

THE OZARK HOLLER

OZARK LAND TRUST NEWSLETTER • SPRING 2020



So many of our Ozark Land Trust projects and properties are not just about the lands themselves, but the people and families that have owned and cherished them for decades. Woods Prairie is no exception. OLT Board member Andy Thomas recounts the long and creative process for how Woods Prairie came to be permanently protected. And graduate student Amanda Coleman discusses why she chose Woods Prairie for part of her Master's thesis research, and how her findings can guide our thinking about the importance of both rural and urban prairies for the future.

Protecting and Restoring Woods Prairie: A Story of Partnership and Success

Andrew L. Thomas

The Woods Prairie success story is long, complicated, and punctuated with amazing people, bold ideas, energy, hard physical work, money, and a major leap of faith.

The most recent chapter of the story began in 1998 when I (a new Ozark Land Trust board member at the time) met Mary Freda O'Connell, who owned what is now called Woods Prairie. Little did I know that the lengthy and irresolute chapter would end with her passing at the age of 96 in 2017. While Mary Freda's death marked a sad and significant turning point for her family and friends, it also heralded the culmination of a nearly 20-year effort by OLT and countless friends and partners to permanently protect Woods Prairie for future generations of people, plants, animals and insects that cling to life there.

Woods Prairie is a spectacular never-plowed prairie in Lawrence County, Missouri, brimming with rare wildflowers, tall native grasses, colorful insects and wildlife galore. It is a breathtaking example of an ecosystem that was once commonplace throughout parts of southwest Missouri, but which now survives only in scattered and very rare remnants.

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Research at Woods Prairie yields understanding about rural vs. urban habitat

Amanda Coleman

The rolling plains and expansive horizons of northeastern Oklahoma fill my childhood memories. I watched "Little House on the Prairie" and read the books by Laura Ingalls Wilder. Life before fences and urbanization dotted the landscape, with seas of grasses as far as the eye could see, drew me into the amazement of prairies.

With the onset of adulthood, my childhood passion has evolved into my current work as a prairie researcher, and most recently, to an examination of Ozark Land Trust's Woods Prairie and other Missouri prairies in both urban and rural settings. My love of nature is now tempered by real-life conservation challenges, such as the global declines in insect populations. Nevertheless, I am excited by efforts to restore, manage and maintain prairie plants and their insect pollinators across many landscapes.

The Great Plains has changed immensely since John Deere's steel plow broke the prairie some 200 years ago. However, many organisms that co-evolved in tallgrass prairies have endured in a now-fragmented landscape. It is up to us to preserve and, where needed, to restore this diverse ecosystem, and to consider the varied landscapes where restoration can be successful and enduring.

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Woods Prairie is extraordinary for its size – a treasure trove of biodiversity with more than 230 plant species documented, some quite rare. The prairie is especially valuable biologically and genetically because it is situated at the far southeastern edge of Missouri’s Great Prairie region as the landscape transitions into the forested hills and hollows of the Ozarks. The prairie is now an island refuge that is completely surrounded by over-grazed monocultures of fescue pastures.

Woods Prairie was named after the Woods family (Mary Freda’s maiden name). The 40-acre remnant was all that remained of a vast 1,700-acre homestead settled by her great-grandfather, John Blackburn Woods, in 1836. Mary Freda told endless stories of growing up on



the prairie, maneuvering horses to cut prairie hay each summer, chasing jack rabbits and prairie chickens, and catching and pulling the tails off of “joint snakes” (glass lizards - the tails grow back!).

