Annual Meeting, Pages 2, 10 & 11.

Oct 13: NE Chapter field Trip to Natural Falls State Park, Page 7

Oct 19: NE Chapter Happy Hour, Page 8

Oct 29: Central Chapter Meeting, Susan Chambers speaks on Great Natives for Oklahoma Gardens, Page 9

Nov 4: NE Field Trip to Redbud Valley, Page 8

Nov 16: C-T Chapter Meeting, Jim Ownby speaks on Wildflowers and Flora of South Africa, Page 8

Nov 16: NE Chapter Happy Hour, Page 8

Nov 26: Central Chapter Meeting, Chad Cox speaks on Invasive Plants, Page 9

Jan 28: Central Chapter Meeting, Kathy Furneaux speaks on Insects of Oklahoma, Page 9

Note: all members are invited to all meetings, including board meetings, and are encouraged to bring guests.

ONPS THANKS THESE DONORS

Harriet G. Barclay Fund

Julia Jordan in Memory of
 Ruth Boyd and Larry Magrath

General Fund

Daniel & Gayle Hough in Memory of Ruth Boyd
 George Kammerlocher in Memory of Ruth Boyd
 Larry Magrath's Valley Forge Life Insurance
 Policy

Color Oklahoma Fund

Cameron Biology Fund Color Oklahoma

PRESIDENT'S PARAGRAPH

Hello again ONPS members and friends!

I hope you enjoyed our rainy season (while it lasted) and that it helped temper the hot weather we are enduring now. Even though we may have a month or more of hot weather, change is coming. And when fall arrives, so will our Annual Meeting, chapter meetings, field trips, and other events.

Our annual meeting will be headquartered this year in Sand Springs, OK. The registration flier is included in this newsletter. Friday evening we will get our meeting started with a presentation about the Oklahoma Botanical Garden. The highlight of our meeting this year will be the tours of two local attractions. First we will take a trip to see the grounds of the new Oklahoma botanical garden. Our tour guide, Dr. Jay Walker, will take us to see the beginning of the garden's new nature trail system. After a break for lunch, we will have a second, quick field trip to the Keystone Ancient Forest, just outside of Sand Springs. We will conclude our Saturday with a catered dinner, the membership meeting and our third annual silent auction. (Do you have a special item to donate for this year's silent auction?) ONPS Board members will meet for a quick board meeting on Sunday morning at our Sand Springs site.

The upcoming change to announce in this fall edition of the *Gaillardia* is that the 2008 Wildflower Workshop will be moving from May to October. After 30 years of enjoying our spring flora, we will make a change and familiarize ourselves with Oklahoma's autumn flora. Our tentative plans are to hold the 2008 workshop in the southeast corner of the state and to combine the wildflower workshop with the ONPS annual meeting. A big change, but I hope it will be a good change and a fun change for all! The idea for a fall wildflower workshop was first mentioned during a committee meeting with members of ONPS and Oklahoma Garden Clubs. The garden club members suggested the change and the majority of the committee agreed that it would be worth trying at least once. If the event is successful, we may alternate the workshop between the spring and fall in the future. I will update you with more details regarding the 2008 workshop as our planning progresses.

Other changes are inevitable, with luck they will be positive changes that bring good things. I look

forward to seeing you at the Annual Meeting in Sand Springs.

Take care until then,

Kim

NOTE: At the Annual Meeting, we will be voting for officers for the next year. The Nominating Committee, headed by Paula Shryock proposes these candidates:

Kim Shannon, President; Gloria Caddell, Vice President; Paula Shryock, Secretary; Mary Korthase, Treasurer; Sharon McCain, Historian; and Directors at Large, Bruce Smith and Connie Murray.



