Illinois Native Plant Society

The Harbinger

Newsletter *of the* Illinois Native Plant Society

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"...dedicated to the study, appreciation, and conservation of the native flora and natural communities of Illinois."

Rosa blanda with a periodical cicada (17-year pharoah cicada; *Magicicada septendecim*).
Photo by Katie Kucera.

In This Issue

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Message from the President

Dear INPS members,

It's hard to believe, but it's almost time for another Annual Gathering! I am very much looking forward to the Annual Gathering hosted by the Northeast chapter, from July 12-14 at Benedictine University in Lisle, Illinois. Please find registration information in your email.

On a personal note, I am also excited to be returning to the great state of Illinois. I left Illinois for Vermont in fall 2022, and continued my term as president until the next INPS election. After Janine Catchpole stepped down last year from her position as president, I agreed to serve again but expressed my preference for someone in Illinois to serve this important role. Perhaps it was a self-fulling prophecy—I have decided that the Midwest is my home and am in the process of moving back. On that note, I'm happy that I will be closer to all of you and be able to participate in our events in-person.

Warmly,
Emily Dangremond

Message from the Editor

This issue highlights our research and survey grants program by featuring articles contributed by the many of the grant recipients in 2023. This program is made possible through the generous donations of Illinois Native Plant Society members and the society is immensely grateful for their support. We also announce the recipients of the 2024 research and survey grant program. It is terrific to see these projects relating to native plants be implemented across the state.

–Christopher Benda, Editor

Submissions to the newsletter are always welcome! Please contact editors Chris Benda (botanizer@gmail.com) and Brian Charles (brianmc4@illinois.edu). Deadlines are March 1, June 1, September 1, and December 1 for the spring, summer, fall, and winter issues respectively.

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INPS News

Chapter News

For information about each chapter, visit our website at illinoisplants.org/chapter-locations

INPS Research and Survey Grant News

2024 INPS Research Grants Announced!

We are excited to introduce our four new Research Grant awardees! Below, please read their diverse and interesting projects, which were evaluated by a panel of seven reviewers.

Leidy Arias Martinez (PhD Student; PI) and Kaleigh White (Undergrad Student; Co-PI), Southern Illinois University

Chromosomal characterization of native Triodanis *species: An exploration of taxonomy and hybridization*

Triodanis Raf. (Campanulaceae), a cryptic genus ranging from North to South America, poses taxonomic challenges due to morphological similarities and potential hybridization. This study aims to resolve species boundaries by characterizing Triodanis chromosomes. Objectives include identifying karyotypic variation, addressing interspecific and intraspecific variability, and providing evidence for hybridization. Using the protocol of Maravilla et al. (2023), root tips from *Triodanis* species distributed in Illinois will be used for

chromosome analysis. Staining, critical for accurate banding, will follow N.L. Darvey's C-banding protocol. Results will inform species delimitation and broaden biological, ecological, and evolutionary insights into this native genus. The project is expected to contribute to the biological, ecological and evolutionary knowledge of this native genus by filling a knowledge gap. [Note: the study will include two species of *Triodanis* spp. known in Illinois.]

Katie Kucera (PI) and Dr. Gary Sullivan (Co-PI), The Wetlands Initiative

Investigating propagation methods and *ex situ* host plant selections for germinating *Comandra umbellata*

Comandra umbellata L. Nutt. (Santalaceae) is a hemiparasitic forb present in dry, mesic, and wet mesic grassland plant communities. Many plant ecologists consider *C. umbellata* an indicator of high-quality, undisturbed habitat, and it is highly sought after in native plant restoration projects. Despite efforts to incorporate *C. umbellata* in habitat restorations, researchers and practitioners have been unable to successfully germinate *C. umbellata* using conventional cold, moist stratification methods. This results in *C. umbellata* being absent from most native plant restoration projects unless practitioners can obtain plugs; even still, *C. umbellata* may not persist in restorations if suitable conditions and host plants are not present. Our research aims to address this germination conundrum by conducting an *ex situ* experiment: applying one of 28 combinations of stratification treatments to *C. umbellata* seeds, and sowing the treated seeds with one of two possible host plant species from plant families known to act as hosts for *C. umbellata*: Cyperaceae and Asteraceae (for a total of 56 treatments combinations). This experiment will complement an *in situ* experiment that The Wetlands Initiative staff and an independent research colleague are currently conducting in the Sandy Hollow restoration area of the Dixon Waterfowl Refuge, a 3,000-acre site owned and managed by The Wetlands Initiative in Hennepin, IL. In this *in situ* experiment, seeds received the same seven treatments as outlined in this proposal and were planted in experimental plots where we are also studying whether planting depth or timing of sowing play a role in *C. umbellata* germination.