But upon Mary Freda’s retirement decades later, less than 40 acres of the original undisturbed prairie remained. When I met Mary Freda, she spoke fondly of her prairie, but quickly mentioned that she was no longer able to care for it and was looking for a new owner to protect and nurture the prairie into the future. Well, I immediately determined that OLT should somehow acquire the prairie! However, OLT simply did not have the means or resources to purchase the prairie outright, nor could it jeopardize the integrity of the organization by taking a risky bank loan to

purchase the prairie. After much thought, discussion and soul-searching, OLT ultimately embarked on an incredibly innovative (albeit experimental and unproven) idea to acquire the prairie: Mary Freda would sell the land to OLT at a bargain sale price, but the transaction would be in the form of a gift annuity. OLT would purchase the land through a mortgage held by Mary Freda, but the principal would never have to be paid and all would be forgiven upon her death. Mary Freda was guaranteed a needed income for the rest of her life, and OLT did not need to raise or borrow an insurmountable amount of money in order to acquire the prairie.

This proposal was an unprecedented and potentially risky experiment. Could OLT consistently raise the needed funds to meet the required interest payments? Could the prairie itself ultimately pay for its own protection? If Mary Freda lived into her 90s or even longer, could we keep up the fundraising momentum? Most of OLT’s friends and advisors said “yes”: it should theoretically be possible to raise the majority of needed funds through seed and hay sales from the prairie itself, and if supplemented with some generous donations along the way, it “could” work.

But meanwhile, the prairie needed major restoration. The prairie was biologically intact, but in a weak and degraded condition. It had been over-hayed for decades, and trees and weedy brush had encroached significantly around the perimeter. Everything was still there – it was just tired and sorely in need of restoration. Therefore, as part of its overall plan to permanently protect and steward the prairie, OLT approached the Missouri Prairie Foundation for assistance. MPF readily agreed to help with restoring the prairie, and the two groups formed an enduring partnership. OLT focused most of its efforts on raising the needed funds to secure the prairie, and MPF oversaw an ambitious endeavor to restore the prairie to its original splendor.

OLT purchased the property on March 31, 1999. The prairie was immediately opened to the public for nature study, hiking, photography, and research, and was soon listed in the Public Prairies of Missouri directory. The day after closing, our MPF-OLT team embarked on a painstakingly slow, but unrelenting and exhaustive restoration plan that took 15 years to accomplish. We reintroduced fire to the prairie and it immediately responded by tossing up lush patches of wildflower species that had not been seen before the burn. In addition to MPF and OLT, many hundreds of dedicated volunteers, including a terrific group of enthusiastic AmeriCorps volunteers performed back-breaking restoration work in all kinds of weather over many years.

As for fundraising, it was the sale of wildflower seeds that ultimately raised the vast majority of funds needed to financially secure the prairie. Year after year, on very hot summer evenings, intrepid volunteers answered the call and arrived with buckets and clippers in hand, and scoured the prairie for its bounty. In addition to volunteers, our native plant nursery friends Mervin Wallace (Missouri Wildflowers Nursery) and Rex and Amy Hamilton (Hamilton Native Outpost) helped harvest and sell large volumes of seeds and were incredibly generous with their expertise, time and money.

Countless amazing volunteers and very generous donors, along with MPF's devoted partnership, made the permanent protection of Woods Prairie a reality. Mary Freda lived a long and fruitful life, staying in her own home to the end. OLT never missed an interest payment in 19 years thanks to the abundance provided by the prairie itself and the generous volunteers and donors who befriended the prairie. Soon after Mary Freda's passing in 2017, OLT made its final interest payment to her estate, then proudly presented a stack of notarized papers to the Lawrence County Recorder to clear the mortgage from the deed, and finally obtained full and secure title to the property. Mission accomplished. When all was said and done, OLT's partnership with MPF and many hundreds of friends not only resulted in the permanent protection of Woods Prairie, but also its complete restoration. The prairie chickens and jack rabbits that once flourished at Woods Prairie are long gone, as are the buffalo and elk that drifted through the region periodically to feast upon the nourishing grasses and forbs. Remarkably, however, quail and other scarce birds, turtles, amphibians, insects, and flamboyant spiders have clung to a nurturing refuge at Woods Prairie, while the over-grazed pastures across the fence are almost devoid of life except for cattle and an occasional robin. Recent sightings include a bald eagle, prairie king snake, ornate box turtle, a spirited short-eared owl, and a patch of very happy-go-lucky prairie grass pink orchids. Stay tuned for the next chapter in Woods Prairie's amazing story!



