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.

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Winter, 1993

COPY AND ART DEADLINE FOR NEXT ISSUE IS 15 FEBRUARY 1994.

CALENDAR

December 1993: No Central Chapter meeting due to holidays.
January 1994: No Central Chapter meeting due to Indoor Outing at OU.
1 February 1994: Photo Contest Deadline. See page 8 and application form on insert.
5 February 1994: Indoor Outing at University of Oklahoma's Bebb Herbarium See insert for details and registration form.
28 February 1994: 7:30 p.m.: Kirkpatrick Horticulture Center, NW 4th @ Portland, OKC: Speaker, Dr. Gloria Caddell of CSU on the Natural History of Japan.
28 March 1994: 7:30 p.m. Kirkpatrick Horticulture Center, Peggy Brennan demonstrating basket-making using native plants.
2 or 9 April 1994: Spring Field Trip to NE woodland. Details in next issue.
29-30 April 1994: Oklahoma Academy of Science spring field meeting.
23 April, 1994: Central Chapter field trip if spring is early and warm. Otherwise, an indoor program. Regularly attending Central Chapter members will be notified. Others may call Ruth Boyd at 872-9652, about mid-April.
20-21 May 1994: Wildflower Workshop, to be held in Tulsa
28-30 May 1994: ONPS spring outing.
18 June 1994: ONPS Board Meeting
13 August 1994: Bog-tripping field trip to SE Oklahoma
15-16 September 1994: ONPS Annual Meeting: Durant area.

MEET YOUR NEW BOARDMEMBERS

Ann Randle, Duncan

Ann was born in Alabama and finished her schooling in Kansas. She received a dual degree from KSU, a BA in architecture and a BS in education. Her husband, Bill, is a veterinarian. After moving to Duncan for Bill to open a clinic, Ann taught in the public schools for several years before obtaining a position with a landscape architecture firm and nursery. The training she received there, plus her drawing and design skills developed in college and post-graduate college courses like plant taxonomy allowed her to open her own business in garden design, "Colorscape". ⊕

Frank Carl, Okeene

Frank received a BS in Zoology from OSU. He has been employed as a Wildlife Biologist with the Oklahoma Department of Wildlife Conservation for twenty-four years, the last sixteen as West Region Game Supervisor. He is also a free-lance nature photographer and belongs to many conservation-oriented organizations. With his wife, Jauretta, Frank shares as hobbies 'birds, bugs and butterflies'. They are eager to learn more about wildflowers. ⊕

NEW COLUMN ANNOUNCED: WILDFLOWER WORKBOOK

The board meeting held on October 17th included a discussion of possible additions to the content of this publication. The following is a new column that resulted from one of the suggestions. Whenever space allows, articles will be included in each issue detailing the propagation of a native plant species. An attempt will be made to focus on those varieties that have more th ordinary value in the domestic landscape - perhaps with suggestions for use, site selection, possible sources or comments on the behavior of the plant in question when it is in a garden situation. Authors of these articles may vary. Respective interests and expertise will no doubt be reflected in their writings. Members with supplementary knowledge of any species written about should feel free to contribute - especially if that experience is in contrast to conventional wisdom. I have personally wanted to contradict 'experts' often enough to offer readers this opportunity, atleast when I am doing the writing. I don't want to be left out of the learning.

GOING WILD IN TAME PLACES

Jim Wilson in his latest book, 'Landscaping With Wildflowers' calls Purple Coneflower America's favorite meadow flower - a good enough reason to begin a new column with this plant as the subject. Another good reason is I have some experience with it as a garden subject and don't have to make up anything. Native plant enthusiasts are familiar with more *Echinacea* species than *E. purpurea* but may not be aware that there is a white selection available to the gardener as well as the bright rose and pale pinks common in the wild. All selections are useful for those seeking good cut flower subjects as well as plants for butterfly gardens, perennial borders and general domestic landscape use. Seed can be collected from the large, - to 1" across -dark, globose seed heads that are obvious in the prairie landscape in June and July. Seed is also available from most large seed companies. Propagation of this perennial is fairly easy from seed but seedlings will vary slightly in height and flower color and size. Sow outdoors, in place, any time from mid-spring to mid-August if you can keep the soil damp for the two weeks it may take for germination. I consider it easier to plant the seed in a potting medium, contained in a clear plastic shoebox that is watered well and then placed in a window sill with the lid closed until germination occurs. Those of you with more sophisticated equipment like heat mats or cables can get germination between 70 and 75°F. Germination usually occurs within 7 or 8 days with any of the inside methods. *E. purpurea* and its cousins puts down a tap root when still young and should therefore be planted out, or transplanted if necessary as soon as good true leaves show themselves. I have tried to dig up Purple Coneflower in the wild more than once unsuccessfully. At the time, I was unsure of what seedlings looked like, or was unable to locate any young enough. Digging up mature plants necessitates severing the tap root and I suspect this is what killed the plant.

Young plants are available both by mailorder and in local nurseries that carry garden perennials. If you choose to start y plants this way, order early or watch for the plants from early spring on. As soon as they appear, purchase them and plant as soon as possible. I have turned my back to the clerk and lifted the plant from its pot in the nursery when I thought I wouldn't get caught. That way I could check the root system for the tell-tale tap root circling around and around inside the confines of the pot; this is a sure indication that the plant has been left too long in that size pot and should not be purchased. The 4" size potted plants seem to do better in the long run than the larger 1 gallon size plants nurseries are so fond of selling you.

