



Gaillardia

The Oklahoma Native Plant Society Newsletter

The purpose of the ONPS is to encourage the study, protection, propagation, appreciation and use of Oklahoma native plants.

Inside:

- Photo contest winners
- Pollen grain
- Red Clay Hill
- Workshop & Festival reports
- Board notes
- Chapter activities

May field trip observations -- by Connie Taylor

The last weekend in May was indeed a time for fair weather botanists. We met at Clayton Lake State Park and enjoyed an afternoon learning both aquatic, wetland, and woodland species that were in flower. With a handout, we focused on the differences between grasses, sedges (usually with edges because of the triangular stems), and rushes which have 6 green to brown sepals instead of bracts. It was a perfect afternoon to be out.

Foggy weather cleared on Saturday as we drove up into the Pushmataha Wildlife Refuge which encompasses 18,000 acres of habitat managed to promote white-tailed deer, turkey, quail, and a few elk. Ray Robinson, the refuge manager, showed us one of the sites of the rare Smallstream Sandreed, *Calamovilfa arcuata*. We also saw many beautiful flowers including a woodland Evening Primrose (*Oenothera linifolia*) which was first collected by Thomas Nuttall when he came to botanize in 1818.

Native pasture visit

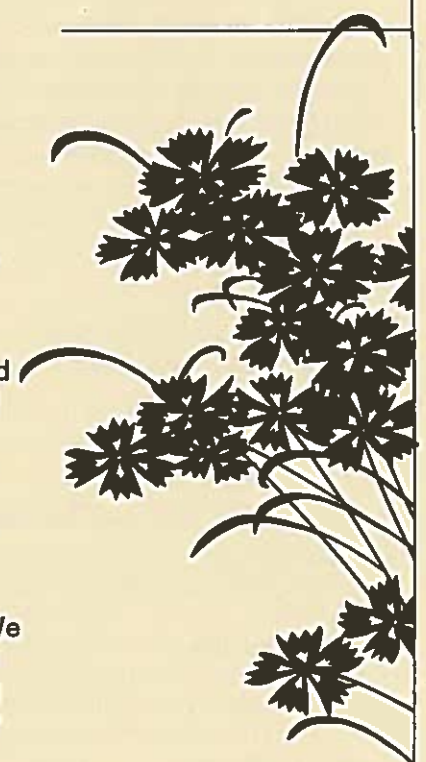
After our picnic lunch we drove north to the Choctaw Nation's native pasture which has the insectivorous sundews. We found thousands of plants with their brilliant crimson deadly (to insects) sticky glandular hairs. They were usually in tiny open areas between the rushes and grasses where the soil was very wet but no standing water.

This is a pimple mound prairie and the tops were habitat for sunflowers and other disturbed habitat vegetation from the use of the mounds by coyotes and other animals. While we were too early for the sundew's dainty purple flowers, we were delighted by Unicorn Root, *Aletris aurea*, a beautiful member of the Lily Family with a spike of very golden urn-shaped flowers. We were also treated to *Tephrosia* and *Psoralea*, two legumes in bloom. It was a meadow full of sedges including *Rhynchospora globularis* and *Scleria*, a sedge with a very hard white fruit.

Birding, etc. at Clayton & Sardis Lakes

Sunday we gathered at the campground at Clayton Lake for an early morning bird-sit and birdwalk. After breakfast and more birding, we discovered Richard Bradley had a bird-attracting tape of a Screech Owl. While we had lots of fun and really saw a lot of new species, the numerous avian residents at the lake edge were nervous wrecks.