Cassie McGinnis (Master's student), Illinois State University

Impact of hemiparasitic *Pedicularis canadensis* on tallgrass prairies invaded by invasive *Lespedeza cuneata*

Hemiparasitic plants can influence plant communities through theft of resources or modification of nutrient availability, and thus hemiparasites potentially alter prairie biodiversity and resistance to invasion. The native root hemiparasite *Pedicularis canadensis* can alter tallgrass prairie community composition, but how this occurs is not known. The goals of this project are: (1) to determine the mechanisms by which *P. canadensis* affects its local community and (2) to determine if *P. canadensis* can impede the establishment and spread of the invasive species *Lespedeza cuneata*. In 2006, 1-m² plots were established on a restored prairie to test effects of fertilizer and hemiparasite removal on hemiparasite community relations. The community composition and dry mass of *L. cuneata* and *P. canadensis* in plots were previously assessed in 2015 and all treatments were discontinued. I will record the presence and percentage cover of species in these plots and determine species richness, relative abundances of species, and dry mass of *L. cuneata* and *P. canadensis*. I will also sample soil from the center of each plot to characterize the soil microbial community. I will use these new data and data from 2015 in structural equation modeling to test hypotheses for the role of *P. canadensis* in the prairie. Knowing how hemiparasites such as *P. canadensis* impact local biodiversity and resistance to invasion and identifying the mechanisms by which they produce these effects can inform prairie management and restoration. Knowledge regarding hemiparasites may help practitioners control invasive species and develop seed mixes for resilient prairie communities. **(Note: Part of Cassie McGinnis's award is funded by the INPS Central Chapter.)**

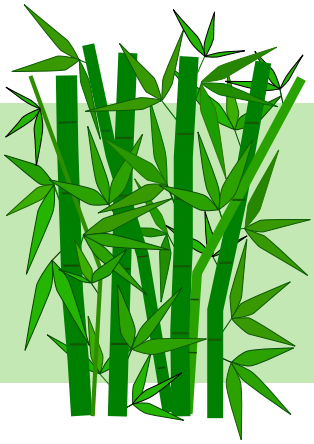
Ilana Zeitzer (PhD Student), University of Illinois at Urbana-Champaign

Investigation of the change in native Illinois plant volatile organic compounds over time post-preservation

Understanding plant interactions is crucial to understand how anthropogenic disturbances are altering ecosystems, such as Illinois prairies, and how restorations are failing to match the diversity and ecosystem functions of remnant ecosystems. Scientific knowledge on species interactions is limited and restricted by the lack of long-term data sets. This is true for volatile organic compound (VOC) analyses as the technology and methods are relatively new. VOCs are key signals in plant interactions with herbivores, predators and parasites of herbivores, pollinators and other organisms. Understanding the abundance and diversity of VOCs produced by plants can provide information on their interactions, but the ability to measure how plant species and populations change in VOC output over time is severely limited. However, herbarium specimens may provide access to information on historical plant VOC profiles and thus plant interactions. While currently herbariums are being used to investigate plant traits, such as leaf area, and phenological life stages, the uses of herbarium specimens for species interactions have been limited. Having access to herbarium specimens with a standardized methodology for VOC collection from preserved plants has the potential to provide access to spatial and temporal gradients spanning all continents and hundreds of years through the millions of specimens already stored in herbaria. I will investigate the VOC profiles of native Illinois plant species and the changes in those profiles over time post-preservation. I will then compare these VOC profiles with historical plants of the same species preserved in local herbaria.

INPS Research and Survey Grant News

The following articles explain the research performed by the 2023 research grant recipients and their results.