Experts such as Wilson say Purple Coneflower stays in bloom for weeks. Strictly speaking this is true but gives the impression that the bloom is continuous - which is mostly not true. In southwestern Oklahoma the best bloom occurs in early summer up until the heat of mid July seems to wear it out. Bloom then reoccurs from September until nights stay consistently below 45 or 50°F. Flowers of late summer are smaller than their 3 to 4" antecedents, about 1" across, and occur at a lower height if you prune back the plant after the first flowering of the year is finished. Eliminating deadheading allows finches to find the seed heads but also encourages the plant to reseed itself if you have soil damp enough. If you wish to add the resulting seedlings to other places or gardens, move them as soon as they have a couple of good size true leaves. If you don't move them you will soon wish you had drawn that garden plan you never got around to because you won't be able to remember what it was they engulfed in their quest for more space. Regardless of how begin your plants, propagation or procurement, they never need staked in southwest Oklahoma's wind even though they can reach 3 feet tall at their peak. Unlike many wildflowers they survive, even thrive with the regular watering and rich soil that regular flower or mixed beds often require. The only pests I have observed are worms that occur on occasional plants in the spring. These are 1/4 to 1/2" long, black and specific in their appetite for purple coneflower. (I don't know what they are or if they would grow, shudder, bigger if allowed to consume my flowers. Perhaps we need a new column written by entomologists.) Insecticides recommended for vegetable gardens work well on this problem. If you are an organic gardener keep a close watch for these pests because the best treatment is Bt in a powder form (Dipel). This works, but too slowly if you don't catch it early.

Combine the common Purple Coneflower with a pink, weeping, mini crepe myrtle and blue salvia (*S. farinacea 'Blue Bedder'* and *S. f. 'Victoria'*) in a traditional border. Use with grasses like the Bluestems or Fountain grasses for a prairie effect that tolerates drought better. If you have other good ideas for partner plants, wild or tame, give me a call.

Ann Randle, owner
COLORSCAPE
Garden Design & Consultation

2300 Fairway Dr.
Duncan, OK 73533-3212
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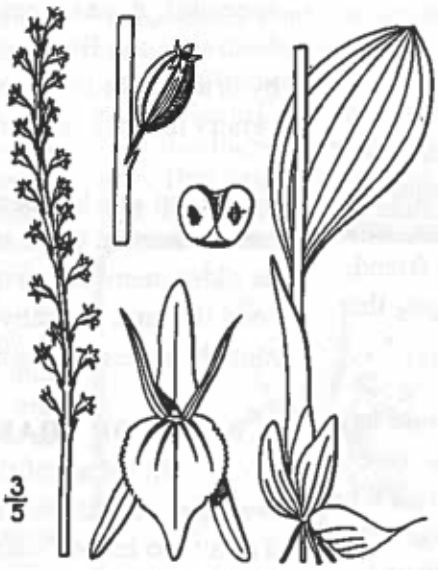
ANNUAL FALL MEETING AND FIELD TRIPS

by Connie Taylor

Good things come in threes. This was true for the annual meeting.

Martin Park in NW OKC may be old hat to many ONPS members, but it was my first trip. The Bur Oaks (*Quercus macrocarpus)* along the creek were an ecosystem I had not visited in some time. Other interesting plants were the soapberries (*Sapindus drummondii)* and the many vines including Snailseed (*Cocculus carolinus)*, two greenbriars (*Smilax spp.)* and of course, some poison ivy (*Toxicodendron)*. As one strolled the paths many plants were seen that could be used in dried arrangements. The park acreage is limited, but the pathways are designed in such a way that many non-repeating trips can be made to different areas and habitats. The prairie dogs were showing off for kids of all ages.

The orchids of Oklahoma were given full coverage at the Saturday evening banquet. Larry Magrath showed us photographs of Oklahoma's orchids and talked about each one, emphasizing diagnostic characters and distribution. About 25% of all orchids in the state are either in very limited and threatened habitats or have been exterminated from our state. Clearcutting, overgrazing, and one shopping area are the main culprits. He distributed a handout listing each of our orchids with their common names and other pertinent information. Although our orchids all have small flowers, many are spectacular, and each small individual flower is a jewel to behold. Coming in the smallest package is the Green Adder's Mouth (*Malaxis unifolia*) with flowers about one millimeter wide, and the whole inflorescence of a hundred or more blossoms smaller than a sunflower.



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Malaxis unifolia Michx.

Ruth Boyd announced "Even if it rains, we are going to Roman Nose State Park." Determination paid off despite showers and threats of showers. We assembled at the Lodge parking lot for a small overview of the ecology of the area and it looked like we would get mighty wet. We moved down into the forest along the creek, protected from the rain drops by the big bur-oak trees, and looked at many different plants. Here the snailseeds had hundreds of bright red berries still on the vines. We came up and out of the forest into grassy bluffs and clearing weather. It ended up perfect for a hike. Among the many flowers we saw were goldenrods (*Solidago spp.)*, gayfeathers (*Liatris spp.)*, and more unusual plants like false gaura (*Stenosiphon)* and on the top of the bluff where the gypsum rock protruded through the thin soil, was the late-blooming nailwort (*Paronychia)* and a tightly matted covering of liverworts The invasion of red cedar (*Juniperus virginianus)* and numerous woody shrubs is changing the very character of this state park. An added highlight was the visit to the springs that have made this area such a valuable place for thousands of years.

Special thanks to Clark Ovrebo for making the arrangements for such a delightful meeting.

