

CLAYTONIA

Newsletter of the Arkansas Native Plant Society

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Special
Feature

Book Review: Know Your Natives a compilation of wild-
flower images, *Sid Vogelpohl*, review by *Virginia McDaniel*

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Several years ago I had the opportunity to attend an Arkansas Native Plant Society (ANPS) field trip to Sid and Jeanette Vogelpohl's property in Logan County. It is a beautiful piece of land on a ridge

and valley just north of Mt. Magazine. We spent the brisk spring morning wandering the bottomland woods and fields, crossed the creek and ascended the steep bluff to his house. We'd seen a number of interesting plants and habitats, but

it was when we arrived at his house that my jaw dropped. Leading off from the back porch was an endless stream of carefully constructed plant beds made of local rock and housing hundreds of native plants. It was just beautiful and made clear to me Sid and Jeanette's dedication to the conservation of native plants. It is with this same dedication that Sid and Jeanette have brought us *Know Your Natives*.

Know Your Natives is a book based mainly on Sid's postings, but also those of a few other ANPS members, to the Society's website (October 2013 – December 2014). In it are stunning photos of many popular native plants and descriptions of key characteristics. He often juxtaposes several closely related species and provides tricks for telling them apart. For example, you can tell the "leaves of three" you shouldn't touch from the more benign fragrant sumac by the fact that poison ivy and poison oak have central leaflets with petiolules (stalks of leaflets) whereas fragrant sumac does not. The book also provides a gentle introduction to botani-

cal terminology. If you have ever used a dichotomous key, you know it is like reading another language: decumbent, squarrose, secund, villous, etc. But Sid provides definitions of these foreign words

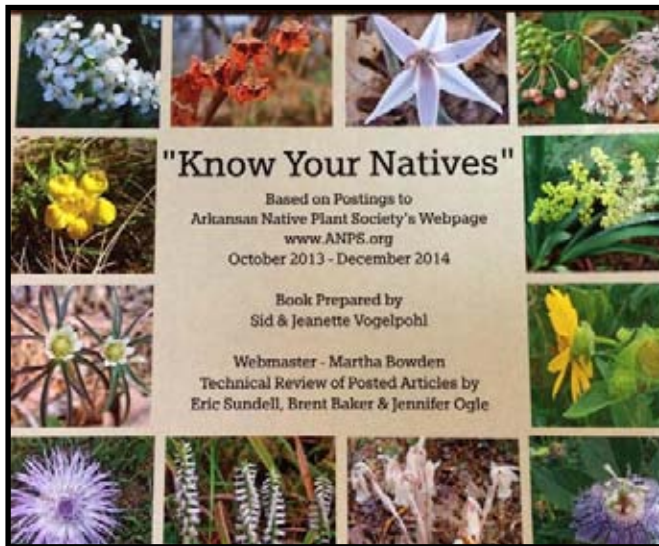
throughout his descriptions. I even found a word that I have been unable to think of for years: decussate = leaves that rotate 90 degrees from one pair to the next as exhibited by water willow (*Justicia americana*) and meadow-beauty (*Rhexia* spp.).

From the detail with which these descrip-

tions are written, it is obvious that this knowledge was gained by meticulous observation and not merely taken from a book or Google search. Sifting through some descriptions can be challenging, but in each description there is a gem of knowledge that I was glad to discover. For example, as the fruit capsule of Indian pipe ripens, the flower moves from nodding to upright for more effective seed dispersal. And the pipevine pollination strategy is ingenious, but I will stop before I give any more gems away.

As previously mentioned, the photos are excellent; but more than that they are educational. Sid often shows the plants in vegetative form, flowering, and fruiting. In my botanical work it is important to recognize a plant in all its forms and this book is great for teaching that information. *Know Your Natives* is an interesting and educational read for the lay person and professional alike!

It is available from <https://knowyournatives.shutterfly.com/>.



ANPS Spring 2015 Meeting

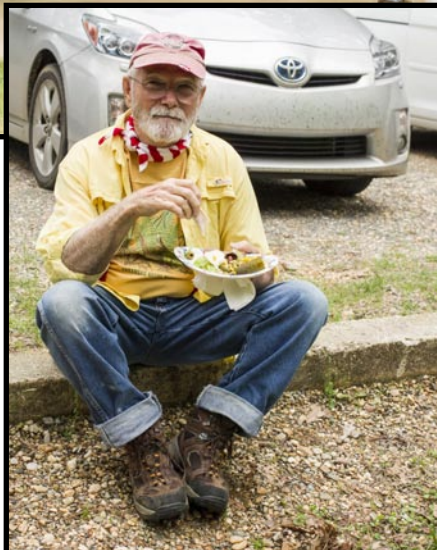
by Michael Weatherford

ANPS held its annual spring meeting in Monticello on April 17-19, with 54 members and guests in attendance. The meeting featured our first silent auction where attendees had the opportunity to bid on books, photographs, art, spring plants and other items related to Arkansas native plants. Botanist Brent Baker presented an interesting program on the saline prairies which occur in areas near Monticello. Karen and Marvin Fawley, both professors at University of Arkansas Monticello, presented fascinating information about the history, features and future plans related to the herbarium located on the UAM campus. Field trips included the Warren Prairie Natural Area in Bradley and Drew Counties and the Bradley County Park nature trail just outside the town of Warren. Warren Prairie is home to many rare plants which occur on saline prairies. The Bradley County Park nature trail features a variety of native plants common to the Gulf Coastal Plain growing on a bluff and along a stream. Field trip attendees enjoyed a picnic lunch, provided by ANPS, at the Bradley County Park.

Below: Many Society members paint their nails prior to attending the meetings.



Virginia McDaniel and Karen Fawley discuss finer points of plant ID.



Left: Joe Wright eats lunch under the watchful eye of a Toyota Prius. Many ANPS members drive a Prius. If you are a Prius driver, you can join the Society for only \$15 per year. Fine Print: Drivers of other vehicles can also join for the same rate.



Above: Meeting attendees are encouraged to bring their children to the Society Meetings. In this photo the children are playing on the swings while the adults enjoy a picnic lunch at Bradley County Park.

Right: A field trip attendee recovers after losing 2 pints of blood to mosquitoes on Warren Prairie. At least we think he recovered. Please check obituaries for John Perrin.



