



Erythronium

Newsletter of the Iowa Native Plant Society, vol. 28 no. 2 May 2023

Pocket Prairie

by Dr. Roger (Jake) Landers

About a year ago I moved to Iowa to live with my daughter, Amy, and her family. She had a pocket prairie waiting for me that I can see this moment from my second story window. It is an area of about 200 square feet between a knee-high retaining wall and the cement extending out from the pool. She and a former student of mine I had taught 50 years ago at Iowa State had transplanted two dozen or so prairie plants in the spring of 2021. I arrived in November to see the winter remains after one year's growth.



I Googled "pocket prairie" to see if this qualified as one, and it fit well within the definition: an area up to an acre in size, usually much smaller, planted to prairie species for close observation. I eagerly awaited spring to burn off the old growth and see what responded. After the burn, a parade began through the summer, with golden Alexanders (*Zizia aurea*) and prairie smoke (*Geum triflorum*), then the dominance of the tall grasses -- big bluestem (*Andropogon gerardii*), Indiangrass (*Sorghastrum nutans*) and switchgrass (*Panicum virgatum*); mountain mint

(*Pycnanthemum virginianum*) with its refreshing smell; and colorful flowers, with some, like silky aster (*Symphyotrichum sericeus*), blooming till frost.

I have been delighted through the summer watching the individual species expand in their second season of growth, to bloom, to set seed (which Madelyn and I harvested), then wither with a covering of snow. A few seeds of each are already waiting in peat pots to be watered and grown for spring planting in new pocket prairies for the three grandkids who live nearby.

Pocket prairies have been here in the Midwest for some time, maybe not by that name, but the idea was here. In 1975, at our Midwest Prairie Conference, one of the speakers from Peoria (or someplace not out of the ordinary) told of her trouble with the City Council which passed an ordinance restricting the growth of weedy plants in support of a landscape of mowed lawns and formal flower beds. Her patches of weedy prairie plants, attracting flocks of butter-flies, had to go. We might have sent back with her a resolution of support for her protest, but I don't remember.

Anyway, the idea of a non-conforming landscape caught on. A few years later one could see an occasional lawn in Ames with a cluster of little bluestem (*Schizachyrium scoparium*) surrounding a

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Questions or comments may be sent by
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Leaves of the President's Notebook



Spring has finally sprung, and it is the time to start looking for wildflowers! As I write this (in early April) several species are already in bloom. Spring beauty, hepatica and snow trillium are flowering in the woodlands. The iconic pasqueflower is blooming on remnant prairies. Even more wildflowers will be in bloom once our newsletter is finalized and distributed. In the last week alone, I've added nearly 400 miles to my odometer in search of blooming flowers. This time of year, is near and dear to my heart. The time and miles are well worth it. Spring is a time to refresh, start anew, shake off the winter blues, and get some vitamin D. The month of May is also recognized as Iowa Wildflower Month and there are several field trip opportunities across the state to see different ecosystems and wildflowers throughout the month of May and beyond. Check out the events listed below and our website for field trip updates.

I wish you all the best and hope to see you out in the field!

Sarah Nizzi

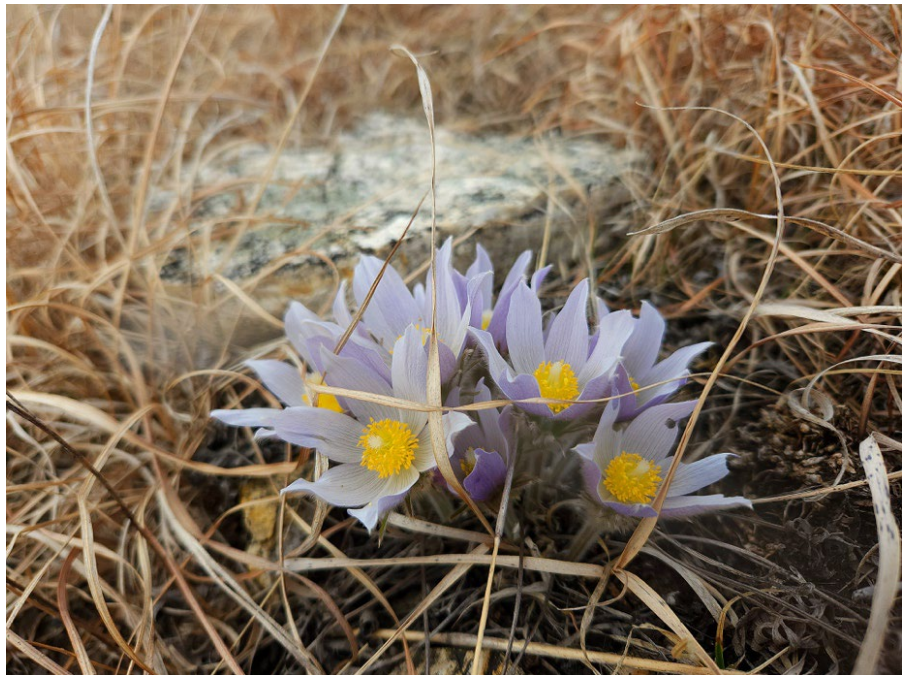
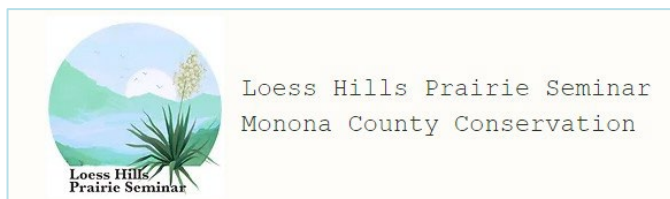


Photo credit: Sarah Nizzi April 9, 2023

Spring comes dressed in blue –
pasqueflowers adorn hillsides,
defying March snow

Deb Lewis

Upcoming Events and Activities: Meetings



LHPS 2023: Head for the Hills!