Fortified by lunch (yes, we birded all morning), we headed west to the upper end of Sardis Lake and visited a vast meadow. Shale is at the surface here and it was interesting to see such dry habitat species such as Yellow Stonecrop, *Sedum nuttallianum*, growing near a lake shore with the beautiful patches of emergent Waterwillow, *Justicia americana*, with its delicate white-purple flowers. The Queen Anne's Lace (about 4 different species in the Umbelliferae including Water Hemlock) painted the meadows with their lady white. We also found several patches of *Anthemis cotula*, Chamomile -- yes, the very one used to make tea. At 4 o'clock the droplets of rain began and we all headed home, our souls refreshed from our interlude with nature.*



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Photo Notes -- by John Miller

Congratulations to the following winners of our 1992 ONPS Photo Contest:

BEGINNERS

- 1st Place - Gene L. Post, Stillwater
- 2nd Place - Diane Woods, Tulsa
- 3rd Place - Carole Klein, Tulsa

AMATEUR CLOSE-UP

- 1st Place - Jennifer Lindsey, Sapulpa
- 2nd Place - Ruth Miller, Sand Springs
- 3rd Place - Bob Lindsey, Sapulpa

PHOTOS NOT CLOSE-UP

- 1st Place - David Willard, Tulsa
- 2nd Place - Bob Lindsey, Sapulpa
- 3rd Place - Jennifer Lindsey, Sapulpa

MERIT AWARDS for Best Photo from Botanical Point of View

- 1st Place - Don Blair, Waukomis
- 2nd Place - Sallie Webb, Broken Bow
- 3rd Place - Gene L. Post, Stillwater

This year's judges were:

Teresa Valero, Professor of Art, University of Tulsa

Al Henry, for many years a judge for Photographic Society of America

Bill Ess, former instructor of photography at University of Tulsa; iDr. Ron Tyrl, OSU Botany Dept., who judged all entries for Best Photos from botanical point of view.

A special thanks to these capable judges!

Also a big thanks to all who entered -- we expect to make good use of your work because we have more opportunities to display wildflower photography now than ever before. All the sets of ONPS contest posters were exhibited somewhere in May. These displays consist of contest photos since 1989.

Awards were presented May 1 in Lawton at the Wildflower Workshop, where all of this year's entries were exhibited.

Photography co-chair, Clark Ovrebo, will be writing "Photo Notes" for the next issue of the *Gaillardia*. As some of you know, my wife, Ruth, and I expect to be moving to Arizona as soon as we sell our home. It is hard to leave beautiful Oklahoma, but we are excited to be moving to cactus country. I already have two new slide shows about cacti and my interest in nature photography will continue.

Thanks for letting me serve on the photography committee the past several years. It has been a pleasure. Thanks for your support. A special thank you to Evelyn Washburn, Thermon Hollis, and Sue Amstutz who have worked faithfully for the last two or three years on the committee. They have never failed to carry out their responsibilities.

Thanks again to all who entered the contest. Your beautiful photographs are a valuable contribution to ONPS. Please plan to enter again next year.

☎ If you belong to a group that would like to exhibit a set of these posters, please contact Sue Amstutz (918) 742-8374 or Ruth Boyd, (405) 872-9652. *

Conservation Corner -- by Susan Jones

HOUSE BILL NO. 2280, which would restrict land acquisitions by the Oklahoma Wildlife Commission, has failed to make it through the legislative process. The bill is dead in the Senate Wildlife Committee and will remain dead or it will be introduced as a new bill in the next legislative session.

It is interesting to note the measure passed in the House 95 to 3.

As originally introduced the bill required that any property acquired by

the Wildlife Conservation Commission after July 1, 1992 shall have legislative approval. Land may be acquired only after consent of a majority of the legislature. The Commission may not purchase additional real property in any county once it has acquired three percent of the real property in that county.

If you would like to let your legislators know where you stand on this bill as well as others, you may call the State Capitol during the week. The

Capitol Straight Line is a toll-free number which allows you to convey opinions to your legislators from Feb.-May when they are in session.

(You can write to legislators about this bill now.) You may also request free copies of any legislation at this number

whether the legislature is in session or not 1-800-522-8555.

If you would like to write your legislators, the addresses are:

Your Representative
State Capitol
Oklahoma City, OK 73105

(405) 521-2711

Your Senator
State Capitol
Oklahoma City, OK 73105
(405) 524-0126

If you are uncertain about the names of your legislators, check with your local library or county election board.