Poison Springs State Forest Sand Barren and Oak-Pine Forest Preserve

Field Trip Report

by Michael Weatherford

On Thursday, May 7, ANPS member Meredith York led a group of nine native plant enthusiasts on a trip through part of the Poison Springs State Forest Sand Barren & Oak-Pine Forest Preserve, located near Chidester, AR. This state natural area, managed jointly by the Arkansas Natural Heritage Commission, the Arkansas Forestry Commission, and The Nature Conservancy, includes more than 400 acres of sandhill barrens and adjacent woodlands. The group in attendance included a mix of ANPS members and guests from central and southern Arkansas. Meredith, who has been faithfully monitoring and photographing native plants in the natural area for many years, knows every square inch of the visited tract and assured us that we did not miss anything of interest. The star of the show was definitely the scarlet beardtongue (*Penstemon murrayanus*) which was in full bloom. Other group favorites in full bloom included nodding penstemon (*Penstemon laxiflorus*), woolly-white (*Hymenopappus artemisiifolius* – say that one five

times without stopping and get a free ANPS membership!), Carolina puccoon (*Lithospermum caroliniense*), hairy spiderwort (*Tradescantia hirsutiflora*), Soxman's milkvetch (*Astragalus soxmaniorum*), queen's-delight (*Stillingia sylvatica*), Texas bullnettle (*Cnidocolus texanus*) and purple milkwort (*Polygala polygama*). We observed dense growth of jointweed (*Polygonella americana*) in the barrens, along with fine specimens of bluejack oak (*Quercus incana*), sand post oak (*Quercus margaretta*) and gum bumelia (*Sideroxylon lanuginosum*). Other species noted by the group included dwarf hawthorn (*Crataegus uniflora*), Nuttall's wild indigo (*Baptisia nuttalliana*), blackseed needle grass (*Piptochaetium avenaceum*), and wormseed (*Dysphania* sp.).

A fine spring morning well spent!

Woolly-White (*Hymenopappus artemisiifolius*). Photo by Michael Weatherford.



Carolina Puccoon (*Lithospermum caroliniense*). Photo by Michael Weatherford.

Bayou Bartholomew Trail

Article and photos by Bette Kauffman

We were intrepid few: four followers with Brent Baker as our guide. After waiting out a brief drizzle in the parking lot, we headed down the bayou side of the 2-mile loop of the Bill Layher Bayou Bartholomew Nature Trail between Bayou Bartholomew and I-530 on the south side of Pine Bluff, Arkansas.

It is an easy trail to walk, about 3 feet wide, flat and gravel all the way. It was low enough in some areas that we walked through a couple of inches of standing water, but the several wood bridges were actually the greater danger, being slick with moisture and algae. The trail also features several benches and standing wildlife observation blinds with elbow high shelves for stabilizing a camera or just standing comfortably.

This habitat is known for its birds. I heard many more birds than I saw! Members of our group more skilled in bird watching than I spotted a prothonotary warbler and a vireo. We saw a couple of Canada geese on the water and at least one great egret flying.

Highlights for me included a fabulous stand of blooming red buckeye. I have never seen such an extensive patch of healthy buckeye bushes, all blooming madly. Not realizing what was ahead, I stopped at the first one and made a number of photographs. Upon finally moving along the path so as to not get left completely behind, I found myself in the middle of the mother lode of blooming buckeye. I fired away, but each bush I came to seemed bigger and more beautiful than the one before.

We passed two possumhaws in full bloom. I was charmed by the Mayapple colonies, some of them quite



Cross Vine (*Bignonia capreolata*)

big. Flowering was all but finished; I found one plant with a nice bloom. Most of the plants sported tiny green apples.

But best of all for me was the blooming cross vine. And we would not have seen it but for looking down! We were walking through a part of the path that was under a few inches of water, and in looking where to place our feet, we noticed that fallen cross vine blooms were floating in the water. We began to look around and Brent spotted a standing snag with a vine going up the trunk. The ground under that snag was covered with fallen blooms. Sure enough, there at the top of the snag in the sunlight of the canopy was the foliage and many, many lovely salmon trumpets with their open yellow mouths.

I have always loved seeing the leaf pattern of a cross vine going up a trunk, but had never seen one in bloom. What a treat! So... I'm old enough to have read Tom Wolfe, and when I look at my cross vine blossom photos, all I can think is

“kandy-kolored tangerine-flake baby”! Google it.

The trail closer to I-530 is much more open, and we returned to the parking lot in warm sunlight. Between the edge of the woods and the highway, we passed a variety of flowering plants—wild berry vines of various kinds, corn salad galore, skull-caps, false dandelion and more.

And to cap a good time, I also got my first dragonfly shot of the season. It's not a good enough shot to share. The dragon insisted on perching on the gravel of the path and blended in well. It might have been a slaty skimmer, but my shot is probably not good enough for a sure identification. A couple of hours well spent!

Red Buckeye (*Aesculus pavia*)



A Master Naturalist's Trip to Pine Ridge Gardens

by Carey Chaney

I am not a gardener. I'd much rather be walking in the woods than working in the yard; but, I have to admit that a nicely planned yard certainly cultivates a pleasant frame of mind. So I am working on improving my home landscape. After reading *Bringing Nature Home* by Douglas Tallamy, I became a convert to the importance of landscaping with native plants. It is appealing to me to know that by incorporating native plants into my yard, I could help reverse the ecological sterility of conventional horticulture and reduce the threat of invasive foreign species. It is a plus to mow less too. But because I am such a novice gardener and landscaping with natives is foreign to most nurseries, going native is doubly difficult. Since Pine Ridge Gardens has the reputation of being the premier source for native plants in Arkansas, I was excited about the opportunity to visit.