Assessing the Relationships between Forest Cover and Canebrakes in Illinois: Implications for Management

By Thanchira Suriyamongkol and Dr. James J. Zaczek

Giant cane (*Arundinaria gigantea*) is one of the three native bamboo species that occur in the US. It is the most common and widespread native bamboo species that extends across southeastern region of the country, with southern Illinois representing the northern edge of its range. Giant cane can form dense, monopodial stands, known as “canebrakes”, and is an important component of the bottomland hardwood forests. Canebrakes provide many ecological and cultural benefits. Their thick rhizome systems and a high aboveground stem density make them an ideal riparian species to reduce run-off, increase infiltration rate in the soil, and improve water quality. In addition, canebrakes provide habitat and resources for many wildlife species, including species of conservation concern such as the Swainson’s warbler.

Land conversion to agriculture, overgrazing, and alteration of disturbance regimes led to the destruction of wetlands and bottomland hardwood forests, along with canebrakes. Giant cane is now listed as a conservation target due to its ecological values. Therefore, there is a need for appropriate and effective management actions to restore and enhance canebrake habitat. Although much research has been done on reestablishment and expansion of canebrake stands, information on the status of naturally occurring canebrakes remain sparse.

In this study, a survey of giant cane was conducted to assess the relationship between canebrake growth and forest characteristics. Data was collected at 47 sites between June–August 2023 across Jackson, Union, Alexander, and Pulaski Counties in southern Illinois. Giant cane canebrakes were found in both small discrete patches and in larger continuous patches within areas that were forested and forest-adjacent. They varied in size, ranging from 104 m^2 to 24,726 m^2. Live culm density ranged from 1.2–24 culm/m^2 and culm height ranged from 46.52 cm to 372.5 cm.

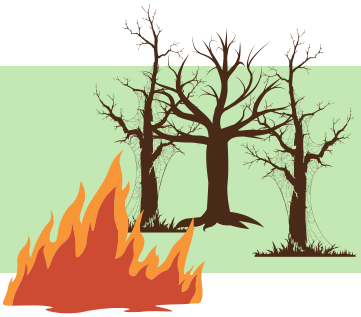
Overstory tree basal area negatively influenced the canebrake area. Leaf litter depth, which was related to the density of canopy cover, negatively influenced culm density. Lastly, overstory tree density negatively influenced culm height. The findings in this study corroborate past studies that overstory trees affect canebrake growth.

As a part of the Illinois Native Plant Society Research program, this study promotes a better understanding of giant cane, a native bamboo species within the southeastern United States, including Illinois. Information obtained from this study can promote giant cane growth and vigor to meet management goals whether as a riparian buffer or as wildlife habitat. Specifically, management of overstory by reducing forest overstory basal area and percentage canopy cover through thinning and prescribed burning can increase light levels and soil resources, which will benefit cane's growth.

We would like to thank the Illinois Native Plant Society Research Grant program for providing funding for this study. We also would like to thank the McIntire-Stennis Cooperative Forestry Research Program for supporting the survey of giant cane as part of this dissertation project. Moreover, we would like to extend our appreciation to Hannah Bendler, Madison Woods, and Jacob Trowbridge for assisting in data collection.

Fire and the Forest

By Dan Marshalla



Fire activity is rapidly increasing in North American forests with more wildfires in the West and more prescribed fires here in the Midwest. Many land managers are choosing to burn in order to encourage oak tree regeneration, improve biodiversity, and control invasive species. On the other hand, where burns are not happening, dead plant debris is building up which can eventually lead to intense wildfires especially as climate change causes hotter and drier days. Fire once occurred periodically across the continent at varying frequencies in part due to indigenous land management, but around the early 20th century this was replaced with large-scale fire suppression. As we return fire to the land, we need to know the specific consequences on plants and biodiversity so that we can burn both optimally and responsibly. Forest understory plants, in particular, are often understudied, especially when it comes to fires, as overstory trees attract more attention than forbs and grasses.

Fire can affect biodiversity, where occasional fires may knock back the strongest competitors, increasing biodiversity, or can decrease biodiversity through environmental filtering where frequent/severe fires eliminate species that are not adapted to such conditions. More light reaching the forest floor and changes to soil nutrients caused by fires can also change the shape of plant communities. So where is the line? When is there too much fire, when is there too little? Which plants will survive in high-fire habitats? And how exactly does fire affect forest plant community assembly?