Save the date for June 2-4, 2023 for the 46th Annual Loess Hills Prairie Seminar. This year's theme is "Head for the Hills." Check back regularly for updates, and follow us on social media to stay connected to our community: <https://www.loesshillsprairieseminar.com/> Registration should open soon. A draft of the schedule of activities is available on the website. Attendance and onsite camping are free. If you have any questions or would like to participate in LHPS as a volunteer, please email: mccbnat@mononacounty.org

Big Sand Mound Nature Preserve Field Day, June 10th



The Big Sand Mound Nature Preserve is located south of Muscatine, Iowa, near the Mississippi River. It is home to a unique, diverse ecosystem of plants and animals and has among the highest concentrations of endangered species in Iowa. A field day at the site is held once every three years, this year on June 10th. Otherwise, the site is not open to the public.

More information is available at:

<https://www.midamericanenergy.com/articles/big-sand-mound>

2023 North American Prairie Conference, June 26 - 29: Prairie Conservation in a Changing World (Altoona)

<http://www.northamericanprairie.org/>

The North American Prairie Conference (NAPC) is America's oldest and most celebrated native grassland conference. It has been held since 1968, roughly every two years.

Registration is open! <http://www.northamericanprairie.org/register>

CALL FOR ABSTRACTS

The 2023 NAPC Planning Committee invites persons with all levels of prairie interest and expertise to submit an abstract to present either an oral paper or a poster. We welcome undergraduate and graduate students, professional and citizen scientists, prairie landowners and professional land managers, policymakers, and prairie authors, artists and enthusiasts.

Oral presentations

There are eight concurrent sessions in the program, each with two sessions for oral papers. These

will be held on Monday, Wednesday and Thursday. Presentations should be NO MORE than 15 minutes long, with 5 minutes allowed for questions. All presenters will be required to adhere to this time limit.


Poster presentations

Posters will be divided into two sessions, each 90 minutes long, on Monday and Wednesday evenings. Poster presenters are required to be present at their poster during ONE of those sessions. Presenters of odd numbered posters will be available to answer questions on Monday, presenters of even numbered posters will answer questions on Wednesday. The maximum size for posters is 46 inches long by 36 inches wide (tall).

All presenters are required to register for the conference. Abstracts are due by May 15th. For questions about submitting an abstract, contact Dr. Thomas Rosburg at thomas.rosburg@drake.edu

Calendar of Other Upcoming Field Trips, Events and Activities

May is Iowa Wildflower Month and many field trips and other activities are being scheduled. More events will be added to the INPS website calendar as new opportunities become available. Also, check for additional information about events already scheduled – www.iowanativeplants.org/calendar.php. For events that are some distance in the future, confirm that the information provided here is correct by visiting the INPS Calendar of Events at the link above or use the contact information provided in the event description.

INPS-sponsored or co-sponsored events are marked with  ; acronyms of other organizations: IPN = Iowa Prairie Network; INHF = Iowa Natural Heritage Foundation; CC = County Conservation; DNR = Iowa Department of Natural Resources; TNC = The Nature Conservancy, Iowa Chapter

Saturday, May 6th, Into the Wild, Out with the Mustard, Winneshiek County, two volunteer shifts: 8:30 am - 12:00 pm and 1:00 pm - 4:30 pm

Head to Heritage Valley, a 1,200-acre nature area near Decorah, for Into the Wild, Out with the Mustard! Volunteers will hand-pull garlic mustard from Heritage Valley's woodlands.

Attend one or both sessions. Wear sturdy shoes or hiking boots, long pants and layers; bring work gloves and water bottle. A bag lunch will be provided. Rain date: Saturday, May 13. An RSVP is required. Meeting location: just north of the junction of Ellingson Bridge Dr. and Red Bud Dr., near Decorah and Waukon. Arrive early to park and check-in. The workday is sponsored by INHF. Contact Volunteer Coordinator Melanie Schmidt at mschmidt@inhf.org or 515-288-1846, ext. 35

Saturday, May 6th, Fowler Forest Wildflower Walk, Woodbury County, 10 am - 12:00 pm

Join a walk through this woodland to view the diversity of spring wildflowers. Wear sturdy walking shoes. The trail is well-maintained, and we will walk slowly up the hill.

Leader: Dawn Snyder, local plant expert

Directions: Fowler Forest is located 1/2 mile west of Smithland on Hwy 141. A parking lot is available.

More info: 712-258-0838. Sponsored by Woodbury CC, Loess Hills Wild Ones, and IPN

Sunday, May 7th, Spring flora hike at Big Rock Park in Pella, Marion County, 1:00 pm – 3:00pm

Big Rock Park is located on the northwest corner of Pella at the end of Big Rock Road. Its 83 acres protect examples of both upland and lowland forests. A trail system allows visitors access to explore much of the park's flora and fauna. The hike is open to the public.

Leader: Dr. Tom Rosburg, Drake University

Directions: Big Rock Park is located at 1230 Big Rock

Road in Pella. Meet at the picnic shelter. More info: <https://www.facebook.com/FofBigRockPark/>
Sponsored by Friends of Big Rock Park

Wednesday, May 10th, Hamilton Tapken Prairie Walk, Jones County (IPN Region 4), 10:00 am – 12:00 pm

Discover the wonders of prairie ecology at the Hamilton Tapken Prairie Wildflower Walk.

Leader: Dr. Ray Hamilton, with assistance from county naturalists and Iowa Prairie Network members

Participants should wear long pants, and bring a water bottle. Be prepared to hike through uneven ground, sand, and prairie. The walk will take place rain or shine but will be canceled if there is severe weather.

Address: Hamilton Tapken Prairie is located at 16639 60th Ave, Onslow. Participants are welcome to meet at the Hurstville Interpretive Center at 9:15 am to follow County Conservation staff to the prairie.

Please register 48 hours in advance. To register or for more information, call Jackson County Conservation at 563 652-3783 or email tvorwald@jacksoncounty.iowa.gov. Free and open to the public. Sponsored by IPN, Jones CC and Jackson CC



Saturday, May 13th, Wolters Prairie Preserve, Butler County (northeast Iowa), 10:00 am - 12:30 pm

Wolters Prairie Preserve is owned by the Butler County Conservation Board (T92N R16W Section 22 E½ NE¼). It was purchased in 1985 by the County Conservation Board with some funding from the Habitat Stamp program. Wolters Prairie Preserve has some wonderful, high quality mesic and wet-mesic tallgrass prairie associated with drainageways in a long rectangle of land. It has a beautiful display of shooting star (*Primula meadia*, formerly *Dodecatheon meadia*) and additional species of native plants.

