Native Plant events for your calendar

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Event/Place</th>
<th>Contact/Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 11</td>
<td>Northeast Chapter meeting</td>
<td>Gary Schaum (918) 743-1313</td>
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<tr>
<td>7:30 p.m.</td>
<td>Tulsa Garden Center</td>
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<tr>
<td>March 25</td>
<td>Central Chapter meeting</td>
<td>Pat Folley (405) 872-6361 or</td>
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<tr>
<td>7:30 p.m.</td>
<td>at Okla. Wildlife Fed. (see pg. 3)</td>
<td>Susan Chambers (405) 769-7917</td>
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<tr>
<td>April 3</td>
<td>ONPS Board meeting/Norman</td>
<td>Linda Watson (405) 325-1985</td>
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<tr>
<td>April 8</td>
<td>Northeast Chapter meeting</td>
<td>Gary Schaum (918) 743-1313</td>
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<tr>
<td>7:30 p.m.</td>
<td>Tulsa Garden Center</td>
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<td>April 10</td>
<td>Gaillardia deadline/May-June issue</td>
<td>Marilyn Bell (918) 496-2218</td>
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<tr>
<td>April 19-21</td>
<td>ONPS/OAS Field Meeting (see below)</td>
<td>Paul Buck (918) 743-3397</td>
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<td></td>
<td>Lake Murray State Park</td>
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<tr>
<td>April 20</td>
<td>Photo Contest Deadline (see pg. 3)</td>
<td>John Miller (918) 245-6983</td>
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<tr>
<td>April 22</td>
<td>Earth Day/Photo &amp; ONPS booth at State Capitol</td>
<td>Susan Chambers (405) 769-7917</td>
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<td>April 29</td>
<td>Central Chapter Outing</td>
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<tr>
<td>6:30 p.m.</td>
<td>Warren's Nursery, Nicoma Park</td>
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<tr>
<td>May 3-4</td>
<td>Wildflower Workshop (See pg. 7)</td>
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<tr>
<td>May 20</td>
<td>Central Chapter meeting</td>
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Field meeting with Oklahoma Academy of Science planned

Conservation co-chair Paul Buck recommends an April weekend with this report:

One of the spring meetings of ONPS will be in conjunction with the Oklahoma Academy of Science (OAS) annual spring field meeting on the weekend of April 19 through 21. Site of the meeting will be Group Camp #2 at Lake Murray State Park just outside Ardmore in south central Oklahoma.

Activities will start late Friday afternoon with the evening meal and a presentation on Chickasaw National Recreation Area (the old Platt National Park), located immediately adjacent to Sulphur. After the program will be refreshments, fellowship and star gazing -- if the sky is clear. Saturday will be devoted to birdwalks in the early a.m., numerous field trips, ranging from plant identification, ichthyology, herpetology, geography and others to a second evening program and more star gazing. The Saturday evening presentation will be by Ross Murphy of the Deep Fork Wetland Coalition, Inc. Ross will discuss efforts to preserve the wetlands of the Deep Fork River which extend from Luther (the west end of the Turner Turnpike) almost to the junction of the river with the North Canadian near Okmulgee. On Sunday, after an early morning birdwalk, the group will break camp and head toward home, field tripping along the way.

Arrangements for the joint meeting have been made by the Boards of both organizations although the OAS has assumed all responsibility for handling the meals and bunk spaces. A detailed program with registration fees, meals and bunk information, plus preregistration forms will appear in the OAS newsletter in mid-March. Any ONPS member not a member of the OAS and interested in the meeting can obtain information or copies of the newsletter mentioned by contacting Paul Buck at P.O. Box 4424, Tulsa, OK 74159-0424, or calling (918) 743-3397 between 8 a.m. and 10 a.m.
Conservation Corner by Paul Buck

I am always surprised to hear friends comment they will be glad when winter is over, spring arrives and wildflowers reappear. I suspect a number of these people look at fall as a time of death and not one when most plants and those animals that do not migrate simply enter a state of dormancy, significantly reducing their daily energy demands. This is an approach to conserving stored food during a long period of environmental stress and permits those organisms the organic reserves to become active again with the increased temperature and moisture levels of spring. There is no reason one should not enjoy nature during the winter months, especially here in Oklahoma where the winters are relatively mild. While out enjoying “nature in the winter” it is easy to recognize virtually all the denuded woody plants, at least to the generic level.