Studying plant functional traits helps answer these questions. Functional traits are properties such as leaf size, chemical concentrations, growth form, bloom time, etc. that can influence a species response to change, affect ecosystem function and services, and tell us about a plant's life history strategies. For example, leaves with high surface area but low mass, high nitrogen content, and high water content are found on plants that grow and cycle through soil nutrients more quickly. The diversity of functional traits—functional diversity—is sometimes used in place of biodiversity measures such as species richness. The addition of one species may have an especially large or small effect on ecosystem processes if the traits it brings are new or redundant, respectively. These nuances are considered with functional diversity, but are not reflected in taxonomic diversity or species richness.

In my study, I used prescribed fire records from Southern Illinois in Shawnee National Forest and Dixon Springs State Park that went back 26 years. Some parts of the forest are burned every couple years, while other parts have been burnt only once over a decade ago, with many areas being burned at some frequency in between. These records revealed a fire history gradient that allowed me to see how plant communities in areas with low, intermediate, and high fire frequency differ. After measuring relative abundance of all understory plants (spending a few weeks doing nothing but identifying plants all day was probably my favorite part of the study), I calculated several functional traits at the plot-level including specific leaf area (SLA) and leaf dry matter content (LDMC). Plants with high SLA have leaves that are built for better sunlight capture and photosynthesizing, while species with high LDMC have leaves with relatively more structural tissue with lower photosynthetic capabilities.

By doing understory plant surveys and measuring functional traits at sites across the fire history gradient, I found that where there is more fire, the plants grow slower and are more conservative in their nutrient acquisition (lower SLA and higher LDMC). This information can give forest managers a better understanding of where to use fire. If a conservative, slow growing plant species needs to be conserved, then fire would be a beneficial tool. But if a fast growing plant needs to be conserved, then fire may be harmful.

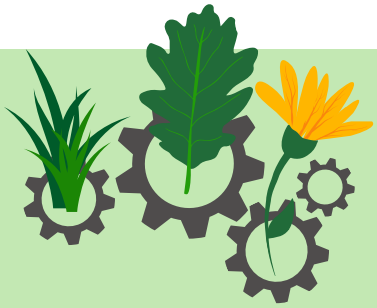
Forest with low fire frequency and excess leaf litter.

Forest with high fire frequency and high understory diversity.

Additionally, I found that both plant functional diversity and species richness increase as fire frequency increases. It is possible that there is a frequency beyond what we studied that reduces biodiversity, but based on the current practices in Southern Illinois, more burns should generally result in more diversity. However, biodiversity is also positively associated with pyrodiversity—the variety of fire regimes across a landscape—so, while increasing fire frequency will increase diversity, maintaining pyrodiversity across the forest is also important. Thus, this research helps forest managers plan both where and when to burn to maximize plant biodiversity.

Returning fire to ecosystems is a high priority for many Illinois land managers. This study helps us make more informed decisions on the best way to bring back prescribed fires and would not have been possible without the Illinois Native Plant Society 2023 Research Grant. I hope this research can help bring awareness to the importance of prescribed fires and protecting biodiversity not just in grasslands, but also in the prairie state's lush central hardwood forests.

Assembling experimental plant communities to understand the competitive interactions that shape Illinois's restored oak woodlands



By Rory Schiafo

As a graduate student in Plant Biology and Conservation at Northwestern University and the Chicago Botanic Garden, I try to understand the factors that influence the identity and abundance of native plant species in oak woodland restorations across Illinois. In particular, I am interested in understanding how restoration outcomes are influenced by biotic interactions— or the interactions between living organisms (e.g., competition for resources). We know that competition between species is important for determining who establishes and persists in a restoration, and thus the plant community composition, and overall functionality of the ecosystem. However, factors such as light availability and the order species arrive at a community may influence the strength of competition and the role it plays in plant community dynamics. To better understand how biotic interactions shape restored plant communities, I investigated the competitive interactions that occur between the species that are used to restore oak woodlands. Specifically, I address how competitive interactions influence the growth of these species and how the strength of competition changes with light availability and species' arrival order.