Pine Ridge Gardens is located not far off Interstate 40 between Russellville and Clarksville. I had great directions, but still felt a bit nervous as I wound my way along the back roads. Please don't let being off the beaten path deter you; it is worth the effort. The nursery has been in operation since the early 1990s, but is located on our host, Mary Ann King's family farm. They sell only propagated natives and their website is <http://www.pineridgegardens.com/>. They also produce a printed catalog every year. Both are great resources. Mary Ann led one group. Her grandson, Preston Kimbriel, and Brent Baker served as guides for a second group. The weather was perfect for our walk. We began our tour of the

gardens by walking through the lower fields stopping every few steps to enjoy the incredible diversity of planted and naturally occurring species. I did my best to keep notes on what we saw: Alabama snowwreath, Red and Ohio buckeye, Wild goose plum, Possumhaw, Butternut (White walnut) & Black walnut, Chalk maple, Fringe trees, American bladder nut, Blue ash, Hercules' club tree (Toothache tree, Prickly ash), Black locust, Woodland blue star, River cane (Native bamboo), a huge Shumard oak, White oak, Pin oak, Bur oak, Water oak, Swamp chestnut oak, River oats (Inland sea oats), Sugarberry, Coral berry, Box elder, Bear paw, St. John's wort, Cucumber magnolia, Spicebush, Sassafras, Sycamore, Redbud, Yellow arrowhead, Iron weed, Carolina buckthorn, Narrow-leaf mountain mint, Winged sumac, Red honey suckle, Dogbane (Indian hemp), Fox grape, Wild senna, Green eye, Green dragon, Bottle brush, Indian pink, Basswood. Our guides were extremely knowledgeable. They pointed out differences between Hackberry and Sugarberry, Shumard and Pin oak. We talked about the threat of the emerald ash borer. We also encountered a Spicebush Swallowtail

larva wrapped in the Sassafras leaf. Its large eyespots on the thoracic hump segments really were startling. This was a nice confirmation of the benefits of using native plants. After a couple of hours in the lower fields, I found it hard to keep up with everything we were seeing. I was utterly overwhelmed when we arrived at the actual nursery. I was amazed at the abundance and diversity of plants. We spent time winding along the pots, making notes or making selections. I took home a couple Indian pink plants, but I will be back. Though they ship, there is nothing like being able to see the plants "in the flesh" to gain a sense of how they will look in the landscape.

Note: I spoke with Mary Ann about some of the new species she has this year. *Symphoyrichum macrophylla* (Big leaf aster), is one new addition. *Solidago auriculata* (Ear-leaved goldenrod), *Solidago buckleyi* (Buckley's goldenrod), and *Heuchera parviflora* var. *puberula*, are all shade-loving plants. Sun-loving include *Asclepias hirtella* (Tall green milkweed), *Baptisia nuttalliana* (Nuttall's wild indigo) and, she adds, much more.



This hand-crafted sign by Lorna Trigg acknowledges ANPS funding for invasive species eradication and native plant restoration at the Fire Om Earth Retreat Center and Botanical Sanctuary in Eureka Springs, Arkansas. Check it out.

Ouachita Trail Hike by Eric Hunt

The first ANPS hike of the year took place on April 11, 2015 along a portion of the Ouachita National Trail in Perry County.

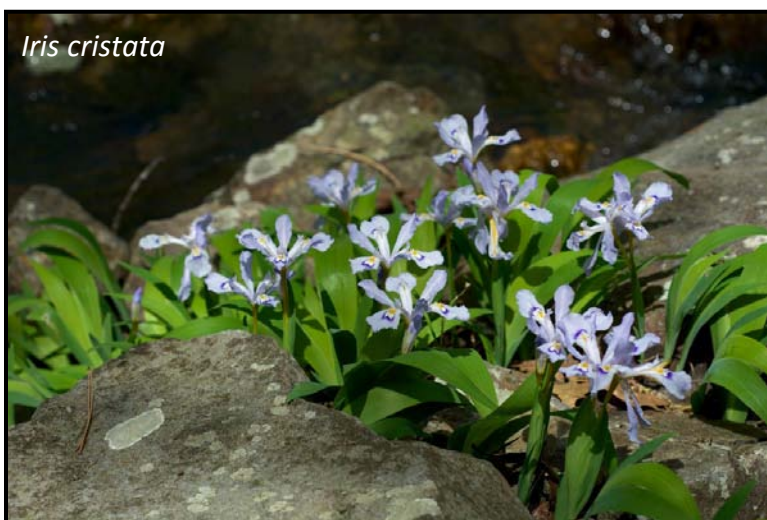
Seven enthusiastic native plant admirers met at the Ouachita National Trailhead parking area at Lake Sylvia on a perfect spring morning. Our first excursion was to walk the short "Trees of the Forest Interpretive Trail" in search of the rare Perfoliate Bellwort (*Uvularia perfoliata*). The trail is an easy walk and contains a good variety of the common trees and wildflowers found in the eastern Ouachitas. We saw lots of Big Leaf Snowbell (*Styrax grandifolius*) with young flower buds. Along the forest floor were numerous large colonies of Crane-fly Orchid (*Tipularia discolor*). Other species of note along the interpretive trail were Fire Pink (*Silene virginica*), Pussetoes (*Antennaria* sp.), Ouachita Sedge (*Carex ouachitana*), Wood Betony (*Pedicularis canadensis*) and last year's seed heads from Indian Pipe (*Monotropa uniflora*). A special treat was finding the strange spring mushroom Devil's Urn (*Urula craterium*).

At the far end of the interpretive trail we found a large colony of Perfoliate Bellwort. The flowers were just past their prime but still in good enough shape to clearly see the warty/bumpy inside surface of the petals, a distinctive feature of the species.

We then carpoled over to the Ouachita National Trail Highway 9 trailhead, managing to squeeze into the last two spots at the very tiny parking area. We headed west along the trail, anxious to see what interesting plants were to be found.

Many of us had never been on this section of the OT (as it's known) and were enjoying the views and scenery, as the trail follows an unnamed creek in a small valley with frequent beautiful vistas.

The standard assortment of early spring wildflowers were out in abundance. Whenever there was a bit more light reaching the trail, Showy Birdfoot Violet (*Viola pedata*) was there to take advantage of it. There were numerous species of blue-



Iris cristata



Rhododendron prinophyllum

berries, with Common Blueberry (*Vaccinium virgatum*) coming into bloom.

The first species of note was Mountain Azalea (*Rhododendron prinophyllum*). Only one plant had open flowers but that was all we needed. Everyone admired the soft pink petals and the spicy, heady fragrance.

Further along, hike co-leader Virginia McDaniel pointed out an easily identified sedge, Black Edge Sedge (*Carex nigromarginata*), growing in abundance along the edge of the trail.