Public land not only supports wildlife but plant life. Let your legislators know your views -- we can't assume the bill will stay dead. *

The *Gaillardia*

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Vice President: Paul Buck
Secretary: Pat Folley
Treasurer: Rebecca Ovrebo
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"No-ose" about Pollen Grains -- by Rahmona Thompson

A physics professor periodically bursts into my office with the exclamation, "I didn't sleep last night! What is in flower now?" I stop and try to figure out which plant has recently tossed millions of pollen grains into the wind attempting to pollinate and fertilize another individual of the same species and succeeding in aggravating my colleague's sinuses. I consider trying to excite my friend with the glorious details regarding pollen grains but decide she is not in a receptive mood.

A pollen grain is really an elegant package for the sperm of angiosperms (flowering plants) and gymnosperms (cone-bearing plants). The pollen wall (outside of the grain) is made of sporopollenin, a very tough substance. The pollen wall is so resistant to degradation it can go through a bee's gut intact or can easily be fossilized.

Sculpturing of pollen walls is determined by variations in the layers that make up the wall, so a grass pollen grain is a relatively smooth sphere while the ragweed pollen grain is a spiny ball. All pollen walls have some sort of relief which creates areas to store proteins called the pollenkit. It is via the pollenkit that a plant stigma can "recognize" the pollen grains of its species; it is also the pollenkit that irritates my friend's nose and those of a hundred other kindred souls.

Another feature of the pollen wall is the pores (thin spots in the sporopollenin). The number of pores varies from species to species; grasses have one; tomatoes three; and ragweed, lots. It is through the pores that the sperm leave the pollen grain.

The cytoplasm (living contents) of an angiosperm pollen grain first divides into two cells; these cells are separated by a thin membrane. The two cells are called the vegetative cell (also called the tube nucleus) and the generative cell. The generative cell is much smaller than the vegetative cell. Two sperm are "generated" by a division of the generative cell. The sperm remain connected at one end and each is little more than the genetic material that it is going to pass on to the next generation.

A pollen grain is denoted a 2-nucleate grain if it is released from the flower before the sperm are formed. It is a 3-nucleate grain if the pollen is shed after sperm develop.

When the cytoplasm of the pollen grain bursts out through the pore in the pollen wall, this event is designated pollen germination. But the contents of the pollen grain do not just spill out onto the flower's stigma; instead, the

vegetative cell stimulates the development of a pollen tube (an extension of cytoplasm bound by a membrane). The vegetative cell and the sperm (or generative cell) pour into the pollen tube and are carried downward through the style to fertilize the egg.

Gymnosperm pollen is similar to angiosperm pollen as it possesses vegetative and generative cells. Gymnosperms differ as they have a few extra cells, prothallial cells, and the sperm do not form until shortly before fertilization. A pollen tube also forms in gymnosperm but it is much slower growing; in pines it may take a year for the pollen tube to reach the structure housing the egg.

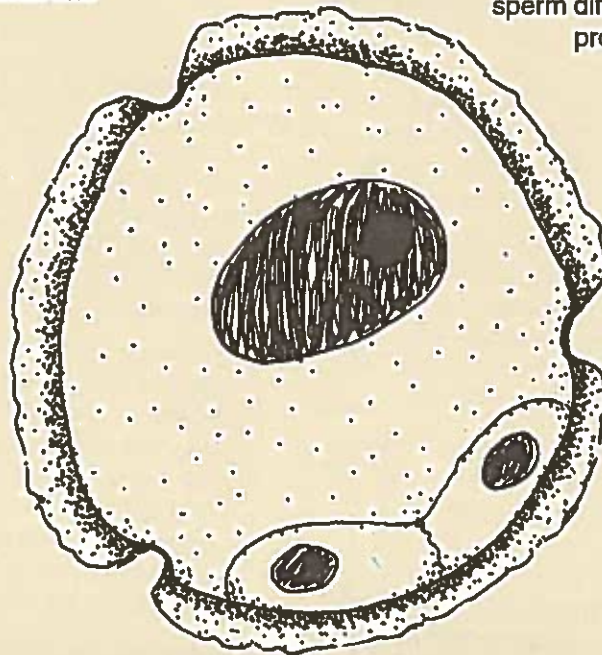
Land plants other than angiosperms and gymnosperms have no container for their sperm. The sperm of these plants must swim to the egg via water from rain, dew, or heavy fog. If the environment dries up before the sperm get to the egg, tough luck, because the sperm have no protection.