Leaders: Mark J. Leoschke, botanist for the Wildlife Bureau of the Department of Natural Resources in

Des Moines and Jake Hill, horticulturalist for the Conard Environmental Research Area at Grinnell College

Directions: From the intersection of State Highway 3 and State Highway 14 on the east side of Allison (a T intersection where the highway goes south) travel east on State Highway 3 for 4 miles to Quail Avenue. Turn left (north) onto Quail Avenue and travel about 1.7 miles (past 195th Street). Wolters Prairie Preserve will be on the west side of Quail Avenue. Park on Quail Avenue (a gravel road). The address is 19155 Quail Avenue. We will walk cross a bridge over a deep road right-of-way ditch to reach the prairie.

A Google Maps photo of Wolters Prairie Preserve without the property boundaries, but with road names: <https://www.google.com/maps/@42.7713788,-92.7158628,1290m/data=!3m1!1e3> Map with the names of highways, etc. for Butler County: <https://iowadot.gov/maps/msp/pdf/butler-co.pdf>

You may want to wear boots depending on how wet this year's spring may be. Even in a wet year much of the prairie can probably be walked in gym shoes, but boots can be handy for looking at lower lying areas. Free and open to the public. Sponsored by INPS

Tuesday, May 16th, Sioux City Prairie Hike, Woodbury County, 6:00 pm - 7:30 pm

All are welcome to celebrate Wildflower Month for a hike in TNC-owned Sioux City Prairie. We'll join our guide, Professor Brian Hazlett, at the *Briar Cliff University entrance* to the prairie. Dianne Blankenship also agreed to be present as support. If possible, please arrive 15 minutes early. Dress appropriately for a mild to moderately strenuous hike.

To learn more about this lovely tallgrass prairie preserve, and find directions, visit [Sioux City Prairie \(nature.org\)](http://SiouxCityPrairie.nature.org). Co-hosted by IPN and Northwest Iowa Group of Sierra Club - "Sierra Hikes!"



Tuesday, May 16th, Doolittle Prairie Walk, Story County, 7:00 pm - 8:30 pm

Join Dr. Thomas Rosburg on monthly prairie walks at the largest prairie remnant in Story County. See rare and common prairie flora that change each month, and learn about the history and ecology of Central Iowa prairies. Long pants, long sleeves, sturdy, closed-toe shoes, and bug spray are recommended. Poison ivy is present in some areas. You may also want sunscreen, bug spray, a hat, and or something to drink. These walks are free and registration is requested for bad weather contact, but is not required to attend. <https://www.storycountyiowa.gov/calendar>

Leader: Dr. Thomas Rosburg, Drake University
Directions: Doolittle Prairie is located north of Ames and south of Story City. From I-35 take Exit 123 (Roland and E18/130th St exit) and go west on E18 for ~ ½ mile until 560th Ave (a gravel road); turn south and go 1½ miles. There is a sign at the preserve entrance on the west side of the road - follow the lane back to the parking lot and prairie.
Additional dates are June 20th, July 18th, August 22nd and September 19th. Sponsors: Story CC, INPS and IPN.



Saturday, May 20th, INPS Yellow River State Forest Field Trip, Allamakee County, 10:00 am - 1:00 pm

A spring wildflower hike with the Iowa Native Plant Society and Friends of Yellow River State Forest will be held at Yellow River State Forest.

Leaders: Denis Kuhen and MJ Hatfield will lead us on a walk to greet spring and enjoy the ephemeral flowers, close up and long distant views, and of course birds.

On this spring meander we'll walk a good path with reasonable grade through woods, eventually arriving at several Native American mounds just before an almost sudden long view through the trees to an expanse of sky, opening onto a goat prairie high above the Mississippi River and the Great River Road. The meander is approximately three miles round trip, fairly flat until the goat prairie.

Dress for the weather including good walking/hiking shoes/boots, bring water and lunch if you wish. Consider bringing insect repellent (ticks are the main concern), camera and field guides. Youth and families are encouraged to attend!

For weather related announcements check the Friends of Yellow River State Forest Facebook page or www.friendsofyellowriverstateforest.org
Sponsors: INPS and Friends of Yellow River State Forest

Tuesday, May 23rd, Broken Kettle-Joy Hollow Complex Hike, Plymouth County, 6:00 pm - 7:30pm

All are welcome to celebrate Wildflower Month with a short program, followed by a hike and tour of TNC's Joy Hollow complex.

Leader: James, Baker, TNC Western Iowa Land Steward

We'll meet in the parking lot of the Joy Hollow complex. Dress appropriately for a mild to moderately strenuous hike.

Directions: visit [joy hollow girl scout camp - Search \(bing.com\)](http://joyhollowgirlscoutcamp-search.bing.com)

Hikers are invited to join local Sierra Club members and friends at 5pm for a pre-hike potluck. Bring your own place setting and serving utensils. Co-hosted by IPN and Northwest Iowa Group of Sierra Club - "Sierra Hikes!"



Tuesday, May 23rd, Codfish Hollow Hill Prairie Walk, Maquoketa, Jackson County, 6:30 pm - 8:00pm

Codfish Hollow Hill Prairie is a 60 acre preserve with 20 acres of prime native prairie on a dozen rocky outcrops. It also shows a mature landscape reconstruction of 35-year old, very local ecotype and diverse prairie buffer zones, as well as mixed woodlands. It has been managed as a biological preserve for 39 years, utilizing features discussed and compiled in the "Native Prairie Management Guide".

Leaders: Tony Vorwald (JCCB naturalist) and Ray Hamilton

We will see blooms of shooting star, downy painted cup, bird's-foot violet, puccoon, rock sandwort, blue-eyed-grass; we'll also see many other prairie plants, grasses, and sedges.

This prairie is the home of some rare prairie plants and butterflies. These include (one of) the world's most northern populations of native purple coneflower (*Echinacea purpurea*) and also Leonard's skipper, a false foxglove species, and Hill's thistle. It is located at the southern edge of the more rugged driftless area, at the crossroads and edges of ancient glaciations.