Next up was Carolina Silverbell (*Halesia carolina*). A beautiful small tree with elegant white pendulous flowers.

American Witch Hazel (*Hamamelis virginiana*) was just leafing out. We found a fascinating spiny gall on several Witch Hazels, home of the spiny Witch Hazel gall aphid (*Hamamelistes spinosus*).

The star of the walk without a doubt was Dwarf Crested Iris (*Iris cristata*). Our visit coincided with peak bloom. Found in great abundance, it was our constant companion as we explored the trail.

We continued finding colonies of Perfoliate Bellwort. Virginia and I quit counting after the 7th or 8th one. It's a tracked species in Arkansas but is locally common in this part of Perry County.

Our lunch stop was around about a mile into the walk at a small fern grotto. A large colony of Cinnamon Fern (*Osmundastrum cinnamomeum*) and Royal Fern (*Osmunda regalis* var. *spectabilis*) was joined by Southern Lady Fern (*Athyrium filix-femina* ssp. *asplenioides*) in a side drainage that must have a small spring as it was clear the area stays wet.

After lunch we headed back to the Highway 9 trailhead and returned to our respective homes with the memories of an enjoyable spring day in the woods fresh in our mind.

Hike participants were leaders Virginia McDaniel & Eric Hunt along with Don Ford, Becky Hardin, Mary McDaniel, Lynna Schoenert, and John Simpson.

The Chinese-American

Disjunction by Eric Sundell

My undergraduate introduction to plant geography came from a readable and enjoyable textbook by W. D. Billings, *Plants and the Ecosystem*. “The existence of any organism anywhere,” he said, “is subject to the ‘approval’ of the local environment.” Which of course made sense: as you leave the woods, you leave most of the ferns behind, but you enter the sun-loving world of black-eyed susies, butterfly weed, and Indian grass. What I had never suspected, though, was another, very different pattern of distribution, more fundamental: a geographic and historical pattern.

Plant groups especially at levels higher than species—genera and even families—show intriguing ranges on the world map. For example, the cactus family (Cactaceae) occurs only in the deserts of the New World, in North and South America. In the deserts of southern Africa, the stem succulents that look like cacti are not cacti at all—they are milkweeds and spurges, members of the Asclepiadaceae/Apocynaceae and Euphorbiaceae. African succulents that look very much like our giant saguaros of the Southwest are often species of *Euphorbia*, the genus to which our beautiful flowering spurge (*Euphorbia corollata*) is referred. Like the hummingbirds, the cactus family had no means of transportation to the Old World—where, judging by the success of the introduced prickly-pears in arid parts of Africa and Australia, they could thrive—and so remained restricted in their range, endemic to North and South America.

Of all the intriguing global patterns of plant distribution, my favorite is the Chinese-American Disjunction, a subject so interesting and accessible that I never failed to include it in Regional Flora lectures. Asa Gray, America’s preeminent botanist of the 19th century, called attention to the fact, first noticed in Linnaean times, that many of the plants of

our eastern forests also occur in eastern Asia—but nowhere else! They are disjuncts, occurring in widely separated geographic areas. In a few cases—like poison-ivy and the northern maidenhair fern complex—the very same species grows in both regions. But at the genus level, the facts get even more interesting: Numerous genera



Above: *Liriodendron tulipifera* foliage and orange flower.

Below: *Liriodendron chinense* twig with flowers—no orange pigment.



are represented by closely related species that occur only in eastern North America and eastern Asia. Our distinctive yellow-poplar (*Liriodendron tulipifera*), for example, has only one sister species the world over, *Liriodendron chinense*, of central China and northern Indochina. (They are interfertile, the hybrid named *Liriodendron x chinamerica*.) Our spectacular native trumpet vine, *Campsis radicans*, shows the same disjunction, *Campsis* being a genus of just two species, with *Campsis grandiflora* restricted to eastern Asia.

Most Chinese-American disjunction patterns are more complex, with one or a few species in eastern North America and many more in the more topographically and climatically varia-

ble eastern Asia. The genus *Panax* (ginseng) comprises give-or-take six species, with two native in eastern North America and four in eastern Asia. *Podophyllum* (mayapple) comprises one American species and four in Asia. The three species of *Sassafras* are divided between the two areas, with one in America and two in eastern Asia. The list is long: some 65 genera of vascular plants—many native to Arkansas—whose species are restricted to eastern North America and eastern Asia. The hickories (*Carya spp.*) are one of few such disjuncts with more American representatives than Asian—over a dozen species here and only a few over there.

Fascinating observations, often called data, challenge us for explanations. How did such a distinctive, remarkable pattern of disjunction come about? Until the publication of *On the Origin of Species* in 1859—under the dogma of Creationism—the question was not amenable to any logical answers or even hypotheses. But Charles Darwin made the earth very old, with long, almost immeasurable stretches of time, during which geographic and climatic changes could cause the migration and evolution of plants and animals.

Now the fossil record made sense, and revealed an astounding, dynamic history of life on earth. Fossils scarcely distinguishable from many of our living Asian-American disjuncts—sassafras, yellow-poplar, many herbaceous perennials—indicate that today’s rich, temperate forests of eastern North America and eastern Asia are relicts of a magnificent temperate forest that encircled the higher latitudes of the Northern Hemisphere, reaching its maximum development during the Miocene epoch of the Tertiary period, some 10 to 25 million years ago. No temperate forest of today quite captures the lush diversity and extravagance of that circumboreal “Arcto-Tertiary forest,” but comparisons have been made to the cove forests of the Smoky Mountains and the redwood forests of the California coast. So how did the Chinese-American disjunction come about?

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Cooling of the earth's climate during the Miocene pushed the temperate forests south not only in eastern North America and Asia but in Europe and western North America as well. In the last few million years, temperate forests in western North America have retreated as the rising Sierra Nevada and Cascade mountain ranges created a rain shadow to the east. Representatives of the Arcto-Tertiary forest now persist in the West only on the western slopes of those mountain ranges. (Fossil stumps of the giant sequoia can still be seen in Colorado.) In Europe—today with a moist, temperate climate—Pleistocene glaciers eliminated many genera, like the hickories, that survived the Ice Age in eastern North America and eastern Asia: migration south in Europe was blocked by the Alps and the Mediterranean Sea. In Asia and North America no such barriers existed, and species of the temperate forests were able to migrate unimpeded—here in the Southeast, to refuges in the southern Appalachians as well as in Mexico. When the ice withdrew and the climate moderated, many of them came back to Arkansas.