BOTANIST'S CORNER

By Kim Shannon

COMMON CONNECTIONS WITH CARNATIONS, CATALPAS AND CAREX

During the relatively short time that I taught plant biology at Tulsa Community College, there was an early lecture topic that always roused my curiosity and imagination. Within the first week of each semester I would review with students the basic concepts and roles of elements and organic compounds that make up all living things. This review of information always got me thinking and with some luck; it engaged the brains of a few students too. My brain always came up with a variety of hypothetical questions. How can a human animal share so much at a molecular level with a geranium, yet look so very different? What do I lack that keeps me from being able to photosynthesize? How is it that plants are so morphologically diverse and we human animals are not? These are but some of the questions that roll around in my brain at any given time. While I do not expect to find answers to my hypothetical questions, there are reasonable explanations to be had. In order to find the beginning of those explanations, we must look at the smallest of anatomical features and physiological processes. Some quick comparisons between the plant and animal kingdoms are in order.

Like in class, I will start with a review of the basics. At the elemental level, we share everything with all living organisms. All organisms on earth are composed primarily of carbon, hydrogen, oxygen, nitrogen, phosphorous, and sulfur. The

combination of these six elements accounts for over 97% of the atomic composition of a typical human and more than 99% of a typical plant. These six elements become linked in a nearly endless series of combinations to form a huge array of carbon-based, organic molecules and compounds. The molecules formed via these combinations are just the beginning of the connections we have with plants and other organisms. We share the basic building blocks of life with our green friends; carbohydrates, lipids, nucleic acids, and proteins. These building blocks aid both plants and animals (including humans) with energy storage, the building and repairing of cellular materials, and the production of enzymes, gametes, hormones, amino acids, etc. Our DNA directs these molecules (and the organelles they form) to perform particular roles within specific structures.

Many of the same molecules within your cells that are working hard are also working hard for the plants in your garden. Before the day gets too hot, the Oak in your backyard is photosynthesizing, producing tannins, storing energy, maturing its acorns, opening and closing its stomata, and undergoing other physiological processes. Many of these tasks are taking place due to the energy provided by the ATP molecule, via respiration. Respiration is the process in which a living cell utilizes oxygen to convert food into carbon dioxide and water, releasing energy. More specifically, the chemical energy of carbohydrates is transferred to the bonds of ATP and that energy is released when the bonds of ATP are broken. So, plant or animal, we are reliant on the mitochondria for energy. The mitochondrion is a very specialized organelle that can be found in the cells of all eukaryotic organisms. It is a double membrane structure that is smooth on the outside and highly convoluted on the interior. The reactions that form ATP take place on the interior of the mitochondria, on the cristae.

Along with respiration, both plant and animal cells undergo many other physiological processes; processes that have been successful for a multitude of organisms for millennia. These processes are a link amongst eukaryotic organisms, including members of the plant kingdom. They are a perfect example of the old adage, "if it ain't broke, don't fix it." If you will, Mother Nature's shortcut in the kitchen; starting with bisquit instead of from scratch each and every time she wants to bake.

We even have organ systems that are comparable to plants either in structure or function. Both plant and animal circulatory systems transport essential fluids and nutrients. In plants though, the circulatory and skeletal systems are one in the same. The cells that make up the xylem tissue are girdled and laced with sturdy lignin which makes the individual cells strong and the whole tissue even stronger. These lignified cells are what support the plant, like a skeletal system. I also believe that like trees, as many of us reach a certain age, we start undergoing secondary growth (ha ha).

We have much in common with the reproductive systems of plants. The reproductive structure, the flower, is dominated by the pistil and stamens. The female reproductive organs, the stigma, style and ovary, comprise the pistil. Within the ovary are one or more immature seeds (ovules) that house the eggs that await fertilization once the pollen has been deposited on the stigma above. Within the male reproductive organs, stamens, pollen is produced and within the pollen are sperm. The sperm must travel down the inside of the style to the interior of the ovary and the ovule. Once the sperm and egg unite, a zygote is formed and mitosis ensues. Even with the many variations that plants have of this theme; these are a familiar set of steps. The outcome of sexual reproduction is a bit different, being that the ovary ripens to a fruit, which in many cases is eaten to ensure the distribution of the seeds. Once again, if it ain't broke don't fix it!

