Remembering Maury Baker
By Theo Witsell

Some people contribute to a cause in a high-profile way, as experts or personalities who are in the public eye and have wide name recognition. Others keep a lower profile and are happy to do whatever work needs doing so long as it is important and contributes to the greater good. These kinds of people are critical to the success of any group, and I can’t think of anyone in the Arkansas Native Plant Society who embodied that volunteer spirit more than Maury Baker did.

When I was a young person starting out studying botany, I was fortunate to connect with the ANPS, where I was very often the youngest person at meetings (sometimes by 20 or 30 years). I met all sorts of older people who mentored me and helped me out in various ways. At some point early on I volunteered to serve as the editor of The Claytonia, a job for which I clearly underestimated the workload. Not only did the editor in those days have to coordinate and edit (and often write) submissions, but they also had to do the graphic design and get the hard copies printed, fold all 400+ of them, put them in envelopes, make and affix the address labels, sort them for bulk mail, and take them to the post office. That’s a lot for one person, especially a college student with a full-time job and a growing family. There were times when I really struggled to keep to the schedule and people noticed. Maury and his wife Barbara approached me and asked what they could do to help. There was no...
criticism, just a kind and sincere offer to help in any way they could.

That offer of help saved *Claytonia* (and maybe my marriage!) and took the form of an arrangement that sustained *Claytonia* for many years. I would produce each issue and get it to the print shop in Little Rock. When the copies were printed, Maury and Barbara would drive to Little Rock from their home in Hot Springs Village, pick them up from the shop, take them home, fold them, pack them, address and sort them, and then drive back to the mail facility and ship them. And somewhere in there, when the ANPS needed a membership chair, Maury stepped up to fill that role. He served from Fall 2006 to Fall 2011.

Maury was also an eager participant on dozens of field trips and we explored many good sites together, especially in the Ouachita Mountains. He was also instrumental in furthering the mission of the Arkansas Natural Heritage Commission Herbarium, where Barbara has been our longest serving and most productive volunteer specimen mounter. Maury made an untold number of trips, picking up and delivering scores of boxes of specimens to and from our facility in Little Rock, so Barbara could mount them at their home. I have no idea how many trips they made, but I know it amounts to something upwards of 12,000 herbarium specimens, which is over half our accessioned collection. Maury and Barbara also took a genuine interest in me and my family, which I very much appreciate. We will miss him and his generous spirit.

### Obituary for Maury Baker


He is survived by his wife of 65 years, Barbara; sons Ryne D. Baker of Houston and Jefre T. Baker of Atlanta; grandson, Ryan J. Baker; granddaughters Nicole Baker Hodges, Britney Baker Shore and Mackenzie Baker Marshall; and great-grandchildren Robert James "R.J.", Hunter, and Stella Shore, Sadie Marshall, and Austin Hodges. He was loved and respected and will be greatly missed.

Maury received his BS in Mechanical Engineering from the University of New Mexico, Albuquerque and an MST&AM from the University of Illinois Champaign-Urbana. He worked 32 years for The Boeing Company, participating in, among other projects, the Saturn V development for the Apollo Mission to the Moon. He and Barbara moved to Hot Springs Village in 1995 and found a wonderful life and home in Arkansas. Maury was active in the Arkansas Audubon Society, the Arkansas Native Plant Society, and the Halberg Ecology Camp Committee. He was a ten year Volunteer Firefighter for the Hot Springs Village Fire Department.

There will be no public service, but a quiet family gathering as he had wished.
This will come as no surprise to those who know me - I have a serious thing for trees. Trees are what drew me to botany as a kid, long before I fully understood what that word meant or that I could make a living practicing it. Growing up, my parents often took us to the San Bernardino Mountains in southern California as an escape from the smog-filled basin below, where we lived and spent most of our time, to hike in the clear mountain air. One memory stands out above all others on those trips – the time my dad handed me a piece of bark he broke off a pine tree growing along the trail and told me to smell it. I could hardly believe my nose – it smelled just like vanilla! Mind blown, the botany seed was sown.

As an adult I doubted that childhood memory (surely a pine tree cannot smell so sweet), so I looked it up a few years ago and sure enough, Jeffrey pine (*Pinus jeffreyi*), a tree that grows in those mountains, is known for having bark that smells like vanilla or, to some people’s noses, butterscotch. When I think back to when I first became interested in plants, the scent of that pine bark is the memory that comes to mind.

Pines belong to a group known as conifers, the largest of four living groups within the gymnosperms, an ancient clade of seed-bearing plants. Gymnosperm seeds are not contained within an ovary, but instead they are typically held in cones. These plants attained global dominance as Earth’s climate warmed and dried during the Triassic and Jurassic periods (252-145 million years ago), pushing the previously dominant spore-bearing ferns and their allies out of the top spot. Gymnosperms were then unseated by the rise of another seed-bearing group, the angiosperms, or flowering plants, during the Cretaceous period (145-66 million years ago) as the Earth again cooled. Angiosperms’ strategy of holding seeds inside an ovary was so wildly successful that today, about 90% of vascular plants, or roughly 300,000 species, belong to this group, while only about 1,000 species of gymnosperms occur worldwide.

I am drawn to gymnosperms for several reasons. One is that most of the world tree records are held by them, including tallest (coast redwood, *Sequoia sempervirens*), most massive individual (giant sequoia, *Sequoiadendron giganteum*), and oldest individual (Great Basin bristlecone pine, *Pinus longaeva*), but also because they tend to inhabit the most inhospitable terrestrial habitats on the planet – at high elevations and latitudes, in nutrient poor soils, and/or in very dry or waterlogged habitats - in large part because angiosperms pushed them out of more favorable, productive habitats.

