

CLAYTONIA

Newsletter of the Arkansas Native Plant Society

Volume 36, No 2
Fall 2016

Special
Feature

Why Natives Are Best By Virginia McDaniel

Special
Feature
Pages 3-7

2016 Spring
Meeting Minutes
Page 21

Fall Treasurer
Report
Page 22

New Members
and Life Members
Page 23

Fall Meeting
Details
Page 24

Membership
Application
Page 26

President's
Message
Page 27

In the fall of 1733 Peter Collinson, a cloth merchant, walked with great excitement to the docks in London to meet a ship. It wasn't a bale of cotton from the Colonies or a fine silk from India, but rather two boxes of seeds from an American farmer named John Bartram. It is with these exotic New World seeds (and hundreds more) that Collinson and his

fellow botanists transformed the English garden from mundane to extraordinary. In return, Collinson sent seeds from England and all over the world

to Bartram to propagate in the New World. It is of this great seed exchange and friendship that Andrea Wulf tells in her book *The Brother Gardeners: Botany, Empire and the Birth of an Obsession*. While a fascinating read, Wulf fails to address the unintended ecological consequences created by this innocent exchange by well meaning, curious botanists.

A non-native species is a species that is living outside its native range as a result of transportation by humans. Many species were transported intentionally, like the exchanges between Collinson and Bartram and other botanists who traveled the world. White clover

(*Trifolium repens*) was commonly added to lawn mixes; Japanese honeysuckle (*Lonicera japonica*) was introduced as an ornamental; multiflora rose (*Rosa multiflora*) and sericea lespedeza (*Lespedeza cuneata*) were introduced for erosion control and wildlife habitat. But many have arrived accidentally, like the chestnut blight that decimated the once dominant chestnut

(*Castanea dentata*) trees in the eastern US and the Ozark chinquapin (*Castanea ozarkensis*) in the Interior Highlands, which arrived in Japanese nursery stock. A non-native invasive spe-



A bee works to pollinate the native trumpet honeysuckle (*Lonicera sempervirens*). Photo by Michael Weatherford.

cies is one that spreads beyond its place of introduction, often taking over an area and preventing the growth of other native species. But why does it matter?

The book *Bringing Nature Home* by Douglas Tallamy is a dissertation on the answer to this question. In summary, what we really need to understand is the roles that plants play in their ecosystems. Plants do not grow up in isolation from other organisms, but rather *with* them. As a result, they have evolved to form relationships that are essential to each other's existence. We all know that insects gather nectar and, in return, plants are polli-

(Continued from page 1)

nated. But the relationship is not quite that simple. Pollinators also depend on plants to feed their larval stage (i.e. caterpillars). Plants want to be helpful, but at the same time do not want to be decimated, so plants develop new toxins to deter insects from eating them. Then insects develop ways to deal with those toxins (e.g. the monarch's ability to ingest toxins from milkweed). These relationships create a system of checks and balances that ensures population sizes of all plants and animals are kept at a level that can be supported by the ecosystem. And this often maximizes diversity. When a plant is transferred from another part of the world, the ecological constraints that kept this plant in check are gone and so are the links that made it a "contributing member of its ecosystem." Non-native plants have no evolutionary history with insects here and as a result insects don't eat them. So we see kudzu (*Pueraria montana* var. *lobata*) covering hillsides and Japanese honeysuckle in every forest, with nary a nibble (except perhaps some deer browse) removed from its perfect leaves. All of that habitat that once provided space for native plants and food for native insects is now gone. As the base of the food chain (plants) declines in diversity and population size, so too do the insects, birds, reptiles and mammals that depend on that food chain. Given the percent of the earth's land surface that is in agriculture production and developed, it is clearer than ever the need to rid our communities of exotic plants and fill our yards with native ones that *benefit* the ecosystem.

In Arkansas there are a handful of particularly problematic non-native invasive plants. They include autumn-olive (*Elaeagnus umbellata*), bull thistle



Native yellow honeysuckle (*Lonicera flava*). Photo by Eric Hunt.

(*Cirsium vulgare*), Callery pear (*Pyrus calleryana*), Chinese privet (*Ligustrum sinense*), Japanese honeysuckle, Japanese stiltgrass (*Microstegium vimineum*), multiflora rose, sericea lespedeza, and tall fescue (*Schedonorus arundinaceus*). I have described a few of these below and given some nice native alternatives to plant instead.

Autumn-olive is native to China, Japan and Korea and was introduced in 1830 to provide wildlife habitat and erosion control. It is a deciduous shrub with minute silvery scales on the undersides of the leaf that give it a grayish green appearance. Its tart, edible red berries are widely dispersed by birds, enabling its widespread invasion. Additionally, its nitrogen fixing root nodules allow it to invade even the most infertile soils. Autumn-olive can be removed by pulling small seedlings, but if it is too large to pull, herbicide is needed to kill it as burning and cutting just make it mad! Nice native alternatives to use include serviceberry (*Amelanchier arborea*), various dogwoods (*Cornus drummondii*, *C. racemosa* or *C. obliqua*) and blackhaw (*Viburnum prunifolium*).

Chinese privet is another lush smelling non-native invasive species that hails from

China, Taiwan and Vietnam. It is an ornamental shrub that can reach twenty feet tall and has opposite elliptical leaves and small white fragrant flowers at the tips of branches. It is especially prone to invading high quality natural communities like glades (naturally treeless areas that often house populations of endemic and rare plant communities). Alternatives to privet include flowering dogwood (*Cornus florida*), redbud (*Cercis canadensis*), serviceberry (*Amelanchier arborea*), and native azaleas.

Japanese honeysuckle is a woody vine that was introduced from East Asia in the 1800s as an ornamental and has been widely planted over the last century. While its luscious smell is unmistakable, its ability to invade native forests and exclude the growth of native vegetation is equally unmistakable. It has opposite leaves that can be entire or lobed (especially the basal leaves) and white flowers that eventually turn yellow in the axils of the leaves. There are two lovely native honeysuckles that can be planted in place of the invasive vine: yellow honeysuckle (*Lonicera flava*) has stunning yellow flowers and trumpet honeysuckle (*Lonicera sempervirens*) has beautiful red tubular flowers that hummingbirds love. For a plant with a nice smell try the pink azalea, *Rhododendron prinophyllum* (photo by Eric Hunt seen below).



Making the most of the legacy:

Using Notes from Nature to discover and disseminate specimen label data

By Travis D. Marsico, Ph.D., Associate Professor of Botany and Curator, Arkansas State University Herbarium (STAR), Department of Biological Sciences, PO Box 599, State University, AR, 72764; tmarsico@astate.edu; 870-680-8191

Importance and Utility of Herbaria

Herbaria are critically important repositories of natural history specimens and data (Baird 2010). They have a variety of functions including research, education, and outreach (Chapman 2005). The research based in herbaria is varied and includes traditional floristic research aimed at understanding the distribution and habitat preferences of plant species (e.g., Marsico 2005, Witsell 2007, Gentry et al. 2013). It also includes taxonomic and systematic research to understand relatedness among species or groups of species and the evolutionary history of plant groups (Judd et al. 2016). Additionally, ecological research has become increasingly common in herbaria, answering questions about plant species invasion history (Delisle et al. 2003, Malmstrom et al. 2007), the spread of pest insects (Lees et al. 2011), and impacts of climate change (Primack et al. 2004, Youngsteadt et al. 2015).

As we enter the sixth mass extinction of species on Earth, the only one driven by human activity, having a comprehensive understanding of species identity and distribution is paramount to implementing conservation and preservation strategies. Herbaria maintain a permanent record of plant specimens, from which species identity and distribution data are gathered (Chapman 2005). Until recently, herbarium specimens and data were rather inaccessible, even for scientists who would like to make use of the information they contain. In the digital age, specimen images and data are shared through aggregation web portals (e.g., www.sernecportal.org and www.gbif.org), making many research applications far more accessible.

Arkansas Herbaria Enter the Digital Age

Arkansas was fortunate to enter the era of digitization and data sharing in 2014 when a project called, “The key to the cabinets: Building and sustaining a research database for a global biodiversity hotspot,” was funded by the National Science Foundation. This project is compiling over 3 million images of plant specimens from over 100 herbaria in 12 southeastern states. In Arkansas, we have 8 active herbaria registered with Index Herbariorum (Thiers 2016), and all 8 are participating in this project. We anticipate that Arkansas has nearly 300,000 specimens that need imaging. Images of herbarium specimens are captured by student employees and volunteers. To date, imaging is complete at Arkansas State University (STAR), Hendrix College (HXC), and the University of Arkansas at Monticello (UAM). Images are actively being captured at the University of Arkansas (UARK) and University of Central Arkansas (UCAC). Future imaging will take place at the Arkansas Natural Heritage Commission (ANHC) and Henderson State University (HEND). About half of the specimens at Arkansas Tech University (APCR) have been imaged, and a mobile imaging station will return to APCR later in the project to complete the imaging work there.

Producing and sharing specimen images in data portals is an important resource for the research community because in some cases species-level identifications can be made from the images themselves. If this is not the case, having access to specimen images allows a researcher to efficiently examine specimens for which loan requests to institutions will be made.

Botanical enthusiasts and students can benefit from the freedom of examining specimen images from the convenience of their homes, classrooms, and coffee shops.

As important as specimen images are to research and education, they represent only a third of the digital record. Another third is the label data, and the final third is georeferenced locality information. Since the majority of plant specimens in Arkansas were collected before data labels were generated on computer word processing software or in digitally native databases, these handwritten or typewriter-produced labels represent legacy data that could only be accessed by visiting the collection that holds the specimen. Yet these data that include information on the species identity, location of the specimen collection site, plant and habitat description, collector, and collection date, are necessary for answering research questions in taxonomy, biodiversity, land management, ecology, and other fields of study. Once we have label data in a digital database statewide, it will be feasible to georeference the state’s plant collections in batches of collections. The georeferencing effort is important, but it is outside the scope of the current digitization project, which, in Arkansas, focuses on the specimen imaging and label databasing aspects of the digitization workflow.

(Continued on next page)

(Continued from previous page)

Making these legacy label data available is a core feature of the southeastern U.S. digitization project, and this article explains how Arkansas Native Plant Society members can become directly involved in this effort. An exciting aspect of the digitization project is the engagement of citizen science volunteers to assist in the legacy label data transcription from labels on plant specimen images to digital database fields. Volunteers can now work from anywhere with a computer and Internet connection to assist in label data digitization using the Notes from Nature web interface (www.notesfromnature.org) (Fig. 1).

Call to ANPS Members to Participate

We need as many volunteers who are willing and able to transcribe specimen labels as we can muster. We only have functional database records for approximately 22,000 of the nearly 300,000 plant specimens in Arkansas. This means that as we generate the images, we may need to transcribe over 275,000 specimen labels for specimens within the state. Data transcription volunteers directly participate in science and help scientists assemble the datasets needed to answer today's important biological and conservation research questions.