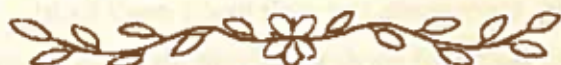
Of all the things we *do* share with plants, there are some defining things that we do not have in common with plants. These include the presence of cell walls, vacuoles and plastids in the cells; the presence of cellulose and the processes of transpiration and photosynthesis. These things distinguish plants from animals. The most obvious thing that makes our green friends unique is the fact that they can photosynthesize. This is possible due to a very specialized cellular organelle; the chloroplast and its sidekick, chlorophyll. And while we are not able to photosynthesize and have no need for plastids, we do have a molecular structure vital to our well-being that is very similar to chlorophyll; hemoglobin. Hemoglobin is a large molecule that is found in the red blood cells of vertebrates. The heme group of the molecule is a porphyrin with iron in the center. In chlorophyll-a, the porphyrin is also present, very similar in structure to that of the heme, except that the iron is replaced with magnesium. Both porphyrin groups of these

molecules assist with oxidation-reduction reactions in their respective settings.

As I see it, the molecules that we have in common with plants are a variation of an evolutionary theme. Over the centuries, plants and animals responded to their environment and the mutagens within it, DNA was modified via the mutagens, the DNA allowed for new or modified molecules, and the genotype and phenotype of the respective organism responded in kind. Perhaps an oversimplification, but whether the organism is an otter, an ostrich, or an Oriental poppy, our similarities begin in our genetic material. As time goes on and mutagens become more noxious and frequent, perhaps the portion of our DNA encoded with plant-like characteristics will provide us with the protection we need from our environment. Or maybe not. As many of you know, I often wish that I could photosynthesize. From a scientific standpoint, I understand why it is not possible, but hypothetically I want to believe that we might someday. The molecular similarities and basic cookbook information within our DNA are already there, we just need a catalyst in the form of mutagens and lots of time.

References:

Raven, P.H., Evert, R.F, and S.E. Eichhorn. 1992. *Biology of Plants*, fifth edition. Worth Publishers, New York. 791pp



CONSERVATION CORNER

Chad Cox

This conservation report will serve as a prelude to the following article by Mike Palmer. The idea that we can use biofuels to replace significant fossil fuels won enthusiastic support but on closer examination, various concerns were raised.

First, corn based ethanol has a questionable net energy yield but also has produced other serious concerns. Even with the limited amount of ethanol generated so far, the price of foods based on corn products have dramatically increased and the land in conservation is being converted into corn production. For these reasons, corn based ethanol is unlikely to supply a sustainable energy source.

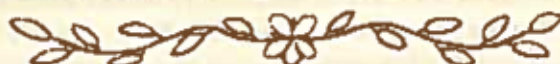
In theory, cellulosic ethanol could supply a sustainable energy source. Plant material, even lumber waste products, are rich in cellulose. That is, much plant material that would be unused otherwise could be a source of ethanol. Likewise,

easy to grow grasses like switchgrass could serve as the cellulose source and be grown on lands set aside for conservation. Additionally, switchgrass and relatives are perennials and would not need cultivation. A technology problem was then raised.

While the starch, an energy storage form of carbohydrates, in corn is readily converted to sugar for fermentation, cellulose requires many more enzymes for digestion because the sugar molecules of cellulose are joined in many different ways. Furthermore, the cellulose, a structural form of carbohydrates, is mixed in with other components which increase the difficulty of freeing up the cellulose for digestion. Therefore, at first, the concerns were that the enzymic problems would lead to a need for monoculture. The monoculture would require cultivation, eliminating many of the advantages first thought supplied by grasses. Fortunately, technology has progress to suggest that polycultured grasses might be used.

The next problem raised was that too much land would be required to even supply the mobility fuel demand. Here I simply will quote the energy guru, Amory Lovins. On the stated inability of cellulosic ethanol to supply our mobility energy, he answered "Not from anyone knowledgeable that I'm aware of. Unless of course you need such large quantities of it, because you have such inefficient vehicles, that you start getting in land-use trouble."

So the promise of a sustainable energy source lives on, while we await its hoped for realization.



BIOFUELS AND BIODIVERSITY

Mike Palmer

Will biofuels herald the doom or the rebirth of Oklahoma grasslands?

