

Kentucky Carnivorous Plants Conservation and Restoration Annual Report

The 2022 year was filled with growth here at CarnivorousKY. I appreciate your patience with me this fall as I completed the Community Centered Environmental Education ecredential with KAEE to become a Green Community Leader in Kentucky. This certification focuses on the North American Association for Environmental Education Community Engagement: Guidelines for Success.

The goal of Kentucky Carnivorous Plants Conservation and Restoration is to safeguard native carnivorous plant populations by ensuring rare plant communities are maintained. The carnivorous plants in Kentucky thrive in the only example of a highland rim wet barrens community in Pulaski County. Highland rim wet barrens are a rare natural community due to practices of fire suppression, invasive species, woody species encroachment, and modern development practices. In 2019, a second extant population of *Drosera intermedia* was found in a prairie remnant in Pulaski County that also contains 9 other rare plants that were documented by OKNP. These natural communities are fragmented by agriculture and development. Changes in climate, hydrology, pollution, biological invasions, air and water quality, agricultural impact, and human impact are detrimental to communities of rare plants. By bringing visibility to populations of rare native plants of conservation concern this project can promote interaction from a diverse group of communities. More than 80% of Kentucky's wetland communities have been converted for land use. Nearly all natural communities in the state have been altered, making any natural communities rare.

The species named in this project are listed with a state ranking of S1. This means these species are critically imperiled in the state because of extreme rarity due to specialized habitat. This information was found in the Kentucky Office of Nature Preserves Rare Plants Database. When communities work together, it strengthens the impact on environmental quality and gives the community a high degree of responsibility for the natural spaces around them. Children who have had a significant experience with nature grow into environmentally conscious community consumers. By interacting with these rare plants in their preferred habitat, we gain outdoor learning opportunities that take us outside of our urban environments. When we can connect the information given by state and federal agencies, land managers, academic researchers, botanical gardens, conservation horticulturists, non-profits, conservation groups, private sector/consultants, community scientists, and volunteers committed to protecting native plants, we can act effectively. This project aims to highlight the importance of native habitat management and restoration processes, the impact of invasive species, the effects of climate change, and the importance of air, water, and soil quality. These rare plants and the communities they thrive in can empower local citizens to view their interconnected communities on a global scale.

I am excited to announce Dr. Krupa from the University of Kentucky has decided to partner with me on my Community Environmental Education Action Plan which will be implemented in partnership with the community to support ecological integrity, shared prosperity, and social equity. Next year my group will be working to present a workshop on the carnivorous plants in Kentucky. I also want to announce that Pulaski County Conservation District is the newest stakeholder in my project. This project will supply opportunities to actively take part in research, conservation, and restoration processes, which will help give a greater public

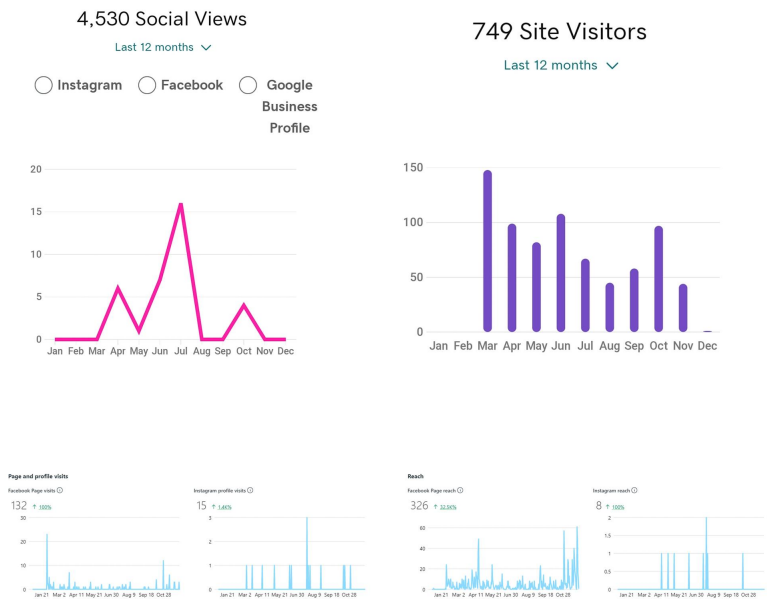
understanding of the role of conservation and the natural ecosystems of our communities. Learning about diverse natural ecosystems and how they interact through history to create the environments we strive to preserve allows us to work together to build stronger, more resilient communities.