The identification of woody plants in the winter is based upon a few simple and consistent characteristics: leaf scar arrangement, size and shape; the number of vascular bundle scars and their arrangement within the leaf scar; the presence of stipules or stigial scars; bud size, shape, color and scale characters (both lateral and terminal buds); pith characteristics; and, a few additional obvious characteristics of the twig. Of course, a few of our trees are evergreen so we must occasionally consider leaves.

The first character to consider in woody twig identification is the leaf (or leaf scar) arrangement. Is there one at a node, two, or perhaps three or more (Fig. 1)? These would indicate, in order, a plant with alternate, opposite or whorled leaf arrangement. There are only a few Oklahoma woody plants with whorled leaf arrangement, the most common being Catalpa and the persistent elongated fruit, in winter split lengthwise and releasing winged seeds, is familiar to most of us. The other commonly encountered woody plant with whorled leaves is Cephalanthis occidentalis (Buttonbush), found in wet areas in all the State except the three Panhandle Counties.

Whenever I tell my students about the woody plants of Oklahoma with opposite leaf arrangement I think of Bob Jennings, Director of Oxley Nature Center in Tulsa. It seems that every time I have a group in the Bird Creek bottomlands north of Tulsa and begin talking about the native plants, Bob appears from behind a sycamore or cottonwood, welcomes us to the out-of-doors he loves so much and proceeds to share some of his vast knowledge of natural history: Bob’s advice is, whenever you find a woody plant with opposite leaf arrangement here in Oklahoma think, ‘MAD Horse’ and chances are you will be correct. M = Acer (maple), A = Fraxinus (Ash), D = Cornus (Dogwood) and, of course, Horse = Aesculus (Horse chestnut or Ohio Buckeye). There are other oppositely leaved trees in the state (Philadelphus, Mock orange; Viburnum, Blackhaw; Forestiera, Swamp privet; Chionanthus, Fringe tree; Staphylea, American bladdernut and Ptelea, Hoptree) but they are small in stature and less widely distributed.

By far, most of the woody plants of Oklahoma have an alternate leaf arrangement and it is with this group one finds it necessary to look closely at leaf scars, the vascular bundle traces, axillary and terminal buds and the soft internal tissue of the twig called pith. Still, many of the major forest trees of the state with alternate leaf arrangement can be recognized quickly based upon one or two unique characteristics. In many cases it requires a close examination of the twig characters, but a few of the common genera are set aside by the following unique characters:

- Terminal bud and several lateral buds clustered at end of twig. *Quercus*, oaks
- Leaf scar completely surrounding lateral bud and bearing five vascular bundle scars. *Platanus*, Sycamore
- Leaf scar nearly surrounding furry lateral bud, bundle traces more than five. *Rhus*, Sumac
- Twig very stout, shield-shaped leaf scars, large pith, tan or orange. *Allanthus*, Tree of Heaven (tan pith), *Gymnocladus*, Coffee Tree (orange pith)
- Pith brown and chambered (cut twig length-wise), lateral buds gray fuzzy. *Juglans*, black walnut
- Terminal bud lacking, lateral buds oblique, with darker scale margins. *Morus*, Mulberry or *Ulmus*, elms

*Continued on pg. 3*
Central Chapter by Susan Chambers

Chapter officers met on January 14th to discuss the direction for the chapter after the departure of our former president, Mike Bush. It was decided that Pat Folley would step into the President's spot from her previous Co-Vice President position, leaving Neil Garrison as Vice President. This was announced at the January 28th meeting to all 11 members present. Pat will be inserting ONPS into the Norman Transcript Clubs and Organizations Guide, due out February 24th.

Our next meeting is with Jim Bennett, of the Oklahoma Wildlife Federation, at 3900 N.W. Santa Fe. The meeting will start at 7:30 p.m. on March 25th.