Directions: type in: "Codfish Hollow Prairie", or our neighbors: "Codfish Hollow Barnstormers". From the east side of Maquoketa, go north on Hwy 62 for less than one mile and turn right (east) on 35th St (Codfish Hollow Road). Go 4 miles to the prairie at 288th Ave. It will be obvious on your left (north). Easy walking, short distance, some mild inclines with bumpy rocky terrain, and smooth mowed firebreaks in restored valleys.

Sponsors: Jackson CCB (563-652-3783), IPN and INPS

Friday May 26th, Corriell Nature Preserve Prairie Walk, Muscatine County-(Region 7), 10:00 am - 12:00 pm

Corriell Nature Preserve is an approximately 200-acre property owned and managed by Bur Oak Land Trust near Atalissa, Iowa. It hosts a diversity of habitat types including upland sand prairie, Cedar River floodplain forests, sedge meadow, and several wetland types including a smaller branch of the Cedar River, enhanced by a population of beavers. Some of the property's highlights include high-quality savanna oaks, views of the Cedar River, an oxbow, and a widespread population of prickly pear cactus and other sand prairie plant species. A trail loop around the site is approximately 2 miles of level ground hiking, with potential for wet conditions in the floodplains.

There is limited parking and a limit to the number of attendees. You must email Tony Vorwald

tvorwald@jacksoncounty.iowa.gov if you want to attend. Tony will provide the information for where to meet and other details.

Note: This property is not open to the public. It is only open by appointment with the Bur Oak Land Trust. This is a special opportunity!

Come prepared for hiking through uneven ground, sand, and prairie. The walk will take place rain or shine but will be canceled if there is severe weather. Sponsors: IPN, Iowa Association of Naturalists, Bur Oak Land Trust, and Jackson CC



Friday to Sunday, June 2nd - 4th, Loess Hills Prairie Seminar, Monona County

See information on page 3

Saturday, June 10th, Big Sand Mound Nature Preserve Field Day, Muscatine/Louisa County, 8:00 am - 4:00 pm

See information on page 3



Sunday, June 11th, INPS Yellow Banks County Park Field Trip, Polk County

Save the date. Watch for more details. Sponsored by Iowa Native Plant Society. Note that most INPS field trips are on Saturdays, but this is on a Sunday



Saturday, June 17th, INPS Patton Prairie Field Trip, Buchanan County, 10:00am – 2:00pm

Patton Prairie is owned by the Buchanan County Conservation Board (T89N R8W Section 2 NW¼). It was purchased in 1998 with funds from the State of Iowa's Resource Enhancement and Protection [REAP] program. The 45 acres have some wonderful, high quality, mesic and wet-mesic tallgrass prairie associated with drainageways in several connected parcels.

Leader: Mark J. Leoschke, botanist for the Wildlife Bureau of the Iowa Department of Natural Resources in Des Moines

Directions: From Independence (the county seat), go east on U.S. Highway 20 to the Winthrop/

Quasqueton exit. Turn left (north) onto Racine Avenue (County Highway W40). Travel north about 0.5 mile to 220th Street (County Highway D22). Turn right (east) onto 220th Street. Travel about one mile to Slater Avenue (County Highway W45). Turn left (north) and travel 4 miles to 180th Street (going through the town of Winthrop). Turn left (west) onto 180th Street. Travel approximately 1.5 miles to Quonset Avenue. Turn right (north) onto Quonset Avenue and travel approximately 1.8 miles to a parking lot for the site just west of Quonset Avenue and south of a farmstead (park on Quonset Avenue if the parking lot is full). We will walk west from the parking lot to the prairie.

You may want to wear boots depending on how wet a spring we have this year. Even in a wet year much of the prairie can probably be walked in gym shoes, but boots can be handy for looking at lower lying areas.

Sponsored by INPS



Tuesday, June 20th, Doolittle Prairie Walk, Story County, 7:00 pm - 8:30 pm

See information for the May 16th walk.

Saturday, June 24th, Wendel Prairie Hike, Woodbury County, 11:00am – 1:00pm

Leader: Kody Wohler, INHF Loess Hills Land Stewardship Director. Glenn Pollock, Dianne Blankenship, and Bill Blankenship will help out with plant ID.

Text/call Sierra Club 712-986-6210 for location details. Co-hosted by IPN and Northwest Iowa Group of Sierra Club - "Sierra Hikes!"



Monday-Thursday, June 26th -29th, 26th North American Prairie Conference

See information on pages 3-4, and much more at the conference website: <http://www.northamericanprairie.org/>. INPS is a co-sponsor (with more than 25 others)



Sunday, July 2nd, Codfish Hollow Hill Prairie

Walk, Maquoketa, Jackson County, 6:30 pm – 8:00pm

See description and directions for walk on May 23rd. We will see blooms of compass plant, leadplant, pale purple coneflower, varieties of milkweed and many other species.



Saturday, July 15th, INPS Field Trip to Kurtz Prairie, Near St. Anthony (Story County)

Save the date. Watch for details as they become available. This will be led by Carl Kurtz. Sponsor: INPS



Tuesday, July 18th, Doolittle Prairie Walk, Story County, 7:00 pm - 8:30 pm

See information for the May 16th walk.

Saturday, August 12th, Okoboji Blue Water Festival

Free event (IPN and INPS will have a table). More information at <https://okobojibluewaterfestival.com/>



Saturday - Sunday, August 12th – 13th, Wildcat Den State Park Floristic Inventory Workshop

Save the date. Details will follow. Cosponsored by INPS and Illinois Native Plant Society



Saturday, August 19th, INPS Field Trip to Brush Creek Canyon State Preserve

Save the date. Watch for details as they become available. Tom Rosburg will lead this field trip. Sponsor: INPS



Tuesday, August 22nd, Doolittle Prairie Walk, Story County, 7:00 pm - 8:30 pm

See information for the May 16th walk.



Wednesday, August 23, Codfish Hollow Hill Prairie Walk, Maquoketa, Jackson County, 6:30 pm - 8:00 pm

See description for walk on May 23rd.