METHODIST CANYON TRIP

by Jimmy Norman, Co-chairman

From just about every standpoint, I believe our ONPS field trip to Methodist Canyon on September 11 was an unqualified success. Whether this is due to the fact that I had so little to do beyond selecting the site and making the basic arrangements, we won't quibble.

It was 10 a.m., and the **seventy** of us who had paid $5 to cover lunch and insurance at the Methodist Conference Center, south of Hinton, were gathered outside to hear Prof. Paul Buck's remarks describing the botanical uniqueness of this and the other Caddo County canyons. He told us that many of the plants growing on the floor of the 70-foot deep canyons, such as the sugar maples (*Acer saccharum)*, are relicts of a more humid climate when the eastern deciduous forest probably extended farther west. Plants growing in the canyons are sheltered from the strong, drying winds on the exposed upland nearby. The nearest naturally-growing sugar maples are in Muskogee County, 175 miles to the east.

Following this brief and pertinent introduction to the Caddo Canyonland botany, we separated into two groups, with Drs. Connie Taylor and Paul Buck as leaders, for a

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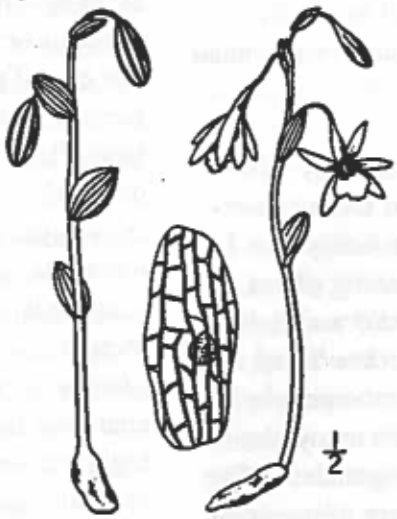
quick before-lunch look at the flora of the canyon floor.

Unfortunately, it isn't necessary to be a botanical genius to recognize that Methodist Canyon is being used to death. Civilization - you might call it "the hand of man" - is taking its toll. Much of the original canopy of trees has been removed to make room for the camp and all of its necessary trappings - exposing the soil to the point that erosion is now a real problem.



Triphora trianthophora

What was not a real problem, though, was the delicious buffet lunch served up by Camp Director Kathy Pierson, with whom all arrangements for our use of the camp facilities were made.

By now, with lunch over, and having pretty well exhausted the botanical possibilities in Methodist Canyon, I was at a loss as to what to suggest all 70 of us might find to do of botanical interest from 1 p.m. until quitting time. So I'll always be grateful to my long-time birding friend, Mitchell Oliphant, of Oklahoma City, for suggesting that we go botanizing in Widowmaker Canyon.

I'd never heard of the place, but at this point I would have agreed to go anywhere. A 15-car caravan rapidly took shape, and if we had only turned on our headlights, I'll bet the people who lived along our route would still be talking about the longest, fastest funeral procession they'd ever seen! Thankfully, Mitch knew just which turns to make, so our fifteen cars were soon stacked up at a locked gate over which all 70 of us clambered. That done, we filed down the steep road which had been hacked out of the Permian redbed wall of the canyon.

What a beautiful surprise Widow-maker was, after traveling through miles of overgrazed prairie and thickets of stunted blackjack oak, to descend into a veritable jungle of large trees - tall and straight - more like those I am accustomed to seeing back home in the bottomlands of West Tennessee. Sugar maple was clearly the dominant species, but I was even more impressed by the black walnuts (*Juglans nigra)* 24 inches or more in diameter, maybe 35 feet up to the first branch - tall and straight - they just don't make 'em like that anymore!

Other arboreal beauties were boxelder (*Acer negundo)*, American elm (*Ulmus americana)*, hackberry (*Celtis spp.)* and Texas red oak (*Quercus shumardii*). Incidentally, the State Champion Boxelder grows right near here in Red Rock Canyon State Park. This tree is a rotund four feet in diameter and is 65 feet tall!

Another real plus here in Widowmaker was the discovery by Jeff Burkhart's wife, Lisa, of *Triphora trianthophora*, or three-bird orchid. When the rest of us got the hang of looking for it, we found many of the tiny orchids. According to Larry Magrath, our orchid specialist, it was a new location for the species. Aside from this, the Burkharts further distinguished themselves by bringing fourteen of Jeff's students from Phillips University in Enid. Is that admirable or what?

So far, no one has been able to explain just how Widowmaker Canyon came to be so named. But, as several of us older members struggled and panted up the long, steep road through the canyon wall toward our cars, we unanimously agreed the name was well-chosen! ⊛

A WORD OF THANKS

On behalf of the membership and board of ONPS, we offer a great vote of thanks to the faithful crew in Tulsa who helped with the assembly and mailing of the ***Gaillardia*** for the past 6-or-so years. Some of the names we know, like Betty Kemm, our first president and still stalwart supporter; Nora Jones, second president and now *Partners in Flight* coordinator; Karen Haworth, new historian; Paul Buck, sometime vice-president, advisor, awards committee chairman and always dependable; Marilyn Bell, who edited the newsletter as well. It is often the quiet and hard-working who don't get noticed until they are lost, and we apologize to those whose names we didn't mention. May your rewards be many and often! ⊛

"Someday, after we have mastered the winds, the waves, the tides, and gravity, we shall harness for God the energies of Love. Then for the second time in the history of the Earth, man will have discovered fire."..... Teilhard de Chardin

Guest article, reprinted by permission from the Southern Appalachian Botanical Society's *Chinquapin*.