But what do the volunteers gain from participating? In my view, volunteers have the potential to gain a variety of benefits from participating in Notes from Nature transcriptions. By examining plant specimens, transcription volunteers can learn new plant species with which they were previously not familiar. They can become more familiar with broad geographic regions or specific locations within the state. Through transcribing label data, volunteers can gain insight into the history of state botanists and specific collectors. Moreover, they can gain a greater appreciation of the tremendous amount of work that went into building Arkansas's natural heritage specimen records over the past century and a half. Finally, there is a strong sense of satisfaction that volunteers can gain by helping on a project that is so much larger than any one person, researcher, or institution. Arkansas plant specimen images and data are genuinely becoming a part of the global data infrastructure of natural history collections, and that is something of which to be proud.

An additional exciting aspect of this particular Notes from Nature interface is that the specimen expedition topics are designed within the state by me, the Chief Mobilizer of Arkansas data. What this means for individual volunteers or groups like the ANPS, is that anyone can request a particular expedition of personal interest. The first three Arkansas expeditions included those for dogwoods, bellflowers, and the Arkansas Delta and Ridge ecoregions (Figs. 1 and 2). But hundreds of geography-specific or taxonomy-specific expeditions can be created to match the interests of the citizen science volunteers. Please feel free to contact me directly at 870-680-8191 or tmarsico@astate.edu to discuss specific expedition ideas.

When is the right time to transcribe label data? Any time you are in the mood to transcribe data is a great time to contribute. Specifically for ANPS members, maybe late nights, bitter cold winter days, scorching hot summer days, or any other time you feel that you want to connect with nature or our state's natural heritage, but are unable to venture outside.

Practical Aspects of Data Transcription using Notes from Nature

To begin exploring plant specimen label data transcription for Arkansas, navigate to www.notesfromnature.org in a computer's web browser. You will want to create an account and login before you begin transcribing so that you can keep up with your progress in your Field Book (see top of Fig. 1A). Once logged in, you can choose your taxonomic group (Plants, for example) of interest (Fig. 1A). Within the Plants group, you can then browse the active expeditions, and find the one(s) that is(are) most interesting to you (Figs. 1 & 2). To learn more about each expedition, you can hover your cursor over the expedition image, and a brief description is revealed (Fig. 2). Once you decide on an expedition to begin transcribing, click on the expedition image or text to reveal your first randomly generated specimen image (Fig. 3A). You can spend as much time as you like examining the specimen image. You can zoom in on vegetative or reproductive features, often being able to obtain a resolution sufficient to see plant hairs. At some point, you will want to focus on the specimen label (Fig. 3B), where the data to be transcribed are located. The specimen label is most commonly on the lower right side of the herbarium sheet (Fig. 3B). For the current expeditions, the information that is needed includes location where the plant specimen was collected and habitat and plant description information (Fig. 3B). Once those fields are completed, you click "Next" (Fig. 3B) to enter data into the remaining data fields (Fig. 3C). These remaining fields include the collector's name, the collector-designated specimen number, and the date of collection (Fig. 3C). Once a specimen is complete, you click "Done" (Fig. 3C) to receive your next specimen image. There are many options to receive help through the project tutorial and field-specific help menus as well as through the "Talk" feature (Fig. 3). The "Talk" feature allows users to comment on a particular image and receive feedback.

(Continued from previous page)

Summary

I encourage all ANPS members to become engaged in a region-wide effort to digitize our state's natural history plant collections. These collections are used in a variety of research, teaching, and outreach applications, and we are calling on the volunteerism of citizen scientists to mobilize these data that have historically been inaccessible. Using the web-based platform Notes from Nature, specimen label data transcriptions are easy and interesting. I look forward to your participation in this project.

Acknowledgements and Dedication

Funding for this project comes from a National Science Foundation grant to T. D. Marsico (grant number 1410098). Herrick Brown, Michael Denslow, and Austin Mast facilitated the Arkansas expedition set up, and I thank these three fellows profusely. I appreciate the curators of Arkansas herbaria for their involvement and enthusiasm for this project. Thanks to the imaging project personnel and volunteers for their dedicated hours of barcode labeling and imaging specimens. Finally, I thank all the volunteers who have transcribed specimen label data already. I look forward to growing our volunteer network.

This article is dedicated to the late Dr. George Pryor Johnson of Arkansas Tech University, who was my collaborator on the Arkansas plant specimen digitization project, my mentor, and my friend. George, I miss you, and I know that the members of the ANPS miss you, too.

Literature Cited

- Baird, R. 2010. Leveraging the fullest potential of scientific collections through digitization. *Biodiversity Informatics* 7: 130-136.
- Chapman, A. D. 2005. Uses of primary species-occurrence data. *Global Biodiversity Information Facility* 6: 22-36.
- Delisle, F., Lavoie, C., Jean, M., & Lachance, D. 2003. Reconstructing the spread of invasive plants: Taking into account biases associated with herbarium specimens. *Journal of Biogeography* 30(7): 1033-1042.
- Gentry, J. L., Johnson, G. P., Baker, B. T., Witsell, C. T., & Ogle, J. D., eds. 2013. *Atlas of the Vascular Plants of Arkansas*. University of Arkansas, Department of Printing Services.
- Judd, W. S., Campbell, C. S., Kellogg, E. A., Stevens, P. F. & Donoghue, M. J. 2016. *Plant Systematics: A Phylogenetic Approach*. Sinauer Associates, Inc., Sunderland, Massachusetts, USA.
- Lees, D. C., Lack, H. W., Rougerie, R., Hernandez-Lopez, A., Raus, T., Avtzis, N. D., Augustin, S. & Lopez-Vaamonde, C. 2011. Tracking origins of invasive herbivores through herbaria and archival DNA: The case of the horse-chestnut leaf miner. *Frontiers in Ecology and the Environment* 9(6): 322-328.
- Malmstrom, C. M., Shu, R., Linton, E. W., Newton, L. A., & Cook, M. A. 2007. Barley yellow dwarf viruses (BYDVs) preserved in herbarium specimens illuminate historical disease ecology of invasive and native grasses. *Journal of Ecology* 95(6): 1153-1166.
- Marsico, T. D. 2005. The vascular flora of Montgomery County, Arkansas. *Sida* 21(4): 2389-2423.
- Primack, D., Imbres, C., Primack, R. B., Miller-Rushing, A. J. & Del Tredici, P. 2004. Herbarium specimens demonstrate earlier flowering times in response to warming in Boston. *American Journal of Botany* 91(8): 1260-1264.
- Thiers, B. 2016. *Index Herbariorum: A global directory of public herbaria and associated staff*. New York Botanical Garden's Virtual Herbarium. <http://sweetgum.nybg.org/science/ih/>.
- Witsell, C. T. 2007. *Hypericum adpressum* (Clusiaceae) new to Arkansas and the Ouachita Mountains, U.S.A. *Journal of the Botanical Research Institute of Texas* 1(1): 713-716.
- Youngsteadt, E., Dale, A. G., Terando, A. J., Dunn, R. R., & Frank, S. D. (2015) Do cities simulate climate change? A comparison of herbivore response to urban and global warming. *Global Change Biology* 21(1): 97-105.

(Continued from previous page)

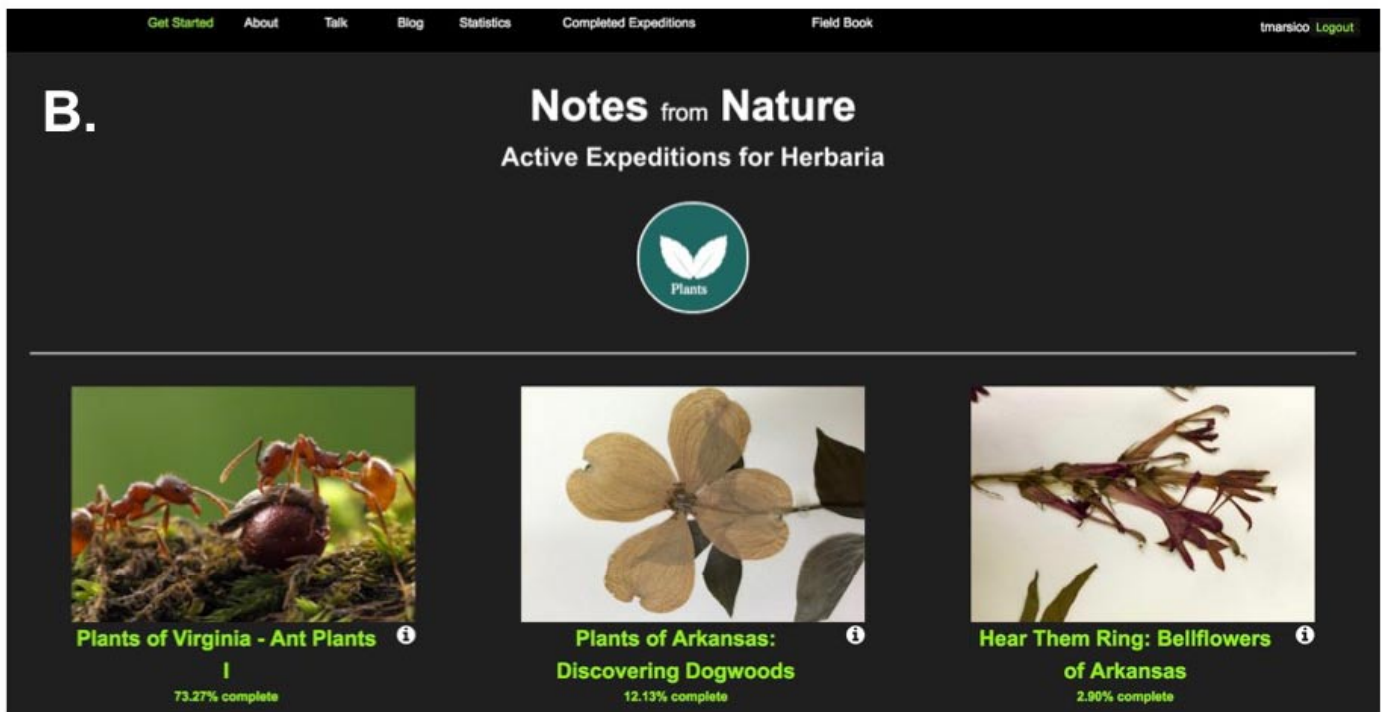
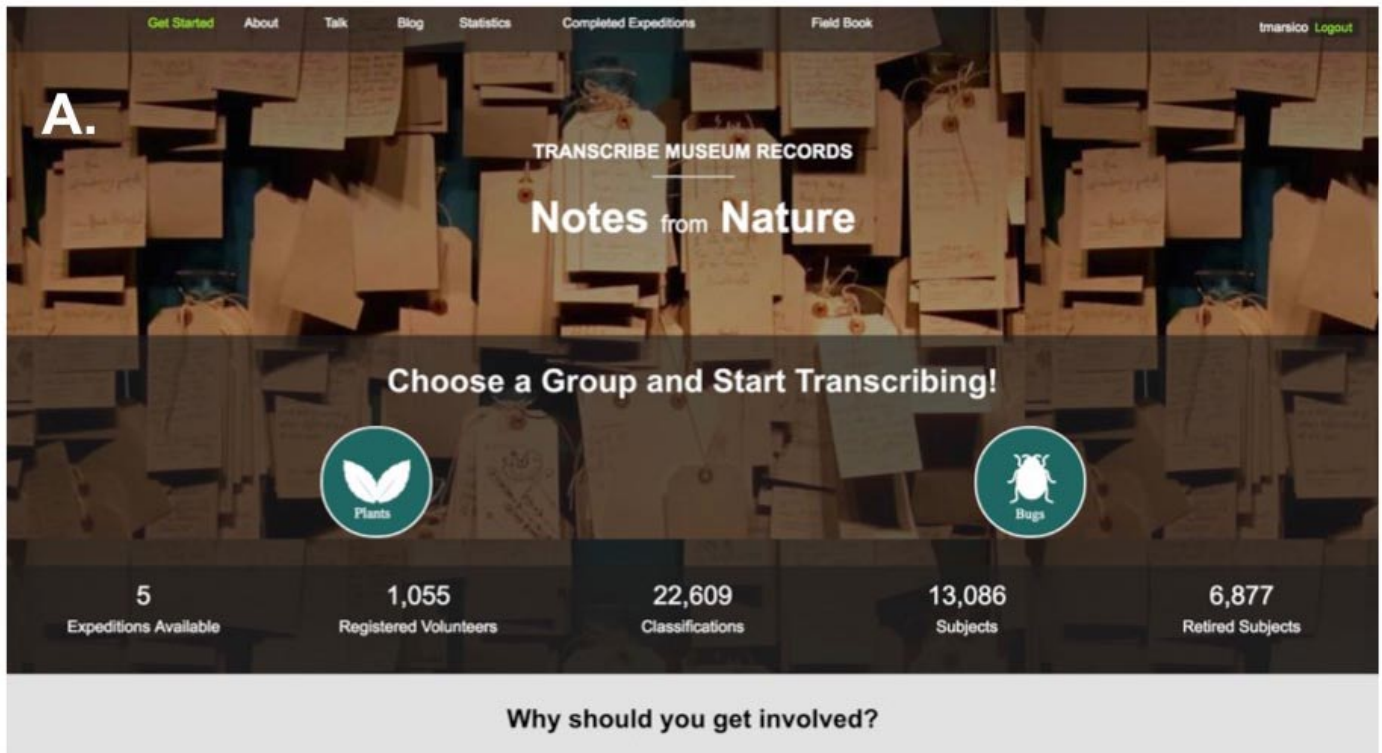