We will see the golden flowers of grasses, the blooms of blazingstars, sunflowers, goldenrods, and more, as well as seeds from many early summer plants. We will probably see preying mantis, also.



Tuesday, September 19, Doolittle Prairie Walk, Story County, 6:00 – 7:30pm

This is the last of the series. Note the earlier time. See the May 16th walk for more information.



Wednesday, September 20th, Codfish Hollow Hill Prairie walk, Maquoketa, Jackson County, 6:30 pm - 8:00 pm

See description for walk on May 23rd.

We will see blooms of half dozen types of asters, ladies' tresses as well as seeding from many plants.



You are invited to attend the Celebration of Life in memory of Bob Scarth. If you wish to attend, please RSVP to Bob's daughter, Jennifer Short:

jls.lacrosse@gmail.com



Tribute to Bob and Linda Scarth from the INPS Board:

When Iowa Native Plant Society members think of Bob Scarth, they always think of "Bob and Linda." The two were always together – some of the most faithful attendees of field trips and meetings, sharing their welcoming smiles and great knowledge about plants, and of course their artistic visions of the plant world and nature. They'd often arrive well before a field trip began so they could take advantage of photographing plants in the early morning sunlight, and then typically would start a field trip walk with the group, only to splinter off and set up their photography equipment when a particular plant or site caught their attention.

Their love of nature led them to regularly take INPS displays to environmental meetings, where they would engage other attendees and draw in new INPS members. And they loved to share descriptions of their most recent travels, and photographs they'd taken around the world. In reality, these photos spoke many words and drew onlookers into a new vision of the miracles and value of our natural world – as did their wonderful book, *Deep Nature: Photographs from Iowa*. Many INPS members proudly display both in their homes. Linda served as President of INPS from 2012 to 2014, further demonstrating her dedication. INPS members will not forget Bob or Linda, nor could they. They are sorely missed, and will be for years to come. We are thankful for all they have given to us and to our organization.



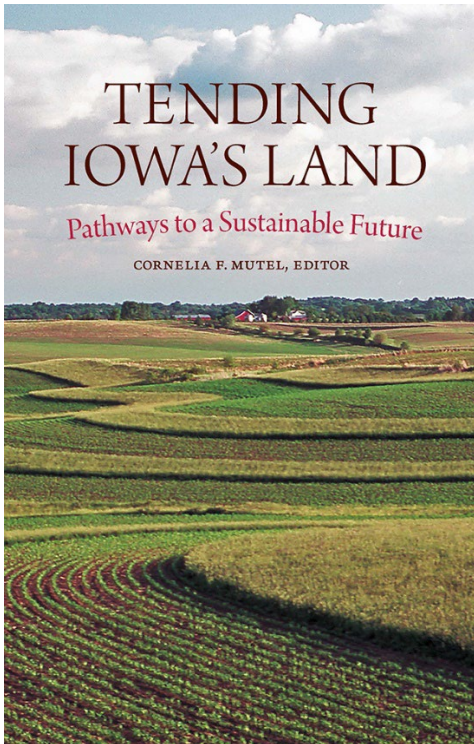
Book Review: *Tending Iowa's Land: Pathways to a Sustainable Future*, edited by Cornelia F. Mutel

University of Iowa Press, c. 2022. Available in paperback or eBook, \$25.00 from UI Press - <https://uiopress.uiowa.edu/books?title=Tending+Iowa%27s+Land> or book (\$21.49) or Kindle (\$14.75) from Amazon - <https://www.amazon.com/Tending-Iowa-s-Land-Pathways-Sustainable/dp/1609388739>

review by Deb Lewis

This latest (and she insists last) book edited by Connie Mutel is, in my opinion, her best yet. She pulled together 29 coauthors, expecting each one would speak not only from their scientific knowledge and/or their experiences, but from their heart.

As Connie says in the introduction, the book is about evenly divided between writings about nature and agriculture. I learned a lot from reading the book, especially about soils and agriculture; but even more so, I was moved by the personal sharing from each author.



Connie opens the book with an Introduction and a Brief History of Iowa's Life and Land. The book is then arranged into four sections: Soil, Water, Air and Life. Each section has four chapters -- written by Iowa's best minds and communicators

-- describing the theme. These technical, but very readable, chapters are separated by personal, first hand stories of experiences in living and interacting with different aspects of the theme. The closing chapter -- Regenerating Our Future: A Call to Action -- is written by Jerald Schnoor. Several INPS members contributed chapters to the book, including Pauline Drobney and Connie who serve on the Board.

The book is a love story, celebrating Iowa's lands, waters, air and biodiversity! It is a lament of what we have lost and are continuing to lose in nature -- yes, the book includes descriptions of the changes since Euro-Americans arrived here nearly two centuries

ago, transforming the state. But the state's wonders that remain, the resilience of Iowa's land if tended and given a chance, the suggested changes in how we live and interact with the land and the opportunities for working together can give us hope for a sustainable future. I hope the book will become widely available and read through purchase and in libraries across Iowa. May those who read it similarly find hope and possibilities for positive change.

Pocket Prairie, continued from page 1

light post or a patch of weedy-looking milkweed attracting butterflies. My good friend, John Pesek, retired Head of the Agronomy department at ISU, wrote me that he had a big bluestem cluster growing in his front lawn in honor of the prairie that built the soil of Iowa. Pocket prairies had become accepted.

In my home town of Menard, Texas, there is no ordinance restricting weedy growth in lawns and hardly one that keeps out old pickups. My planting of an Eastern gamagrass in the flower bed outside my Menard Manor window just before COVID-19 closed in on us, was my pocket prairie. Sad times, I could see my wife thru her window screen or about once a week thru the locked glass doors separating us.

I watched the grass grow to a spectacular six feet tall and three feet wide, partially blocking my view of main street traffic. I secretly burned the withered remains in March, and when it had regrown to its second summer splendor, I explained to the Manor Administrator, upset with my behavior, that it was proper management to burn prairie. She had to report it as a miscellaneous fire. I knew she would not have permitted it if I had asked her, so I burned it anyway. People who don't burn, don't understand fire.

I will burn my pocket prairie in Iowa this spring with Amy, Jon, three children and spouses helping, and ten grandchildren watching, my greats. I plan to see another parade of prairie plants and a scattering of insects through the summer, and watch it go dormant. Maybe I'll get to enjoy it a few more times as we go around the sun.