BOTANICAL EXCURSIONS

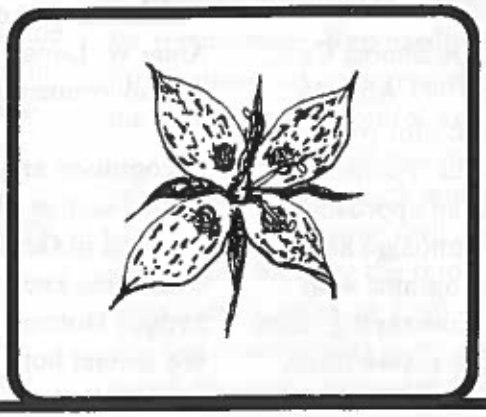
By George Ellison

As enumerated in the first installment of this newsletter, the manner in which we locate, identify, learn about and become infatuated with certain plants and habitats is continually fascinating. The entire process — not just plant location and identification — is one I like to think of as "botanizing." The process itself becomes addictive, so that we continually require new plants and new habitats to contemplate. This Botanical Excursions column will focus upon specific plants or habitats found in the southern mountains and adjacent regions, but the ongoing process through which one explores and ultimately comes to terms with the natural world will always lie at the heart of the matter.

For the most part, it's the commonly encountered plants that get us through the year: hepatica, bloodroot, trout lily, bellwort, wild geranium, the trilliums, etc., in spring; Turk's-cap lily, soapwort, passion flower, evening primrose, mullein, morning glory, Joe Pye weed, etc., in summer; gentians, goldenrods, asters, lady's-tresses, witch hazel, etc., in fall; and the evergreens in winter. Like old friends, we touch base with them regularly or simply observe them from afar while driving to and from work. They're the backbone of our floral universe.

Less frequently encountered plants spice up botanical excursions, providing incentive and focus. Who wouldn't want to come upon a plant previously unreported from the Southern Appalachians, or establish a new state record? Few of us, alas, will have that opportunity. We can rather easily, however, enliven outings by seeking previously unreported plants in our home counties, region, or wherever we happen to be botanizing with some regularity.

Here in western North Carolina, the process of establishing which plants have been reported from the general mountain area or specific counties is relatively simple. One starts with the Manual of the Vascular Flora of the Carolinas (University of North Carolina Press, 1968) and the updates by J. Dan Pittillo, et al. published in the JOURNAL OF THE ELISHA MITCHELL SOCIETY, vols. 85, 88, 104 (1969, 1972, 1988), pp. 18-22, 144-152, 1-18. B. Eugene Wofford's Guide to the Vascular Plants of the Blue Ridge (University of Georgia Press, 1989) doesn't provide dot-map county locations, but does indicate whether a given species has been reported from the portions of Virginia, North Carolina, Tennessee, South Carolina, and Georgia that lie within the Southern Blue Ridge Province. This data can then be fine-tuned with more recent information appearing in various journals (like CASTANEA), checklists (like Flowering Plants of the Great Smoky Mountains), and the regularly updated Natural Heritage Program List of the Rare Plant Species of North Carolina. These same sources — except for the Smokies checklist and Natural Heritage Program List — apply to South Carolina as well, but those of you in other states will have to work out your own methodology, which is part of the fun.



Each petal of American columbo (*Frasera caroliniensis*) features a fringed, nectary gland that attracts pollinators, often sweat bees, to serve as pollinators.

— Drawing by Elizabeth Ellison

I've marked a copy of Newcomb's Wildflower Guide to indicate those species that haven't been reported from Swain County, N.C., where I live and do most of my botanizing. Collecting and pressing herbarium specimens to establish Swain County records for plants like fairy wand (*Chamaelirium luteum*) solitary pussytoes (*Antennaria solitaria*), pennywort (*Obolaria virginica*) lily-of-the-valley (*Convallaria montana*) auricled tickseed (*Coreopsis auriculata*) eastern agave (*Manfreda virginica*), and most other species doesn't really interest anyone except me, as they've been previously reported in numerous adjacent counties and merely needed confirmation for this one.

Other finds like the second N.C. county record for goldenseal (*Hydrastis canadensis*), the third N.C. county record for American columbo (*Frasera caroliniensis*), the first station of water willow (*Justicia americana*) reported west of the Balsam Mountains in North Carolina, and an extensive stand of glade spurge (*Euphorbia purpurea*), which is listed as one of the "sensitive plants" in the Nantahala and Pisgah National Forests, are more noteworthy. It's gratifying to be able to add tidbits of potentially useful range information to that collected by several generations of professional field botanists. One does what one can, too, to protect these plants by informing landowners of their presence and by reporting their whereabouts to appropriate state and federal agencies.

Primarily, however, the opportunity to locate plants that one might otherwise never see turns each botanical excursion into a mini-adventure in which anything could suddenly pop up. Like a kid at Christmas Eve, I dream of finding the dainty little goldthread (*Coptis groenlandica*) growing in some remote high-elevation bog in the Cowee Range,

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Excursions Cont:

or locating a station of Oconee Bells (*Shortia galacifolia*) flourishing way back along the headwaters of Second Hurricane Branch. Such dreams — even when not specifically realized — take one into some grand terrain.