An outing is planned for April 29th, 6:30 p.m., at Warren's Nursery, 10901 N.E. 23rd, Nicoma Park.
Wayne Chambers will lead us through the native plants available at the retail nursery.

We also have made plans to grow wildflower seedlings for Earth Day, Monday, April 22, again this year. However, we will offer them for sale this year! (We're also going to start them earlier.) They will be sold at the Native Plant booth and the Department of Transportation booth at the State Capitol.

Because Memorial Day will be observed May 27, our May meeting will be moved to May 20. (Speaker TBA.)

Report on Flora of North America meeting

Our speaker for the January 28th meeting was Rahmona Thompson, acting curator of the Bebb Herbarium, on the Flora of North America project. The project was initiated and partially funded by the Carnegie Museum and the Pugh Charitable Trust. As of right now, there is no comprehensive flora for the North American continent, although there are several flora that cover segments of North America, including the U.S. and Canada. The classic flora is Flora Europea. Many countries already have flora projects and the importance of the North American project can be underlined by the fact that 7% of the world's vascular plants grow in North America, north of Mexico.

Some of the regional floras are excellent sources; however, they may treat the same species quite differently, depending on the part of the country where the plant is growing. A ponderosa pine that averages 70 meters in Oregon may average only 35-55 meters in the intermountain area. Some plants may be listed as completely different species by different flora.

All contributors to the project follow the same set of rules governing treatments of species, genera, etc. The project is a long-term endeavor at the least. It is to be published by the Oxford Press over a period of 12 years, ending in the printing of an index. The first volume and introduction is just about to go to press. All of the information is also being data-based, to be updated and revised as necessary.
Indoor Outing Notes, Reviews, etc.

by note-taking attendees Linda Watson, Pat Folley, Carla Childs and Nora Jones

How to order book
For ONPS members who wistfully admired the beautiful Phillips book on grasses that was displayed at the Outing, here is ordering information: The title is pasture and Range Plants; and it is currently published by the Alumni Association of Hayes State University in Kansas. Send $19.50 per copy (includes postage and handling) to: Fort Hayes State University, 600 Park Street, Box 272, Hayes, Kansas. Call them at (913) 628-4430 to have it put on your credit card. Thanks to Kate Skinner for tracking this information down for us.

Indoor Outing

Paul Buck brought several reference books, slides, and some plant material to demonstrate his talk on identifying woody plants in winter. Oklahoma has heavy forest area in the eastern part of the state, and as you go west the grasslands become more common, and even further west the only trees you see are along streams and drainage areas. You progress from tallgrass into shortgrass. Many woody plants reach western edge range of distribution in Oklahoma; many species also reach the eastern edge range. Fowering dogwood has never been found naturally occurring in Tulsa County. They have been planted here, yes, but not are natural. Generally, sugar maples retain their leaves into fall. Persimmons have leaf buds elevated, and with auxiliary buds above the old leaf scar. Smooth (common) sumac has bright red berries and leaves into the fall and the fruit is edible. Poison ivy is abundant in winter, so watch out for it; birds like the berries. Cottonwood has three small ridges that run from leaf scars; buds are gummy and glossy in appearance; tops of trees where silvery-brown branches are found; seeds extremely small; short life span. Salt Cedar was introduced from Asia, has deep root system, can dry up streams, has a broad range. Eastern Red Cedar has small, scale-like leaves, fruit modified cones, commonly called "berries." There is a wide range of oak varieties across the state.

The described characteristics for identifying plants: from alternate, opposite or whorled arrangement of leaves or buds.

Prairie Insects

Along with some very funny "bug" stories and jokes, Steve Goldsmith showed insect collections, and gave ways to collect insects -- bare hands, insect nets, a field guide as ID, and use of ethyl acetate on a cotton ball in a jar to kill insects you collect.