For example, in the western U.S. the Great Basin bristlecone pine attains its greatest age of nearly 5,000 years at high elevations, on exposed slopes in thin dolomite soils where little else can grow. At the other end of the soil-moisture spectrum, the bald-cypress (*Taxodium distichum*) of the southeastern U.S. is often the dominant tree in saturated soils of swamps and bayous. Another gymnosperm, not a conifer but a gnetophyte, welwitschia (*Welwitschia mirabilis*), is a bizarre-looking plant with an...
Gymnosperms are tough! They thrive at the ecological fringes, and they look good, or at least interesting, doing it. To me, they are the embodiment of botanical “grace under pressure,” the reply Ernest Hemingway gave the poet Dorothy Parker when she asked him to define “guts.” So, when ANPS board member Joe Ledvina announced his plan to hold our Fall 2022 ANPS Meeting in Stuttgart, I got excited. This would be an opportunity for me to finally visit Arkansas’ largest, and arguably its gutsiest, tree, a massive bald-cypress in the Dale Bumpers White River National Wildlife Refuge.

Bald-cypress was described by dendrologist James Hardin as “the most distinctive species” of southern conifer, and for good reason. This deciduous gymnosperm grows tall with a straight trunk and buttressed base, the bark reddish brown to gray and peeling in thin strips, and older specimens growing in swamps have vertical roots, called knees, jutting out of the ground all around them. Their crowns are narrow, pyramidal, and become flattened with age. Bald-cypress leaves are needle-like, and most are borne in groups on branchlets, giving them a featherlike appearance. A mature cypress swamp is quite a beautiful and somewhat eerie sight to behold.

Some of the features that make bald-cypress distinctive, such as its buttressed trunks and knees, are thought to be adaptations to help it tolerate life in the swamp – a habitat with water-logged, oxygen-deprived soils. Buttressed trunks may help provide stability in the soft, unstable soils of this environment that also experiences high winds and frequent flooding. Though there is disagreement on the function of knees, recent research suggests they may be involved in oxygen transfer and carbohydrate storage. During the Fall 2022 ANPS Meeting, 12 society members and friends agreed with me that it would be cool to see the champion gymnosperm, and so we all met at the Champion Bald-cypress Tree Trail trailhead on Saturday morning, October 8th to walk to the tree. Several botanically knowledgeable members of the group helped identify plants along the trail as we walked. Virginia McDaniel, botanist and fellow board member, helped me scout the walk the day before. The trail that leads to the tree is mostly flat, an easy out-and-back walk of a little more than two miles round trip, but it is under water for parts of the year. Fall is often a good time to go as the trail tends to be dry, as it was when we visited.

Along the way to see the champion, our group walked past several native trees typically found in a bottomland hardwood forest, including some impressive specimens of Nuttall oak (Quercus texana), overcup oak (Quercus lyrata), cedar elm (Ulmus crassifolia), and green hawthorn (Crataegus viridis), and a fruiting specimen of indigo-bush (Amorpha fruticosa), a native shrub that sports showy clusters of small, deep purple flowers with orange stamens in the spring. Once we reached the tree, we saw water elm (Planera aquatica) and water hickory (Carya aquatica) growing nearby. We also noted several woody vines along the trail, including peppervine (Nekemias arborea), muscadine (Muscadinia rotundifolia), and snailseed (Cocculus carolinus) in fruit and climbing on a grapevine (Vitis sp.). While this trip was definitely woody-plants focused, we did see many herbaceous plants as we
walked, including squarrose sedge (*Carex squarrosa*), wild bean (*Phaseolus polystachios*), and rice cutgrass (*Leersia oryzoides*), and probably many others I don’t recall because, well, we were all there to see the big tree.

And what a big tree it was! I heard a few gasps from the group when they realized we had reached the end of the trail and were suddenly standing face to face with the largest tree in the state. It lives in a slough that was about half full of water when we visited, so we weren’t able to get right up next to it. But when we walked down the bank of the slough and stood on the edge of the water, we got an idea of how big the tree is – it measures 126 feet tall with a trunk circumference of 43.5 feet. Its knees alone are huge, with some measuring 10 feet tall! As I stared up at the tree, I realized just how impressive it is, especially given the harsh habitat it is living in and knowing that it has been marginalized, spending the past few hundred years or so in an inhospitable swamp. This magnificent tree is a survivor, and a graceful one at that.

*Lycopus*, the wolfbanes, are a cosmopolitan genus of Mints that characteristically lack much of the minty, or any odor that many of our native mints have. Some would even say that *Lycopus* also lack the attractive characters that some of our other mints like beebalm, hedge-nettle, and others with showy flowers used in gardens. In the eastern United States there are ubiquitous species found from New England south and west to Texas: *L. ru-bellus* and *L. virginicus*. These two are common and easily separated by their calyx structure and the seeds (nutlets). In Arkansas there 4–5 species present.

While a graduate student at the University of Tennessee I worked on many genera as small projects and during a field trip to Arkansas in 2010 we collected a *Lycopus* as specimens and living collections from Miller County in the southwest corner while working on *Clematis*. Upon drying the specimens and then opening the newspapers back up their was a distinctive yellowish imprint of the pressed plant left on the newspaper. Under the dissecting microscope the plant was distinctly covered in numerous small stipitate glands, i.e. yellow glands on little stalks. I began comparing specimens housed in the herbarium to these samples and started finding a pattern in the geographic distribution, and also a single person that kept collecting the same entity - Dale R. Thomas. He collected prolifically throughout the South and many of his collections were at Tennessee. Once the characters showed a nice pattern of localized distribution and specific morphology that indicated this may be a novel species, the study was expanded to include molecular data.

The long slow process of studying a new species in a taxonomically difficult, but small genus continued with the addition of specimens loans from other herbaria and DNA study using barcode markers. First, a loan of 500+ specimens was borrowed from the Botanical Research Institute of Texas, and specimens from Austin Peay State University in Tennessee. These specimens were gone through and identified to species and those with the glandular characters were set aside. It should be noted that *L. angustifolius* and *L. amplectens* both exhibit similar glandular characters, but neither species occurs within several hundred miles of the region of interest and they are...
different in their morphology. The second part of the study was molecular analyses of all of the North American species to determine if basic barcode markers could tell the species apart. The results were less than satisfactory for most North American species aside from *L. americanus*, *L. asper*, *L. cokeri*, and *L. uniflorus*. The remainder of the species were not sufficiently separated except for the novel species which had a single distinctive character change relative to *L. rubellus*. These minimal observed differences in the DNA should not be considered conclusive because the sampled markers are a very tiny part of the whole plant’s genome, so further study is warranted.