ONPS members know that hay meadows are excellent places to go to find a high diversity of grasses and wildflowers. Indeed, many ONPS field trips have been organized around visits to these hay meadows. Annual mowing keeps the diversity high, and prevents invasion by eastern red cedar and other woody species.

ONPS members also know that these hay meadows are disappearing rapidly. There are two main culprits: abandonment (leading in most cases to cedar thickets) and development (i.e. invasion by stripmalls). The socioeconomic reasons behind the

loss of hay meadows are complex, but involve (in part) the difficulty in making a living selling hay.

Meanwhile, scientists throughout the world are developing new crops for biofuels. In particular, Oklahoma researchers are genetically modifying switchgrass to be low in lignin, with the aim towards planting them in massive monocultures. At first glance, switchgrass is an attractive biofuels crop – it is a perennial, and is (relative to corn) water and nitrogen efficient. But monocultures do not fare well in a variable climate, and in the face of diseases. Switchgrass typically grows in communities of over a hundred species; it is unlikely to be continually productive when grown alone. Nevertheless, given the momentum behind biofuels, it is very likely that many of our last remaining hay meadows will experience intense pressure for conversion into species-poor biofuel fields.

This is a profound irony. Our meadows have been continuously under production, in some cases for the better part of a century. We have the technology to harvest them. And by harvesting them, we can enhance biodiversity as well as scenic beauty. There is absolutely no reason we cannot even restore native plants to long-abandoned meadows or other degraded land for biofuels production. I call this vision the 'biofuels rewilding of America'. But unless others share this vision, and spread the word, the homogenization of Oklahoma is virtually guaranteed.

I have joined the blogosphere with a new blog on Low-Input, High-Diversity Biofuels. You are welcome to read my postings, and comment on my crazy ideas! Just sign on to:
<http://testone.okstate.edu/debo/blogs/>

Mike Palmer is with the Laboratory for Innovative Biodiversity Research and Analysis, Department of Botany, Oklahoma State University



COLOR OKLAHOMA

2007 MATCHING GRANT WINNERS

Pearl Garrison

Congratulations to the winners of Color Oklahoma's 2007 matching grants for adding native wildflowers along Oklahoma highways. This year's applications were outstanding. We encourage more groups, businesses, organizations and individuals to apply next year.

Color Oklahoma will match up to \$500 from each winner. Crews with the Oklahoma Department of Transportation will sow the seeds in the fall for blooms next spring and summer.

Winners are:

Williams Landscape of Randlett; Brandon Miller with the Muskogee County 4-H, Ardmore Beautification Council, Cameron University Biology Club, City of Weatherford, Susan Hill and Jeannie Ho Coley of Norman, and the Oklahoma City University Department of Biology.

Craig Williams of Williams Landscape wants to make a visual impact statement for all who enter Oklahoma from the south. The two-acre site he chose is highly visible from Interstate 44 and Oklahoma 70. He chose to plant Indian Blanket, Indian Paintbrush and Tickseed.

Miller chose the intersection of Highways 62 and 165. During Oklahoma's centennial celebration, he believes it is especially important to plant wildflowers and help re-establish native wildflower species for generations to come. He chose a two-acre site for Black-eyed Susan, Indian Blanket, Indian Paintbrush, Plains Coreopsis, Prairie Coneflower and Tickseed.

Norma-Lynn Paschall, executive director of the Ardmore Beautification Council, said wildflowers between Interstate 35 and Scenic 77 will be a wonderful tourist attraction at the gateway to Lakes Murray and Texoma. The Council has raised \$6,500 to sow six varieties of wildflowers on nine acres. Color Oklahoma is matching money for the purchase of Indian Blanket.

Dr. Michael Dunn represents the Biology Club at Cameron University. The club is proud of its community and university and chose a three-acre site at the gateway to Lawton near a Cameron University billboard. The site is eight miles north of Lawton between the Highway 281 entrance to

westbound I-44 and the Highway 49 exit. The Biology Club chose Indian Blanket, Tickseed and Purple Coneflower.