Facing page: *The Prairie at its finest.* photo by Amanda Coleman. **Below:** main entrance to Woods Prairie Nature Preserve. picture by Andrew Thomas. **Above:** What a controlled burn looks like, picture by Andrew Thomas

Andrew Thomas, an OLT Board Member for over 20 years, and past president of the organization, is Research Assistant Professor in Horticulture / Agroforestry at the University of Missouri's Southwest Research Center at Mt. Vernon. He received his B.S. in Horticulture from the University of Missouri, and his M.S. in Agronomy from Iowa State University. Before coming to the Southwest Center in 1996, Andy worked for two agricultural "biotech" companies in California and Wisconsin, the Center for Plant Conservation at Missouri Botanical Garden in St. Louis, and the Rwandan Agricultural Research Institute as a Peace Corps Volunteer.

Andy conducts research on a wide variety of horticultural crops and crop production techniques, resulting in more than 50 peer-reviewed scientific publications. He also farms 70 acres tending hundreds of fruit and nut trees, and consults internationally on a variety of horticultural projects. Andy, his wife Diann, and sons Donovan and Avery live near the southwest Missouri town of Monett.



Coleman Cont. from page 1

While proper stewardship of the prairie is critical to the long-term health of its resident species, sound prairie management, for instance, is vital to maintain interaction dynamics like plant/pollinator mutualism. In addition, protecting and restoring prairies also translates to a variety of socioeconomic and broader ecosystem benefits. Among them are biophilia (humans communing with nature), stress relief, aesthetics, erosion control and carbon dioxide absorption.

My recent research has been focused on to what extent prairie preservation and restoration can provide benefits across both rural and urban, and large and small, prairie systems.

With a solid sampling of Missouri prairies as a focus for this work, I am encouraged for the future.



Prairies support over 800 species of plants, insects, birds, fish and mammals, even though only 1% of remnant prairies remain in the United States. Prairie restoration is left to individuals or groups, reconstructing any size land acquirable. Interest in the prairie ecosystem is not limited to the rural setting; urban residents and organizations also incorporate prairie plots in front or backyards, parks or parcels of land. Importantly, urban prairie “gardens/plots” are gaining popularity for their ecological services. However, it is not known to what extent these small urban prairies can sustain the plant/pollinator interactions that are vital to both the insects and plants.

My research indicates they can indeed sustain, and comparing such prairies to those like Woods Prairie proved important in the research.

The goal of my graduate thesis research was to examine plant/pollinator interactions in three urban prairies in southwest Missouri and compare them to rural prairies. Rural prairies were predicted to have

stronger plant/pollinator networks than urban, and, I thought, the comparison would generate knowledge for managers of both rural and urban prairie habitats.

When I was looking for a rural mesic prairie within an hour’s drive of Springfield, Missouri that shared soil types with an urban prairie demonstration garden at Valley Water Mill Park, Woods Prairie was simply an option on my list of public prairies. When I walked onto the prairie, however, I was in awe at the diversity of grasses and forbs (broadleaf flowering plants) that surrounded me. When inquiring about using this prairie in my research, I was equally intrigued that the previous owners preserved it so well.

Ultimately, I sampled three urban and three rural prairies, based on soil types, from May through August 2018. Rural Woods Prairie shares mesic soil type with the urban prairie at Valley Water Mill Park. La Petite Gemme Prairie is the rural comparison of hardpan soil with urban Kickapoo Edge Prairie at Nathaniel Greene Park. A portion of rural Providence Prairie shares wetland soil type with the urban prairie unit at the Springfield Conservation Nature Center.

I found many interesting, and somewhat encouraging, results from my study.