The results of the study led to the recent description of a new species, *Lycopus glandulosus*, that is distributed in the West Gulf Coastal Plain of southwest Arkansas, northwest Louisiana, and northeastern Texas. Like other *Lycopus* species, this one also occurs in wet habitats on creek sides, wet ditches, pond margins and flood plains. In Arkansas where I’ve seen it in the wild it occurs in flood-plains with ash, ironwood, magnolia, and *Taxodium*. Populations of the plant tend to be large due to the extensive rhizomatous or stoloniferous growth. In adjacent Louisiana it is only found a few northwestern counties, but it appears to be abundant in a large number of counties in northeastern Texas.

*Lycopus glandulosus* is distinctive compared to other species that are sympatric. It is most similar to *L. rubellus* and populations were observed within 10–15 miles of one another. This new species has distinctively silvery leaves that are densely covered in short hairs and the whole plant, especially the terminal portions, are densely golden glandular with 10x magnification. In the wild, the plants leave an oil residue on the collectors hands. In addition, the odor produced by the volatile compounds when the plant is gently disturbed releases a eucalyptus-like odor. This single character is unlike other *Lycopus*. Most species of *Lycopus* do not have distinctive fragrances.

Largely due to fire suppression, grasslands and savannahs are facing woody encroachment from species that were previously controlled by recurrent fires. In response, land managers have tried to use prescribed fire to re-establish conditions found prior to fire exclusion and suppression. However, because fire has been absent for so long, simple application of prescribed fire to the landscape is insufficient to restore communities. Sweetgum (Liquidambar styrciflua) is a common species invading southeastern grassland habitats, and its ability to vigorously resprout has made it difficult to eradicate. It is unclear how best to apply prescribed fire to control this encroachment. Specifically, it is not well understood if the timing of fire might impact the ability of species to resprout or recover long term. However, fires that coincide with periods of seasonally lower root NSC (non-structural carbohydrates—basically sugar and starch) concentrations and higher metabolic requirements – late spring through summer – could be more effective at reducing resprouting growth. The goal of this study was therefore to investigate how the timing of prescribed fire impacts the resprouting vigor and carbohydrate storage of sweetgum.

In this study, we monitored the recovery of top-killed sweetgum trees at two similar prairie sites in Central Arkansas with different disturbance histories – one burned in August 2021 and one burned in March 2022. Over 80 total resprouting trees were collected across four harvest dates – March, June, August, and December 2022 - to compare NSC concentrations, above ground growth, and water relations over time and to determine if initial size of the tree at the time of the fire disturbance affected resprouting response.

By the final harvest event in December 2022, the summer burned site had sixteen months to recover while the winter burned site had nine months to recover from fire disturbance. Pre-fire, all the experimental trees were similar in size. Despite the difference in time since fire, there was no difference in resprout height or resprout mass between the sites at the end of the 2022 growing season. While the sites had similar resprout mass and resprout height in December, the trees at the winter-burned site had a higher regrowth rate - the winter-burned trees pro-
duced their resprout mass in a much shorter time frame compared to the summer-burned trees. Additionally, the summer-burn site trees had an advantage of being able to grow resprout mass between their fire disturbance (August 2021) and dormancy in winter. Despite this head start allowing the summer-burn site trees to have significantly taller resprouts with more mass at the June harvest event, they were not able to maintain this through the summer growing months. The summer burned trees were more water stressed than the winter burned trees in September and had significantly less root carbohydrate storage than the winter burned trees in December. Immediately after a prescribed burn, fire damage to a plants’ photosynthetic organs leads to a decrease in carbon being supplied to the roots and other tissues of the plant. This carbon supply deficit can result in the starvation and die back of root tissue, decreasing the plants’ ability to take up nutrients and water. When plants are more water stressed, they will close their stomata to try to minimize water loss at the expense of decreasing photosynthetic gain. This leads to reduced growth, and decreased ability to build up carbohydrate reserves and recover. Compounding the immediate loss of above ground tissue and decreased root mass after the fire with the longer-term increased water stress and lower carbon reserves, we found that the summer-burned trees were in a much more vulnerable position. While the summer-burned trees produced just as much resprout mass as the winter-burned trees in this first growing season after both fires, the summer-burned trees had half as much root NSC as the winter trees going into the dormant season. This puts the summer burned trees at a serious disadvantage for growth, disturbance response, and ability to persist on the landscape.

This study looked at the physiological response of one species, from only two burn units, burned at two distinct time periods. We need to know so much more about the variation of fire, how different species respond, and ultimately how we can best apply fire to meet management goals. This study would not have been possible without the Delzie Demaree Research Grant – I am humbled, honored, and so grateful to the Arkansas Native Plant Society for their support.

Resprouting growth of a top-killed sweetgum tree in the winter-burned site, August 2022 (fire months after fire).
These members have joined ANPS since the last issue of *Claytonia*, from August 6, 2022 to March 11, 2023:

Mary Baker (Little Rock, AR)
David Barfknecht (Little Rock, AR)
Andrew Boatright (Springdale, AR)
Megan Boothe (Huntsville, AR)
Ginger Carr (Fayetteville, AR)
Patsy Conner (Little Rock, AR)
Leslie (Fowler) Cooper (Sherwood, AR)
Ali Ebrahimnegad (Wesley, AR)
Marcia Erbland (Little Rock, AR)
Dennis Evans (Neosho, MO)
Flinn’s Native Seeds (Lamar, AR)
Carolyn Gould (Little Rock, AR)
Dalton Holder (Fayetteville, AR)
Jamie Holiman (Little Rock, AR)
Amy R. & Stephen Hudson (Conway, AR)
JoAnne Jennings (Little Rock, AR)
Shannon Kitchen (Fayetteville, AR)
Catherine Marlowe (Morrilton, AR)
Shelle Morgan (Jonesboro, AR)
Mackenzie Mullikin (Greenwood, AR)
Joseph Odom (Little Rock, AR)
Cindy & Kent Owen (Powhatan, AR)