A 19th Century Naturalist, Spring Ephemerals, and My Botanical Awakening

by Amie Adams

Three years ago, a 90-year-old newspaper column spurred my botanical awakening.

I would like to believe I was predisposed to plant-loving from a young age. After all, the topography of my childhood had included woodlands and scattered prairie potholes. As a young girl, I'd picked fistfuls of violets, chased "helicopter seeds" down the street, jumped in leaf piles, and climbed trees. My family had taught me to identify a scant handful of species: white pine, cattail, dandelion, creeping charlie, silver maple, butterfly milkweed, wild rose. However, although I had run wild outdoors, I actually knew quite little about the land and her creatures. Despite professing a great love of nature, a large part of what I loved was merely scenery—a backdrop to my human-centered world. Then, in my 20s, I was fortunate to discover the work of B.O. Wolden, one of Iowa's most notable naturalists. His desire to know, to care for, and to tell stories about the natural world forever changed my perception of the Iowa landscape.

Bernt Olaf Wolden (1886-1968) was born in Island Grove in Emmet County, a lush woodland tucked between two lakes. From a young age, Olaf recorded when flowers bloomed and migratory birds returned, and over time these meticulous lists developed into scientific papers, floristic inventories, and a newspaper column filled with stories from his home place and his travels around Emmet County. I gravitated toward Olaf's newspaper column because Island Grove was where—years earlier—I'd fallen deeply in love with the landscape. Like any young person in love, I was eager, curious, and insatiable. So I read. Much to my disappointment, the Nature Notes confused me. It wasn't scientific jargon I struggled with; Olaf loved writing for the general public. Rather, it was the names: birds and plants I'd never heard of despite having lived in Iowa for nearly my entire life. Something shifted in me, and I

understood that if I desired to deepen my relationship with this ecosystem, then I needed to become acquainted with the plants I lived among. It was time to learn a new way of seeing. Winter passed while I studied field guides.

The following spring, I visited a woodland near my new home in central Iowa. Wind gusts scattered the clouds and brought bursts of late afternoon sunshine as they hurried across the sky. Even before I parked my car, I could see plump white dots poking up amid leaf litter. Snow trilliums covered the upland woods, interrupted by clumps of pink and purple hepatica. Above, black and white striped hairy woodpeckers hammered on tree trunks; the Iowa River lazed below, freed of its winter ice. The snow trilliums looked exuberant, each with three petals splayed open to sun, wind, and insect. Excitement and reverence surged in my chest as I knelt and leaned in for a closer look. Inside the petals, a cluster of pale filaments hoisted sunflower-seed-shaped anthers dusted with bright yellow pollen. Some flowers had petals streaked with pollen left behind by the legs of visiting insects. Here in the boundary layer, warm, still air created a comfortable micro-climate in last season's leaves for the trilliums. *Like a nest*, I thought.

Wake robins, Olaf had called them. Assurance of both spring and new life. Nosing around on the forest floor that afternoon, I was greeted by hepatica, toothwort, and spring beauties. Joy—like an electric spark—accompanied each sighting. I couldn't believe I'd survived almost three decades without experiencing the astonishment of spring ephemerals, but I knew that I'd found a delight I would return to year after year.

(Amie Adams is a 5th-generation Iowan, new member of the Iowa Native Plant Society, and the author of *The Observer: The Life and Writings of Bernt Olaf Wolden*, a biography and anthology of Wolden's selected writings. Visit <https://www.amieadams.space/the-observer> to learn more.)

Spring Photo-Essay

by Kara Grady, Iowa Wildflower Nerd

I learned wildflowers backwards. What does that mean? It means my first friends were the purple asters and swaying goldenrods. Then the butterfly milkweed and fragrant bee balm.

But spring ephemerals remained a mystery, until my internship at Neal Smith National Wildlife Refuge. It was there I met the spreading oak and the prickly briar, the dainty spring beauty, and the red columbine.

When Karen, the refuge biologist, would take us interns on trips to look at birds, my eyes stayed glued to the ground, waiting for the next wonder to push forth from the soil.

“Wild geranium!” I would cry, while everyone else was glued to the sky.

And when I would grumble about the latest briar prickle, a stumble into a glen full of may apples would restore my smile.

One day, we came across a flower we didn’t know. It looked sort of like a trout lily, but smaller, and with serrated leaves. The minute we got back to the library, I hit the books. Turned out the tiny white flowers were toothwort, and I proceeded to regale my fellow coworkers of its most interesting facts, whether they wanted to hear them or not. For example, did you know the tubers of toothwort have a mild horseradish flavor?

That spring was much like the one we’re experiencing now: stubbornly cold, windy, and snowy. The plants we were trying to find on our weekly surveys refused to come aboveground, and who could blame them? I’m pretty sure I did a little dance when the first bloodroots finally revealed their large white blooms.

On my last day at Neal Smith, we stumbled across some larkspur growing amidst the thorns. Guess who left her phone at the office?

Thanks to my fellow intern, Anna Ivarson, for sharing her photos!



Photo by author
Wild geranium, *Geranium maculatum*



Photo by Anna Ivarson
Dwarf larkspur, *Delphinium tricorne*



Photo by Anna Ivarson
Toothwort, *Dentaria laciniata*



Photo by Anna Ivarson
May apple, *Podophyllum peltatum*



Photo by Anna Ivarson
Bloodroot, *Sanguinaria canadensis*



Photo by author
Red columbine, *Aquilegia canadensis*



Photo by
author (Kara)
Spring beauty,
Claytonia
virginica

Native Plant Spotlight - *Claytonia virginica*

by Dr. Thomas Rosburg, Drake University

John Clayton II emigrated from England to Virginia in 1715 at the age of 21. At that time, he could not have known or even suspected that in 1773 he would be honored as the first president of the Virginia Society for the Promotion of Useful Information (Virginia Natural History Society 1998). The farmer-planter and plantation owner was educated in law and served as the Clerk of Gloucester County for over 50 years. His interest in natural history and botany was stimulated and fostered by a group of eminent mentors – William Byrd II (American planter, lawyer, surveyor, statesman, writer), Dr. John Mitchell (American physician, botanist and cartographer), John Bartram (botanist, naturalist, explorer, the “father of American botany”), and Mark Catesby (English naturalist and artist).