I grew experimental plant communities under three different light-availability treatments at the Chicago Botanic Garden in Glencoe IL. These plant communities contained twelve plant species commonly seeded in woodland restorations. The species used in this experiment include both graminoid and forb species across a range of conservatism scores and light requirements. Conservatism scores (i.e., coefficients of conservatism, or "c-values") describe variation in a plant species' ability to tolerate habitats that are more or less disturbed or human-modified. Conservatism scores are assigned by regional botanists and range from zero to ten, with non-native and weedy species scoring zero, while species restricted to remnant or high-quality sites are assigned ten. To describe a species' light requirement in this experiment, I selected each species from one of three seed mixes that were designed by the Forest Preserves of Cook County to restore mesic woodlands with varying light availabilities. For example, the species I selected from a seed mix designed for open woodlands are those that require high-light conditions, while the species selected from a seed mix for shaded woodlands have low-light requirements.

The high-light treatment used in this experiment. Communities in the high-light treatment grew under full sun conditions.

The moderate (front) and low-light (behind) treatments used in this experiment. Communities in the moderate-light treatment grew under a 30% woven shade cloth, while those in the low-light treatment grew under an 80% woven shade cloth.

List of species used in this experiment and their c-values.

- *Bromus kalmii* (10)
- *Carex cephalophora* (5)
- *Coreopsis tripteris* (5)
- *Diarrhena obovata* (10)
- *Elymus villosus* (7)
- *Glyceria striata* (4)
- *Panicum virgatum* (3)
- *Rudbeckia subtomentosa* (8)
- *Sisyrinchium albidum* (6)
- *Scrophularia marilandica* (4)
- *Solidago caesia* (8)
- *Veronicastrum virginicum* (8)

By manipulating light availability and the order of species' arrival in experimental communities, I addressed how each of these species' growth was influenced by competition, light availability, and arrival order. In 'ordered' experimental communities, I manipulated arrival order by first planting a single seedling of four species—the early arrivers—on June 12, 2023. Twenty-four days later, on July 7, 2023, I added a single seedling of the remaining eight species into the community—the late arrivers. This created experimental communities that contained all twelve of the study species (one individual of each), four of which arrived early, and eight of which arrived late. Species were selected for early planting such that each group of four early arrivers contained a conservative forb, a conservative graminoid, a non-conservative graminoid and a non-conservative forb and so that each species appeared in six early cohorts. To serve as controls in this experiment, I also grew 'concurrent' communities where all twelve of the species arrived at the same time and 'solo' communities where one individual of a single species grew on its own. In total, I grew 60 of these communities under three light conditions (180 communities total). This experimental design allowed me to compare each species growth when grown without any competition, when arriving at the same time as the rest of the community, and when arriving early or late into a community, thus allowing me to quantify each species response to competition and arrival order.

I found that competition reduced plant species growth under all light conditions. However, competition had the largest negative effect on species' growth when there was higher light availability. I also found that when species arrived at a community twenty-four days earlier than their competitors, they were more successful compared to when they arrived at the same time as their competitors. The observed advantages to being early, often referred to as "priority effects", were also greater under high-light conditions compared to low-light conditions. I also found interesting patterns in species responses to arrival order that were influenced by their functional group (forb or graminoid), conservatism status (c-value) and light requirements. For example, the response of functional groups to priority effects was dependent on light availability. That is, while forbs benefited more than graminoids from early arrival in high-light conditions, the opposite was observed in the moderate-light treatments. Further, the negative effect that late arrival into the community had on a species growth was stronger among non-conservative species compared to conservative species. This result is not surprising when considering that high c-value plants are typical late-successional species that can establish in existing plant communities. For the species with high-light requirements, the cost associated with arriving late was less than that of the species with intermediate or low-light niche requirements. This was counter to my prediction that species with low-light requirements would be better equipped to handle late arrival into an already established community due to their ability to grow despite being shaded out by larger, earlier arriving species.

This work increases our understanding of the processes influencing the establishment and success of seeded species in oak woodland restoration, which will serve to inform future seeding practices in this threatened ecosystem. This work suggests that competition between species will be strongest in woodlands with higher light availability, which can inform the ways in which land managers seed and restore these communities. I also show that species benefited from early arrival into a community, suggesting that seeding difficult-to-establish species into a restoration before the rest of the community may increase the establishment and success of these species. The predictable patterns in the way that conservatism and light requirements impacted a species' responses to competition and arrival order may also be leveraged during restoration practices. Overall, this work informs our understanding of the factors influencing species' growth and success in ecological restoration. Through this enhanced understanding, we can continue to develop restoration practices that foster diverse and resilient plant communities across Illinois.