Diana Picklesimer (Bainbridge, GA)
Randy Putt (Springdale, AR)
Gregory Rajsky (Melbourne, AR)
Sharon Roberts (Eureka Springs, AR)
Morgan Russell (Blytheville, AR)
Gael Sammartino (Little Rock, AR)
Felicia Skipper (Ward, AR)
Donna G. Smith (Silsoam Springs, AR)
Marianna & Tom Smoot (Tonititown, AR)
Robin Starr (Fayetteville, AR)
Frank Swift & Michelle, Garrett, & Gary Andrews (Jacksonville, AR)
Willa Thomason (Fayetteville, AR)
Amanda Townsend (Springdale, AR)
Roxy Rose Wallace (Hot Springs, AR)
Wanda Watson (Gassville, AR)
Carol Wright (Little Rock, AR)

**New Life Members**
Art Browning (North Little Rock, AR)
Susan Hubbard (Eureka Springs, AR)
Sue Anne Jenkerson (Batesville, AR)
James Johnson (Mountain Home, AR)
Marie Simonds (Donaldson, AR)
Diana Soteropoulos (Little Rock, AR)

**Welcome, New ANPS Members!**

We are working on new designs for Arkansas Native Plant Society T-shirts. Go to [Bonfire.com](http://Bonfire.com) and search Arkansas Native Plant Society to see shirts available.

**New ANPS T-shirts Available to Purchase!**
Soon after the pandemic began in 2020, I decided to get in the field for some solace. I headed out to the South Fourche Botanical Area (SFBA), a 2580-acre site where I had been working on a botanical inventory for the last 6 years. Because I was doing a full inventory and collecting specimens in duplicate for the Arkansas Natural Heritage Commission and Ouachita herbaria, I would sometimes only make it a few hundred meters before having to head home because my plant presses were full. Hence, and a little embarrassingly, this was my 41st visit to the SFBA.

I drove to an area I’d only visited in the fall and stood atop the sandstone bluff overlooking spring coming to the Ouachita Mountains. The pleasant light greens of hardwoods, the deep greens of pine, the churning, full roar of the South Fourche La Fave River with Forked Mountain in the distance and a soft spring breeze. What a feeling! Then a yellowish orange flower caught my attention, and my first thought was hoary puccoon (*Lithospermum canescens*). Not a rare plant, but one I hadn’t yet collected for my inventory, so I was excited. I scrambled down the steep, rocky slope and when I got to the plant realized it was just prairie ragwort (*Packera plattensis*). Darn! Already on my list. But then I noticed a plant with rather large, clasping leaves. The flowers were still whitish green but tipped with a subtle pink. My heart started to beat a little faster. I grabbed my hand lens (because I’m over 40 and can’t see any more) and looked at the sepals. Hairs! Squamous hairs! Wow! Now this is a find!

I took a few photos and as soon as I got back into cell phone range texted Susan Hooks to make sure I wasn’t making a huge species ID blunder. She verified it was what I thought: Ouachita twistflower (*Streptanthus squamiformis*)! I then texted Brent Baker and Theo Witsell. Theo’s re-
Ouachita twistflower, an annual herbaceous plant in the mustard family (Brassicaceae), has been considered endemic to the southwestern portion of the Ouachita Mountains in Arkansas and Oklahoma, restricted to portions of the Athens Plateau; Central Hills, Ridges, and Valleys; and Central Mountain Ranges ecoregions. This find in the SFBA (in Perry County) was a 100-km range extension of a species whose entire range was only 2600-km² (50km*75km)! And it represents its first occurrence in the Fourche Mountains Ecoregion.

This newly discovered population was located on a steep, south-facing sandstone glade above the South Fourche La Fave River. It was confined to open, exposed glades and predominantly was associated with thin soils adjacent to steep sections of exposed sandstone bedrock of the Lower Atoka Formation. Approximately 200 plants were found in a 4000-m² area in the vicinity of the new population. Plant associates included hairy lip-fern (Cheilanthes lanosa), wild oregano (Cunila origanoides), linear-leaved rosette-panicgrass (Dichanthelium linearifolium), long-leaf wild buckwheat (Eriogonum longifolium), woodland sunflower (Helianthus hirsutus), Texas toadflax (Nuttallanthus texanus), post oak (Quercus stellata), azure blue sage (Salvia azurea), little bluestem (Schizachyrium scoparium), Ohio spiderwort (Tradescantia ohiensis), and small Venus’ looking-glass (Triodanis biflora).

There are several lessons in this discovery. First, timing is important. Twistflowers are only out for a couple months in the spring. If I’d gone to this same place in July or August I would have (and probably did) completely miss it. Second, no matter how many times you have been to a place, there is always something new to see and find. So, keep getting out and looking around. You never know what you may find!
Arisaema: nine instead of two?
A new study looks into the different varieties of Jack-in-the-Pulpit (*Arisaema triphyllum*) and green dragon (*Arisaema dracontium*) and has found evidence from unpublished dissertations, herbarium records, iNaturalist photos, and field observations that there are 6 distinct species of Jack-in-the-pulpit and 3 distinct species of green dragon. Differences are found in the leaves (underside color and number of leaflets) and the shape and color of the spathe and spadix.

Find the paper here:

Netleaf leather-flower (*Clematis reticulata*) was thought to be one species with a lot of variability. New research using herbarium specimens, field work, and common garden studies shows six newly recognized species. They used morphological and genetic data along with biogeographical and ecological information. Species geographically split out quite neatly. *Clematis arenicola* is located in southwestern Arkansas and into western Louisiana and eastern Texas. *Clematis ouachitensis* is located in the Ouachita Ecoregion in western Arkansas and eastern Oklahoma.