Notable contributions

Research Grade Observation of *Physarella oblonga* in Jefferson Memorial Forest. It is safe to say not much research has been done of myxomycetes in Kentucky. Since 2021 I've observed 20 species of myxomycetes in Jefferson County. This observational field data will document the diversity and distribution in Kentucky.

Erythronium, commonly called the fawn lily, trout lily, dog's-tooth violet, or adder's tongue. This genus comprises about 20 species in the Liliaceae family that are closely related to tulips. This field observation, after consulting with local authorities at the Kentucky Native Plant Society, is an unusual population of unspotted *Erythronium*. While several species and hybrids of *Erythronium* without the leaf mottling are present in western populations across the United States, there are few in the eastern populations. "It is proposed that the complex leaf color pattern may act as a camouflage to escape herbivores, while the reflective silvery spots may have a role in attracting pollinators of this early-flowering species. (La Rocca, Nicoletta et al. 2014).

I contributed to 17 citizen science projects in 2022, nine of which inform OKNP on the distribution and diversity of flora and fauna in Kentucky. CarnivorousKY had 462 observations of 275 species. Of these observations, 186 were ranked Research Grade, of 152 species.



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Figures show website analytics to optimize web usage and marketing. I updated the website at the beginning of the second quarter, shown in the analytic dashboard.

iNaturalist stats 2022

Project	Description	Rank	# of observations	Species
Biodiversity of Kentucky ONKP	This project shows the biodiversity of Kentucky. It is also part of the umbrella project Biodiversity of the 50 States	141	425	216
City Nature Challenge 2022	From April 29 - May 2, 2022, let's take a break from Derby	27	20	11

	<p>happenings and take photos of plants, animals, fungi and other organisms in Louisville Metro (Jefferson County)</p>			
<p>Fungi of Kentucky</p>	<p>Working toward a list of Fungi that occur in Kentucky. Providing observational field data, Fungarium collections, and genetic data from Fungi of Kentucky.</p>	<p>36</p>	<p>109</p>	<p>50</p>
<p>KNPS Wildflower Week 2022 KNPS</p>	<p>The Kentucky Native Plant Society, in conjunction with its annual Wildflower Weekend (April 9 & 10), is coordinating this week-long BotanyBlitz project.</p>	<p>36</p>	<p>31</p>	<p>19</p>
<p>Mushrooms of Kentucky ONKP/KNPS</p>	<p>This project's goal is to document the diversity, distribution, and conservation status of mushrooms. This project excludes lichens as we are tracking lichens in a separate project.</p>	<p>38</p>	<p>96</p>	<p>44</p>

Plants (Vascular) of Kentucky OKNP/KNPS	This project is a part of an umbrella project aimed at documenting the diversity, distribution, and conservation status of all of Kentucky's Flora and Fauna	114	255	142
Documenting the Natural Heritage of Kentucky OKNP	This is an umbrella project utilizing the power of crowdsourcing to document the Natural Heritage of Kentucky, the biodiversity of our flora and fauna.	133	418	216
Jefferson Memorial Forest Biological Inventory	Biological Inventory for Jefferson Memorial Forest, Fairdale, KY	37	9	5
Kentucky Botanists Big Year 2022 KNPS	Kentucky Native Plant Society's 4th annual Kentucky Botanists Big Year project!	23	134	109
Kentucky Roadside Native Plants ONKP	Kentucky Nature Preserves is seeking to document native plants, and their habitats, along roadside right-of-ways in Kentucky.	5	17	13
Lichens of Kentucky OKNP	This project is designed to compile observations of	28	13	6

	lichens of Kentucky into a user-friendly database.			
Mosses, liverworts, and hornworts (Bryophytes) of Kentucky OKNP	This project seeks to document the diversity, distribution, and conservation status of Bryophytes (mosses, liverworts, and hornworts) of Kentucky.	59	10	4
Native Kentucky Organisms	Categorizing and tracking native organisms in Kentucky.	224	168	128
Contributed to 17 projects			462	275
Research Grade Observations			186	152

Operating costs reflect the change in the website at the beginning of the second quarter.
Annual Operating Cost for 2022 totals \$180.00

Abbreviations:

KAEE- Kentucky Association for Environmental Education

OKNP- Office of Kentucky Nature Preserves

KNPS- Kentucky Native Plant Society

If you want to learn more about the project and see the full report, check out the website!
CarnivorousKy.com

Keep an eye open for the workshop page which will list our upcoming events in 2023!