- Of all focal forb species sampled across all prairies, 88% were native to tallgrass prairies.
- For the most part, each prairie had different focal forb species. There was not much similarity between rural prairie focal forb species or between urban focal forb species.
- Out of the 10,113 insect visits I recorded, 59% were from bees, followed by 20% from butterflies/moths. Wasps, beetles, and flies comprised the rest of the counted visits. Woods Prairie received the greatest number of insect visits in the rural prairies.
- Overall, rural prairies received fewer insect visits than did the urban prairies.
- Insect fidelity (the tendency of an insect to visit one species of forb, then visit another forb of the same species next, thus potentially transferring genetically compatible pollen) did not significantly differ between rural and urban prairies. In fact, insect fidelity was greater than 97% across each month studied. This finding differed from those of the only two prairie plant studies examining pollination across a rural-to-urban gradient.



Photos: Facing page, above and below, show the variety of native plants and the birds and butterflies that they attract. All photos taken by Amanda Coleman

These results suggest that active management of urban prairie units may be enough to sustain the same level of pollinator services as rural prairies. The fact that there is great heterogeneity in native plant species between/across both urban and rural prairies is, I think, a positive.

Conservation of prairies in rural and urban settings will continue to be important as urban expansion increases, and it is reassuring that urban plots may be able to sustain the same kind of pollination and related activity as their larger, rural cousins.

Devoting land to prairie preservation and restoration contributes to the health of this diverse habitat. Prairies, and prairie “gardens/plots” in more urban settings, provide food resources, gene flow, shelter and nesting for prairie organisms.

While I’ve chosen to research prairies for my graduate work, everyone can and should appreciate their natural beauty and importance. The next time you visit Woods Prairie, notice the stark differences in biodiversity between the adjacent pasture, managed for livestock only, and the prairie. Do the same when you compare and contrast other prairies to their neighboring natural habitats. You’ll readily observe the many reasons why we protect prairies, and why they have such a dear place in my heart. Encourage the protection and restoration of prairies both urban and rural, and the development of urban prairie gardens, and you may enjoy them as much as I do.



Amanda Coleman received her Associate of Science in General Studies and Bachelor of Science in Biology from Drury University in Springfield, MO. She recently received her Master of Science in Biology from Missouri State University in Springfield, MO, working with advisor Dr. Alexander Wait. She currently teaches Life Science at Ozarks Technical Community College in Springfield, MO. She enjoys spending time with her husband and two children, gardening, and watching the insect visitors to the native prairie plants on her property.

Q&A with OLT Board Member Bob Morgan

Robert Morgan (Bob) is a retired civil engineer. He and his wife, Sharon, currently live in Springdale. Arkansas Bob spends his time reading, working in his shop, gardening, hiking, bicycling, canoeing, and fishing for smallmouth bass. During his career Bob was the environmental manager for Beaver Water District where he was responsible for developing and implementing the District's Source Water Protection Program. He was also an active member of the American Water Works Association where he was a trustee on the Associations Technological and Educational Council, liaison to the Standards Council and a former chairman of the Source Water Protection Committee. Bob has been active in the Ozark Land Trust since 2015.

What were your early influences in nature and outdoor life?

When I grew up in Rogers, AR. it was a pretty rural place, so we didn't have many options for recreation besides going outdoors. I suppose my real love of nature started when I joined Boy Scout Troop 122 at the Methodist Church in Rogers. Mr. John Swearingen was our Scout Master. He was a natural teacher and also had a great knowledge of the outdoors. As I got older, our outing got more and more adventurous. When we got into white water canoeing, I was hooked.

How did you begin to incorporate your love of nature and conservation into your professional life?

I went to the University of Arkansas to become a Civil Engineer with the hope of working on water and wastewater projects. For a few years that was what I was doing. Then in 1980 the Boy Scouts of America had an opening in their engineering division. I was fortunate enough to get the job. Our function was to help local Boy Scout councils manage their camp properties. Much of our duties were assisting with conservation planning for the councils. Later my experience in conservation planning helped me to secure a position as director of Arkansas Nonpoint Source Pollution Management Program. During my tenure as the Nonpoint Source Pollution director, I was given an opportunity to attend graduate school. As a graduate student I studied stream restoration and watershed management.