Prairie Grasses

Terry Bidwell said that most successful cattle ranchers do not practice heavy grazing on their land; plants are adapted to a certain amount of grazing. The prairie cannot fight Eastern Red Cedar invasion when fire is taken out of the cycle. Most reproduction of prairie grasses is done by underground rhizomes. From July -- August to September, it is important to rest tallgrass prairies to increase vigor. Big Bluestem grows dormant for long periods of time and is very resistant to grazing. There are two main fire types: headfire moves fastest, quickly. Extensive and fast fire moves at 2-3 miles/hour. Soak firelines with water. Then backfire (moves slowly, flame height not high). Grasses are easily identified from seed head. Prescribed burning takes time to see results. He brought several fact sheets and handouts on Eastern Red Cedar invasion and grazing on the range, and prescribed burning.

Wildflower slides

Bob Lindsey talked on his experiences in photo contests: you must please yourself first. When photographing a field of flowers it is hard to get all of them in focus at the same time. Use a tripod -- a good tool to help you compose pictures. When you find a pretty plant, take several shots from many points of view. He uses flash on all pictures except scenery shots. Uses a 100 mm macro lens and very slow film (Fuj 50). Be sure and watch your background for distractions. Vertical pictures seem to work best. Have an open space on the left side of the photo because your eyes scan information from left to right. On spiked blooming species, try a low level movement (bent stalk, eg) to avoid static pictures. Have it curve to the right. Neutral density filter is good for scenic shots, especially with sunlight; dark blue filters give stormy effect; polarizing filter is good for color emphasis in scenic shots. He uses a 24 mm lens for landscapes. For scenery the sky is an important component. Shots of two flowers together is not recommended because it is hard to compose correctly. White flowers are hard to shoot...you have to experiment and know your equipment. Usually, I prefer to get whites correct. He showed many beautiful slides of flowers and landscapes he had photographed.

LW
In search of the ultimate native plant

Did you ever wonder just what the word native means? Good old Daniel Webster has several definitions, including "an indigenous or original inhabitant." Using this definition it seems like a fairly easy task to determine which plants are native to Oklahoma. Right? Well, let's see.

Start with the "indigenous" part of the definition. Old Daniel tells us that indigenous means "growing or living naturally in a particular region or environment." With a few field guides you could easily prepare a list of hundreds of plants which are known to occur naturally in Oklahoma. The "original" part of the definition, however, is trickier. What plants were originally in Oklahoma? Not just hundreds of years ago before European exploration, or thousands of years ago before the last ice age, or millions of years ago before the dinosaurs. But hundreds of million years ago, before there were any birds or mammals. In some ways this sounds like an impossible quest. However, if you happen to be interested in the time period of around 250 to 300 million years ago, the task gets easier. This is because rocks can be found over most of the state which were formed during this ancient period. And, as most of us know, where there are rocks there may also be fossils.

Last month, two ONPS members decided to search for fossil evidence of some of these original Oklahoma native plants. With rock hammers in hand, John Dickerson and I trekked to an ice colc creek bed in the southern part of Tulsa County. Geologically speaking (take a deep breath), the surface rocks in that area are part of the 210 foot thick Seminole Formation, which is the lowest unit of the Missouri Series... of the Pennsylvania System... of the Paleozoic Era. In simple English, the rocks in the river were formed almost 300 million years ago. This, of course, means that any plant fossils we might find inside those rocks would also be that old. Now that would qualify as a real native plant!

When the Seminole Formation was being created, most of what we now call Oklahoma was covered by a shallow sea. The Tulsa area was right on the beach, complete with coastal marshes, tidal mud flats, and estuaries. Looking south from this area you would have seen mountain crests on the horizon. Looking west there was nothing but the sea, all the way to the Pacific Ocean. To the east were the hills formed by the uplift we call the Ozark Plateau. It was a world of mosses, ferns, small amphibians and giant dragonflies. Grasses and flowering plants had not yet evolved. Over time, as mountains rose and eroded away, and sea shores advanced and receded, layers of sand, clay, mud and silt were deposited. These in turn were buried under thousands of feet of other layers. Under this pressure the layers of sand hardened into sandstone; the clay and mud hardened into shale. Eventually, however, the succeeding layers were worn away and the early sandstone-shale layers were exposed. These layers are now evident where streams have been slowing cutting their way through this formation exposing more and more to inquisitive eyes and persistent hammers.