Fragmentation and Resilience: The Genetic Diversity of Butterfly Milkweed in Illinois Prairies

Dr. Mary Ashley

Anyone interested in native plants in our region knows that the tallgrass prairie, which once covered about 60% of Illinois, was quickly decimated following European settlement. Only a few thousand acres of native prairie remain, and most of what remains is in small, isolated prairie fragments. I'm interested in how prairie plants respond to this habitat fragmentation and isolation, mainly how it affects their reproduction and genetic diversity. Prairie plants in isolated fragments may be reproductively isolated, that is, only being able to exchange pollen with the other individuals in the fragment. If the population is small, this may lead to several negative consequences, depending on the species. The remaining plants may have increased rates of self-fertilization (if they are able to self-pollinate) or reproductive failure (if they are self-incompatible). Small populations are susceptible to a process called genetic drift, where genetic variation is lost over time due to random processes. Some species will increase their rate of clonal reproduction, which further reduces the population size. These processes could lead to loss of genetic diversity in fragmented populations and threaten its persistence.

One of the smallest and most isolated remnant prairies in the Chicagoland area is James Woodworth Prairie in Glenview, previously known as Peacock Prairie. James Woodworth Prairie, a 5-acre native prairie fragment surrounded by commercial and residential developments, is owned and managed by the University of Illinois Chicago, where I am a professor. While Woodworth Prairie has suffered from invasive species, changes in drainage, and pollution, it continues to support a surprisingly rich community of species characteristic of the original prairie. Among the native plants that have been recorded at Woodworth Prairie are seven species of milkweed, members of the genus *Asclepias*. Milkweeds are an especially important component of prairies and grasslands because they are the only larval host species for monarch butterflies. With support from the 2023 INPS Research Grant, I investigated the genetic diversity of one of these milkweeds, butterfly milkweed (*Asclepias tuberosa;* pictured below) at Woodworth Prairie to see if there was evidence of genetic decline due to the small size and isolation of the prairie.

I was also interested in another question about milkweeds. Because of the decline of monarch butterflies, and because monarchs require milkweed plants for reproduction, milkweeds are being planted throughout the Midwest, in both large- and small-scale efforts, to restore habitat for monarchs. People usually purchase seeds and seedlings for these restoration and gardening efforts from commercial native plant nurseries, rather than collecting seeds themselves. A few of the largest native plant nurseries, such as Prairie Moon Nursery in Winona, Minnesota, provide seed for planting milkweeds and other native plants throughout the Midwest. The sources of the seed-producing plants are often unknown or local to the nurseries, which may be very far from the restoration sites. The plants may be adapted to different conditions or climates than the restoration or garden sites. So, the second question of my study was whether I could detect genetic differences between native populations of butterfly milkweed and plants commercially purchased for restorations or pollinator gardens.

The Plant Science Research Center at UIC grows milkweed seedlings for many area pollinator events and citizen science projects. Shown here are butterfly milkweed and swamp milkweed (*Asclepias incarnata*) seedlings that will be distributed later in the summer.

My students and I collected leaf samples from butterfly milkweeds at James Woodworth Prairie in the summer of 2022, when we found 53 flowering plants. Butterfly milkweeds were also sampled at Hosah Prairie, another remnant prairie in Zion, Illinois. The Plant Science Research Center at UIC grows milkweeds for various educational activities and to give away to pollinator garden projects and monarch butterfly citizen science initiatives. I sampled butterfly milkweeds at the greenhouse that were commercially purchased from two different native plant nurseries, Prairie Moon Nursery and Pizzo Nursery Native Plant Nursery, located in Leland, Illinois. So, my study involved comparing plants from two native prairies and two commercial native plant nurseries.

I extracted DNA from the leaves of these plants and used genetic markers to evaluate and compare the four samples. The data from the genetic markers (called microsatellites) could be used to ask: 1) do remnant prairie populations of butterfly weed have low levels of genetic variation due to isolation? 2) Are the commercial seedlings genetically different from the Illinois remnant butterfly weed populations?