Mayor Mike Brown of Weatherford wants to improve the appearance of a high visibility area along Interstate 40 and reduce the cost for ODOT to maintain the grassland. The city's Parks and Recreation Department will help water and maintain the plants until they are self-sufficient. The one-acre site is east of the city near the I-40 west on-ramp. The city chose Black-eyed Susan, Claspig Coneflower, Indian Blanket, Indian Paintbrush, Lazy Daisy, Lemon Mint, Missouri Primrose, Plains Coreopsis, Prairie Coneflower, Purple Coneflower, Showy Primrose and Tickseed.

Susan Hill and Master Gardener Jeannie Ho Coley want the thousands of people who travel Highway 9 every day to enjoy the colorful beauty and variety of Oklahoma's native wildflowers. The one-acre site they chose is between Imhoff Road and McGee Drive and is close to Interstate 35. They chose Black-eyed Susan, Indian Blanket, Indian Paintbrush, Lazy Daisy, Prairie Coneflower, Showy Primrose, Tickseed and Purple Coneflower.

Dr. Terry Conley of OCU wants to provide a reservoir of native wildflower species to spread from Highway 152 near South Council Road to an adjacent disturbed portion of OCU property. This part of the property was most likely prairie prior to settlement and the long-range plan is to allow it to return to its native state. Highway 152 is heavily traveled and the roadside near Council Road is highly visible. The two-acre site will be planted with Black-eyed Susan, Claspig Coneflower, Lemon Mint, Plains Coreopsis, Prairie Coneflower, Showy Primrose, Indian Paintbrush, Indian Blanket, and Lazy Daisy.



IN SEARCH OF THE SHAMROCK

Ron Tyril

British taxonomist Tom Cope, travel guide Lin Kobsey, and I are off to Ireland next June in search of Irish wildflowers and some of the Emerald Isle's most famous scenic sites. We hope that you will join us on a 10-day botanical adventure (June 5-14, 2008), a trip timed to catch the country's wildflowers at the peak of their flowering.

This trip will be a bit different from our past forays to England and Scotland because we will stay in

three cities rather than one, and divide our time among wildflowers, renowned gardens, and famous Irish sites. Because of the influence of the Gulf Stream, Ireland has a remarkable diversity of plants, species characteristic of both northern Europe and the Iberian Peninsula. As you encounter these plants, Tom and I will introduce you to their taxonomy and ecology. We will look at them "up close and personal." We also will not be walking long distances on this trip, but rather venturing just a short distance from our coach. Our coach driver, by the way, is also an Irish guide and likely will keep us entertained with his tales of local Irish history and folklore as we travel. A brief synopsis of our itinerary follows.

We will fly overnight to Dublin, our base for two days. By coach, we will tour the city; see its many Georgian Squares; visit its renowned Phoenix Park (at 1752 acres, larger than Central or Hyde Park); and tour the Guinness Storehouse built in 1904. You also will be able to explore the city on your own in the afternoons. In addition, we will travel to the Wicklow Mountains in Ireland's "Garden Country" and visit the famous Mount Usher Gardens designed in the Robinsonian Style.

As we travel westward across the midlands, you will explore the monastic settlement of St. Ciarian at Conmacnoise established in the 6th Century on the banks of the River Shannon. You will then venture into the Blackwater Bog by narrow-gauge railway to see its rare flora and fauna. Using the city of Galway on the West Coast as our base for three days, you will visit Brigit's Garden, which emphasizes Celtic Heritage; tour Kilmore Abbey, home of the Benedictine nuns of Ireland; explore the town of Clifden, which has more than 5,000 years of history; as well as cruise Ireland's only fjord at Killary Harbour. You also will stroll the paths of Letterfrack and Connemara National Parks. Leaving Galway, we will travel south into a botanist's delight—the 115 square mile karst limestone region known as The Burren in County Clare. As you stroll across the clints, being careful to avoid the grykes, you will see subtropical and arctic plants growing side-by-side. After enjoying the beauty of the area and its wildflowers, we will continue on to the magnificent Cliffs of Moher, which rise a sheer 700 feet from the Atlantic Ocean, and gaze westward in hopes of catching a glimpse of North America. We will follow the coast south, take a ferry across the mouth of the River Shannon to

County Kerry, and enter the city of Killarney, which will be our base for three nights.