Figure 1. (A.) Notes from Nature launch page found at www.notesfromnature.org. This page provides the login (top right), general information about the project, and the two taxonomic groups (Plants and Bugs) currently available for data transcriptions. (B.) Once the Plants group has been selected, a series of expeditions can be browsed and chosen. At the time this article was written, four expeditions were available, one from Virginia and three from Arkansas: (1) Plants of Virginia – Ant Plants, (2) Plants of Arkansas: Discovering Dogwoods, (3) Hear Them Ring: Bellflowers of Arkansas, and (4) Plants of Arkansas: The Delta and Crowley’s Ridge Flora (see Figure 2). To begin, simply click on the image or title associated with the expedition.

(Continued from previous page)

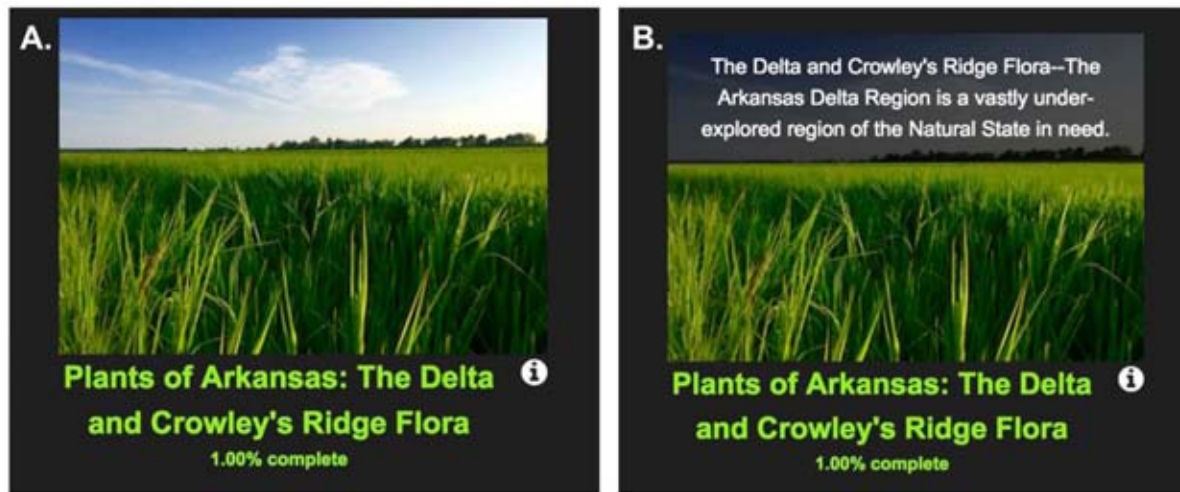


Figure 2. The Plants of Arkansas: The Delta and Crowley's Ridge Flora expedition. (A.) As of 18 July 2016, the new expedition was 1.00% complete. (B.) When the user hovers over the expedition image, a brief description of the expedition appears.

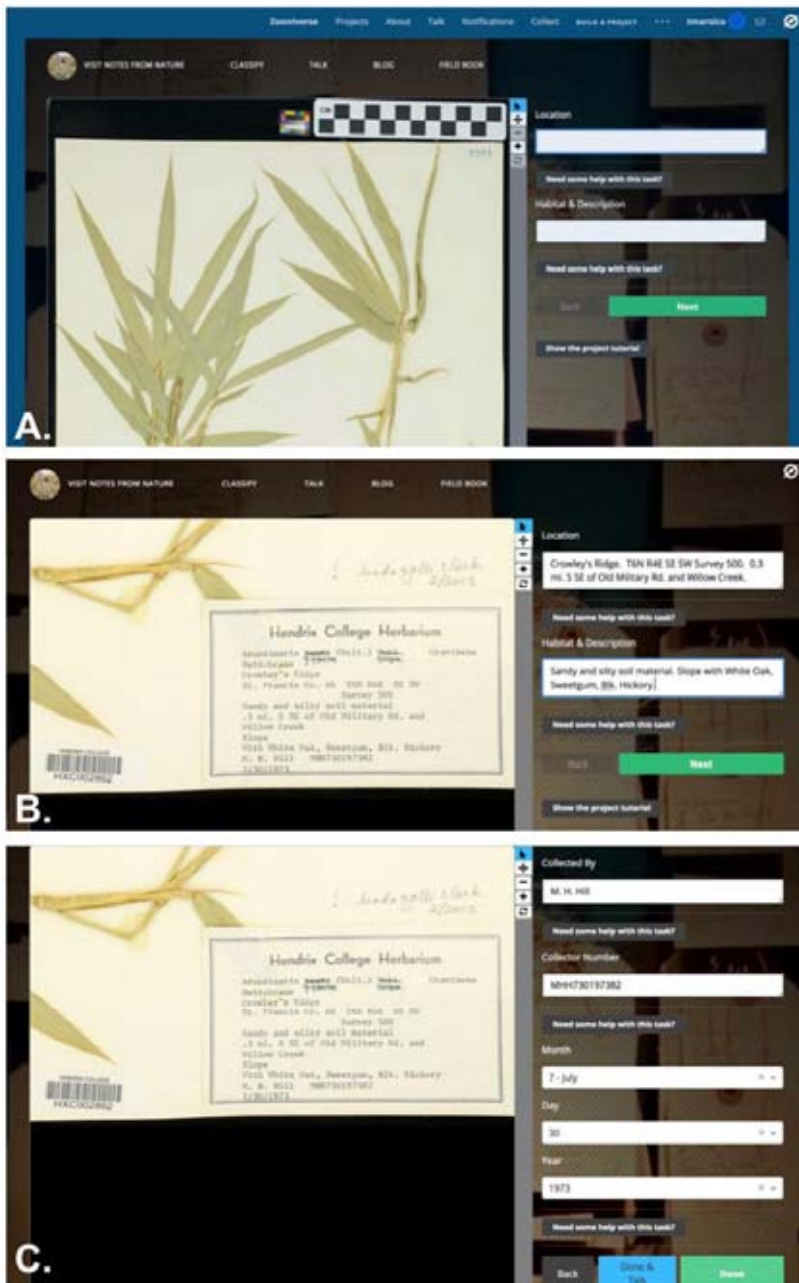


Figure 3. (A.) When the user clicks on an expedition, in this case the Plants of Arkansas: The Delta and Crowley's Ridge Flora expedition, an image of an herbarium specimen appears (left) along with data fields to be filled (right). The user can examine any and all parts of the specimen image in detail. Using the pan and zoom tools at the top right of the image, the user can focus on the specimen label (B.). Note in panel B. that data for Location and Habitat & Description have been filled for this specimen. There are detailed instructions on the website to answer common questions about how to complete these data fields. For example, note how on the specimen label, the location information is not grouped together. In this case, the data transcriber should organize all the "location" information together separated by periods. Also, Notes from Nature asks that labels are transcribed as they are written and that transcribers should not attempt to interpret abbreviations (though obvious misspellings can be corrected). (C.) The second page of data to be gathered includes the collector, collector number, and date of collection.

Your ANPS Treasury Funds at Work!



Chris Sheldon: Aileen McWilliam Scholarship, \$1,000. M.S. program, School of Forest Resources at University of Arkansas at Monticello. Chris is studying the development and restoration of forested wetlands and plans to work in wetland restoration after graduation.



Rajaa A. Alanbagi: Delzie Demaree Research Grant, \$1,000. Ph.D. program at University of Arkansas, Fayetteville. Rajaa is conducting an inventory of the macrofungi that effect the decomposition of forest floor litter in northwest Arkansas.



Rebecca Stubbs: Delzie Demaree Research Grant, \$1,000. Ph.D. program at University of Florida, Gainesville. Rebecca is doing a field and lab examination of the classification and evolution of the North Temperate genus *Micranthes*, a segregate of *Saxifraga*, the saxifrages, a group of small-flowered, perennial herbs. Her grant supports her trip from Florida to

Arkansas to study, sample, collect, and photograph our three species of *Micranthes*.



Eric Hunt, Virginia McDaniel's backpack, scholarship recipient Rebecca Stubbs, and Gabe DeJong of The Nature Conservancy at TNC's Dry Lost Creek Preserve in Saline County. Rebecca points to one of her study species, Texas saxifrage (*Micranthes palmieri*). Photo by Virginia McDaniel.