Sometime around 1730 Clayton sent Catesby (who had returned to England) many plant vouchers and a manuscript describing the plants of Virginia. Catesby passed these along to the Dutch botanist Johan Gronovius who prepared and published *Flora Virginica* (1739, 1743) based on Clayton's manuscript and his specimens. Some of Clayton's plants made it into the hands of Carolus Linnaeus, the Father of Modern Taxonomy. When Linnaeus introduced the

use of binomial nomenclature in *Species Plantarum* (1753), his knowledge of North American species was based primarily on Clayton's specimens. Among them was spring beauty, the species to which Gronovius had given the generic name *Claytonia* in Clayton's honor and which Linnaeus adopted.

Claytonia is one of nine genera that comprise the family Portulacaceae in North America. Three other genera are present in the Iowa flora, including *Phemeranthus* (formerly *Talinum*) with two native species (fameflower), *Montia* with one native species (miner's lettuce) and *Portulaca* with two non-native species (purslane). Worldwide, the Portulacaceae contains about 500 species assigned to between 20 and 30 genera. Most species in the family can be recognized by their succulent or fleshy leaves, a 2-merous calyx, a 5-merous, radial corolla, and capsular fruit. Although the perianth is treated by most North American floras as having 2 sepals and 5 petals, the correct interpretation is probably an involucre of 2 bracts and a calyx of 5 petaloid sepals. The corolla and its petals are absent. Several other characters unite the Portulacaceae. The color seen in the petaloid sepals comes from betalains, which are nitrogen-containing pigments, rather than from anthocyanins, which are the pigments responsible for the red to blue colors observed extensively in plants (vegetables, fruits, flowers and leaves). The embryos, or baby plants, within the seed are curved rather than straight. If stipules are present, they are either scarious (dry-membranous and translucent) or hair-like. Many species utilize C₄ photosynthesis. Portulacaceae is most closely related to the cactus family and exhibits the greatest diversity in western North America, the Andes of southern South America and southern Africa.

The treatment above is presented in the *Flora of North America* (Packer 2003). In 2009, the *Angiosperm Phylogeny Group III* was published. Based on new molecular research, it revised the Portulacaceae resulting in the transfer of *Claytonia*, *Phemeranthus* and *Montia* to a new family – Montiaceae. Thus, *Portulaca* is the only Iowa genus

retained in Portulacaceae. However, not all recent floras have adopted *APG III* nomenclature. For example, *Flora of Missouri* (2013) follows *FNA*, citing that new family circumscriptions in Portulacaceae are still controversial.

Claytonia virginica (Virginia spring beauty) is one of 25 species of *Claytonia* and 91 species of Portulacaceae present in North America. It has the largest biogeographical range of all *Claytonia* species, occurring east of a line from north-central Minnesota through northwest Iowa and central Kansas to south-central Texas. Only one other species, *C. caroliniana* (Carolina spring beauty), occurs in eastern North America. *Claytonia* is distinguished from other Portulacaceae species by their single pair of opposite cauline leaves. One or more basal leaves similar to the cauline leaves are also present. The petaloid sepals of most *Claytonia* species have conspicuous, often pink venation. *C. virginica* and *C. caroliniana* differ in the shape and attachment of the cauline leaves. In Virginia spring beauty the leaves (blades) are linear, more than 8 times longer than wide, and lack a distinct petiole. The cauline leaves of Carolina spring beauty are elliptic or ovate-lanceolate, usually 2.5 to 6.5 times as long as wide, and possess an obvious petiole.

Populations of Virginia spring beauty occur reliably in the southeast half of Iowa, southeast of a line from Winneshiek County in the northeast through Boone County to Pottawattamie County in the southwest. Runkel and Bull describe its habitat as rich soils of moist open woodlands in *Wildflowers of Iowa Woodlands*. The use of woodland as a type of ecosystem can be confusing. In most contexts and colloquial use, as with Runkel and Bull, woodland is synonymous with forest (i.e., *Wildflowers of Iowa Forests*). However, ecologically speaking there is an important difference between woodland and forest ecosystems. Woodlands have less canopy cover (the percentage of surface area covered by the canopies of the trees in the canopy layer) and density than forests. The percentages may vary among ecologists; I favor 35% to 65% canopy cover for woodlands and

greater than 65% for a forest. In Iowa and much of the Midwest, the density and canopy cover of trees on the native landscape varied along a gradient from prairie ($\leq 10\%$) to savanna (10% to 35%) to woodland and finally forest. Many factors could contribute to the gradient depending on location. The frequency of surface fire was critical – decreasing fire is correlated with increasing tree density and canopy cover.

Thus, woodland and forest ecosystems were both present on Iowa's native landscape; forests occupied the more fire-protected habitats (narrow, deep valleys or ravines, north and east slopes) and woodlands flourished in slightly more exposed and fire-prone habitats. Furthermore, woodland ecosystems varied from open woodland (35% to 50% canopy cover) to closed woodland (50% to 65% canopy cover). It's very likely woodlands were more common than forests. Nowadays, the vast majority of Virginia spring beauty populations occur in forests. But that doesn't mean spring beauty prefers forest. That pattern can also be explained by spring beauty being tolerant of the successional transition of woodland to forest in the absence of fire. So, what is spring beauty's native and natural habitat? That's a good question.