Our travels into the countryside surrounding Killarney will take you to the town of Kenmare, founded in 1670; over the Cahra Pass, with its panoramic views of the entire Beara Peninsula, to the town of Glengarriff, which means "the rugged glen" referring to the beauty of the surrounding mountains. You also will explore Garinish (Innacullin) Island in the middle of Bantry Bay. Known as Ireland's garden island, it is world-famous for its collection of tropical plants that thrive because of its sheltered location and the influence of the Gulf Stream. In our travels, you will pass through Molls Gap into Killarney National Park; traverse a portion of the famous scenic Ring of Kerry; reach the shores of the Lakes of Killarney; and, following in the footsteps of Queen Victoria in 1861, visit Muckross House and Gardens. Be forewarned, you will have to leave the coach and travel via a local jaunting car (horse & buggy) through the National Park. If you are not too tired, there will be time for shopping in Killarney before dinner at the Quilles Farmhouse for an evening of traditional Irish food and entertainment. Our return to the U.S. will be via Shannon Airport. To get an inkling of the beauty of where we will be traveling, just "Google" the site names listed above.

This tour is our fourth one to the British Isles. Our first two were in 2000 and 2003 to see the wildflowers of southeastern England, followed by one to see the wildflowers of the Scottish Highlands in 2006. Twenty-five ONPS members have joined us on these previous trips. The tour price (double occupancy), which includes: round-trip airfare, ground transportation, hotel rooms, meals, gratuities and admission to historic sites, is \$3795 per person. For further information and a detailed itinerary, contact me (405-744-9558; rj.tyrl@okstate.edu) or Lin at Lin Kobsey Travel (918-747-0077; Lkobsey@SBCGlobal.net). I do hope that you will join us in search of the shamrock.



CHAPTER ACTIVITIES

Northeast Chapter Sue Amstutz

Activities for Northeast Chapter include a number of varied experiences in the next three months. We will participate in the Open House for Tulsa's Centennial Botanical Gardens on September 8 - 9 by providing volunteers for the ONPS booth at the two-day public kickoff for the long-awaited Tulsa gardens. Four to five thousand visitors are expected each of the two days of the event.

Our September 10 meeting will feature Dr. Ron Tyrl reprising the fascinating presentation on Linnaeus which was a feature of last May's Wildflower Workshop in Ardmore. In order to allow many chapter members who were unable to attend the Workshop to be able to hear his treatise on Linnaeus, the chapter has invited Dr. Tyrl to tell all of us about the life and times of the Father of Scientific Nomenclature. As is our custom, the evening will begin with a potluck supper which will precede a short business meeting and Dr. Tyrl's presentation.

On September 22, we will have a Field Trip to Lake Tenkiller State Park. This excursion will be in conjunction with ONPS' latest project, assisting State Parks Naturalists in identifying, cataloging and referencing the botanical diversity in each park. (See the article in this edition of Gaillardia titled "What is Project Tenkiller?" for a further explanation of this endeavor.) The chapter will meet at the Tenkiller Nature Center at 10:00 a.m. and spend the day participating in ONPS' first effort in this newest project.

Not
in at
all.

In October chapter members anticipate attending the State ONPS Annual Meeting on October 5 - 7. On October 13 we will return to Natural Falls State Park in eastern Oklahoma for a fall field trip. Chapter members visited Natural Falls in June of 2002 and May of 2005, but this will be our first autumn exploration of this lovely area. We anticipate the beginning of fall color, plus many fall wildflowers blooming along the trails, as well as the beauty of Natural Falls cascading to the pool below, especially if rainfall has been sufficient. We will meet at the Park Visitor Center at 10:00 a.m. We are reminded that there is a small admission fee to Natural Falls State Park.

Our final fall excursion will be to Redbud Valley on Sunday afternoon, November 4, for fall foliage, including hopefully the sugar maples in their

glorious autumn color. We will meet at the Redbud Valley parking lot at 2:00 p.m.

Our monthly Happy Hour Social times at Panera Bread on East 41st Street are scheduled for September 22, October 19, and November 16. Friends and guests, as well as ONPS members are invited to all of the above activities.