Find the paper here:

Photos clockwise from the top: Jack-in-the-pulpit (*Arisaema triphyllum*) - first 3 photos— which may now be considered different species; green dragon (*Arisaema dracontium*) flower and leaves. All photos by Eric Hunt.

Netleaf leather-flower (*Clematis reticulata*) which is probably now *Clematis ouachitensis*. Photos by Eric Hunt.
Harmony Mountain, October 21-23rd, 2022
The annual retreat at Harmony Mountain Fall 2022 was a resounding success. We were so glad to see each other, not to be taken for granted in this continuing age of Covid. The weather cooperated and we were able to visit Richland Creek at the peak time for the colorful sugar maples, but the color change was delayed in other areas. The potluck dinners shared on Friday and Saturday nights were scrumptious as usual; the auction rivaled the one in 2021 in amount of money raised. During the business meeting, we voted to keep the 2022 officers. Sue Hubbard agreed to continue her role as President. She has done a great job, arranging for interesting hikes last year and this coming year. Sandy Tedder will remain Vice-President; Deb Bartholomew agreed to serve as Treasurer again; Janice LaBrie will continue as our Historian/Photographer; and Burnetta will remain Secretary/Newsletter Editor. Steve made a motion to donate $100 to the Ozark Natural Science Center with Sue seconding that motion; Jim motioned to donate $400 to the Audubon Ecology Camp with Steve Smith seconding; Sue made motion to donate $100 to the Wetland Society with Jim seconding. We also agreed to pay $300 to reserve Harmony Mountain for next year. Although it, as we, are aging a bit, it still remains the best place for our needs. Next year we plan to hold the retreat on November 3rd – 4th. Attending were Ginny Masullo, Steve Smith, Jim Dudley, Deana Vickers, Deb Batholomew, Janice LaBrie, Sandy Tedder, Gordon Beavers, David Geneson, Steve Holst, and Burnetta Hinterthuer; Sid and Jeanette Vogelpohl met us at Richland Creek. We really missed Mary Ann and Gene this year as they were unable to come.

Richland Creek and Steel Creek
Saturday, October 22, 2022. Since we were ahead of deer season (with guns), we could schedule a trip to Richland Creek. It was a spectacular day with sunshine galore, and since the creek had plenty of water, the trees were already changing color, the most brilliant colors we saw on the entire trip. Due to earlier drier conditions, most of the herbaceous color was long gone with the exception of wreath goldenrod (Solidago caesia), so that was welcome.

The trees and shrubs that welcomed us on the trail were: American hophornbeam (Ostrya virginiana), or the official ironwood (though two other species are sometimes called this as well); Ozark chinquapin (Castanea ozarkensis), a small sapling but without signs of the blight yet and a larger tree that hopefully has escaped the blight; white oak (Quercus alba) and southern red oak (Q. falcata) were there, as well as Carpinus americana, which is also called American ironwood along with blue beech, musclewood, and muscle beech. (Now you see why I always like to use Latin names as well as common names.) A large tulip tree (Liriodendron tulipifera), not native to this region but one commonly planted when pioneers moved in from Kentucky and Tennessee, was glorious in soft yellow leaves; leatherwood (Dirca palustris) was there and quite abundant as were bitternut hickory (Carya cordiformis) and with pignut hickory (Carya glabra), spicebush (Lindera benzoin), and its close family member sassafras (Sassafras albidum). White ash (Fraxinus americana) and black locust (Robinia pseudo-acacia) were abundant around the campground and on the bank and along edges of the creek. There was still plenty of water in the creek. Inland sea oats (Chasmanthium latifolium) was abundant. It was a great day to be on Richland Creek.

On Sunday, those of us heading west ended up going down to Steel Creek and walking the roadways just up from the river. The species were mostly native non-showy fall species with a lot of Johnsongrass (Sorghum halepense), Kentucky fescue (Lolium arundinaceum), and sericea lespedeza (Lespedeza cuneata) thrown in for good measure. We paid more attention to Mexican tea, once Chenopodium ambrosoides but now Dysphania ambrosioides. It reminds me of my childhood walking around the barnlot, but is a medical plant and used to prevent gas developing in beans called epazote in central America. The distilled essential oil is toxic but the plant is used to treat digestive problems, etc. A climbing milkweed was also spotted but was too high to reach. The bluffs were amazing with colorful backdrop of fall leaves.
Fall Business Meeting Minutes

October 8, 2022
The Grand Prairie Center, Salon B
Philips Community College
2807 US-165, Stuttgart, AR 72160

The Arkansas Native Plant Society held its Fall 2022 Business Meeting at the The Grand Prairie Center, Phillips Community College, Stuttgart, AR.

President Nate Weston called the meeting to order. Nate thanked Joe Ledvina for his great work putting the fall meeting together. It had been a few years since the Covid pandemic derailed the bi-annual meetings and Joe had not had the usual orientation to organizing the event. He had done a superb job getting everything together.

Nate reported that the Saturday morning and afternoon field trips went really well in spite of the recent drought. The weather was perfect and the plant specimens better than expected. Nate thanked the field trip leaders for leading the various field trips and asked Joe Ledvina to describe the Sunday’s field trips. Joe Ledvina reported that Richard Abbot will be leading a field trip at Taylor Woodlands near Pine Bluff. Diana Soteropoulos will lead a field trip at Pine City. Caravans for both trips will leave the hotel in the morning at 8:30 AM.

Nate also thanked the members for coming to the meeting and making things happen. The potluck was great and participation in the field trips was excellent.

Nate thanked Kate Lincourt for her service on the Board of Directors. Kate has been Treasurer for the past six years and has done an outstanding job.

Kate Lincourt gave the Treasurer’s Report. She said that the Fall meeting added over $1,000 to our income. Our income for the current year is over $10,000 and on track with the budget. Expenses are also on track at $10,978. The 2023 Budget is pretty similar to the current year. We have added a line item of $250 for the annual Eco-Tour. John Simpson moved to accept the financial report. Roselie Overby seconded the motion. The motion passed.