Can you tell us about a resource protection project you've been involved in that is particularly important to you?

During graduate school we received a grant to restore Blossom Way Creek in Rogers. The creek had been channelized years earlier and was really not functioning well at all. I received the assignment to direct the restoration design. We used natural stream design practices to restore normal sinuosity and riffle structure to the stream. At completion the stream was a functioning urban waterway. The stream now flows perennially, there are riffles and pools and a somewhat healthy aquatic community. Several years ago I was out at Blossom Way and was able to see a mink working along the shoreline.



Bob Morgan enjoying one of his favorite places-Upper Buffalo Wilderness area

Where are the outdoor places in Northwest Arkansas you most like to frequent?

My favorite places are about anyplace in the Boston Mountains, especially on trails in the Upper Buffalo Wilderness Area and along the Ozark Highland Trail. Also, during season, I float various streams around the Ozark Highlands and fish for smallmouth bass. As my friend David Thrasher says, my favorite stream is the one I am on now. My next favorite is the one I am getting ready to go to.

Of the lands in Arkansas that OLT protects, which are your favorites?

I still have not been to all of the properties in Arkansas. My favorites so far at Hogscald Holler, Williams Woods and the Fred Berry property.

You have some extraordinary gardens in your own backyard. Can you tell us a little about them?

Several years ago, Douglas Tallamy came to Fayetteville and gave a lecture based on his book 'Bringing Nature Home'. Sharon and I attended and then afterward decided we would see what we could do to entice nature into our back yard. Our idea was to use native plantings to generate some organized chaos on the lot. The chaos part was easy. Organizing it has been more difficult. Sharon compiled a list of native trees from Tallamy's book to plant. Currently we have what we call the 'bird garden', the 'fence garden', the 'shade garden', the 'rain garden', the 'east garden' and the 'front garden'. The bird garden is roughly 1000 square feet and is dominated by a viburnum, a wahoo and a buckeye. Under these trees there is an understory of native perennials including purple coneflowers and penstemons. The shade garden is under a redbud tree. It consists of Solomon's seal, crested iris, columbine, Carolina bluebells, Dutchman's britches, and celandine poppy. The rain garden was built as a demonstration project regarding stormwater management. The garden is roughly 400 square feet and treats runoff from roughly half of our roof. When we rebuilt our screened in porch a few years ago, we jugged it out from the house so as to be surrounded by the gardens. The west side was obviously exposed to intense evening sun. So we planted a green wall on that side consisting of a trellis covered with trumpet honeysuckle. Sharon is the gardener in the family, my job is to haul heavy things around the yard and put them where she directs.

Can you tell us why you became involved in Ozark Land Trust?

The direct answer is that former board member Duane Woltjen asked me to serve. When Duane thinks you can do something, he has good reasons and it is hard to say no. The more fundamental reason however is that in today's world, conserving natural habitat as well as resources is going to depend more upon the actions of concerned individuals, not on new government programs. Land Trusts are in the best position to help those individuals who make the effort.

Why are groups like OLT important to the conservation landscape?

Most of the land in the United States is held by private landowners. Many of the private landowners, likely most, have a deep love for their land and do not wish to see it degrade in anyway. The land trust provides those

landowners with a mechanism to assure that their property will not succumb to development or other pressures in the future. Those properties can then continue to provide wildlife habitat, water and air purification, food and fiber as well as aesthetic values. No other systems provides for permanent landscape preservation on private property.

For those who have a passion for conservation and don't know where to start, how would you recommend they get into it?