ANPS Plants: Ongoing Legacy for Vilonia

When Vilonia's new Frank Mitchell Intermediate School was still in the planning phase, retired educator and native plant enthusiast, Mary Wells, began sowing the seed of a grand plan with principal Andy Pennington and his faculty to "bring nature home" via a simple but ambitious project: Mary's idea was to establish an "across the curriculum" venture that would involve students in planning, planting, and caring for a native plant landscape on their new campus. All the classes will have a hand in planting and caring for their landscape, but as it has gotten off the ground, it is the math and science students who are learning how to recognize the plants, plant them properly, label them with taxonomically correct names, and to care for them as they get established. This will be an ongoing project that will continue to draw students and teachers—and their Vilonia community—into an understanding and appreciation of the relationship between native plants and animals and their relationship to our human community. Our \$500 grant is going a long way!



Top Photo: 8th Graders Katlyn Smith & Jake Norman tend the dogwood tree their class planted.

Bottom Photo: Native plant landscape at brand new Frank Mitchell Intermediate School in Vilonia makes a spectacular classroom. Article and photos by Molly Jones.

2016 Grant recipient First Step of Malvern had a work day to remove invasive species from their Nature Trail. They had help from the Arkansas Forestry Commission, US Forest Service, and Diamond Lake Master Naturalists. They removed a mountain of privet as well as several large mimosa and chinaberry trees. It was a hot day, but all still had smiles at the end.



Sundell Herbarium

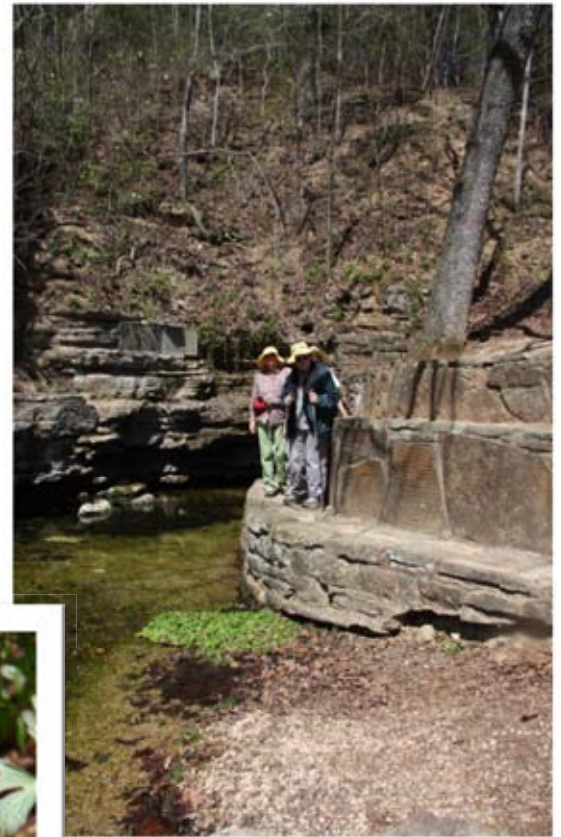
July 26, 2016 was a historic day! Construction began on the Botanical Research Center and Sundell Herbarium on the University of Arkansas Monticello

campus! ANPS was a major contributor in the funding of this construction project. The library and research space will bear the name Arkansas Native Plant Society Library and Research Room! Hopefully, the building will be completed in late spring 2017. *Photo by Dr. Ed Bacon.*

Ozarks Chapter Field Trips – By Linda S. Ellis

Each year, as Spring comes around once again, we plant enthusiasts have to decide where and when to go to see species of interest. I decided that I would start instigating field trips to all the public springs and/or waterfalls in northwest Arkansas. With this goal in mind, the first trip of the year on April 9th was to Withrow Springs State Park. Located about 5 miles north of Huntsville, the spring water flows into War Eagle creek through a limestone valley that is very scenic and full of spring ephemerals.

We met at the ranger station and made the acquaintance of Adam, the park supervisor. He was glad to have us identify some of the plants near the station. The group then went to the Dogwood trail head and made our usual pace of about 20 feet an hour. One of the first species we spied was a nice stand of Ozark wake robin (*Trillium pusillum*) which is white-flowered when it opens but becomes rose colored with the age of the flower.



Above: Hikers enjoying beautiful scenery around the falls.

Left: Ozark wake robin,
Trillium pusillum.

Below: Water starwort,
Callitriche heterophylla.

Photos by Linda Ellis.

As we proceeded up the trail we found Robin's plantain, not a plantain but a fleabane daisy (*Erigeron pulchellus*), hound's tongue or gypsy flower (*Cynoglossum officinale*) and quite a bit of sassafras (*Sassafras albidum*) in flower.

We left the Dogwood trail for Withrow Spring itself (the spring is named after Richard Withrow who established the first grist mill in the area). Although all traces of the mill are gone, there is a history sign at the spring. Besides some common aquatics like water cress (*Nasturtium officinale*) we found a tiny aquatic called water starwort (*Callitriche heterophylla*) which was new to me. We enjoyed a fine spring day in the company of friends and flowers and that's as good as it gets.



In Pursuit of Waterfalls: An Ozarks Chapter Field Trip – Article and photos by Linda S. Ellis

Having decided to visit all the public waterfalls and springs in northwest Arkansas, the next field trip was on June 11th, 2016 to High Bank Twin Falls on the Mulberry River. I had never been on the Mulberry and although it was placid on the day of the trip, from the look of past flood debris overhead in the trees, this river earns its standing as Class II/III.

The Ozarks chapter members visited the falls located near the access of the same name. We crossed highway 215 and took the trail toward the falls at our usual botanist's pace through deep woods and past feeder streams. One of the first plants we encountered was an invasive species that was new to me called a Japanese bitter orange or trifoliate orange (*Citrus trifoliata*) in the Rutaceae family (also under the name of *Poncirus trifoliata*).



The steep bluffs and wooded streams were very dramatic along the trail and we saw several species associated with this habitat like southern maiden hair fern (*Adiantum capillus-veneris*) and Christmas fern (*Polystichum acrostichoides*) along side wild hydrangea (*Hydrangea arborescens*) and mountain houstonia (*Hedyotis purpurea*). Although the falls were not running very heavily, there were more than enough plant species to keep us all interested until we returned to go to the Redding campgrounds restaurant and a well-deserved cold drink and lunch.

Foundation Farm

May 12, 2016

By Burnetta Hinterthuer

Patrice Gros founded Foundation Farm in 2006 as a USDA (United States Department of Agriculture) certified organic farm, following 10 years of experimentation in various forms of organic vegetables and different growing methods. The farm is located north of Eureka Springs, just south of the Missouri border. Jim Dudley, President of OCANPS, had talked with Patrice about providing a tour of the farm for OCANPS this spring. At the end of the tour, we would eat a meal made from the fresh produce produced on the farm.

Burnetta gave a talk on “Why I Like Plants” to the Unitarian Universalist Fellowship of Eureka Springs emphasizing the fact that we cannot exist without them and discussing the start of the Farmer’s Market movement in the United States, realizing the idea has been around a long time. Steve Holst, Kelly Holst, Amy Wilson, Paula DuPont, Laura Villejas, and Burnetta as well as others from the Eureka Unitarian Universalist Fellowship joined us for the tour and meal. Patrice talked about the methods he used in developing the garden soil and the no-till process of planting seed. We visited several garden areas and a greenhouse to see the process firsthand. The meal was healthy and tasty greens from the garden with Farmer’s Market bread and we enjoyed visiting with everyone. It was inspiring to hear of the way in which Patrice has built up the soil over the years and is now very successful in providing tons of produce for the Eureka Springs Farmer’s Market as well as restaurants in the area. Patrice uses volunteers for various projects and one can certainly learn a lot by just listening to him talk about his garden. If you haven’t toured an organic farm, I recommend it as a possible field trip for you can pick up many pointers for use in your own garden.

Return to Wilson Springs Reserve, May 21, 2016

Article and photos by Sim Barrow & Burnetta Hinterthuer

Burnetta Hinterthuer, with the Ozarks Chapter Arkansas Native Plant Society (OCANPS) and Sim Barrow, with the Northwest Arkansas Land Trust led a botany-themed hike through Wilson Springs Preserve, Fayetteville’s largest wet-prairie remnant. The preserve has been undergoing restoration over the last few years, and Burnetta has been documenting the return of native species, many of which are of special concern to the Arkansas Natural Heritage Commission. Don Mills of Eureka Springs, Eloise Johnston from Ft. Smith, and Steve Patterson from Poteau, Oklahoma joined us on the hike.

Iris virginica



Wilson Springs harbors one of the largest populations of native sedges in northwest Arkansas following the removal of introduced invasive species and green ash, a restoration process started in 2012. The openings allowed light onto the woodland floor and the seed bank responded with tall grass prairie species of wildflowers, grasses, and sedges. Thirty *Carex* species have now been reported. Many obligate wetland species were found at this year’s hike, including *Carex opaca* and *Carex davisii*, both of which are tracked species, along with other sedges such as *Carex frankii*, *C. squarrosa*, *C. vulpinoidea*, *Juncus anhelatus*, and a large bulrush, either *Scirpus georgianus* or

atrovirens according to Theo Witsell. The plant lacked mature fruit for a definite identification. Other notable plants included *Iris virginica* (Virginia iris), *Amorpha fruticosa* (Indigo bush) and *Asclepias hirtella*

(tall green milkweed). *Nasturtium officinale* (watercress) and *Sagittaria latifolia* (broadleaf arrowhead) were found in the stream, along with the rare stream darter. The beaver pond had a large population of *Nuphar lutea* (spatterdock) almost in bloom. Other interesting finds included two banded water snakes, box turtles, and several fascinating fungi. Joe Neal said he has observed about 150 species of birds in Wilson Springs throughout the years. He mentioned that the sedge wren requires this habitat for survival. Not that long ago, it was once 300 acres and is now 120 acres. It is an important remnant of the mesic tall grass prairie ecosystem that was once part of thousands of acres in Northwest Arkansas.



Steve Patterson, Don Mills, Burnetta Hinterthuer and Eloise Johnston

ANPS & OCANPS Field Trip Ninestone Land Trust, Inc.

Saturday, June 4, 2016

by Judy Griffith & Don Matt

Although many potential attendees turned back due to torrential rains within just 1 mile of Ninestone, we had only light sprinkles here, gradual clearing by lunchtime and full sun by 2:00PM. The intrepid plant enthusiasts and photographers who braved the forecast and drove through downpours to get to Ninestone included: Burnetta HINTERTHEUR, botanist; Steven Foster, botanist; Stacey Davis with her children Elizabeth and Jack; Quintin Welch; David Chapman; Joe Neal; Joan Reynolds; Don, Jane, and Emma Steinkraus; and Gary Milczarek.

In late May and early June we focus field trips on the sandstone glades that are now in their sixth year of restoration, including their second controlled burn in January 2016. The night before the field trip, the glades were refreshed with 3/4 inch of rain, so they were resplendent with wildflowers that have increased as a result of removing cedars, controlling introduced invasives, and burning. Barbara's Buttons (*Marshallia caespitosa*) is a tracked plant that blooms at this time along the edges of the bluff beside Hairy Blazing-star (*Liatris hirsuta*). Bringing color to lichen and cryptobiotic soil crust on sandstone ripple rock and the balds were Lance-leaf Tickseed (*Coreopsis lanceolata*), Ohio Spiderwort (*Tradescantia ohioensis*), Prickly-pear (*Opuntia cespitosa*), Western Prickly-pear (*Opuntia macrorhiza*), Fame Flower (*Phemeranthus calycinus*), Widow's Cross (*Sedum pulchellum*), Sandwort (*Arenaria serpyllifolia*), tracked Tall Pink Glade Onion (*Allium canadense* var. *lavendulare*), Sampson's Snake-root (*Orbexilum pedunculatum*), Venus' Looking-glass (*Triodanis perfoliata* subsp. *biflora*), and fragrant Arkansas Calamint (*Clinopodium arkansanum*), along with numerous emerging native warm season grasses and sedges.