Nate Weston reported Loblolly State Park was awarded a small grant for a native plant garden at the park and that the garden has been a great success. The Park donated four paintings for the Silent Auction.

Nate Weston said that Eric Fuselier was unable to attend the meeting but that he had been very active this year organizing and producing webinars for ANPS. Nate encouraged members to check out the Webinars which are available on YouTube on the ANPS channel.

Sue Hubbard reported that the Ozark Chapter will meet at Harmony Mountain this year for its annual meeting. The chapter was very busy with field trips in the Spring and Fall. She invited interested members to join the Chapter. Dues are $10 a year and members receive information on all field trips and events.

Nate Weston reported that the Spring Meeting will be held May 19-21, 2023 in Northwest Arkansas. The meeting location has not been selected yet.

Nate Weston asked Margaret Lincourt to report on the Board of Directors election. Margaret said that the following individuals had been recommended to the Membership by the current Board.

- Vice President: Sarah Geurtz
- Treasurer: Leslie Patrick
- Membership: Molly Robinson
- Internet/Social Media Officer: Nate Weston
- Editor: Virginia McDaniel

Nate asked if there were any additional nominations from the floor. There were none. Then Nate asked if anyone wanted to be considered for these Board positions. There was no response. Becky Hardin moved that we elect the slate of officers recommended by the Board. Kate Lincourt seconded. The motion passed.

There being no further business, the meeting adjourned at 6:35 PM.

Respectfully submitted,

Margaret Lincourt, Secretary
Everyone is welcome to attend! Meeting registration is only $10 with no pre-registration required. Registration will begin at 5:00 p.m. on Friday, May 19 at the Illinois River Watershed Partnership Watershed Learning Center.

MEETING LOCATION
Illinois River Watershed Partnership Watershed Learning Center
221 S. Main St., Cave Springs, AR 72718
Website: irwp.org

HOTEL LOCATION
Holiday Inn Express and Suites Bentonville
2205 S.E. Walton Boulevard, Bentonville, AR
479-271-2222

We have reserved 10 king rooms at a rate of $109.00 plus tax per night and 10 double queen rooms at a rate of $119.00 plus tax per night. Reservations must be received by April 28, 2023 to guarantee these rates. Follow the link in the hotel’s name above to book your room, or if you prefer to call to make a reservation, mention that you are with the Arkansas Native Plant Society.

DINING OPTIONS
We will have a potluck meal Friday and Saturday evenings. Bring a dish to share or just come and eat! The IRWP Watershed Learning Center has a refrigerator we can use to store food overnight. There are also many dining options near the hotel.

SILENT AUCTION
The silent auction will begin at 6:00 p.m. on Friday and close at the end of the program on Saturday evening. Proceeds from the auction support the ANPS small grants program, student research grants, and student scholarships! Bring any donations you would like to include in the auction before 6:00. Auction sheets will be provided. If your item does not sell, you must take it back with you at the end of the meeting.

FIELD TRIPS
Several field trips to local areas of top botanical interest are scheduled for Saturday 8:30 a.m. - 5:00 p.m. and Sunday 8:30 a.m. - 12:00 p.m.

You must sign up for field trips on Friday evening to allow for adequate logistical planning. We will also provide directions to each site on Friday evening. We advise bringing a hat, sunscreen, water, snacks, and bug spray on field trips!

NOTE: Field trip locations may change due to inclement weather, so check the ANPS website and Facebook for the latest field trip locations in case of rain, as we will post alternative activities there.
EVENING PROGRAMS SCHEDULE – at the IRWP Watershed Learning Center

Friday, May 19
5:00 PM  Doors to meeting room open and registration begins; silent auction setup
6:00 PM  Silent Auction opens
7:00 PM  Evening program begins
7:15 PM  Brendan Kosnik, M.S. student in biology at Arkansas State University and 2022 ANPS Delzie Demaree Research Grant recipient, will speak on his research “Discovering the Rare Sedges of Eastern Arkansas”
8:00 PM  Virginia McDaniel, Acting Forest Botanist for the Ouachita National Forest, will introduce the informative videos “Glade Restoration on the Ozark-St. Francis and Ouachita National Forests” and “Shortleaf Pine-Bluestem Restoration on the Ouachita National Forest” produced by Fauna Creative with funding from the US Forest Service and The Nature Conservancy
8:15 PM  Marson Nance, Director of Land Stewardship and Research, Northwest Arkansas Land Trust, will speak on the topic "Restoration Ecology of Wilson Springs Preserve"

Saturday, May 20
5:30 PM  Doors to meeting room open, registration continues
6:00 PM  ANPS Business Meeting
7:30 PM  Keynote Speaker: Dr. Ray Fisher, Research Entomologist at Mississippi State University and adjunct Professor at the University of Arkansas, will speak on the topic “Girdlers, Gallers, and Get-togetherers: tales of plants and arthropods”
8:30 PM  Silent Auction closes

QUESTIONS?  Visit anps.org or contact Eric Fuselier at anps.programs@gmail.com.

ANPS is recognized by signs on Highway 309, between Mount Magazine and Paris, for litter control. ANPS members Jeanette & Sid Vogelpohl collected litter (including cigarette butts) along two miles of highway, almost every weekend, for 10 years. 135 full bags were collected, of which 52 bags of plastic and cans were recycled. Photo by David Forst.
Lake Wilson in Fayetteville
Saturday, April 8th
11:00 a.m. – 2:00 p.m.
Come join Eric Fuselier on a Spring Ephemeral Hike at Lake Wilson in Fayetteville. We’ll be taking it slowly. Bring a lunch/snacks and water. Family friendly hike – kids are welcome.
Level of Difficulty: Trail is mostly level with little to not elevation change. Length is approximately 1-mile round trip.
Location: Meet at the pavilion at the end of the road that goes along the west side of the lake.