Cross-Timbers Chapter
Elaine Lynch

On Saturday, June 16, we toured the OSU Research Range to look at wildflowers and the results of the prescribed burning program. Chris Stansberry, Station Superintendent, lead "A Walk upon the Prairie: Patchiness is Good." The Research Range has several plots that are burned at different times of the year. They study the vegetation re-growth patterns to find out which plants respond to burning at which seasons. They also have a pasture that is used to study the combination of burning and grazing on plants. Again, different areas of the pasture are burned at different times. One thing they have discovered is that cattle prefer burned areas with new growth to the point they will cluster in one and ignore the rest of the pasture. The effects of prescribed burning were very interesting. We were also able to view many wildflowers in the burn areas and along the road between them.

Ron Tyrl will lead us on a field trip on Saturday, September 1. The title of the walk is "A Great Year for Grasses". We will meet at the OSU Life Sciences East parking lot at 8:30 a.m., to beat the heat. We will carpool to a local setting to be determined. The trip should last about two hours.

Jim Ownby has agreed to speak at our potluck dinner on November 16. He will talk on "Wildflowers and Flora of South Africa". The potluck dinner will be held in Room 110 Life Sciences East on the OSU campus. It will start at 6:15 p.m. We will also hold a short business meeting to elect officers and discuss future activities. We will need to elect a new vice-chair as Olen Thomas has decided to step down to pursue other activities. Anyone willing to run for office is asked to contact Paul Richardson (405-377-4831 or speedy154@juno.com) or Elaine Lynch (405-624-1461 or mneslynch@yahoo.com) before November 16th.

FIELD TRIP RULES

- Participation is at your own risk.
- Preregistration is required for all field trips.
- Field trip announcements will contain the name, address, and telephone number of the leader. If you have doubts about the terrain, difficulty, etc., ask.
- Collecting any plant parts or other materials at the site must be approved by the field trip leader.
- Field trips take place rain or shine. Hiking boots, long pants and a hat are essential.
- Bring water and lunch or a snack. Sunscreen and insect repellent are always in demand. Field guides, a camera and binoculars are nice.
- All ONPS field trips are open to the public at no charge, unless charges per-member are specified in the announcement. Visitors and newcomers are always welcome.
- Children old enough to keep up are welcome. Pets are not.

Central Chapter
Marilyn Stewart

My apologies to the wonderful Central Chapter members! Lou Duke's absence has left an enormous hole in our group, her leadership and enthusiasm have been greatly missed the past few months. Your patience for our efforts are appreciated and anyone wishing to assist are welcome.

We do have a schedule of interesting meetings planned for the fall and hope to see all of you there. I would also like to encourage any of you to bring plants to share to any of our meetings, it's a great way to spread our natives around to good homes.

On September 15th, we will have a field trip to Pat Folley's home, 15100 Etowah Rd, Noble at 9:00am. From the west on Highway 9, go to 120th Street, then south about 3 miles to Etowah Rd, turn east and go about 2 1/2 miles.

The schedule for the 7:30 PM Central Chapter meetings at OSU/OKC, Student Center, 900 S Portland is:

October 29th—Susan Chambers, Great Natives for Oklahoma Yards.
November 26th—Chad Cox, Invasive Plants.

January 28th—Kathy Furneaux (Entomologist)
Insects of Oklahoma and their Relationship to
Native Plants.

WELCOME THESE NEW MEMBERS

Ellen Benson, Broken Arrow
Rebecca Cargill, Midwest
Josie Driskill, Tulsa
Heather Hale, Tulsa
Pam and Richard Hodge, Skiatook
Sharon M. Lee, Tulsa

Richard and Susan Lorenson, Eufaula
Donna Marshall, Broken Arrow
Daniel McGlinn, Stillwater
Janis Reed, Oklahoma City
Asia Scudder, Norman
Nancy Titus, Coyle

FOR JOINING OR RENEWING USE THIS FORM

Fill out this form or supply the same information. Make checks payable to Oklahoma Native Plant Society and mail to Oklahoma Native Plant Society, 2435 South Peoria, Tulsa, OK 74114.
Membership is for Jan. 1 - Dec. 31 of current year and dues include subscription to *Gaillardia*.