My students typically perked up during the disjunction lecture when I informed them that yellow-poplar shared this Chinese-American distribution with the alligator.



Sassafras hesperia from the Eocene Period.



Calyx and corolla differences of trumpet vines

Left to Right—American trumpet vine (*Campsis radicans*), cross of American and Chinese trumpet vine, Chinese trumpet vine

UAM Botanical Research Center and Herbarium Building

The new Botanical Research Center and Herbarium Building at the University of Arkansas at Monticello is making significant progress. All of the funding is now in place and the project is going out for bid very soon. The new building will house the UAM Herbarium (a collection of about 27,000 dried plant specimens used for research and teaching), a DNA sequencing lab, offices, and the new Arkansas Native Plant Society Conference Room and Library. The building should be completed in late 2015 or early 2016. A portion of the funding for the project came from the ANPS and individual members. Thank you! Karen Fawley



Earth Days at Arkansas Tech in Russellville, Arkansas

ANPS member Sid Vogelpohl manned an educational booth during the annual Earth Days celebration April, 22. I am sure attendees enjoyed the beautiful display Sid created as well as his home grown bouquet. Great photos Sid!

Announcements:

Mark your calendars, birding friends, for y'all are hereby invited to an INFORMAL* birding-natural history "conference," **Bison, Birds, Botany & Butterflies** (BBBB), centered at The Nature Conservancy's Tallgrass Prairie Preserve in northeastern Oklahoma, **September 25-26, 2015** (maybe even starting September 24). We will informally* —and I do mean informally* —and with little fanfare and no fund raising -- observe and enjoy free-ranging bison, typical birds of the Flinthills prairies and associated crosstimbers woodlands, and the remarkably diverse native flora there. We will also check out all the other stuff, like fossils, Eastern Collared Lizards, Ornate Box Turtles, and anything else encountered. This is also peak time for the southward migration of Monarch Butterflies, and if previous years serve as guide, we should see a lot of them, too.

On both Friday and Saturday, meet at the Tallgrass Prairie Preserve headquarters area at noon. If you are interested, there are no "fees," no "registration," nothing whatsoever official about this BBBB. We can meet up over there where the grass is tall, where the lizards are big and colorful, where the bison are crossing the road or head butting out in the fields, or maybe an interesting hawk never seen before in this universe is gliding over the grass, or some rare Flinthills flower like *Eryngium* has opened just for us. — Joe Neal.

November 6-8th, the **OCANPS** will hold its annual fall meeting at Harmony Mountain. We meet, elect officers, set the dates for spring hikes, hold an auction to raise money for the chapter, and take a hike in the Buffalo River area on Saturday. If you would like to join us, please contact Burnetta at wbhint@gmail.com for more information and directions.

Warren Prairie Natural Area

by Virginia McDaniel and Brent Baker

Photos by Mike Weatherford and Eric Hunt

You know you are with a bunch of botanists when the star of the show is a 4-cm-tall skeleton of a plant with a 4-mm-long, petal-less flower found on the edge of a salt slick. Not only that, but the winter annual was a few weeks past its prime and the walk began just as the skies opened and in the presence of persistent swarms of mosquitoes. But none of these factors dampened the enthusiasm of the ANPS group heading to find the federally listed geocarpon (*Geocarpon minimum*) at Warren Prairie.

Warren Prairie Natural Area contains about 4,600 acres owned and managed by Arkansas Natural Heritage Commission (ANHC) and The Nature Conservancy. It is located in the Coastal Plain just east of Warren, AR, and contains a mosaic of salt slicks, saline barrens, post oak flatwoods, mound woodlands, pine flatwoods and woodlands, and bottomland hardwood forest communities. The naturally high content of sodium and magnesium salts in the soils of the barrens in addition to the thin soils often prevents the growth of trees. But these harsh conditions have enabled a community that is dominated by grasses and herbaceous vegetation and one that provides critical habitat for the largest population of the federally threatened *Geopcarpon* in Arkansas as well as habitat for many other rare species.

After noting the prairie spiderwort (*Tradescantia occidentalis*) blooming around the parking area, we left the

shelter of our vehicles soaked in bug spray and cloaked in raincoats (except our leader, ANHC botanist Brent Baker, who was content to ride out the shower in a T-shirt) and headed into the open pine flatwoods. When I say open, I mean there wasn't a shrub to be found. Brent explained that a forestry mulcher had been used to more quickly convert forests choked with brush to the open woodlands



Geocarpon minimum by M. Weatherford

that historically would have occupied the area, a process that would take years via other methods. After the mulching, they use prescribed burning to maintain the open habitat. Open woodlands are the preferred habitat of many rare plants and also the federally threatened Red-cockaded Woodpecker that was reintroduced to the site in 2010. Given that there are now as many as seven breeding pairs in a total of nine groups, it seems to be working well for the woodpeckers. We observed

the potato dwarf-dandelion (*Krigia dandelion*) in bright yellow bloom, woolly ragwort (*Packera tomentosa*), a few dwarf palmetto (*Sabal minor*), and some scattered yellow thistle. Yellow thistle is aptly named botanically, *Cirsium horridulum*, as it is absolutely horribly armed with spines. Not a plant you want to accidentally trip and fall on!



Cirsium horridulum by E. Hunt

Many in the group were surprised to learn from Brent that this particular thistle is one of several thistles native to the state, this one occurring mainly in the Coastal Plain. It is a great nectaring source for numerous insects, including the uncommon Diana Fritillary, Arkansas' state butterfly, which is also known from Warren Prairie.