Usually we discover the unexpected in curious ways. My wife, Elizabeth, first observed water willow while spincasting in the rapids of the Tuckaseegee River for small-mouthed bass. I first observed American columbo from a van moving at 40 mph along a dirt road near the Cherokee Indian Reservation. The astonished, non-botanical driver thought it was an emergency when I ordered him to halt. On a whim, I stopped a native mountaineer in the post office in Bryson City and inquired if he ever saw goldenseal while hunting ginseng. "Yep, plenty of it," he said, and led me to a mountain just outside Bryson City covered with the stuff. Behind waterfalls, in bogs, down in gorges, on steep cliffs, and in other unlikely places, we'll go on locating plants that may not be new to science but are new to us individually, so long as we devise strategies that keep us looking.

Deliberately searching for a given species in the specific habitat where it might be expected has greatly enhanced my understanding of the diverse flora and natural areas of the southern mountains, even when the plants that actually materialized were the ones least expected. The chance location of a new colony of American columbo exceeding a thousand plants gave me goosebumps on a warm May morning, and inspired me to inquire into a curious life cycle that features prominent, fringed nectaries on each petal and the habit of flowering synchronously at regular intervals.

As an unpaid amateur in the world of botanical exploration, the "county record game" often keeps me going on over that next ridge or around that far bend in the river when otherwise I might retire from the field for the nearest tavern. And the process of continually seeking out new plants in my home county has, in turn, given me a clearer idea of not only where I am but of who I am. Through them and their wonderfully diverse habitats, I have a clearer notion of my exact place in the world.

Bryson City, N.C., writer/naturalist George Ellison writes a weekly Nature Journal column for the "Smoky Mountain Neighbors" supplement of the ASHEVILLE CITIZEN-TIMES; teaches plant identification workshops for various institutions; and serves as a field trip leader for Western Carolina University's annual Native Plants Conference. His upcoming Botanical Excursions piece will consider the periglacial boulder fields found throughout the Blue Ridge Province.

1993 ANNE W. LONG AWARD RECIPIENT

by Paul Buck, Awards Committee Chairman

Sydney Dobson, Executive Director of Oklahoma City Beautiful, Inc., was the recipient of the 1993 Anne W. Long Award. Director of the organization for over ten years, she is responsible for the successful "Pennies for Wildflowers" project in Oklahoma City, an approach which raised $10,000 during the 1993 campaign alone. Sydney oversees numerous additional programs with "Adopt-a-Park", wildflower plantings, landscaping, community clean-ups and the development of nature trails, citing just a few. She is the dynamic driving force for the Oklahoma City Beautiful program which has funneled over $1.25 million into the beautification of the Oklahoma City community. Sydney clearly exemplifies Anne W. Long's philosophy of the giving of one's self for the environmental improvement of the community.

Recognition and the presentation of a plaque was made at the banquet of the Society's 1993 annual meeting at Edmond in October. Those of us who were acquainted with Anne know she is pleased with the selection of Sydney Dobson for the 1993 Anne W. Long Award. We extend both our congratulations and sincere appreciation to Sydney.

APPLICATION FOR NOMINATION TO 1994 ANNE W. LONG AWARD

Clearly, Sydney Dobson is a tough act to follw, but members are encouraged to give serious thought to nominees for the 1994 award. Please remember the ONPS may annually recognize outstanding contributions to the Society and its goals via this award. Individuals, groups of individuals, scout troups, church groups, science or environmental organizations, businesses, etc. that have contributed to the purpose of the ONPS shall be elligible for the award. [Note: ONPS board members are not eligible for this award.] Send nominations directly to the Awards Committee Chairman: Rahmona Thompson / Biology Department / East Central University / Ada, OK 74820. The Deadline is 1 September, 1994 and all nominations will be treated in confidence.

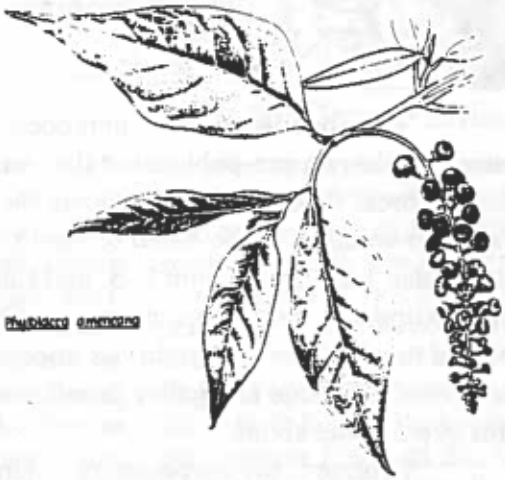
Nominee:_____ **Contact person**_____

Address of nominator(s)_____

On a separate sheet, provide detailed information supporting the nomination. Such background material is essential for evaluation by the Awards Committee.

BOTANIST'S CORNER: POKEWEED

by Dr. Paul Buck, Botany Department, Tulsa University



Phytolacca americana L. is referred to by most Oklahomans as "poke" but goes by a variety of other names across its wide range. Found from Florida to Texas and north to Ontario and New England, it is known as pokeweed, pokeberry, scoke, garget, pigeonberry and inkberry plus at least 20 other common names. The generic name, *Phytolacca,* is from the Greek phyton, meaning plant, and the French lac, or lakecolor. The term is thought to be an allusion to the colored fruit. Of course, the specific epithet, *americana,* is in reference to its geographic distribution in the New World.

A tall, perennial herb to 3 metres, the plant is common in clearings, open places in woods, along borders of woods and in pastures and waste places. It is more or less succulent, bears racemes of small whitish flowers lacking petals and produces a fleshy berry with crimson juice. Youngesters quickly learn how to prepare ink from the crushed berries, a messy process but one producing a functional product. There are letters written during the civil war with poke juice that are still legible today.