So the more advanced plants -- the angiosperms and gymnosperms -- have developed high-

tech packaging for their sperm. This means these plants can toss these sperm-bearing packages to the wind or entice some insect, bird, or mammal with rewards of food (pollen itself or nectar) to shuttle the pollen from one flower to another. All the elaborate types of cones and exquisite forms of flowers are must mechanisms to ensure that the plant's pollen end up in the correct place.

So, the next time your nose is runny and eyes are watery, do not just blaspheme the junipers and grasses. Pause as you reach for a Kleenex and appreciate the source of your misery -- the pollen grain. *

Rahmona Thompson, an ONPS board member, is an associate professor of the ECU Biology Department. She has worked with John Skvarla and Scott Russell, OU, who consider pollen no small matter.



A 3-nucleate pollen grain with 3 pores

Note from field trip co-chair

Because the rain will play out during the summer and hot days persist in diminishing the flowers that bloom, we will only have one trip during the summer -- to see orchids in August. In late September the Oklahoma Academy of Science field trip and our October annual meeting will put us out in the field to enjoy our fall flowering species. Be sure to check the next *Gaillardia* for details.

Connie Taylor

Further Adventures on the Red Clay Wildflower Hill by Ruth Boyd

No gardener in his right mind plan a vacation in spring. When a family emergency took me to Prescott, Arizona for 10 days beginning April 27, 1992, I fretted the entire time knowing that plantain, ragweed, croton and amaranth were taking over the entire hill and wondering what action there was from all the seeds I planted last fall. You may remember that my spring-planted seeds had been very disappointing.

As I turned onto the cul-de-sac where I live, the first thing I saw was large patches of *Coreopsis lanceolata* three feet tall and in full bloom. As I neared the house I saw those bright golden flowers in almost all the perennial borders where I never planted it. That original clump of plants was brought home from a botany field trip with Jim Estes in 1983. When I moved six years ago, I brought a few plants with me and have been sharing with anyone who would allow it ever since.

Although I moved about two dozen plants to the red clay hill two springs ago, the wind and birds have planted in many other places. When I clean up the gardens in the fall, I leave some seed heads for the birds and some I harvest, but some I just throw over the fence into my neighbor's unused and unmowed pasture. It is now well established there.

The other thing rampant on the hill now is showy evening primrose, *Oenothera speciosa*. I can't give enough of that away to keep it thinned properly. Last year it was mostly all deep pink and this year almost all white. Can anyone explain that to me?

I don't see any improvement so far in germination rate for fall-planted seeds over those planted in the spring. I have been pleased to note that some things that did not germinate last year are now coming up and

those that bloomed last year have spread. Some of the latter are yellow coneflower (*Ratibida columnifera*), a black-eyed Susan (*Rudbeckia hirta*), *Gaillardia pulchella* and prairie coreopsis (*C. tinctoria*). A couple of things in bloom now that didn't bloom last year are *Phlox drummondii* and ox-eye daisy (*Chrysanthemum leucanthemum*).

I planted a small patch of crimson clover (*Trifolium incarnatum*) last fall and had a brief bright showing early this spring. The ones that bloomed a little last spring have completely disappeared. As a dumb amateur and not a botanist, it doesn't bother me at all to plant ox-eye daisies and crimson clover. After all, I just call it the Red Clay Wildflower Hill, not the Native Oklahoma Wildflower Hill.