In the lab, I used DNA markers called microsatellites to evaluate the genetic composition of the remnant prairie butterfly milkweed and the commercially sourced seedlings.

My results were a bit surprising. The Woodworth Prairie butterfly milkweeds had high levels of genetic variability, similar to those we find in large plant populations that are not isolated. And although butterfly weeds can reproduce asexually (clone), I found only a couple of plants that were clones. So the Woodworth Prairie may not be so isolated after all! There may be pollen coming in from butterfly weeds growing elsewhere, something I will investigate in the future. But it is good news for remnant prairies. Hosah Prairie also had a genetically diverse population of butterfly milkweeds. For the second question, I found substantial genetic differences between the two Illinois native prairies and the seedlings obtained from the commercial nurseries. Pizzo Native Plant Nursery in Leland, Illinois, is about 280 miles southeast of Prairie Moon Nursery and much closer to our native prairie sites. However, the seedlings from both these nurseries were genetically quite similar and genetically different from our two local prairie populations. It made me wonder about the source of the plants used for these commercial native plant nurseries, and whether different nurseries were sharing the same seed source. The genetic markers I used don't tell me anything about local adaptations or whether specific problems might arise from the widespread planting of commercial seeds. However, it indicates that milkweed populations in restorations and gardens will have some genetic differences from native populations. These differences might be important, and are also something I hope to investigate further.

Swamp milkweed (*Asclepias incarnata*) is another milkweed found at Woodworth Prairie, popular in pollinator gardens and monarch habitat restoration projects. This plant has a monarch visitor, perhaps looking to lay an egg (or maybe just looking for nectar).

Other News, Articles, Web Links, & Videos

Registration is open for the 2024 Natural Areas Conference (NAC24): Where Science Meets Stewardship. The conference will take place in Manhattan, Kansas, from October 7–10, 2024. Learn more: naturalareas.org/2024_natural_areas_conference.php

From the Michigan State University Extension, read the article "Plant identification? There's an app for that—actually several!" tinyurl.com/PlantIDAppGuide

Check out the new book *Milkweeds of the United States* by Gene Thomas. tinyurl.com/MilkweedsoftheUS

Desmodium paniculatum @tshahan | *Desmodium ochroleucum* @ciafre | *Desmodium ciliare* @astrobirder

From iNaturalist, read the blog post "Identifying *Hylodesmum* and Distinguishing it from *Desmodium*" written by Claire Ciafré, botanist for the Pennsylvania Natural Heritage Program and Western Pennsylvania Conservancy. inaturalist.org/posts/90196-identifying-hylodesmum-and-distinguishing-it-from-desmodium

Contribute to an effort to save critical prairie habitat in Monroe County! Heartlands Conservancy is raising funds to purchase a 15-acre property containing hill prairie in Monroe County. An anonymous donor has offered to match donations 1:1 to save the prairie, up to half the purchase price. A handful of folks have already stepped up to provide time to raise the rest of the needed funds. Find more information and donate here: heartlandsconservancy.org/support/save-the-prairie/

Botany Humor

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The Harbinger Summer 2024

You can renew/join by filling out the form below or online at illinoisplants.org/online-membership-form/.
Please become a member and support this local non-profit organization dedicated to the preservation, conservation, and study of the native plants and vegetation of Illinois!

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- ☐ *Primula* (Life).....$2,000^{00}
- ☐ *Erigenia* (Life).....$5,000^{00}

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Chapter Affiliation

- ☐ Central (Springfield)
- ☐ Forest Glen (Westville)
- ☐ Grand Prairie (Bloomington)
- ☐ Kankakee Torrent
- ☐ Northeast (Chicago)
- ☐ Quad Cities (Rock Island)
- ☐ Southern (Carbondale)
- ☐ Other/Uncertain

I would like to help with...

- ☐ Leadership & Organization
  Serving on Board at State or Chapter Level
- ☐ Leading Field Trips & Tours
- ☐ Organizing Workshops &/or Seminars
- ☐ Giving Workshops &/or Seminars
- ☐ Public Speaking
- ☐ Fundraising
- ☐ Website Assistance/Management
- ☐ Public Media/Communications
- ☐ Writing/Submitting Articles
- ☐ Photography
- ☐ Other: _____
- ☐ My area of expertise: _____