Next we encountered nebkha mounds. I initially thought these were piles of mulched debris created by the mulcher, but Brent told us they were naturally occurring mounds created by the accumulation of wind-borne sediments around scattered vegetation during drier climatic periods in the past. They go by a number of names, including prairie mounds, Mima mounds, pimple mounds, or coppice

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dunes and they strongly influence the spatial distribution of plants and soil resources and create microhabitats that increase species diversity, abundance, and richness. One of the plants we observed on the nebkha mounds was barbed rattlesnake-root (*Prenanthes barbata*), a plant of conservation concern that needs a fair amount of light in order to bloom. We saw the basal rosettes of wavy-margined leaves that grow from small corms. This plant may finally get the opportunity to bloom now that the woodland has been opened up. We also observed the densely hairy, silvery leaves of the Carolina violet (*Viola villosa*), suited to the somewhat sandy, better-drained soil of the nebkhas. We then swung by the margin of an open marsh to see a relatively uncommon species of arrowhead (*Sagittaria papillosa*), with its narrow leaves



Sagittaria papillosa by E. Hunt

and papillate (bumpy) sepals and bracts.

It is restricted mainly to the West Gulf Coastal Plain of Texas, Louisiana, and southern Arkansas. We moved out of the woodland through post oak flats into the open barrens (often referred to colloquially as “prairie”) where we encountered yellow star-grass (*Hypoxis hirsuta*) and a field of Texas sunnybells (*Schoenolirion wrightii*), a rare plant only found in saline barrens in

southeastern Arkansas, northern Louisiana, eastern Texas, and northern Alabama. In the wetter depressions we found the blue-green twisted stalks of Wolf’s spike-rush (*Eleocharis wolfii*), a state plant of conservation concern, and the more common slender spike-rush (*Eleocharis tenuis*). Nearby we saw both the spring spider lily (*Hymenocallis liriosme*) and green hawthorn (*Crataegus viridis*) in bloom.



Texas sunnybells by E. Hunt



Hymenocallis liriosme by E. Hunt



Crataegus viridis by E. Hunt

(Continued from previous page)

After crossing the open grassy barrens with bluets (*Houstonia* spp.), yellow-puff (*Neptunia lutea*), a sensitive-brier look-alike but without the prickles and with yellow flowers instead of pink later in the summer, and sundews (*Drosera brevifolia*) with their red leaves glistening with sticky, insect-trapping “dew,” and scattered green or spider milkweeds (*Asclepias viridis*) in bud, we came to the salt slicks where few plants can grow. There we saw a few dwarf plantain (*Plantago pusilla*), lichens, some dried blue-green algae, technically cyanobacteria, (*Nostoc* sp.), and then the dried stalks of our prized plant: *Geocarpon minimum*.

Geocarpon is known from only a few dozen locations in four states and was listed as threatened under the Endangered Species Act in 1987. In Missouri this species is found on sandstone glades, whereas in Arkansas, Louisiana, and Texas it is found on saline barrens. It seems to require high levels of magnesium in the soil. It is a winter annual that generally blooms in late February and March and fruits in March to early April. Population sizes are highly variable from year to year depending on rainfall, temperature, and perhaps other factors. This year was apparently not a particularly good one for the species

based on Brent’s survey results but we were all pleased to see the several plants Brent had located as well as for the opportunity to see and better understand the unique geocarpon.



Warren Prairie by E. Hunt



Drosera brevifolia by E. Hunt



Warren Prairie by E. Hunt

Ouachita Mountain Glades

Photos and article by Michael Weatherford

On June 5 U.S. Forest Service Botanist Susan Hooks, with able help from staff members Terry McKay and Mary Lane, led a group of ANPS members on a field trip to two Ouachita Mountain glades located in the Ouachita National Forest. The glades are sparsely covered in cedar, elm and hackberry trees growing among bare rock outcroppings. Several rare and interesting plant species grow on the thin soil characteristic of the glades.

Rare species observed by the group include: *Carex latebracteata* (Waterfall's sedge); *Draba aprica* (Open-ground Whitlow-grass); *Amsonia hubrichtii* (Ouachita bluestar); *Pilularia americana* (Pillwort); *Tradescantia longipes* (Dwarf spiderwort); *Isoetes melanopoda* (Quillwort); *Valerianella nuttallii* (Nuttall's cornsalad); *Astragalus distortus* var. *engelmannii* (Milk vetch).

Other species observed include: *Penstemon arkansanus* (Arkansas beardtongue); *Ruellia humilis* (Wild petunia); *Marshallia caespitosa* (Barbara's buttons); *Opuntia humifusa* (Prickly pear cactus); *Thelesperma filifolium* (Greenthread); *Triodanis leptocarpa* (Venus looking glass); *Manfreda virginica* (False aloe); *Houstonia nigricans* (Glade bluet); *Sedum pulchellum* (Widow's cross sedum); *Eriogonum longifolium* (Umbrella plant); *Lotus unifoliolatus* (American birds-foot-trefoil); *Arnoglossum plantagineum* (Indain plantain); *Celtis tenuifolia* (Dwarf hackberry); *Tragia urticifolia* (Nose burn); *Minuartia muscorum* (Sandwort); *Phemeranthus calycinus* (Fame flower).



Above: Widow's Cross Sedum (*Sedum pulchellum*)

Below: Arkansas Beardtongue (*Penstemon arkansanus*)



Below: Ouachita Blazing Star (*Liatris compacta*)



Spring 2015 Meeting Minutes

ANPS Spring Meeting

Membership Meeting

University of AR at Monticello

Monticello, Arkansas

April 18, 2015

2015 Spring Meeting Field Trips

SATURDAY MORNING

Warren Prairie - Leaders: Brent Baker and Jennifer Ogle

Bradley County Park - Leaders: Virginia McDaniel, Mike Weatherford, Marvin Fawley, Karen Fawley

SATURDAY AFTERNOON

Warren Prairie - Leaders: Brent Baker and Virginia McDaniel

Bradley County Park - Leaders: Jennifer Ogle, Mike Weatherford, Marvin Fawley, Karen Fawley

SUNDAY MORNING

Turner Neal Natural History Museum/Pomeroy Planetarium (UAM) – Leaders: Karen Fawley, Marvin Fawley, Morris Bramlett, Dean of Math and Science
Bill Layher Trail, Pine Bluff - Leader: Brent Baker

2015 Spring Meeting Evening Program Information

The first Spring Silent Auction began Friday at 5:30pm and ended Saturday at 9:00pm. The Friday evening program was presented by Brent Baker, botanist with the Arkansas Natural Heritage Commission. His talk was entitled “*Characteristics and Management of Saline Barrens*”. Sid Vogelpohl also presented a review of “*Know Your Natives*,” his compilation of wildflower images.