I've also had in bloom already this year a wild verbena of unknown species, *Oxalis violacea* and *stricta*, wine cups (*Callirhoe involucrata*), stork's bill geranium (*Erodium texanum*), false dandelion (*Pyrrhopappus*), Missouri evening primrose (*Oenothera missouriensis* or possibly *Oklahomensis*), cutleaf evening primrose (*O. laciniata*), *penstemon cobaea* and two different kinds of erigeron, spiderwort (*Tradescantia ohiensis*), and four o'clock (*Mirabilis nyctaginea*). Birds brought me three real surprises this spring ... baby blue eyes (*Nemophila phacelioides*), scrambled eggs (*Corydalis micrantha*), and a non-native black mustard.

When I wrote my red clay hill update late last summer, I was very depressed because it looked like many of my efforts had been in vain. Before the newsletter was published the rains came and the hill was lovely again. I hope I remember that when the summer doldrums arrive again.

If I don't have all the species names correct, remember I have already admitted that I am only a dumb amateur.

"Wichita Wonderland" -- Wildflower Workshop Report -- by Joanne Orr

The 15th annual Wildflower Workshop was a Wichita wonderland with great speakers and Mother Nature's very best spring weather for the Saturday field trip. More than 108 people attended the workshop sessions at the Shepler Center at Cameron University and browsed at the display tables featuring books, a wide variety of wildflower T-shirts, seed packets and helpful literature on the "how-tos" of wildflower planting on highways and at home.

Dr. Doyle McCoy, noted botanist and author of five popular books on Oklahoma's wildflowers, trees and shrubs, received the Bess Snodgrass award. This is the second year for this prestigious honor established by John and Charles Snodgrass of Ardmore in memory of their mother who, in 1930, planted the coreopsis that have spread throughout the Arbuckle Mountains. Dr. McCoy was recognized for his contributions to the conservation and enhancement of the wildflowers in Oklahoma, through his publications and his efforts that helped to establish the Indian Blanket as the state wildflower. Dr. McCoy received a framed photograph of wildflowers in the Wichita Mtns. with a metal plaque. The Snodgrass brothers also donated \$400 worth of wildflower seeds to the award winner. The seeds will be planted by the Dept. of Transportation as part of the Roadside Wildflower Program. The highway and community to be planted was to be chosen by Dr. McCoy. Exact site and flower selection will be done in cooperation with the Dept. of Transportation Beautification office.

Weckeah Bradley's presentation on Comanche plant lore was highlighted by the many specimens she brought to show everyone. Shampoo made from yucca root and devil's claw tea were just a few of the exhibits. Following her talk, a large group enjoyed identifying and translating plant names back and forth from Comanche to English to Latin. Weckeah wore her native dress with authentic elk

and bone decorations. She is the granddaughter of Chief Quanah Parker and is a judge of the Comanche children's court.

Dr. Ron Tryl, professor of botany at Oklahoma State University, gave a very instructive and fun explanation of why Oklahoma has a myriad of varieties of wildflower species; only California and Texas have more. Dr. Tryl was just back from a sabbatical at Kew Gardens in England.

Arnold Davis, past president of the Texas Prairie Asso., described the Texas experience in restoring prairies. As he returned to Ft. Worth after the field trip, he repeatedly described the Wildflower Workshop and field trip as the best he had ever attended, with outstanding program and truly friendly folks. High praise from a Texan yet!

Glen Wampler, Fort Sill Fish and Wildlife administrator, described the burn program at the Fort. Oklahoma's Tall Grass Prairie Preserve in Osage County is also into burning as a prairie management tool. Oklahoma's burn experts may need to have a special get-together one of these times.

Robert Ziegler, assistant professor of biological sciences at Cameron University, described Oklahoma's most common native grasses and their use as ornamentals. Paul Buck, emeritus professor of botany at Tulsa University, talked about the Wichita Mountains and described things to look for on the Saturday field trip. Laurie Stillings reported on the Dept. of Transportation's Roadside Wildflower Program. There are 354 active acres that have been planted by the Department during the last four years, located in 156 different sites throughout the state.