In spring 2016 Ninestone applied to the Arkansas Native Plant Society for a grant to assist with continued development of our Native Plant Gardens, an ongoing project that provides incentive to visitors to encourage native plants on their own land. Original plantings in 1994 were Christmas Fern (*Polystichum acrostichoides*), Northern Maidenhair Fern (*Adiantum peda-*

tum), Bloodroot (*Sanguinaria canadensis*), Virginia Bluebells (*Mertensia virginica*), Wild Hydrangea (*Hydrangea arborescens*), Solomon's Seal (*Polygonatum biflorum*), Jacob's Ladder (*Polemonium reptans*), and Black Cohosh (*Actea racemosa*), etc. Newer trees, shrubs, and vines from native plant nurseries include Musclewood (*Carpinus caroliniana*), Leatherwood (*Dirca palustris*), Witch-Alder (*Fothergilla major*), Fringe Tree (*Chionanthus virginicus*), American Beautyberry (*Callicarpa americana*), Red Buckeye (*Aesculus pavia*), and Trumpet Honeysuckle (*Lonicera sempervirens*).

Our work at Ninestone intends not only to protect and restore this land and its native inhabitants, but also to educate our visitors about the connection between biodiversity and natural communities. As invasives are controlled with fire and other methods in our sandstone glades and savannah, the regeneration of native plant species becomes more evident. As more natives are added to the gardens, those who visit can learn about nurseries where native plants are available, and become inspired to replace invasives with natives in their own landscapes. We help visitors understand that as habitats in the natural world are changed by development the precious native communities of flora and fauna that have evolved over untold millennia are fragmented and destroyed. The ecology and the food chain that once supported native plants, butterflies, bees, insects, herps, and birds is replaced with introduced invasive plants that compete with native plant species, further reducing the food available to wildlife, including threatened pollinators and declining bird species that must feed insects to their young. Native plants provide more food for insect-dependent wildlife, such as many birds, small mammals and amphibians.

Thanks to funds Ninestone received from the ANPS grant, naturally occurring Purple Milkweed (*Asclepias purpurascens*), plus new plantings of Rattlesnake-master (*Eryngium yuccifolium*), Ox-eye Sunflower (*Heliopsis helianthoides*), Compass Plant (*Silphium laciniatum*), Gray-head Coneflower (*Ratibida pinnata*), Prairie Dock (*Silphium terebinthinaceum*), Butterfly Milkweed (*Asclepias tuberosa* subsp. *interior*), and a Yellowwood tree (*Cladrastis lutea*), are all now fenced to prevent deer from eating leaves, or

flowers and potential seeds. This spring, emerging in the savannah after the planting of seeds collected on-site or locally, are River-oats (*Chasmanthium latifolium*), Arkansas Ironweed (*Vernonia arkansana*), Passionflower (*Passiflora incarnata*), Yellow Ironweed (*Verbesina alternifolia*), Frostweed (*Verbesina virginica*), and Wild Senna (*Senna marilandica*). New to the original backyard gardens are Downy Tickseed (*Coreopsis pubescens*), Culver's Root (*Veronicastrum virginicum*), Vernal Witch-hazel (*Hamamelis vernalis*), American Witch-hazel (*Hamamelis virginiana*), and a few more native shrubs. ANPS monies have also provided watering supplies and some native plants from nurseries.

Attendee Joe Neal summed up his appreciation of the field trip. "A genuine Ozark glade exploded into bloom this afternoon at 2:31 PM. Source of ignition: deep red Fame Flowers, by the hundreds, or maybe by the thousands, across sandstone glades at Ninestone Land Trust in Carroll County. And there had already been a fantastic show of pink—a wild glade onion covering whole expanses of ripple-marked sandstone, *Allium canadense* var. *lavendulare*, Tall Pink Glade Onion, listed as an S2 for Arkansas, which means that in Arkansas it is at a high risk of extirpation because of restricted range, etc. Glade restoration work at Ninestone has had a dramatically positive impact on it there. Who would believe we were in Arkansas and not in some expensive-to-get-there remote, tropical paradise where impossible is possible? Who would believe this beating heart of the real Ozarks? Who has not been astounded by presence of so much remarkable life? Welcome to the real Ozarks, the part that has been here for thousands of years, making the Earth a better place, one glade flower by one glade flower."

Remember to check out the full-color version of the Claytonia by going to the ANPS website, <http://anps.org/newsletters/>.

Select the edition you are interested in and enjoy!

ANPS 2016 Fall/Winter Events, Welcome All!

When: August 13, 2016, 9:00am

Where: Gillam Park, Little Rock Audubon Center

Leader: Eric Hunt

Eric Hunt will lead. Meet at 9:00am at the parking lot of Gillam Park at the Little Rock Audubon Center on Springer Blvd. Take Exit 1 for Springer Blvd off of I-440 and head south on Springer Blvd/AR365. The building is on your right near the top of the rise after the railroad track crossing. We will drive from there to the parking area inside Gillam Park.

Gillam Park at the Little Rock Audubon Center includes bottomland hardwood forest, cypress-lined oxbow, upland white oak/hickory, post oak savannah, and ultra-rare nepheline syenite glades within its 400 acres. We will be looking for blooming crane-fly orchid and checking out what's in bloom along the edges of the nepheline syenite glades. Depending upon rainfall, we should see nice displays of hairy blazing star.

Bring walking sticks if you use them, wear sturdy shoes and be prepared for wet ground in the bottomlands. Bring water, lunch and insect repellent. Rain will cancel. Contact Eric Hunt (ericinlr@gmail or 415-225-6561) for more information or reservations.

When: October 8, 2016, 10:00am

Where: Ranch North Woods, Little Rock

Leaders: Eric Hunt and Eric Sundell

Join Eric Hunt and Eric Sundell for a walk (actually, a stroll) through Ranch North Woods in west Little Rock, the Nature Conservancy's newest preserve in Arkansas: "An oasis in the heart of the city."

The 234 acre preserve has beautiful views of Pinnacle Mountain (the preserve adjoins the state park), almost 2 miles of shoreline along the Little Maumelle River, and lovely woods and fields—in particular, a riparian woodland dominated by the two most picturesque species of Arkansas hickories, shagbark and the uncommon nutmeg hickory. We will also see two of the most beautiful oaks - overcup and burr oak and a beautiful fall blooming wildflower, bushy goldentop.

Trails are all flat, and the walking easy. You can read more about Ranch North Woods Preserve—and watch a video—at the Arkansas Nature Conservancy's website: <http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/arkansas/placesweprotect/ranch-north-woods-preserve-in-arkansas.xml>

Meet in the parking area by the railroad tracks at 10am. Bring water, lunch/snacks, bug spray, cameras and binoculars.

Directions: from Cantrell Road/Arkansas Highway 10 in west Little Rock, go north on Ranch Boulevard about ¾ mile to the gate and parking area. The turn-off on Ranch Boulevard is approximately 2 miles west of the red light at the junction of Cantrell Road with Pinnacle Valley Road. For more info, call either Eric: Sundell at 870-723-1089 or call/text Eric Hunt at 415-225-6561 or email him at ericinlr@gmail.com

When: February 24-26, 2017

Where: Little Rock, AR, Flower & Garden Show

ANPS Has Big Plans for Participation in the 2017 Little Rock Flower and Garden Show.

Your Society will be on hand big-time at the 2017 Little Rock Flower and Garden Show, February 24-26.

We are co-sponsoring appearances by Douglas W. Tallamy, author of the book "Bringing Nature Home". This breakthrough book explains the importance of incorporating native plants into our yards, and illustrates how the choices we make as gardeners and homeowners can impact the diversity of life in our towns and even our planet. With 40 million acres of lawns in the USA, this book addresses a new conservation frontier. Dr. Tallamy will be making two presentations, "Building Pollinator Populations at Home" and "Creating Living Landscapes", on Saturday, February 25, 2017.

We will also be screening an important new documentary film, "Hometown Habitat—Stories of *Bringing Nature Home*" by Catherine Zimmerman. This film documents cases of successful application and implementation of the principles Dr. Tallamy covers in his books and presentations.

And that's not all! ANPS will also have a booth on the Show floor. We'll be there to tell folks about ANPS and answer questions about native plants. We'll be looking for volunteers to man the booth.

For details of the Little Rock Flower and Garden Show go to: <https://argardenshow.org/>

For more information on Douglas Tallamy go to: <http://www.americanforests.org/magazine/article/backyard-biodiversity/>

To learn about Catherine Zimmerman's film "Hometown Habitat" go to: <https://www.linkedin.com/pulse/hometown-habitat-stories-bringing-nature-home-catherine-zimmerman>

We'll see you at the show.

OZARKS CHAPTER ARKANSAS NATIVE PLANT SOCIETY

Thanks to all who agreed to lead a hike. We welcome everyone to attend hikes!

Fall/Winter Event Schedule:

When: August 8, 10:00 AM

**Where: 13602 Sugar Mountain Road,
West Fork, AR**

Stephen Marquardt will guide us to a population of crane fly orchids on his property south of West Fork. Last year, we were also able to photograph three-bird orchids in the same vicinity on the same day. From the town of West Fork, drive South on Hwy 71. It is about five minutes to the old iron bridge and Woolsey Cemetery. Across from them, take LEFT on WC 156, drive about 3 miles. You will see a mailbox with the number 13608, which will seem out of sequence. Keep going until you see the mailbox with the 13602 address, turn left into driveway and continue to log cabin. Notify Burnetta if you are attending and for further instructions at 479-430-0260 or e-mail her at wbhint@gmail.com.

When: October 1, 10:00 AM

Where: Gentry Prairie, Gentry, AR

Tall Grass Prairie Seed Collection day on Gentry Prairie, Gentry, AR. We will meet to see the prairie in sunflowers and grasses and to collect seed. Bring clippers if you have them. We will have paper bags and give some basic instructions on how to collect the seed. The seed will be used in restoration and conservation sites in Northwest Arkansas. Location: Benton County, near Siloam Springs, AR. After collecting seed on the prairie, those who wish may do a roadside tallgrass prairie tour of Benton County with Joe Neal. We may also visit some individual gardens to collect seed. Contact Burnetta if you are interested in either of these activities at wbhint@gmail.com.

When: November 4-6

Where: Near Jasper, AR

**What: Annual OCANPS Harmony
Mountain Retreat**

On Friday night, we have a plant auction following a potluck. Bring a dish to share as we get together to review the year behind us and plan the year ahead. We will elect officers and plan the hikes for the coming year. On Saturday and Sunday, we will have hike to some place in the surrounding area. Contact Burnetta for further information at 479-430-0260 or email her at wbhint@gmail.com.