Within five minutes of slipping and sliding down the steep mud bank to the stream, we started finding fossils. (It helps to go on a field trip with someone like John who has been collecting fossils for almost sixty years!) During the next hour we hunted, hammered, splashed, dug, and progressively froze our hands. We cheered when we found a keeper and groaned when a fossil bearing rock crumbled in our hands. The result was a small backpack full of rocks with freshly exposed fossils or rocks to take home and split open and a later (and warmer) time. We found evidence of at least three species of ferns, most with details so well preserved that tiny veins are clearly visible. The finest specimen is a fern called Alethopteris sartii, with 1/4" long, smooth-edged pinnules. Most of what we found were the carbon remains of lance shaped leaves, of unknown identity, which vary in length from 1 to 3 inches. These too, were superbly preserved, with all surface textures intact.

Besides learning more about native plants, we had the pleasure of proving again that a fine time is guaranteed to anyone, of any age, who is willing to get cold, wet and dirty.

Tom Chilton
14th Annual Wildflower Workshop

The Wildflower Workshop will be held in Ardmore on Friday, May 3. The daytime conference will be at the Goddard Center, with dinner at the Noble Pavilion that evening. Speakers include Dr. Linda Wallace on the Fires of Yellowstone and its effects on wildflowers, and Dr. Wayne Elsens on How to Photograph Wildflowers.

A Saturday field trip in the beautiful Arbuckle Mountains is planned. Among displays will be the ONPS photography exhibit. The event is sponsored by the Oklahoma Department of Transportation, Ardmore Garden Clubs, the Noble Foundation, and ONPS. Cost for the lunch will be $6.50, dinner, $9.00, and the field trip $6 cost includes transportation and sack lunch. Watch your mail for a separate mailing and registration form.

Harriet Barclay Award

ONPS has agreed to continue supporting the Harriet Barclay Award with a $25 contribution in support of the Oklahoma Junior Academy of Science. Special awards help encourage and stimulate many students to continue their studies in science and math to make even greater achievements. According to Jimmie Pigg, Director of OJAS, 390 students from 56 schools in Oklahoma entered one of the 12 regional contests in 1990. From these, 100 were selected to give their research papers at the state contest. These students must develop, design, and carry out a basic research project. They must write a paper over their research and give an oral presentation and defend it at the regional contest. Next contest will be at East Central State University in Ada, April 4-6, 1991.

Publicity Chair, Vice President aboard

Sydney Dobson of Oklahoma City Beautiful has agreed to serve as Publicity Chair for ONPS. She will be mailing press releases to the media -- print, radio and TV -- throughout Oklahoma. If you have ONPS items that need to be publicized, send them to Linda Watson, ONPS President, and she will forward them on to Sydney. Dr. Rebecca Oviedo, assistant professor of biology at Central State University in Edmond, has been elected to serve as ONPS vice president, and also co-chair the membership committee. Welcome, Rebecca & Sydney!

Conservation tree seedlings available

The Oklahoma Department of Agriculture, Forestry Division, recently announced that tree and shrub seedlings are now available for winter and early spring conservation plantings throughout Oklahoma. The Division provides seedlings through a continuing program to aid landowners in establishing windbreaks, curbing soil erosion, improving wildlife habitat and in the production of timber, Christmas trees and fuelwood. The tree planting season in Oklahoma generally runs from December through March. Over 20 species of bare root conifer and hardwood seedlings, and seven species of containerized seedlings are available on a first-come, first-serve basis. The minimum order of bare root seedlings is 200 in multiples of 50, while the minimum order for containerized seedlings is 48 in multiples of 24.

Prices vary depending on the amount of seedlings ordered. Native plant species available through this program include Baldcypress, Black Locust, Black Walnut, Bur Oak, Green Ash, Loblolly Pine, Mulberry, Osage Orange, Pecan, Ponderosa Pine, Redbud, Shortleaf Pine and Sycamore. Seedlings may be obtained by contacting the Forestry Division at Rt. 1, Box 44, Washington, OK 73093 or calling (405) 288-2385.