Poke is steeped in old wives' tales and folk lore and is considered by many a deadly plant to be feared, avoided and eliminated, since it does contain poisonous compounds. However, it is of value as food for both wildlife and humans and has medicinal value.

The tender shoots have been used as pot-herbs for years but must be carefully prepared. The young shoots must be cooked thoroughly and the first water in which they are cooked discarded. They are rich in vitamin C and make excellent greens or substitutes for asparagus and appear canned on grocery shelves as "poke salet".

I've had people claim the very young shoots can be eaten raw with impunity but on the other hand, personally know individuals who suffered (from both ends of the alimentary canal) after ingesting uncooked leaves. The berries are edible when cooked and in making pies. They are also used in making wine and many amateur wine makers will eagerly relate their experiences with poke wine.

Many wild birds, including mourning doves, robins, cardinals, blue jays and waxwings, plus small mammals consume the berries. Poke is an excellent native plant for attracting wildlife into the back yard. It is attractive early in the growing season and particularly colorful in the fall when the leaves turn a brilliant red. It is the root system that winters over and the stems can be easily cut and discarded after the first heavy frost.

As one would suspect, a plant with poisonous properties is probably of medicinal value; after all, the difference between the medicinal and poisonous characteristics of most of our drugs is simply the dosage level. In the 17th and 18th centuries, the fruits were taken to England and used as a purgative and herbalists recommended them for rheumatism. Reportedly, the dried root is still used in Appalachia for treatment of hemorrhoids and washing with a decoction made from the roots helps to control itching.

The native Oklahoma poke is an interesting plant and one of significant value to both humans and wildlife. The next time a volunteer comes up in your yard don't rush out and destroy it - leave it for shelter and food for the birds and small mammals. In the event you wish to try it either as food or medication - use good judgement and find out exactly what parts are to be used and how they are to be prepared: there are documented deaths of humans from eating the berries. ⊕

Contributions needed: Now that I have a desktop publishing program (the thing that makes all those little boxes on the pages), I have had to start a place to paste in stuff that needs to go in all the leftover corners. They're called 'fillers' in the newspaper business, but I think of them, rather, as 'goodies'. And that's the name of the file. Find a 'goody' of your own, paste it on a postcard, slip it in an envelope, even phone it in, and I will give you credit with the first author when it gets used--eventually, if not next time. Send to: Pat Folley / 15100 Etowah Rd. / Noble, OK 73068 / or phone (405)872-8361. ⊕

THE PHOTO PAGE

by Bob Lindsey

December may seem like a strange time to be talking about wild flower photographs instead of cold weather. However, the entry date for the 1994 ONPS photo contest has been moved to February 1, 1994, so it is time to start reviewing and selecting your photographs. The rules this year are basically the same as for last year.

What is it going to take to be a winner this year? The photo must be in sharp focus, the color should be true and bright and it must be an **Oklahoma wild flower.** Good composition will separate the winners from the rest of the group.

The flower(s) should be a good specimen and the background should be visible, but not compete with the main subject. You may choose to underexpose the background (by using flash) or have it out of focus (by using a small f-stop) to create a pleasing background. How do you get the picture sharp? Good focus, no camera shake (use a tripod or high shutter speed), a clean lens, and high-resolution film (slow, ASA 100 or less) will all contribute to a sharp picture.

This year, as every year, the judges will be different. A different 'collective point of view' will be used in selecting the winners. Judges will still be looking for a high quality photograph but their artistic opinions may vary from previous judges'.

Select your photographs carefully to be sure they meet all the entry requirements as listed on the entry form. The ONPS contest should challenge you to improve your knowledge of native plants and your photography skills. I'm looking forward to seeing new flowers and lots of great photographs this year. Remember, the **deadline is February 1!** ⊛

Flora of North America

VOLUMES ONE & TWO

"Announcing an event unprecedented in the annals of plant science..." I have a pre-publication flier on my desk that begins with these words. The flier is announcing the September publication of the first two volumes of the *Flora of North America North of Mexico.* Being that I am on the joint U.S. and Canadian editorial board for this publication, the filer's wording may not be too strong. I have witnessed much of the work that has gone in to production of these books and have seen page and galley proof; it is therefore very exciting to see this event come about.

Volume I, the introductory volume, serves as a compilation of our present-day understanding of floristics and the factors that affect and are affected by it. There are chapters on soils, weeds, plant conservation, past botanists, and classification systems. This book with its beautiful maps will be an excellent resource. There are several chapters that I may require as reading in my plant taxonomy class.

Volume II covers all the ferns, fern allies (Psilotophyta, Lycopodiophyta, and Equisetophyta), and gymnosperms (Cycadophyta, Ginkgophyta, Coniferophyta, and Gnetophyta) that grow in North America north of the U.S./ Mexican border. Represented are 627 species and 92 genera. Additionally, the book has identification keys; 600 distribution maps; descriptions for families, genera and species; and many illustrations. The flier describes the project as "it distills the original herbarium, laboratory, and field work of hundreds of contributors....who have joined forces to develop this century's premier tool for identifying, understanding, and conserving North America's priceless floristic heritage."

I know it is not too decorous to brag about something that involves yourself. But these two volumes were primarily the product of my colleagues in the project and their time and efforts. So I believe my applause is within the bounds of good taste.