Fungus found on Wilson's Spring hike earlier this year. Photo by Burnetta Hinterthuer.

2016 Spring Meeting Field Trip Report— Dripping Springs

By John Simpson

Saturday April 23 was bright and sunny as a band of adventurous plant enthusiasts gathered morning and afternoon at the trailhead at the end of Wildcat Road just north of Hot Springs. The groups of twenty or so each met for outings of the Arkansas Native Plant Society. Those participating included members of the ANPS as well as Garland County and Hot Springs Village Audubon Society, Master Naturalists from several chapters, and other friends of our special natural environment.

During a brief introduction the groups were informed of an unexpected challenge as the small stream to be crossed to reach the outing trail had a bit more flow and depth than noted on the leaders' exploratory outing there several days earlier (more water being released from the upstream dam). With good spirits and a little in-stream assistance all made it safely across with only one guest choosing to swim partway!

Co-leader Eric Sundell immediately resumed his natural role of instructor—gently providing identification of interesting plants often with characterization features, geographic range, and bits of historical data. And interesting plants were indeed in abundance!

A highlight was the blooming shrub silverbells (*Halesia carolina*). Also noted was *Nemophila* (baby blue eyes) and several species of *Krigia* (false dandelion) brightly colored in #2 pencil orange. The rich soil was conducive to violets. We noted wood violet (*Viola sororia*), arrow-

leaf violet (*Viola sagittata*), and the last of the blooms for the bird-foot violet (*Viola pedata*). The ubiquitous purples of the phlox (*Phlox pilosa*) and whites of the beardtongue (*Penstemon arkansana*) provided color accent all along the way. The large-flower tickseed (*Coreopsis grandiflora*) were numerous but not yet in bloom.

Also along the half-mile walk to the Dripping Springs we found ferns—bracken fern (*Pteridium aquilinum*), netted chain fern (*Woodwardia areolata*), and lady fern (*Athyrium filix-femina*). We also noted fern allies—scouring rush (*Equisetum hyemale*) and adder's tongue (*Ophioglossum pycnostichum*). At the Dripping Springs itself (a vertical bluff face covered with mosses and liverworts) were embedded cinnamon ferns and trailing tendrils of partridge berry (*Mitchella repens*). Blooming wild azaleas high on the bluff offered whiffs of sweet

fragrance.

Trees of the area provided canopy cover over much of the trail. There were oaks—northern red (*Quercus rubra*), southern red (*Quercus falcata*), willow (*Quercus phellos*), and white (*Quercus alba*); sweet gum (*Liquidambar styraciflua*); mockernut hickory (*Carya tomentosa*); red maple (*Acer rubrum*); and basswood (*Tilia americana*). The umbrella magnolias of limited geographic range (*Magnolia tripetala*) were in bloom with pretty cream-colored blossoms disagreeably pungent.

These were two walks along a rich trail which should always be protected. The land is owned by the city of Hot Springs being in a watershed providing part of the city's municipal water supply. The same walk at different seasons will present a series of different blooms and plants which would be just one of many reasons to return to the hospitality of Hot Springs!



Co-leaders John Simpson and Eric Sundell lead group of eager listeners on field trip to Dripping Springs. Photo by Michael Weatherford.



Bird Friendly Yards

By Pam Stewart, Cedar Waxwing photo by Gail Miller

Ever feel that kudzu and concrete are taking over the world? Then there's vinca, English ivy,

lespedeza.... the list goes on and on. Stilt grass crowds out native wild flowers. As a result of all this alteration, we are, as wildlife biologist Jerry Davis says, "starving our birds".

The Arkansas Audubon Society (AAS) Bird Friendly Yard (BFY) initiative is an effort to increase bird habitat. A BFY provides food, water, shelter and safe nesting places. The most important step in creating a bird friendly yard is the replacement of invasive plants with native plants.

Even birds which feed on berries and seeds as adults, feed insects to their nestlings. The majority of our insects are adapted to feed only on native plants. By planting species native in your area, you bridge distances between fragmented local ecosystems, supporting not only birds, but butterflies, other pollinators and wildlife. Yards don't have to be sterile places of mown non-native grasses. Yards can have

borders, corners, or large areas dedicated to native plantings that provide nectar, seeds, berries, insects, shelter, and nesting places.

Besides opening the door to non-native invasive species, our modern world has removed many places where birds once lived and nested, or rested during migration, and added hazards such as windows, invisible to birds, and lights that brighten the night sky confusing migratory routes. Some simple steps can be taken to reduce bird hazards. Bird feeders, nest houses, and bird baths also add habitat, and provide refuge important during migration and harsh weather.

The BFY criteria is a list of actions anyone can take to make a yard bird friendly. You can use the list and accompanying information and explanations posted on the AAS website, register/receive a book of suggested yard plants native to most parts of Arkansas, as well as a guide to nonnative invasive species. Once your yard is bird friendly, you can apply for certification, listing on the website, and a yard sign if you wish. http://www.arbirds.org/Yard/yard_bird_program.htm

By following the BFY criteria and encouraging neighbors and friends to do the same, we can make Arkansas the largest bird sanctuary in the USA!

Arkansas Audubon Society 2-day workshops, Sept. 17-18, 2016

Aquatic Biology

Instructor: Robin Buff, retired A.P. science teacher and Audubon Ecology Camp Director

Water is essential to all life. The organisms that inhabit our ponds and streams are the important basis of many food chains, they also act like canaries in the coal mine to alert us to the condition of our waterways and how our actions on land impact water quality. During this class we will collect, examine and identify organisms from both lake and stream. Participants will be instructed in water sampling from lake and stream and the collection and identification of aquatic organisms using microscopes and field guides. The health of the watershed will be determined using established protocol. Those who want to wade should bring old sneakers or water sandals.

The Monarch Butterfly: In Nature, in Your Yard and in the Classroom

Instructor: Ruth Andre is a retired 4th grade teacher and has been raising many species of butterflies at her home in Tilly for 10 years.

One of the most iconic animals that we see is the gorgeous Monarch Butterfly, *Danaus plexippus*. Due to its beauty, intriguing life history and changing population numbers many of us want to know more about the species and how we might help it survive. (Participants in this class are eligible for 10 Professional Development hours from the ADE.)

The Bird Friendly Yard

Organizers: Pam and Jack Stewart, Presenters: Dan Scheiman, Jennifer Ogle, Jim Allen, Karen Seale, Cheryl Lavers

It is estimated that many of our bird species have declined in numbers dramatically over the last half century, some by as much as 80%. What can we do to reverse this trend? A team of instructors will address the many ways in which we can make our yards places where birds can find food, shelter and protection. Topics addressed by individual instructors will include: An introduction to the Bird Friendly Yard program (BFY); Landscaping with native plants for birds; Invasives and how to deal with them; Supplementary feeding, watering and housing; Simple actions and Citizen Science contributions individuals can make to help birds; Insect importance to birds; Bird hazards.

This workshop offers a pathway to extend and connect your yard with the natural ecosystem one plant at a time and will prepare you to become a mentor for the AAS BFY program.

REGISTRATION For more information and for registration forms, e-mail Barry Haas at bhaas@sbcglobal.net. Or you can download a registration form from Arkansas Audubon website, arbirds.org.

Williams Woods Nature Preserve, May 11, 2016

By Bob Morgan & Burnetta Hinterthuer

Bob Morgan led the OCANPS members on a hike to Williams Woods Nature Preserve. Attending were Jeanne Neath, Rick Woods, Steve Holst, Sharon Morgan, Bob Morgan, Sid Vogelpohl, Kristin Musgnug, Rebecca Bryant, and Burnetta Hinterthuer. Williams Woods Nature Preserve is a tract of wooded land owned by the Ozark Highlands Trail Association. The preserve is located on a mountain overlooking St. Paul, Arkansas in Madison County. The property contains 563 acres and includes an original hand-hewn log home, several outbuildings, ponds, a field or two, and a beautiful mountain covered with a lush hardwood forest of towering trees. The property is open to visitation by members of the Ozark Highlands Trail Association and their guests at their own risk.

The preserve is named for Ms. Alpha (Alphie) Williams. Alphie moved on to the property with her family in 1911 at the age of eight. She was the only girl of eight siblings. Some time after that, Alphie's parents separated. Alphie stayed on with her mother and her surviving 2 brothers (five of the brothers died as infants) on

their original 20-acre plot. The home on the property was built in 1937 from hand-hewn logs harvested from the property in 1935. The house is now on the national register of historic places.

We walked the old trail west through the forest and observed Christmas fern (*Polystichum*

Asarum canadense); bergamot (*Monarda fistulosa*); St. Andrew's cross (*Hypericum hypericoides*); Jack-in-the-pulpit (*Arisaena triphyllum*); green dragon (*Arisaema dracontium*); and mayapple (*Podophyllum peltatum*); plus 25 more species of herbaceous wildflowers. Grasses were also common and we saw beakgrass (*Diarrhena Americana*);

inland sea oats (*Chasmanthium latifolium*); nimblewill (*Muhlenbergia schreberi*); and Bosc's rosette grass (*Dichanthelium boscii*). We walked along an old road through the forest and found a large sugar maple (*Acer saccharum* var. *saccharum*). Without any equipment, we estimated the bigness index for the tree at about the bigness index



Jeanne Neath, Kristen Musgnug, Rick Woods, Rebecca Bryant, Steve Holst, Sid Vogelpohl, Sharon Morgan, and leader Bob Morgan at base of the sugar maple tree. Photo by Burnetta Hinterthuer.

acrostichoides), ebony spleenwort (*Asplenium playneuron*), and rattlesnake fern (*Botrychium* sp.) as well as understory trees of Carolina buckthorn (*Frangula caroliniana*); pawpaw (*Arisaema triloba*); deerberry (*Vaccinium stamineum*); and spicebush (*Lindera benzoin*), to name a few. Along the wooded trail were wildflowers in bloom including Ohio spiderwort (*Tradescantia ohioensis*); crested iris (*Iris cristata*); false dandelion (*Krigia biflora*); tall rattlesnake-root (*Prenanthes altissimum*); wild anise (*Osmorhiza longistylis*); false dandelion (*Krigia biflora*); wild ginger

for the champion tree in Arkansas. Bob said that he thought the former champion tree had fallen. We need to follow up on this with the Arkansas Forestry Commission. The photo shows everyone standing at the base of the tree.

Rain was threatening so we hiked uphill to the old cabin porch. Along the roadside, we startled a wild turkey sitting on her nest. After she flew off, we counted a dozen eggs. After lunch, we hiked at the base of a bluff and found more wildflowers. This was an interesting place to visit and it would be a good idea to explore more of this 563 acres.

Haw Creek Falls - March 20, 2016

Trip Leaders Eric Hunt, Jennifer Ogle

Article & photos by Eric Hunt

The first ANPS wildflower walk of the 2016 season was held on the first day of spring, March 20, at Haw Creek Falls and campground in the Ozark National Forest in Johnson County. About 15 eager wildflower enthusiasts gathered under cool skies with an intermittent light mist, eager to see early spring ephemerals.