Anne Long Award nominations

Interest earned from the Anne Long Fund account, which now stands at over $3,700, is used to recognize an individual or group who has made a recent, outstanding contribution to Oklahoma Native Plants. Be thinking of nominations (due Sept. 1) for next year’s award which will be given at the annual meeting in Poteau.

The December Mississippi Native Plant Society Newsletter reports on a new 26-page catalog of perennials, wildflowers, herbs and native grasses. Send $2 to Flowerplace Plant Farm, P.O. Box 4865, Meridian, MS 39304.

Volunteers!

Look after Earth Day Booth at State Capitol, contribute to Gaillardia, co-chair a committee (membership, photography, publicity, newsletter, etc.) and more. Linda Watson, ONPS president, points this out there’s less to do if everyone pitches in, and no point in shying away because you have a full-time job -- most ONPS needs can be handled weekends and evenings. "In fact," says Linda, "most of the board members work and have families." Please get active in ONPS. A handy form is provided below to help you get started.

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Yes! I can be more active in ONPS as a Volunteer.

Name: ________________________
Address: ______________________
City: ________________________ ST ZIP __________
Telephone: ____________________

Interests or Ideas:

(Please elaborate on separate sheet.)

Send to: ONPS, c/o Tulsa Garden Center, 2435 S. Peoria, Tulsa, OK 74114. ONPS needs you. Thanks!

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Watch for ONPS, please

Ruth Boyd, ONPS Historian in charge of the ONPS "scrapbook," asks all readers to take action when "ONPS" name appears in print: "Please send all clips if our name appears in your newspaper...also welcome are pictures taken at meetings or on field trips, or of special projects." The next opportunity for members to view the impressive scrapbook, Ruth says, will be at the OAS-ONPS meeting April 19-21 at Lake Murray (see pg. 1).

Posters Anyone?

Can anyone solve the mystery of the six missing photo posters? Last seen at our annual meeting at Sequoyah State Park. Please call Nora at 585-1117 (office hours) if you know their whereabouts.

Conservancy tours

The Oklahoma Nature Conservancy offers a variety of tours to some of its recent acquisitions. The Tallgrass Preserve in Osage County can be visited (for prairie chicken emphasis, and later, wildflowers), and the Black Mesa Nature Preserve in the state's panhandle is also open for tours.

For more information, contact the Conservancy's Oklahoma field office at 320 South Boston, Suite 1222, Tulsa, OK 74103. Phone is (918) 585-1117.

'Shroomers set 1991 forays

The success of the 1991 Indoor Outing was accentuated perfectly for ONPS members who enjoy mushroom hunting by the first meeting of the incipient Oklahoma Mushroom Club. Present at the session were Clark and Rebecca Ovrebø, Susan and Ed Douze, Nancy Shields, Cindy Wilson, Joe Nurre, and Nora and Jack Jones. They agreed on the following dates and foray sites for 1991: March 30 or April 13, Tulsa County Morel Hunt; August 24-25, Foray to Southeastern Oklahoma Bogs; Oct. 12 or 19, Tenkiller Lake Foray. In June, Clark is also planning to teach a class on mushroom identification at Martin Park Nature Center in Oklahoma City.

If you are interested in joining in, contact either Jack Jones in Tulsa (918) 749-5859, or Clark Ovrebø in Edmond (405) 341-9583.

by Jack Jones

The Gaillardia
Published bimonthly by the Oklahoma Native Plant Society
2435 S. Peoria • Tulsa, OK 74114 • (918) 496-2218

President: Linda Watson
Vice President: Rebecca Ovrebø
Secretary: Nora Jones
Treasurer: Herb Beattie
Historian: Ruth Boyd
Editing: Marilyn Bell

ONPS Memberships
For $10/year, individuals; $15/yr, families; and $5/year, students, you can become a member of the Oklahoma Native Plant Society and receive the six newsletters a year and all other mailings to keep you informed in Native Plant field trips, meetings, and issues relating to ONPS purposes. To join, write to:
Oklahoma Native Plant Society
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Tulsa, OK 74114

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Tulsa, Oklahoma 74114

Photo Contest!
April 20