In Illinois, Dr. John Hilty describes its extant habitat as moist to dry deciduous woodlands (does that mean forest?), savannas, thinly wooded bluffs, city parks, old cemeteries, and lawns (especially near trees). Less often, spring beauty is found in mesic prairies. In Missouri, Dr. George Yatskievych identifies spring beauty habitat as bottomland and mesic upland forests, streambanks, ledges of bluffs, upland prairie, sand prairie, pastures, cemeteries, lawns, railroads and roadsides. Iowa populations are not much different from those in Illinois and Missouri. While I have not seen it in a prairie or pasture, I have observed dense populations in the lawn-like habitat of city parks and cemeteries under an oak canopy. Spring beauty is not a weed that will invade your lawn. It occurs in those lawn-like habitats because it's always been there as a member of the herbaceous layer of an oak woodland. It has tolerated the

ecosystem degradation that came from grazing, tree-cutting and harvest, fire suppression, and the conversion of the herb layer to a lawn dominated by non-native grasses. The initial Iowa coefficient of conservatism (C-value) assigned to spring beauty is 4. During the revision of Iowa's coefficients, it was bumped up to a 5. Spring beauty can tolerate some human disturbance because it likes the increase in light that usually results. Yet there is approximately a 50% chance that a randomly located population of spring beauty will be in a high quality and relatively pristine ecosystem.

Interestingly and surprisingly, the C-value assigned to spring beauty in Illinois is 1. That is the same coefficient they have given to native weedy species like daisy fleabane, common evening primrose and eastern red cedar. Clearly they have a much different view of spring beauty's life history and ecology than we do in Iowa. Both Missouri (C-value=3) and Michigan (C-value=4) view its conservatism as somewhat lower than Iowa. In Minnesota, C-values have been assigned to species in certain ecoregions or floras. Virginia spring beauty has a C-value of 7 for the prairie-aspen parkland ecoregion of Minnesota. How about in Virginia, where John Clayton observed and first collected it? Similar to Iowa, Virginia has given it a C-value equal to 6. This goes to show two important lessons: 1) A plant species life history, niche and ecological function can play out differently within different regions of its range. How a species responds to anthropogenic environments depends on the species abiotic and biotic natural environments. 2) Assigning C-values to species and interpreting the philosophy of plant conservatism is highly subjective. But I must say, a C-value of 1 for *Claytonia virginica* is absurd.

Claytonia virginica is a well-known spring ephemeral. It is among the first vascular plant species to appear in the spring, as its shoots develop from perennial, subterranean, globose tubers. A tuber is a food storage structure formed from underground stem tissue, typically a rhizome. Flowering begins in April and can last for 4 to 6 weeks. After the seed is

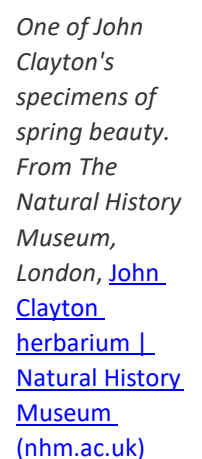
mature, the shoot senesces and all evidence of the plant is gone by June. Food reserves in the tuber are replenished during its brief period of photosynthetic activity so the tuber can survive dormancy until the following spring. Spring ephemerals effectively hibernate and aestivate for about 10 months of the year. Spring ephemerals have opted for squeezing an entire growing season's worth of photosynthesis and reproduction into a short window of opportunity. The amount of solar radiation has to be sufficient to warm up the soil and stimulate respiration and growth. They are constrained by cold on the early side of their window. But light intensity cannot be so much as to cause leaf out in the canopy. Thus, they are constrained by shade on the latter side of the window. For a few weeks in late April and early May, the forest herb layer is illuminated with the highest light levels it will ever experience. Spring blooming species like bloodroot and downy yellow violet utilize the same strategy for reproduction, but unlike spring ephemerals they opt for the strategy of shade tolerant leaves and a full growing season for photosynthesis and growth.

The spring ephemeral strategy suggest that although spring beauty grows in forests, it does not necessarily "like" forests. Being dormant for 10 months of the year allows it to avoid shade, foliage herbivores, competition with taller or deeper-rooted plants, and most forest disturbances. On the other hand, not being active during most of the growing season may jeopardize its relative abundance in the community, and maintaining energy rich tubers makes it a target for herbivores that can locate and retrieve them. *Claytonia* tubers are sought by mammals capable of digging or burrowing -- from white-footed mice and eastern chipmunks to squirrels and grizzly bears.

The ideal environment for spring beauty might be a closed woodland. There is higher light availability than in a forest during the latter part of its short growing season when fruits and seeds are maturing. Yet light levels are lower than in a savanna or open woodland, which helps limit herb layer productivity

Seed dispersal commences when the 3-5 mm long capsules split open from the top down along 3 lines. The smooth, shiny, black seeds about 2-3 mm in diameter are ejected from the capsules (autochory). Secondary dispersal is provided by elaiosomes attached to the seed. These fleshy appendages are rich in oils, proteins, starch and vitamins. Ants find them irresistible and carry seeds with elaiosomes attached back to their nest where they discard the seed and feed the elaiosome to larvae

Just as John Clayton was surely enamored with its joyful presence and message of renewal, we can appreciate the beauty *Claytonia virginica* brings to the otherwise drab and dreary early spring woodland. Bees and flies certainly appreciate the offer of sustenance and warmth on chilly spring days. Ants are undoubtedly drawn to the appearance of bright-white, pink-striped flowers, signaling that nourishment for their babies will soon follow. All of this happens because of spring beauty's spring ephemeral strategy for its own survival. Or could it be a strategy designed for a bigger purpose? Research conducted in Tennessee discovered that spring beauty provides a vital function in forest and woodland ecosystems. It's called the "vernal dam." High photosynthetic activity by spring beauty in early spring increases its uptake of nutrients and thereby sequesters them at a time when increased leaching and stream flow from snow melt and rain would otherwise contribute to nutrient loss from the ecosystem. The guild of spring ephemerals function like a dam that blocks the loss of N, P and K by retaining them in plant tissues at a time when those nutrients are more exposed to ecosystem loss. Then as spring beauty and the other spring ephemerals senesce and go back into dormancy, those nutrients are released and made available to the many plant species that are waking up and beginning their growth. So now you can fully appreciate all of those dainty little beauties poking through the leaf litter that make us smile with their promise of the end of winter. They have a big job ahead of them.



As we look ahead to summer -- photo and text by Jackie Armstrong:

The secret prairie world of abundance, diversity and balance is obscured by the pace of our lives. From the car or even the bike, the magic of prairies is hidden if we don't slow up and meander deep into our prairies to see the dazzling colors of short and down in a prairie, to take in a the best gifts of August in Iowa.



tall forbs and grasses. Laying ground-upward view, is one of



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