The Saturday evening program was presented by Karen and Marvin Fawley, botanists at UAM. The talk was entitled “*The UAM Herbarium: Present, Past and Future.*”

The Membership Business Meeting followed the presentation on Saturday, April 18, 2015.

Jennifer Ogle called the meeting to order at 8:35pm.

Treasurer’s Report

Don Ford provided the 2015 Spring Treasurer’s Report, as of March 31st, with a balance of \$27,092.89. The Treasurer’s report was accepted by the Board. Meredith York made a motion to approve the Treasurer’s Report and Eric Hunt seconded the motion. The motion was approved. Don reported a total of \$632 from the Spring Silent Auction.

Membership Minutes

Don Ford made a motion to accept the minutes from the Fall 2014 ANPS Membership Meeting. Mary Ann King seconded the motion and all were in favor.

Old Business

Small Grant Request-FireOmEarth

The membership approved a small grant request for \$1000 from Fire-OmEarth to remove invasive plants at the 2014 Fall Membership Meeting. Jennifer Ogle reported that they are making good progress with the invasive plant removal. A beautiful, sculpted ANPS sign has been placed on the trail in recognition of the ANPS donation.

Digitization of past Claytonia issues

Mike Burns reported that every copy of *Claytonia* (1981-present) has been scanned. He is making progress to post these scanned copies to the ANPS website.

New Business

Scholarship Committee

The Board approved \$1000 in funding for Jennifer Reed, an undergraduate student at the Arkansas State University at Jonesboro. Dr. Travis Marsico is her advisor.

Ninestone Land Trust

The Board approved a small grant request for \$1500 from Ninestone Land Trust, Inc. for glade restoration and removal of invasive plants. Eric Hunt made a motion that this request be approved by the membership and Virginia McDaniel seconded. The motion was approved.

Hometown Habitat

The Board approved a small grant request by email vote for \$1000 to **Hometown Habitat**, a 90-minute environmental education documentary focused on showing how and why native plants are critical to the survival and vitality of local ecosystems. (<http://themeadowproject.com/>) Susan Toone made a motion that this request be approved by the membership and Richard Emmel seconded. The motion was approved.

2015 ANPS Fall Meeting

The 2015 Fall Meeting is scheduled for October 9-11 in Eureka Springs. Mike Weatherford reported that 30 rooms have been reserved at the Eureka Inn

Spring 2015 Meeting Minutes, continued

Best Western (\$107.95 + tax per night including a full breakfast). There is a two night minimum stay. Reservations must be made before August 20th to guarantee room availability at this rate. Possible field trips include Devil's Eye-brow, Ninestone, and Lake Leatherwood.

Natural Areas Association

Brent Baker requested ANPS sponsorship for the Natural Areas Association Conference which will be held in Little Rock on November 3-5, 2015. Mike Burns made a motion to approve a \$500 donation with the provision to increase the donation up to an additional \$2000 after Board discussion. Meredith York seconded the motion. All were in favor of the motion with 1 abstention.

Don Ford moved to adjourn the meeting and Marvin Fawley seconded. The meeting was adjourned at 9:03pm.

2015 Semi-Annual Treasurer's Report and Proposed 2016 Budget				
2015 Semi-Annual Treasurer's Report				Proposed 2016 Budget
January 1 - 30 June 2015				
		START 2015	➔	\$27,283.67
	2015 Budget	2015 Actual as of 30 June		
<u>INCOME</u>				
Membership Dues	\$4,000	\$2,260.00		\$4,000.00
Meeting Registration	\$500	\$270.00		\$500.00
Plant Auction	\$1,500	\$632.00		\$2,000.00
Interest	\$0	\$0.77		\$0.00
T-Shirt Sales	\$700	\$270.00		\$500.00
Contributions	\$0	\$95.00		\$0.00
TOTAL	\$6,700	\$3,527.77	➔	\$3,527.77
<u>EXPENDITURES</u>				
ANPS.Org (website expenses)	-\$50	\$0.00		-\$50.00
Claytonia (Print & Distribute 2 Issues)	-\$1,600	-\$672.82		-\$1,400.00
Directory (Print and Distribute)	-\$900	\$0.00		-\$750.00
Memorial Awards (Awards/Scholarships)	-\$2,000	-\$1,000.00		-\$2,000.00
Grants/Support to Public Gardens	-\$500	-\$4,000.00		-\$1,000.00
Meeting expenses (space, copies, speaker,etc.)	-\$1,000	-\$177.23		-\$1,000.00
Ecology Camp	-\$500	-\$500.00		-\$500.00
Bulk Mail	-\$250	-\$220.00		-\$240.00
Supplies/postage/miscellaneous	-\$430	-\$178.24		-\$300.00
T-shirts	-\$1,500	\$0.00		-\$1,000.00
TOTAL	-\$8,730	-\$6,748.29	➔	-\$6,748.29
		Total as of 30 June 2015	➔	\$24,063.15

Respectfully submitted by Don Ford, Treasurer

New Members

Carol Daggett (Fayetteville, AR)	Sharon Keller (Mountainburg, AR)
Chris & Charles Feild (Little Rock, AR)	Suzanne LaRose (Kimball, MI)
Daniel Feild (Fayetteville, AR)	Vicky May (Fayetteville, AR)
Stacey, Fiona, Jack, Elizabeth Davis (Springdale, AR)	Lisa Netherland (Fayetteville, AR)
James "Dee" and Masami Fiser (Bryant, AR)	Anne Orsi (Little Rock, AR)
Lillian Franklin (Hattieville, AR)	Jack and Janet Ryan (El Dorado, AR)
Amy Hatfield (Maumelle, AR)	Jesse Scarbrough (Elkins, AR)
Karen Hicks (Mablevale, AR)	Truman & Dolores Stamps (Springdale, AR)
Sharon Hollaway (North Little Rock, AR)	Michelle Wisdom (Fayetteville, AR)

New Lifetime Members

Warren and Holly Fields (Rogers, AR)	Jennifer Ogle (Fayetteville, AR)
Steven Foster (Eureka Springs, AR)	Lynna Schonert (Little Rock, AR)
Kristin Musgnug (Fayetteville, AR)	Joe A. Wright (Alexander, AR)

Congratulations to our President, **Jennifer Ogle**, on completion of her 2015 Master of Science Degree at the University of Arkansas in Fayetteville!