March in Arkansas is one of the best months of the year to go searching for wildflowers. Winter is slowly giving way to spring, the temperature is perfect for hiking and there are no bugs. Walking through the forest with blooming flowers underfoot and dormant trees above is magical.

Sanguinaria canadensis



Our walk started along the bottom of a north slope of a ridge, where we found two of the earliest blooming woody plants, leatherwood (*Dirca palustris*) and spicebush (*Lindera benzoin*) in full flower, along with walking fern (*Asplenium rhizophyllum*) and green trillium (*Trillium viridescens*). As we walked further, we noticed the impressive leaf buds of umbrella magnolia (*Magnolia tripetala*). Next we found a colony of Palmer's saxifrage (*Micranthes palmeri*) growing in a beautiful clump of moss in a seep at the base of a small boulder.

We slowly made our way along the bottom of the ridge where the parade of flowers continued. Rue anemone (*Thalictrum thalictroides*), bloodroot (*Sanguinaria canadensis*), cutleaf toothwort (*Cardamine concatenata*), white trout lily (*Erythronium albidum*), yellow trout lily (*Erythronium rostratum*), wild blue phlox (*Phlox divaricata*) and large-flowered bellwort (*Uvularia grandiflora*) were out in full force. Christmas fern (*Polystichum acrostichoides*) was in abundance; this year's fronds were still a few weeks away from emerging.

The bottom of the ridge rounded a corner into Pack Rat Falls Hollow, where the star of the day was found in great num-

Dicentra cucullaria



bers: Dutchman's Breeches (*Dicentra cucullaria*). It literally carpeted the forest floor and grew up both sides of the hollow.

We slowly made our way up the hollow, hop-scotching rocks and boulders back and forth over the seasonal creek. There were two enormous American sycamore trees (*Platanus occidentalis*), possibly old-growth, that made everyone stop and marvel at their imposing presence. Both sides of the hollow were filled with umbrella magnolia, spicebush, walking fern, christmas fern, Dutchman's breeches, green trillium, and large-flowered bellwort. American beech (*Fagus grandifolia*) was easily identified from its cigar-shaped leaf buds and habit of not dropping all its leaves in the fall.

At the head of the hollow was Pack Rat Falls, approximately 20 feet tall, where we stopped to rest and have lunch.

Many of the photographers headed to Haw Creek Falls where witchhazel (*Hamamelis* sp) grows along the creek bank. Most thought it was Vernal witchhazel (*Hamamelis vernalis*) but without flowers it's hard to tell.



Possum Trot (near Nail, AR)

Ozark National Forest

May 1, 2016

Article & photos by Eric Hunt

Spring in the Ozarks is a time of volatile weather. A visit to Possum Trot in the Ozark National Forest in 2015 was canceled due to heavy rain and it looked like the 2016 hike would also be canceled due to heavy rain. Instead, it was pushed back by one day. In the end, it was just hike leader Don Mills from Eureka Springs and myself from Little Rock exploring in the woods.

Possum Trot is an area Burnetta Hinterthur first explored in 1992 and found it to be incredibly rich in diversity, with an abundance of tracked species, rich soils, and large trees. She has periodically returned through the years to lead native plant walks. Scheduling conflicts this year meant she was not able to join us but Don Mills was very familiar with the area. Which is a good thing, as there are no trails whatsoever! It was all bushwacking, all the time. Nevertheless, he led us directly to several areas of intense beauty and plant diversity, from memory!

Our goal was to reach a north-facing stream shelf with three small waterfalls flowing over it where one of the rarest plants in Arkansas is found: French's shooting-star (*Dodecatheon frenchii*). Found only in two counties, French's shooting-star has one of the most specific habitats of any of our native plants. It is found growing underneath north or east facing stream ledges in shallow, sandy soil along the dripline. The plants are rarely exposed to direct sunlight and in fact grow in quite deep shade.

We started our walk at the end of a dirt forest service road that was blocked by fallen trees. The forest floor was carpeted in black cohosh (*Actaea racemosa*) under a canopy of mixed hardwoods. Wild comfrey (*Cynoglossum virginianum*) was scattered here and there. Ferns were in abundance underfoot, including Christmas fern

(*Polystichum acrostichoides*), rattlesnake fern (*Botrychium virginianum*), broad beech fern (*Phegopteris hexagonoptera*), and northern maidenhair fern (*Adiantum pedatum*).

Our first stop was at a beautiful cascade of about 15 feet. The surrounding forest was filled with American beech (*Fagus grandifolia*) and umbrella magnolia (*Magnolia tripetala*). Downy rattlesnake plantain orchid (*Goodyera pubescens*) was in scattered spots in the leaf litter. Devil's urn mushroom (*Urnula craterium*) was also present.

Next we made it to the large stream shelf where the French's shooting star grows. The habitat was exquisite. A beautiful stand of umbrella magnolia framed the three waterfalls flowing over the shelf while American beech towered overhead. Along the drip line and extending a few yards back in deep sandy soil were hundreds and hundreds of French's shooting star. The plants were not quite in bloom but many had inflorescences growing with buds showing.

The rest of the trip was spent wandering around and getting slightly lost, but in a good way. As we bushwacked around we found more downy rattlesnake plantain along with showy orchis (*Galearis spectabilis*), dwarf lark-

Botrychium virginianum



spur (*Delphinium tricorne*) and virgin's bower (*Clematis virginiana*). Umbrella magnolia was everywhere —giant multitemmed trees, many in full bloom. One of the most impressive sights was a huge expanse of eastern green violet (*Hybanthus concolor*) with thousands of plants over a large area, all in bloom.

We finally made it to a forest service road that we knew would circle back to where our vehicle was. It was an absolutely beautiful late spring day in the Ozarks.

Magnolia tripetala



Spring 2016 Meeting Minutes

The Arkansas Native Plant Society held its 2016 Spring business meeting on April 22 at the Comfort Suites in Hot Springs, Arkansas. Approximately 60 members and guests were present.

President Michael Weatherford called the meeting to order and thanked the outgoing board members for their service. He also announced that our incoming Vice President has had to resign and that the board recommended Susan Hooks to replace her. He asked for a vote of approval by show of hands. Susan was approved unanimously.

Treasurer's report

Don Ford reported that we had a balance of \$27,955.48 at the end of 2015, and that we have since had income of \$1205 and expenses of 1621.98, for a balance to date of \$27,538.40. The report was approved by show of hands.

Fall 2015 Minutes

President Weatherford then asked for a motion to approve the minutes of the fall 2015 meeting as posted in the newsletter. Mike Burns moved and

Don Ford seconded that the minutes be approved. The motion passed.

Old Business

Marvin Fawley announced that funding is in place for the building of the UA Monticello herbarium, bids have been submitted, and a bid is expected to be accepted by the end of April, with possible completion of building by the summer of 2017.

New Business

Virginia McDaniel announced that our Fall meeting will be September 23-25, in Mena, Arkansas. Details regarding venue and lodging will be forthcoming.

President Michael Weatherford announced that the following scholarship and grants were approved by the board:

Scholarship

- ◆ **Chris Sheldon**, a candidate for a MS in Forestry at UA-Monticello--\$1000 to continue his studies

Research grants

- ◆ **Rebecca Stubbs**, a PhD candidate at the University of Florida -- \$1000 to cover her expenses for a 5-day trip to Arkansas to find and collect specimens of the genus *Micranthes* and document habitat characteristics
- ◆ **Rajaa A. Alanbagi**, a PhD candi-

date at the University of Arkansas--\$1000 for a study of macrofungi involved in forest floor litter decomposition

Other grants:

- ◆ Ninestone Land Trust--\$1000 for native landscaping
- ◆ First Step—\$1000 for removal of non-native plants along a nature trail, purchase of native plants for the trail and a butterfly garden, and development of interpretive signs along the trail and butterfly garden.

The membership voted to approve the board's recommendations.

The meeting was adjourned.

Respectfully submitted,
Molly Jones, Secretary



New Merchandise Alert! ANPS hats will be available, along with our terrific t-shirts, at the upcoming Fall Meeting!!!

2016 Treasurer's Report for Fall Meeting, September 2016

2016 Semi-Annual Treasurers Report						Proposed 2017 Budget	
		1 Jan - 30 June 2016					
		2015 Actual	2016 Budget	2016 Actual as of 30 June	→		
<u>INCOME</u>							
Membership Dues	\$4,560.00	\$4,000	\$1,665.00			\$4,000.00	
Meeting Registration	\$865.00	\$500	\$340.00			\$500.00	
Plant Auction	\$3,774.00	\$2,000	\$537.00			\$3,000.00	
T-Shirt Sales	\$540.00	\$500	\$240.00			\$500.00	
Contributions	\$170.00	\$0	\$127.00			\$0.00	
Interest	\$0.80	\$0	\$0.00			\$0.00	
TOTAL	\$9,909.80	\$7,000	\$2,909.00	→	\$2,909.00	\$8,000.00	
<u>EXPENDITURES</u>							
ANPS.org (Website expenses)	-\$43.00	-\$50	\$0.00			-\$50.00	
Claytonia (Print & Distribute 2 Issues)	-\$1,439.80	-\$1,400	-\$867.59			-\$1,500.00	
Directory (Print and Distribute)	-\$799.05	-\$750	\$0.00			-\$800.00	
Memorial Awards (Awards/Scholarships)	-\$1,000.00	-\$2,000	-\$3,032.00			-\$2,000.00	
Grants (Support to Public Gardens)	-\$4,503.10	-\$1,000	-\$501.03			-\$1,000.00	
Meeting expenses (space, copies, speaker, etc.)	-\$477.23	-\$1,000	-\$319.00			-\$1,000.00	
Ecology Camp	-\$500.00	-\$500	-\$500.00			-\$500.00	
Bulk Mail (USPS Buld Mail Permit)	-\$220.00	-\$240	-\$225.00			-\$240.00	
Supplies (postage/miscellaneous)*	-\$255.91	-\$300	-\$1,356.99			-\$300.00	
T-shirts/Hats	\$0.00	-\$1,000	\$0.00			\$0.00	
TOTAL	-\$9,238.09	-\$8,240	-\$6,801.61	→	-\$6,801.61	-\$7,390.00	
		Total as of 30 June 2015			→	\$24,062.77	
		Approved but not expended Grants etc.			→	-\$4,998.97	
		Uncommitted Total			→	\$19,063.80	

Respectfully submitted by Don Ford, Treasurer

*Note: 2016 Actual Supplies/postage/miscellaneous contains \$1199.35 for new ANPS brochures

New Members *(Through July 9, 2016)*

Darlene Baker (Little Rock, AR)

Jan Baker (Little Rock, AR)

Gabriel, Liz, Wendell, Sylvan & Auburn DeJong (Little Rock, AR)

Annette Enderlin (Hot Springs, AR)

Charlet Estes (Horseshoe Bend, AR)

Betsy Hall (Little Rock, AR)

John Heard (Roland, AR)

Barry Horner (Hot Springs, AR)

Marge Jernigan (Little Rock, AR)

Debbie Johnson (Little Rock, AR)

Natalie Johnson (North Little Rock, AR)

Al Kaye (Mountain Home, AR)

Patti Kent (Fayetteville, AR)

Austin Klais (Fayetteville, AR)

Karen Malone (Hot Springs, AR)

Beverly Merritt (Royal, AR)

Jean Moser (Jacksonville, AR)

Rebecca and Michael Loftis (Heber Springs, AR)

Tom Nowlin (Clinton, AR)

Nina Orsini (Little Rock, AR)

Christopher, Natalia, & Benjamin Patterson (Greenbrier, AR)

Robert Pitts (Cabot, AR)

Layne Sleeth (Huntsville, AR)

Barbara Sparr (North Little Rock, AR)

Janelle A Stookey (Mountain Home, AR)

Becky Ward (Little Rock, AR)

Terri Waterman (Hot Springs, AR)

Trisha Williams (Nacogdoches, TX)

Tamora Wood (Huntington, TX)

Melissa Woods (Little Rock, AR)

Marisa Williams (Eureka Springs, AR)

Charlotta Witrell (Smithville, OK)

Marcia Zamora (Little Rock, AR)

New Lifetime Members

Debbie Hoofman (Enola, AR)

Margaret Morrell (Conway, AR)



Field trip to the Middle Fork Barrens Natural Area during ANPS Spring Meeting weekend. Trip leaders were Jennifer Ogle and Virginia McDaniel (seen in action).