Name: _____

Affiliation: (School, Business, or Avocation) _____

Address: _____

Home Phone: _____ Office Phone: _____ Please do not list my phone _____

E mail: _____

Renewal ___ or New Member ___ Dues are tax deductible.

Annual Membership Choice: \$15 Individual ___ or \$20 Family ___, or \$5 Student ___

Life Membership Choice: \$250 Individual ___ or \$350 Family ___

Add \$5.00 ___ to cover cost of copying and mailing a complete ONPS directory if desired.

**Oklahoma Native Plant Society
2007 Annual Meeting
Sand Springs Community Center
Sand Springs, OK
October 5-7, 2007**

The 2007 Annual Meeting will be held at the Sand Springs Community Center, in Sand Springs, OK (just west of Tulsa on Hwy 51). On Saturday, our premiere field trip will be an exclusive tour of the Oklahoma Botanical Garden's nature trail system with Dr. Jay Walker. Dr. Walker and Dr. Ron Tyril are developing the nature trail system (and accompanying trail guide) through portions of the new botanical garden site. After a break for lunch we will have a quick afternoon field trip to the Ancient Keystone Forest in Sand Springs. We will conclude our annual get-together with our silent auction.

For our out-of-town members and guests, a list of area hotels is included on this page. The map showing the location of the Sand Springs Community Center is on the next page with your registration form. We look forward to seeing you at the Annual meeting! Don't forget to bring an auction item!

Tentative Meeting Itinerary

Friday

6-8pm Registration check-in

8:15pm Oklahoma Centennial Garden presentation
by Pearl Garrison

Saturday

8:00am Continental Breakfast at the Sand Springs Community Center

9:00am to Noon Field Trip to Oklahoma Botanical Garden; trail system preview

Noon to 2:00pm Lunch on your own

2:15pm Meet at Sand Springs Community Center

2:30pm to 4:30pm *QUICK* Field Trip to Keystone Ancient Forest

4:30pm to 7:00pm Free Time for ONPS shopping, auction item review, relax, etc.

7:00pm Dinner at Sand Springs Community Center & Auction bidding

8:30pm Membership Meeting

9:15pm Auction bidding ends

9:30pm or so Silent Auction Results

Sunday

9:00am to Noon ONPS Board Meeting

Tulsa and Sand Springs Area Hotels:

Hampton Inn (located between Tulsa & Sand Springs)
7852 West Parkway Blvd.
Tulsa, OK
918.245.8500

Holiday Inn Express-Gilcrease
2316 W. Cameron
Tulsa, OK
918.585.7000

Days Inn
1110 East Charles Page Blvd
Sand Springs, OK 74063
918.245.0283

Best Western
211 South Lake Drive
Sand Springs, OK 74063
918.245.4999



Third Annual Silent Auction

On Saturday, October 6, 2007, during our Annual Meeting, we will have our third annual silent auction to benefit ONPS. Items will be on display during the annual meeting and bidding will begin as soon as an item is displayed. Last year we raised approximately \$400.00 and we hope to do better this year!

Find something unique to donate to this year's auction and better yet, bring your mad money or checkbook! If you have a question, call Kim Shannon at 918.697.3488.



Sand Springs Community Center
420 Plaza Court
Sand Springs, OK 74063-0338
918-246-2561

Directions: From Hwy 64/412, exit at Adams Road. The community center is located in the Plaza Court shopping center, facing south. (It is to the right of the Walgreen's that sits in the parking lot.) Look for the ONPS signs at the front of the center.

Mail registration on or before Sept. 28th to:
 Kim Shannon
 5216 E. 41 St. N.
 Tulsa, OK 74115

REGISTRATION FORM

Name(s) _____

Address _____ City/State _____ Zip _____

Phone(s) _____ Email _____

Registration Fee \$15.00 per person X _____ = \$ _____

Saturday Catered Dinner \$12.00 per person X _____ = \$ _____

Vegetarian meal? _____

Total Enclosed \$ _____

The Gaillardia

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Marilyn Stewart/Lou Duke/Kathy Webb
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