Executive Board Nominations for 2016

Based on recommendations of the Nominations Committee, the Executive Board places in nomination before the Membership the following individuals for positions coming open in 2016:

Vice President
Margaret Malek

Secretary
Molly Jones

Webmaster
Eric Hunt

The nominating committee will present the following slate of officers at the fall meeting: In accordance with Article V, Section 2, Jennifer Ogle will become Past President in 2016, Mike Weatherford will become President in 2016, Virginia McDaniel will become President Elect in 2016. The nominating committee recommends Margaret Malek for Vice President, Molly Jones for Secretary, and Eric Hunt for Webmaster for 2016. The following officers will serve their second year in the position indicated for 2016: Don Ford, Treasurer; Betty Owen, Editor; MaryAnn King, Memorial Awards Officer; and Mike Burns, Membership Officer. Election of officers will occur at the business meeting on October 9th in Eureka Springs.

**ANPS Fall Meeting
October 9-11, 2015
Eureka Springs, Arkansas**

Everybody is welcome to attend! Meeting registration is only \$5 with no pre-registration required. Registration will begin at 5:00PM on Friday, October 9.

Hotel: Lodging in the Eureka Springs area is at a premium during the month of October. ANPS has reserved a block of 30 rooms in the Eureka Inn (Best Western), 101 East Van Buren Street (479-253-9551) at a rate of \$107.95 plus tax. Please note that reservations must be made before August 20 to guarantee availability of this rate, and there is a two-night minimum stay.

Meeting Location: The meeting site is the American Legion building located just north of Eureka Springs. From downtown, just travel north on Main Street (Highway 23) three miles past the train station. The American Legion is on the left just past the intersection of Highways 23 and 187.

Dining Options: There are numerous dining options around the hotel.

Field trips: Several field trips to local areas of top botanical interest will be scheduled for Saturday and Sunday. We will offer something for everybody, whether you want to take it slow and easy or something more vigorous. You must sign up for field trips on Friday evening to allow for adequate logistical planning.

Program: Saturday evening we will have a special program featuring presentations from several recipients of grants from ANPS made to individuals and groups for the purpose of enabling the study, promotion and establishment of native plants in Arkansas.

Plant Auction: The meeting will feature the always-popular native plant auction, where you can bid on many Arkansas native plants not readily available at your local nursery. Be there at 7:00PM Friday and ready to bid!

For complete and up-to-date details, go to www.anps.org or contact Michael Weatherford, 870-820-8300, weatherfordm@sbcglobal.net.

Save the Date!

The ANPS Spring Meeting will be held in Hot Springs, Arkansas.

April 22-24, 2016

ANPS Membership Application and Renewal Form

- New Member
- Renewal
- Address Change

	<i>Membership Type</i>	
	Student	\$10
	Individual	\$15
	Supporting	\$20
	Family Membership	\$25
	Contributing	\$30
	Lifetime (age 55+)	\$150
	Lifetime (under age 55)	\$300

Name (s) _____

Address _____

City _____ State _____ Zip _____

Phone (_____) _____ - _____

E-mail _____

Please send this form and your dues directly to the ANPS treasurer. Please include the entire form with your payment.

Don Ford
4017 Bluebird Lane
Little Rock, AR



Claytonia

Spring 2015
Newsletter

Your dues status is on your mailing label.

On the mailing label there will be a number, for example, "15", and this indicates that your dues are paid through 2015. (Life members will have an "LF" on their label.)

To renew your membership, please fill in the application for membership, changes of name, address, e-mail or telephone number and mail your dues to the Treasurer:

Don Ford
4017 Bluebird Lane
Little Rock, AR 72210

<p>President Jennifer Ogle ranunculus73@gmail.com</p>	<p>Secretary Karen Fawley fawley@uamont.edu</p>
<p>President-Elect Mike Weatherford weatherfordm@sbcglobal.net 870-820-8300</p>	<p>Awards & Scholarships Mary Ann King office@pineridgegardens.com</p>
<p>Vice President Virginia McDaniel virginiamcd31@yahoo.com 828-545-2062</p>	<p>Membership Chair Mike Burns anps.membership@gmail.com</p>
<p>Treasurer Don Ford anps.treasurer@gmail.com</p>	<p>Editor Betty Owen pjbowen@gmail.com</p>
<p>Nominations Chair Eric Sundell esundell42@gmail.com (870) 723-1089</p>	<p>WebMaster Martha Bowden anps.web@gmail.com (501) 803-9545</p>

President's Message
Jennifer Ogle

Dear Fellow Native Plant Lovers,

You may have read in the news that the Fayetteville city council recently approved a resolution to address the problem of invasive plants in their town. The goal is to develop a policy or ordinance that will encourage the eradication of existing invasions and to educate the public about the importance of using native plants in their gardens and landscapes. To my knowledge, such an ordinance would be the first of its kind in Arkansas.

I mention this because it well illustrates how attitudes are beginning to change in favor of native plants and their habitats on a rather large scale. Invasive plants have become such a problem in both natural and urban areas that folks are starting to realize how important it is to try to control their spread. Once considered inferior to specimens brought in from other regions of the world, native plants are now beginning to be valued as vital members of healthy ecosystems and attractive components of a sustainable landscape.

As a member of ANPS (and no doubt in other ways too), you have contributed to this change in attitude, because the funds you contribute to this organization are used to promote the education and conservation of native plants and their habitats in Arkansas. At our fall meeting in Eureka Springs this October, we will hear reports from some of our grant recipients to see recent examples of how those funds are being used. We will also tour Lake Leatherwood, Ninestone Land Trust, and Devil's Eyebrow Natural Area, home of black maple and many other rare plants. And of course we will hold our annual auction, where you will have the opportunity to bid on native plants, seeds, and other plant-related items. I hope to see you in Eureka Springs this fall!

Jennifer

ARKANSAS NATIVE PLANT SOCIETY

Membership, Mike Burns
10145 Dogwood Lane
Dardanelle, AR 72834

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