Photo credit to Sid Voelpohl.

ANPS Fall Meeting
September 23 - 25, 2016
Mena, Arkansas

Everybody is welcome to attend! Meeting registration is only \$5 with no pre-registration required. Registration will begin at 5:00PM on Friday, September 23.

Meeting Location: Ouachita Center on the Rich Mountain Community College Campus (look for ANPS sign!).

Sun Country Inn, 1309 Hwy 71 North, Mena, AR 71953, Phone: (479) 394-7477 or (877)394-7477

Twenty-five rooms (15 double queens and 10 kings) have been reserved at the reduced rate of \$84.55 plus tax per night. Reservations must be received by **August 23, 2016** to guarantee the reduced rate. Be sure to mention that you are with the Arkansas Native Plant Society when making your reservation.

Dining Options: Potluck meal Friday and Saturday evenings. Bring a dish or just come and eat! There are also many dining options in downtown Mena: Stache's Cookery (tasty), Branding Iron, American Artisans (awesome lunch!), and Skyline Cafe (breakfast is early and delicious!).

Field trips: Several field trips to local areas of top botanical interest will be scheduled for Saturday 8:00 AM-5:00PM and Sunday 8:00AM-12:00PM. 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.

Programs:

Friday 7:00PM – Annual Native Plant Auction (bring plants, books or homemade jelly for auction!) **Saturday 7:00PM—Dr. Travis Marsico** - Associate botany professor and curator of the Arkansas State University Herbarium will give a presentation on the digitization of Arkansas herbaria and how ANPS members can help.

Saturday 7:45PM – Dwayne Estes – Associate Professor at Austin Peay State University (APSU), curator of APSU Herbarium, and Botanical Explorer with Botanical Research Institute of Texas (BRIT) will speak on the fascinating similarities between the vegetation in the Ouachita Mountains and the Cumberland Plateau of Tennessee.

For complete and up-to-date details, go to www.anps.org or contact Virginia McDaniel virginiamcd31@yahoo.com, (828) 545-2062.



Save the Date! ANPS Spring Meeting:
Little Rock, April 21 - 23, 2017

Letters From Our Members

Dear Editor,

Just wanted to relay a neat bird activity in my backyard. Maybe y'all have had this happen to you, too, but I hadn't until last year. I enjoy putting out food for the birds every morning. I know they are watching for me to come out of the house because as soon as they see me, they come. I barely get my back turned from putting it out and start walking back to the carport and there they are...swooping down to the driveway to see what's there.

I also have a pan in the herb garden. When my robin sees me, she/he? comes to the fence and waits. I walk over and sprinkle some in the pan, back off a few steps, and here he comes. When I come home in the afternoon and get out of the car, my robin goes to the fence and waits. Of course, I can't disappoint him...so I go to the food tin, scoop up some and take it to the pan. I stand on the carport and watch him swoop down and start eating. Usually, a few starlings see him and come, too. But they aren't as brave as he is. They fly away at the least movement from me. But the robin just keeps on eating, oblivious to me or anyone else. I have known him to chase them away.

I've had a dog meet me after work, but this is the first time a robin has done the same thing.

Marsha Heien

Stuttgart

Dear Editor,

When I read the message inviting members to submit articles for the fall newsletter, I felt guilty. I have spent a good amount of time sending letters and articles to the newspapers, and the only benefit from that effort is being able to share my thoughts with others. The ANPS takes me on exhilarating, educational walks, feeds me wonderful food, makes it possible to enjoy a native plant auction, puts me in contact with exceptional people, and sends me the best newsletter I have ever gotten to name just a few advantages of belonging to the ANPS. I only wish I could name, describe, and write about a wild plant from our yard. One day, I will make good on getting the young, knowledgeable man I invite after every meeting to visit us and, after eating one of my wife's wonderful meals, we will walk the property identifying the beautiful plants that share our acreage. If that happens, I will ask him to co-author a proper article for this great newsletter. Until then, I can only tell members how much Sharon and I enjoy the ANPS.

We found a new way to appreciate this robust organization at the last meeting. My wife is a willing nature walker, but really enjoys visiting around town. At the last meeting, she and Eric's wife Milanne spent field trip time visiting various places in Hot Springs. I am sorry about not including full names in this essay, but I do well to remember my own. I often refer to our group as the Arkansas "Natural" Plant Society just to give you an example of my malfunctioning brain. Finally, I must mention Sid and his wife who live at a marvelous plant place near Paris that, besides hundreds of plants, includes a flowing, small

river and a "big, very big" steel bridge. We have stopped at their home unannounced more than once, and always get treated like honored guests. The most memorable time being the summer of 2014 when we visited (unannounced, as usual) with our three Oregon grandchildren. Sid spent a good two hours teaching them about Arkansas plants. I know there are many people working hard during their free time to make this such a great organization. Thank you!

Blessings to all always, and all ways,

Richard Emmel,

Little Rock

Dear Readers,

Your contributions are always welcome. Thank you to the two members who wrote letters sharing their stories and thoughts. Thanks to all the members that wrote articles and supplied photos for inclusion. As you can see from one of these letters, our readers really enjoy our newsletter. Your Executive Board and your Claytonia Editor thank you and look forward to serving you in the future.

Respectfully yours,

Betty Owen

Claytonia Editor



ANPS MEMBERSHIP APPLICATION

www.anps.org

Membership Categories

- \$10 Student
- \$15 Individual
- \$20 Supporting
- \$25 Family
- \$30 Contributing
- \$150 Lifetime Membership (age 55 and over)
- \$300 Lifetime Membership (under age 55)

Application Purpose

- New Member
- Renewal
- Address Change

Name(s) _____

Address _____

City _____ State _____ Zip _____

Phone (_____) _____ - _____ E-mail _____

Please send this completed form with your dues directly to the ANPS treasurer.

Don Ford
4017 Bluebird Lane
Little Rock, AR 72210

For other membership questions, please contact the membership chair, Mike Burns, at anps.membership@gmail.com or (479) 229-2185.

The Arkansas Native Plant Society is a non-profit organization.

Promoting the conservation, study, and enjoyment of the native plants of Arkansas



Claytonia

Spring 2016
Newsletter

Your dues status is on your mailing label.

On the mailing label there will be a number, for example, "16", and this indicates that your dues are paid through 2016. (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 Mike Weatherford weatherfordm@sbcglobal.net (870) 820-8300</p>	<p>Secretary Molly Jones mollyj46@icloud.com</p>
<p>President-Elect Virginia McDaniel virginiamcd31@yahoo.com (828) 545-2062</p>	<p>Awards & Scholarships Mary Ann King office@pineridgegardens.com (479) 293-4359</p>
<p>Vice President Susan Hooks shooks@fs.fed.us (501) 321-5323</p>	<p>Membership Chair Mike Burns anps.membership@gmail.com (479) 229-2185</p>
<p>Treasurer Don Ford anps.treasurer@gmail.com</p>	<p>Editor Betty Owen pjmbowen@gmail.com</p>
<p>Immediate Past President Jennifer Ogle ranunculus73@gmail.com</p>	<p>Internet & Social Media Eric Hunt anps.web@gmail.com</p>

President's Message

Michael Weatherford

The ANPS spring meeting, held April 22-24 in Hot Springs and the nearby Ouachita Mountains, was another great experience for our members and guests. The programs and field trips were simply outstanding.

We always bring in speakers that are of special interest to our members. Friday night Kayti Ewing, a botanist with the Arkansas State Highway and Transportation Department (that's right, AHTD employs a botanist), presented an eye-opening program about AHTD's efforts to protect and re-establish native wildflowers on our state's roadsides. She told us about Operation Wildflower, Wildflower Routes and the Native Wildflower Area Signage Program as well as AHTD's standard seeding specifications and plant relocation efforts. AHTD has recently adopted a Milkweed Enhancement Plan, which has, thus far, led to the planting of around 1,000 milkweeds (*Asclepias viridis*) on our state highways and AHTD mitigation areas. That's a pretty good start. Kayti is fairly new to the job and her enthusiasm is contagious. We look forward to working with her. Kayti Ewing's email address is Anne.Ewing@ahtd.ar.gov.

Saturday night Justin Thomas explained how native plant diversity, density, richness and quality directly correlate to ecological stability. This could have been snooze time for tired folks coming in from some great field trips, but Justin made it interesting. He is the co-founder and director of the Institute of Botanical Training, an organization that provides the "field taxonomy" and "applied ecology" elements to a wide variety of botanical research projects for several public and private conservation organizations.

The field trips are always the main attraction at the ANPS meetings and are ideal for anyone interested in learning about native plants, regardless of expertise. Our trip leaders are the best professional botanists and botany enthusiasts in the state of Arkansas. At the spring meeting we explored several unique areas around Hot Springs. ANPS also sponsors field trips throughout the year. Learn about them and get the schedule at <https://anps.org/upcoming-events/>. Our Business Meeting emphasizes the continued awards of scholarships and grants, our works with other like-minded organizations, our support of publishing information related to native plants, and efforts to educate the public about native plants. Pot-luck, interesting programs, great field trips, fellowship with like-minded folks; truly a cheap thrill for only five bucks registration.

These meetings are addictive and will leave you looking forward to the next one. The ANPS fall meeting will be very special because it will feature the Annual Native Plant Auction, where you can bid on hard-to-find native plants donated by ANPS members and cooperating native plant nurseries.

Sincerely,
Michael Weatherford, ANPS President

ARKANSAS NATIVE PLANT SOCIETY

Membership, Mike Burns
10145 Dogwood Lane
Dardanelle, AR 72834

Address Service Requested

Nonprofit Org
U.S. Postage Paid
Little Rock, AR
Permit No. 233