I recommend that you seek out copies of these books and examine them for yourself. I have no doubt that you will be as impressed as I. [Publication information: Oxford University Press; Volume I, ISBN 0-19-505713-9, $75.00; Volume II, ISBN 0-19-508242-7, $75.00]

by *Rahmona Thompson, Biology Department, East Central University.* ⊛

"The blunt truth of it is, as technologically sophisticated as we are, we are no more capable of completely reconstructing a simple, natural habitat than we are of building a human body from scratch." Sally Wasowski, from ***Requiem for a Lawnmower***

WILDFLOWER CHECKS AVAILABLE

Personal checks with a wildflower theme are now available through Designer Checks, P.O. Box 12967, Birmingham, AL 35202-2967. There are four wildflower designs per set. Featured are gentian, yellow evening primrose, daisy and wild geranium. Cost is $4.95 for 200 regular checks or $5.95 for 150 duplicate checks. (The prices are probably less than the cost at your local bank). The price includes an equal number of mailing labels. For more information, contact the address above or call 1-800-239-9222 during regular business hours. Be sure to send a check reorder form or a voided check so they can get the bar-code from it.

[Ed. note: this is not a paid AD. I ordered some of these and found them to be very well-designed. ⊕

CONSERVATION CORNER

NON-NATIVE PLANTS

(or, what the Native Plant Society isn't about) by Dr. Mike Palmer, Botany Department, Oklahoma State University

As stated on the cover of this newsletter, the purpose of the ONPS is to encourage the study, protection, propagation, appreciation and use of Oklahoma native plants. It is very important to stress the *native* plants, because plants not originally native to Oklahoma have invaded all portions of the state, and in many places are causing substantial changes in our ecosystems. According to a recent report by Connie Taylor at the Oklahoma Academy of Sciences, approximately 1/8 of the plant species growing outside of cultivation are non-native (exotic). Some of my research reveals that the proportion of exotic species occurring in locales throughout the American west ranges from 1/10 to 1/3 of the species.

Exotic plants have been introduced by various means. Some were introduced centuries ago by ocean vessels which used soil as ballast. Others were intentionally introduced as food or medicinal plants. Some of our more recent introductions were introduced for ornamental purposes (e.g. Japanese honeysuckle and multiflora rose), erosion control (e.m. sericea, kudzu), or forage (numerous species of grass). Most of our exotics originated in Europe, but Asian species account for many of our recent introductions, especially of woody plants.

Interestingly enough, American species have not done very well in Europe, despite ample opportunities for them to escape. However, American goldenrods and asters have successfully invaded Japan. The reasons for the success of European plants have been well described in Alfred Crosby's very readable book, Ecological Imperialism: The Biological Expansion of Europe, 900-1900, Cambridge University Press, 1986.

Exotic species can be major problems for conservation. Salt cedars (*Tamarix chinensis)* have completely altered the hydrology of major river systems, thus threatening native wetlands. Punk Tree and Brazilian Pepper have altered the water flow in the Everglades. Purple loosestrife has wreaked havoc on diverse wetland communities throughout much of the United States. Cheat grass has caused extensive ecosystem change in the upper great plains. Japanese honeysuckle has smothered rich forest understories in the southeastern United States. English ivy has done similar damage in the Pacific northwest forests, as has European buckthorn for the forests around the Great Lakes.

Closer to home, Japanese brome and cheat grass have become a part of almost all Oklahoma tallgrass prairies. Since these species fill a niche not occupied by native species (that is, winter annuals of grasslands), it is probable that they change the amount of nutrients available to native vegetation. Johnson grass can also occasionally invade native paririe; once established it is very difficult to eliminate.

For the most part, human disturbance (e.g. trampling, cultivation, logging, land development) increases the number and abundance of exotic species. However, there are some exotics which successfully invade relatively undisturbed land. With a few exceptions, ecosystems dominated by nonnative species do not support a high diversity of animal species.

Fortunately, there are a number of techniques which work against some exotic species, according to a recent review of the literature by restoration ecologist John Berger (Restoration Ecology, Vol. 1, pages 74-82). Precisely timed fires are successful against white sweet clover and garlic mustard, though they accelerate the spread of buckthorn. The restoration of water flow to stagnant pools appears a promising way to control exotic aquatic weeds in Florida. Cutting and uprooting works for some species, but is infeasible for others. As a last resort, herbicides have been used agains exotics (this only works in cases such as woody plants where one can affect only the target species).

Perhaps the most exciting technique against exotics is biological control, in which an insect (or occasionally mite) species which

.....continued on page 10

.....continued from page 9
specializes on only one species of exotic plant is introduced. Ideally, the host plant is driven to extinction (outside of its native range, that is), by the insect, which then automatically goes extinct. Somewhat less desirable, but certainly an improvement, is the situation wherein the exotic plant is kept under control at a low abundance level. In the worst case, the insect switches from the exotic plant to a related species of native plant. This accentuates the need for a thorough understanding of the plant's and the insect's biology. Biological control based on such an understanding now holds much promise in the campaign against purple loosestrife, Klamath weed, and tansy ragwort. ⊛

CENTRAL CHAPTER REPORT

by Susan Chambers

September 26, 1993: The Central Chapter met at the Bebb Herbarium on the University of Oklahoma Campus. In a short business meeting, President-by-default Ruth Boyd made a plea for volunteers to take some of the chairmanship duties remaining unfilled. There were no takers.

Then, the fourteen members and guests present were treated to a tour of the Electron Microscopy Laboratory adjacent to the Botany building. Dr. Scott Russell demonstrated two different kinds of electron microscopes, the special glass and diamond knives used to prepare material for use in the machines, and made prints of some pollen grains while we watched. Mrs. Russell added to the occasion by serving coffee and cookies in the conference room. It was an exciting and educational visit.