The most important thing for a person getting started in conservation is for them to educate themselves as best they can on the subject. Then they should take the big step and do something. That might include incorporating native plantings in your landscape, participating in local projects such as riparian plantings, stream cleanups and other projects. Possibly, if you are a landowner, then learn about how conservation practices can help your farming operation and also protect the environment. Then get involved with a local organization as an active member. Starting a career in conservation becomes a lot easier when you already have contacts in the field and a reputation of being someone with a good head for what is right. Finally be persistent. The Buddhists have a saying, "when the student is ready, the teacher will appear". If you make yourself available, an opportunity will come along.



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To help people protect and conserve the natural resources and beauty of the Ozarks and to advocate for land conservation.

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We hope you can join us on September 12 for our Annual Meeting, which was delayed as a result of the COVID-19 crisis. We'll provide more info about how we will meet, in person in Washington, MO, or virtually, as we receive more information about public health and its impact on OLT's operations. Visit ozarklandtrust.org and our Facebook page, and if you don't already, subscribe to our e-newsletter on our website, for more information as it develops.

ACCOMPLISHMENTS AND FINANCIALS

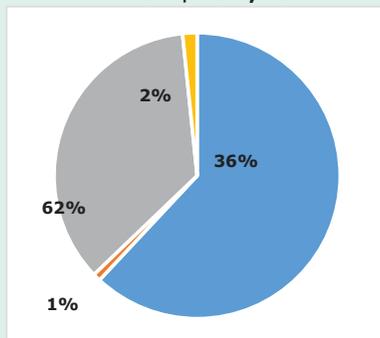
The last year has been both great and bittersweet for Ozark Land Trust. The great:

- We introduced our new name, Ozark Land Trust, and our logo, Conservation Close to Home.
- It was our first year operating under national accreditation.
- We completed five more conservation easements totaling 505 hundred acres, and brought new education programs to our Schulze Nature Preserve in Washington, MO We greeted two new board members, Mark Curtis and Karen Massey, and we've welcomed our new Executive Director Larry Levin, Administrative Assistant Roxann Holloway and Stewardship Specialist Donna Kridelbaugh.
- We're pleased to announce new titles as well; Nic Rogers is now our Conservation Program Manager and Abigail Lambert is our River Stewardship Manager.

The bittersweet part was saying goodbye to our longtime, exceptional ED Peggy Horner (who continues to help us!), to our wonderful associate Kathy Lee, and to those directors rolling off the board. And our great projects manager, Kelly O'Mara, is departing this month, but will continue her relationship with OLT as a volunteer and supporter!

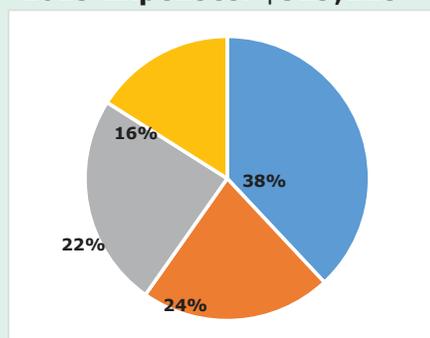
2019 Financial Report

2019 Income: \$494,491



Individuals—36%
Foundations—62%
Government—1%
Earned Income—2%

2019 Expenses: \$529,125



Stewardship & Land Management—38%
Public Education—24%
New Conservation Project—22%
Administration—16%

Note: The above chart reflects an unaudited approximation of funds received and expended for administration, outreach, stewardship and project management. It is not a financial statement for the organization. Form 990 tax returns for Ozark Regional Land Trust, now dba Ozark Land Trust, are publicly available for years 2017 and prior.

ANNOUNCING OUR NEW OZARK LEGACY SOCIETY

Ozark Land Trust wants to recognize our wonderful supporters who include OLT in their trust and estate plans. If you support us in that way and would like be included, or if you're interested in learning more about how to support OLT in this way, let us know. Contact our Executive Director Larry Levin at larry.levin@ozarklandtrust.org or call 314 420 0460 and he'll be happy to chat about how you can create a lasting legacy for conserving lands in our beautiful Ozarks!