Local sponsors for the Lawton workshop included Robert Groves from Cameron University, Wanda Angotti, Blanche

(Cont. on pg. 7)

Quartz Mountain Wildflower Festival

By the time you receive this newsletter, we will have participated for the third time in the annual Quartz Mountain Wildflower Festival.

Quartz Mountain State Park, with its many, many wildflowers, is at the height of its beauty in the spring/early summer. It's a great place to spend several days.

Bob Lindsey assisted in the festival again this year. As usual, he generously shared his expertise on how to take prize-winning wildflower photos.

I hope this ONPS relationship with the Oklahoma Dept. of Tourism will continue.

John Miller, Photography Committee
Co-Chair



Another Wildflower Festival has been successfully carried out at Quartz Mountain State Park this spring. John Miller and Bob Lindsey once again kindly donated their time and considerable expertise to the programming and their efforts are greatly appreciated. As always, the ONPS posters were very popular and our visitors enjoyed the chance to look at a variety of beautiful wildflower photographs. And speaking of photography, David Halpern, a professional photographer from Tulsa, conducted programs on wildflower photography. All-in-all, the festival was a success and I wish to thank ONPS for their continued support of this program.

Vicky Mason, Naturalist
Quartz Mtn. State Park

Northeast Chapter Notes

The chapter plans to have four meetings a year with field trips between meetings. Meetings are held at the Tulsa Garden Center.

Speaker at the March meeting was Jackie Bubenik, Director of Riverparks. He emphasized the natural areas of the Riverparks system. At the May meeting John Miller presented his new slide program on Cacti and the photo committee displayed the 1992 photo contest entries.

The spring field trip was a tour of the new Tulsa Junior College Horticulture Center and Greenhouse, the first tour ever scheduled.

The chapter celebrated State Wildflower Day with a local field trip, visiting three members' homes to see wildflowers incorporated in backyard landscaping (Betty Kemm, Ollie Crosby, Richard Bradley). Next stop was Gluedobbers Field, a large tract of limestone prairie, where over 40 wildflowers were identified. The final stop was the commercial garden of Richard Dahlke, who specializes in native perennials at his "The Compleat Gardener."

The chapter has been busy between meetings. In March members manned a booth for two days at Every Man's Garden Fair which was attended by several thousand people. They also manned a booth for the Fair's morning program for elementary school children.

Fifteen Tulsans attended the Wildflower Workshop in Lawton.

The chapter provided a display for the Tulsa Garden Club spring flower show and won a blue ribbon and a special award rosette for its education exhibit.

Several members have given wildflower programs to organizations and have others scheduled.

Members are encouraged to suggest trips. Let Betty Kemm know a suggested date and meeting place so the telephone committee can get activated. Call 742-4351.

The next regular meeting is scheduled for Sept. 14 at the Tulsa Garden Center, 7:30 p.m. *

Submitted by Betty Kemm

ONPS board meeting highlights

The ONPS executive board met the evening of April 2 at the Steer Inn in Stroud. New board members Vaughn Smith, Edmond, Central chapter liaison with the board and T.H. Milby, Norman, who has replaced John Skeen, were introduced. The spring 1992 *Gaillardia* was slightly late due to a change in bulk mailing postal regulations. We heard glowing reports of the March 28 Illinois River field trip and details on the Clayton Lake area plans. An Aug. 8 orchid trip to SE Oklahoma was planned. We will try to make reservations for a 4-day trip to Black Mesa for end May, 1993. Board member Mike Palmer agreed to be Conservation co-chair and would like to see that committee more active in presenting resolutions to the legislature. Reports were given on the photo contest in progress -- 1989, 1990 and 1991 photo entries, mounted as posters,

Central Chapter Notes

At the Feb. 24 meeting, the first order of business was election of officers: president, Ruth Boyd; vice president in charge of programs, Steve Thompson; vice president in charge of membership, Pat Folley; secretary/treasurer, Wayne and Susan Chambers; liaison to state board, Vaughn Smith. Members were reminded of the Illinois River field trip led by Jim Norman March 28.