Lake Atalanta
Sunday, May 7th
10:00 AM
Nate Weston will be leading a hike along the Lake Atalanta loop in Rogers, AR. Lake Atalanta offers a surprising amount of diversity and is something of a hidden gem of biodiversity just a few minutes’ drive from downtown Rogers. For this walk, we will see native plants from several different ecosystems, including forest, riparian, prairie, and even some glade species.
Level of Difficulty: This will be an easy, 2-mile walk along paved trails.
Directions: To get to Lake Atalanta from downtown Rogers, go east on E. Walnut St. Keep going down the hill towards Lake Atalanta until you reach the park. Turn left into the main entrance and park. We will meet up at the pavilion beside the restrooms. If you miss us, we will be walking counterclockwise along the boardwalk.

Ouachita National Forest Woodland Restoration
Thursday, May 25th
10:00 a.m. – 2:00 p.m.
Join Virginia McDaniel, Acting Ouachita National Forest Botanist, and Jennifer Ogle, Collections Manager at the University of Arkansas Herbarium, for a tour of the Pine-bluestem woodland restoration area on the Ouachita National Forest. We will see a variety of grassland species like little bluestem, panic grasses, sunflower, wild petunias, coneflowers, and milkweeds.
Level of Difficulty: Easy to moderate; we will primarily be walking off-trail through an open shortleaf pine woodland with a carpet of mostly native forbs and grasses in the understory.
Directions: Meet at the USDA Forest Service office in Waldron, Jct Hwy 71 & 248 in Waldron, AR. We will carpool from here to the woodlands.
Please RSVP Virginia McDaniel – 828-545-2062.

Infinity Farm
Saturday, June 3rd
Come on a Tour of Infinity Farm with Faith Shah. Visitors will roam the various "rooms" of native plants and shrubs. Fingers crossed our gardens won’t have too much drought damage from last summer. Expect to see Echinacea (coneflowers), Ohio horsemint, various Spiderworts, Fragrant sumac, Indian pink, Scarlet Penstemon, Foxglove beardtongue, large flower baby blue eyes, and many more.
Level of Difficulty: easy
Location: In the Keels Creek, Kings River valley; 88 CR 326, Eureka Springs, AR

Lake Frances Preserve
Saturday, June 10th
9:30 a.m. – 12:00 p.m.
Join Jennifer Ogle, Collections Manager at the University of Arkansas Herbarium, and Marson Nance, Director of Land Stewardship & Research at the Northwest Arkansas Land Trust, for a tour of one of NWALT’s newest conservation properties, the 830-acre Lake Frances Preserve in southwestern Benton County. We will walk through a mature post oak savanna and pine-oak woodlands undergoing restoration and will see several native wildflowers in bloom, as well as many native trees and shrubs. Level of Difficulty: Easy to moderate; we will primarily be walking off-trail through an open savanna and woodlands with a dense layer of native and non-native herbaceous vegetation in the understory.
Directions: From Hwy 412 in Siloam Springs, turn south on AR Hwy 59 (S. Lincoln St.) and continue for approximately 3.4 miles, then turn right onto Lake Frances Gate Road. Drive through the gate and park on the right side of the gravel road. GPS of meeting location: 36.129673, -94.538874.
Please RSVP to Jennifer Ogle at jogle@uark.edu if you plan to attend.

Richardson Bottoms, Ouachita National Forest
Tuesday, June 20th
10:00 a.m. – 2:00 p.m.
Join Virginia McDaniel, Acting Ouachita National Forest Botanist, and Susan Hooks, retired Ouachita National Forest Botanist, for a wander around an upland marsh in the heart of the Ouachita National Forest. This natural wetland was created when beavers used trees to create a wetland that represents a unique habitat in the typically dry pine oak forest and an excellent wildlife and plant viewing area.
Level of Difficulty: Easy to moderate; we will primarily be walking along road around the wetland and surrounding forest. Bring rubber boots if you want to venture into the wetland.
Directions: Meet at Richardson Bottoms Wildlife Viewing Area located in both Garland and Montgomery counties in Arkansas. It is approximately 25 miles west of the junction of Arkansas Highways 298 and 7, or approximately 5 miles east of the town of Story on highway 298. Turn south onto Forest Service Road 37300. Go 2.5 miles to the wetland.
In the Spring 2020 *Claytonia*, we commemorated the life and work of Missouri botanist, botanical illustrator, and ANPS member Linda Ellis. Linda sadly died in early 2020 after a long illness. Her death was a significant loss to our botanical community, as she was an expert in her field and a fun and witty person to spend time with in the field. Though she lived in Missouri, she spent many years botanizing in the Arkansas Ozarks with members of ANPS. In 2022, the ANPS board learned that, prior to her passing, Linda had bequeathed her botanical art to the society. It includes hundreds of pieces, including framed and unframed watercolors, scientifically accurate illustrations, and colored-pencil drawings of native wildflowers, grasses and Ozark landscapes. It also includes samples of some of the brochures and posters in which her art appeared, and even a few doodles and rough sketches of both botanical and non-botanical art.

We are honored to receive this gift.

The news of Linda’s generosity came to us by way of Bob and Barb Kipfer of southern Missouri, long-time friends and executors of her estate. The Kipfers are retired medical professionals who became ardent conservationists in retirement, in part due to meeting Linda in a glade more than 25 years ago. The meeting left quite an impression on the Kipfers and resulted in a lasting friendship.

“Our first contact with Linda Ellis was when she came to a glade restoration which we had burned two years before with the Missouri Department of Conservation. We were just introduced to conservation and were amazed by her knowledge and the time she shared with us. She began identifying plants right and left. I especially remember her pointing out a little 6" tall plant and saying that it was the host plant for the Baltimore Checkerspot. A little further down she cried out ‘there it is!’ and pointed out the orange and black caterpillar and we were hooked. After that we had many wonderful hikes on our land and hers, absorbing her fountain of knowledge on all things botanical and otherwise, spouting Latin like a Roman senator.”

– Bob Kipfer

Board member Mike Burns traveled to Missouri last summer to receive the art from the Kipfers, then delivered it
to the University of Arkansas Herbarium (UARK), where it is temporarily being housed in the climate-controlled facility overseen by UARK collections manager and fellow board member Jennifer Ogle.