For our November meeting, we met once again in the Kirkpatrick Horticulture Center in Oklahoma City. Twenty-two members and guests heard Dr. Clark Ovrebo present a slide program on the Natural History of Costa Rica. The slides were really awe-inspiring and the anecdotes about the La Selva Biolgical Research Station were exciting enough to make a person wish for a round-trip ticket. Dr. Ovrebo, a mycologist and professor at UCO, Edmond, showed slides of tropical rain-forest plants, poison dart frogs, boa constrictors, pit vipers, and much more. Following the program, we exchanged plants and seeds donated by several of our members and heard an update on the east-shore Lake Hefner project, to which we contributed.

As we will have no regular meetings in December or January, due to the time involved in sponsoring the Indoor Outing, our next meeting will take place on February 28, when the featured speaker will be Gloria Cadde also a professor of botany at UCO, on the Natural History of Japan. ⊛

BOARD MEETING

The CCAS Board met at the Norman Public Library on Saturday, December 4 for the traditional new/old board and officer training session. With most of the key players on hand, and a packed agenda to fill, we had a busy and productive day. Some highlights included Nora Jones' huge *Partners in Flight* report, planning for several statewide field trips and the next-October annual meeting, and settling the problem of distribution of mail. Have you ever wondered why it takes so long for your check to clear? Then consider that it is picked up at the Tulsa Garden Center, read and sorted by Betty Kemm and Paul Buck, then forwarded to Secretary Darlene Michael if an update to the membership records is needed, to Membership chairman Susan Chambers if it's a new membership, then forwarded to Treasurer Judy Jordan for deposit into our treasury. It takes a lot of folks to run a state-wide ganization.

Winter weather doesn't stop us, either. Next big plans are for the Indoor Outing. Be sure to read the enclosed brochure and get your reservation in! ⊛

SCRAPBOOK ITEMS WANTED

by Ruth Boyd

Karen Haworth of Tulsa is our new historian. If you (all of you) attend any ONPS function and have taken pictures or other souveniers, please share them with us so that they may be placed in our scrapbook. Also, if you see items in your local newspaper about our activities, please share these also. Contributions may be sent directly to Karen at 1043 E. 37th, Tulsa, OK 74105. ⊛

NEW MEMBERS

ONPS proudly welcomes these new members: Phyllis Bernard, Edmond; Phillip Crawford, Lindsay; Leslie Cole, Edmond; Carol Eames, Tulsa; Frances Heston, Norman; Ron & Gloria Hoggard, Piedmont; Carol Robins, Stillwater; Melissa Nagel and John Shackford, Oklahoma City; Bob & Dorothy Smith, Tulsa; Karen Teeter, Madill; and Julia Whitworth, Atoka.

See anyone you know on this list? Give them a call.

The *Gaillardia*

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NOTICE

> Pre-registration is now required for all field trips.
>Field trip announcements will contain the name, address, and telephone number of the leader. If you have doubts about terrain, difficulty, etc., ask.
>Field trips take place rain or shine. Proper dress and shoes, hat, etc., are essential. Bring water and lunch.
>Participation is at your own risk
>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
Next state-wide event is the Indoor Outing at OU on February 5. .Registration form is on the colored insert. Or call Ruth Boyd at (405)872-9652.

Think about it: "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise." .....Aldo Leopold

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 [_]Gift from_____
_____$5.00 Student ____$200.00 Lifetime Individual _____
_____$300.00 Lifetime Family [_]Renewal [_]New Membership
_____$_____ contribution for_____ (All contributions are tax deductible)

NAME_____HOME PHONE_____

AFFILIATION_____

ADDRESS_____BUSINESS PH._____

CITY_____STATE_____ZIP_____

RENEWAL TIME!

Please look down at your mailing label ☞ If the top line has a date entry of 12-93 or before in the third "word" position, your renewal for 1994 is due. (The first "word" is your membership group: IM for individuals, FM for families, SM for students. The second "word" indicates the time you joined ONPS.) If you are a LIFE member, why not use this notice to send a gift subscription? Our low rates make it easy for anyone interested in natural plants to get in on our great field trips, interesting and educational programs, and lots of new friends. Just fill in the application on page 11 and send it to the Tulsa Garden Center address, and we'll do the rest. ⊕

NEED A GOOD BOOK?

I got a really great deal on Rick Imes' *The Practical Botanist*, published in paperback at $21. This beautiful and well-written book leads the reader through an introduction to botany, cultivation of wild plants in a garden, identification of new plants, and building a personal herbarium. Color illustrations on every page, suitable for high-school through adults. At my cost, $7 plus $2 postage and 35 cents tax.

More! John and Connie Taylor's wonderful cross-reference and checklist for all the plants known to grow wild in Oklahoma, up-to-date and with full index to both common and scientific names. $9 to cover cost of printing, plus $3 postage and 40 cents tax. Call Pat Folley or write at the address in the publication box on page 11.

For a really good map of your local area, order 1:24,000 topographical maps from the Oklahoma Geological Survey / 100 E. Boyd / Norman OK 73069. Specify Range, Township and Section needed (or name the town you want covered). Maps are $2.50 each + $1.50 postage for one to ten maps. Index free. ⊕

"If the biota, in the course of aeons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? To keep every cog and wheel is the first precaution of intelligent tinkering."
..... Aldo Leopold

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