Pat Folley gave the program on wild plants of our area that have been or are now *useful*. She listed a few books on the subject and elaborated on their correctness or lack of. Back to Eden was described as "dangerous," Euell Gibbons' Healthful Herbs as very helpful for the beginner, and Peterson's Field Guide to Eastern and Central United States as fairly new and very thorough, if somewhat dull. She showed slides of many of these native plants and spoke on what particular products were made from the different plant parts. Twelve people were present.

Dr. Leila Shultz, curator of the Inter-Mountain Herbarium in Utah and the interim curator of the Bebb Herbarium in Norman, gave our March 30 presentation on desert plants of Utah. She showed color slides of desert plants, mostly photographed from flat on the ground (many were no taller than a few inches). The areas these plants grow in have such diversity because of the aridity.

There are some 3,000 species in Utah, of which 10% are classified as rare and 10% as threatened. Some occur only in restricted areas, sometimes an area only the size of a large room.

The genera listed with the highest levels of endemism were *Astragalus*, *Penstemon*, *Cryptantha*, *Eriogonum* and *Phacelia*. *Arctomecon humilis* was listed as most endangered growing only in scattered pockets over a five-mile area. Leila also reminded us that Vol. 1 of The Flora of North America had just gone to press and would be available at the end of the year.

We had a request for volunteers for a booth at "The Growing Affair" on May 20 at the O.S.U. Extension Center. Sixteen attended Leila's presentation. *

Submitted by Susan Chambers

are getting wide circulation. Joanne Orr of the Dept. of Transportation, gave a summary of plans for the Wildflower Workshop. Site for the Oct. 3-4 annual meeting has been changed to Alva and will be planned by Paul Nighswonger with board help. Mike Palmer agreed to coordinate an Indoor Outing for Feb. 5-6, 1993 in Stillwater. Betty Kemm was appointed nominating committee chair to have a slate of officers ready for the annual meeting. Copies of proposed By-laws changes were previously mailed to board and will be voted on at the annual meeting. The fall issue of *Gaillardia* will be published early so that these changes, the nominated officers, detail about the meeting and registration form can be included. All contributors to the newsletter are asked to note Aug. 10 as next deadline.

by Ruth Boyd, president

Workshop (Cont. from pg. 5)

Scott and Louretta Borsos from the Lawton Garden Council. Clara Bishop and Doris Arens, Oklahoma City, represented the State Garden Clubs. Marjorie Franklin represented ONPS. Field trip leaders from ONPS were Paul Buck and Louis McGee. Robert Ziegler and Elise Smith from Lawton and Ron Ziegler also acted as tour leaders.

The ONPS photo contest entries for 1992 were featured along with outstanding photographs of wildflowers in the Wichitas by Elise Smith, Lawton.

Next year's workshop will be in the northeast part of the state. See you there! ❀

Background on Workshop

Once again wildflower lovers met for a workshop in Lawton May 1 and 2. This was an event begun and planned by Oklahoma State Garden Clubs 15 years ago. Each year Garden Club members in the workshop location, along with the Dept. of Transportation, do the planning and act as hosts for the workshop. For the first three years the workshop was mainly Garden Clubs of Oklahoma carrying the responsibility. Later, Transportation personnel became active members. Now the ONPS participates with the photo contest and posters, plus field trip leaders. This has become an outstanding event for wildflower lovers from all over the state, an educational and fun time. ❀

by Marjorie Franklin, ONPS historian

Help, please!

Pat Folley at the Bebb Herbarium, Oklahoma University, needs to contact Ms. Jean Ettner, who once donated some materials to that institution. If you know Jean, or can tell Pat how to contact her, please call (405) 872-8361 or write Pat at 15100 Etowah Rd, Noble, OK 73068.