At the last board meeting, members voted to form an ad hoc committee to handle the gift. This committee formed over the winter and is composed of four people from the ANPS board and membership: Mike Burns, Jennifer Ogle, Leslie Patrick, and Theo Witsell. The Committee to Promote and Archive Linda Ellis’ Art, or PALEA* for short, will make recommendations to the board about how to best protect and promote Linda’s botanical art and help further the mission of ANPS.

*Those who have studied flowers of the Grass Family (Poaceae) or Sunflower Family (Asteraceae) may recognize the word *palea*. In grasses, it refers to the upper bract of a floret. In the inflorescences of many sunflowers, the palea, also called a *receptacular bract* or simply *chaff*, is a bract on the receptacle that subtends each flower.

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**2022 Fall Treasurer's Report**

<table>
<thead>
<tr>
<th>2022 Year End Treasurer's Report 1 Feb 2023</th>
<th>1 Jan - 31 Dec 2022</th>
<th>Proposed 2023 Budget</th>
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<td>2021 Actual</td>
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| **EXPENDITURES**                          |                     |                      |
| ANPS.Org (website expenses)               | -$99.00             | -$111.00             | -$99.00  |
| Claytonia (Print & Distribute 2 Issues)   | -$2,075.90          | -$2,000.00           | -$2,273.97|
| Directory (Print and Distribute)          | $0.00               | -$1,150.00           | -$1,444.61|
| Memorial Awards/Scholarships              | -$8,475.00          | -$3,000.00           | -$6,000.00|
| Grants/Support to Public Gardens          | -$4,199.80          | -$1,000.00           | $0.00    |
| Meeting expenses (space, speaker, etc.)   | -$529.17            | -$1,000.00           | -$440.00 |
| SWS: AR Eco Tour                          | $0.00               | $0.00                | -$250.00 |
| Ecology Camp                              | $0.00               | -$500.00             | $0.00    |
| Bulk Mail                                 | -$245.00            | -$245.00             | -$265.00 |
| PayPal/Square fees                        | $0.00               | $0.00                | -$50.45  |
| Zoom (webinar series)                     | -$163.39            | -$164.00             | -$162.83 |
| Supplies/postage/fees/misc                | -$102.37            | -$130.00             | -$69.99  |
| T-shirts/Hats Purchase                    | $0.00               | $0.00                | $0.00    |
| Tabling (ASB, MG)                         | 0.00                | $0.00                | -$375.00 |
| TOTAL                                     | -$15,889.63         | -$9,300.00           | -$11,430.85|

Total as of 31 Dec 2022: $25,663.40

*The website is budgeted at $111 to reflect the domain renewal (~12.80 per year every 5 years); PayPal/Square fees are separated out in 2022-2023.

Respectfully submitted by Leslie Patrick, Treasurer

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Linda’s illustration of Starry Rosinweed (*Silphium asteriscus*), drawn for *Steyermark’s Flora of Missouri*, shows a palea subtending an individual flower.
After arriving in Arkansas in 2017 and a busy, cash-strapped 2018, I attended my first Arkansas Native Plant Society meeting in the spring of 2019, in Conway. I expected to be my normal shy, awkward, quiet self in a big social gathering, but I was welcomed so warmly into this passionate, positive, and supportive community! The welcome I had felt in Conway was repeated and amplified the following fall, in Arkadelphia. It was then so disappointing to be unable to get together with you all during the next couple of years.

Last spring, we tested the waters with our "mini-meetings". These were well-attended, with dozens of folks getting together to enjoy native plants, food, companionship, and botanically interesting corners of the Natural State. Finally, last October, after a three-year drought, we had our fall meeting at the newly refurbished (though not quite completed!) Grand Prairie Center in Stuttgart. Sadly, some of our most active members and field trip leaders were unable to attend. I appreciate so much those who stepped up to help out in their absence.

Get ready for 2023, as the tireless and intrepid Eric Fuserlier takes another turn as ANPS President. He did not let the pandemic and our inability to meet in person stop him in 2021, providing a month-long virtual spring meeting and scheduling, hosting, and recording informative and educational online presentations throughout the year. Having built this expertise, he then volunteered to continue that work and has been providing additional webinars as our Program Officer. Our spring meeting, May 19-21 in Northwest Arkansas, will see us back in full swing again, I’m sure! I look forward to seeing you in May!

– Joe Ledvina, ANPS President

Arkansas Native Plant Society Membership Application

<table>
<thead>
<tr>
<th>Membership Categories</th>
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<td>$10 Student</td>
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<td>$15 Individual</td>
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<td>$20 Supporting</td>
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<td>$25 Family</td>
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<td>$150 Lifetime (age 55+)</td>
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<tr>
<td>$300 Lifetime (under age 55)</td>
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_____ New Member
_____ Renewal
_____ Address Change

Name(s) ____________________________________________

Address __________________________________________

City ___________________________ State _____ Zip ________

Phone ______________ Email __________________________

Mail this completed form with a check made payable to the Arkansas Native Plant Society to:

Leslie Patrick, Treasurer
15 Pinecrest Court
Conway, Arkansas 72032

JOIN OR RENEW ONLINE INSTEAD! Details at anps.org/join.
Please check your mailing label!
The calendar year is the membership year. If your mailing label says “22” or earlier it’s time to renew. Life members have an “LF” on their label.

To renew your membership, fill out the application for membership on page 22 and mail it to the address on the form. Or renew online at anps.org/join.

Botany Limericks
By Virginia McDaniel & Jennifer Ogle

There once was a sedge with no edges
It grew in the watery dredges
The stems, they were hollow
It’s not hard to follow
Those plants, they were rushes not sedges!

When you find a plant you need to loot
Grab a trowel; don’t forget the root
Make sure it’s not rare
Take what is fair
And try to have flowers and fruits

When nights are chilly and trees are bare
a bud emerges wrapped in care
Leaves of green, life blood red
Eliaosomes keep ants fed
But its toxic to us, be aware!