Barclay Award is presented

The Harriet G. Barclay Award is presented by ONPS each year to the author of the best paper on botany at the Oklahoma Junior Academy of Science. This year the winner is John Smith from McLoud High School. The cash award was presented during the Academy of Science meeting April 4 this year followed by a plaque commemorating the event. It was to be presented to John at his high school award's program.

Jimmy Pigg, Junior Academy of Science coordinator, reports that he and the winner are pleased with the "enhanced" award, and that it is deeply appreciated.

Your support of the Barclay fund makes this program possible. Many thanks to those who have helped make a difference in the life of a young scientist. ❀

Recommended Reading

ONPS vice president, Paul Buck, has recently completed an updated edition of Distribution and Identification of Woody Plants of Oklahoma in the Winter Condition. While the book is very useful during the dormant season, it can also be used during the summer. Keys are based on leaf arrangement, leaf and stipule scars, bud morphology and location, bark and other characters. Distribution maps and drawings by Mark Stern make the book invaluable for field botany in Oklahoma.

The book is available through the Oklahoma Academy of Science. For more information, write Dr. Edward N. Nelson, OAS executive secretary/treasurer, ORU, 7777 S. Lewis Ave., Tulsa, OK 74171. ❀

Review by Nora Jones

Become an Oklahoma Native Plant Society member.

Please enroll me as a Member of the Oklahoma Native Plant Society. My dues payment is enclosed for the category checked. Make checks payable to Oklahoma Native Plant Society, and mail to:

Oklahoma Native Plant Society • 2435 South Peoria • Tulsa, OK 74114

- _____ \$15.00 Family
_____ \$10.00 Individual
_____ \$ 5.00 Student
_____ \$ _____ contribution (All contributions are tax deductible.)

Gift or Unbirthday
From: _____

Renewal

New Membership

NAME: _____ HOME PHONE: _____

ADDRESS: _____ BUSINESS PHONE: _____

CITY: _____ STATE: _____ ZIP: _____

Call for nominations NOW!

September 1, just over two months away, is the deadline, but this is the final reminder in *Gaillardia*: please consider giving your Anne W. Long Award nomination some thought right now.

Consider the purpose of ONPS: "to encourage the study, protection, propagation, appreciation and use of Oklahoma native plants." Do you know a person or organization who has made "outstanding contributions" to this purpose? That's the point of this recognition, named for one of the ONPS founders, Anne Long.

A high school science club received the first award, individuals won for the next two years, and last year's award went to The Nature Conservancy.

Nominations are now being accepted. They should be sent to the Awards Committee chair, Paul Buck, and will be treated in confidence: Send to:

Paul Buck
Biology Department
University of Tulsa
Tulsa, OK 74104-3189

Include in your nomination: complete names and addresses of both the individual(s) making the nomination and the nominee(s); also a contact person if the nominee is an organization. Supportive material should be included for evaluation by the committee. *

Oklahoma Native Plant Society
c/o Tulsa Garden Center
2435 South Peoria
Tulsa, Oklahoma 74114

For your calendar

Orchid trip	Aug. 8	Ruth Boyd, 405-872-9652
<i>Gaillardia</i> deadline	Aug. 10	Marilyn Bell, 918-496-2218
NE Chapter Tulsa Garden Ctr.	Sept. 14	Betty Kemm, 918-742-4351
OAS Fall meeting	Sept. 25, 26, 27 Greenleaf State Park	Connie Taylor, 405-924-5163
ONPS Annual Meeting in Alva	Oct. 3-4	Paul Nighswonger 405-327-2752
ONPS Indoor outing	Feb. 5-6, 1993 Stillwater	Mike Palmer 405-547-2621 or 744-7717

Central Chapter (Oklahoma City area) meeting/field trip info, call Pat Folley, 405-872-8361.

For Northeast Chapter (Tulsa area) suggestions for summer field trips, call Betty Kemm, 918-742-4351.

*PLEASE let us know if you are moving.
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