



Erythronium

Newsletter of the Iowa Native Plant Society vol. 23 no. 1 - April 2017

Confessions of a Herbarium-Savvy Field

Botanist, *Carolyn Beans* (*American Scientist* December 7, 2015. Reprinted with permission.)

I have a confession. The plants I collected during my graduate work are still sitting in a plant press. Without printed labels. In my house. I graduated over a year ago. For some time the press sat tucked in a corner of my living room, topped by my cable box and router. I may own the only media console constructed with thousands of miles of driving and months of wading through waist-high weeds.

I should know better. Before graduate school, I spent a few years working in herbaria (which are plant libraries, basically), first at the Academy of Natural Sciences in Philadelphia and then at Harvard University. I helped enough researchers find the one pressed plant that propelled his or her research forward to know that the plants I have holding up my cable box could serve a far more noble purpose. A standard practice in biology when one's research involves identifying living organisms to species is to collect and preserve examples that serve as vouchers that they were named correctly. But as a researcher, even one who relied on herbarium specimens, I am all too familiar with the many ways we justify letting our voucher specimens go unaccessioned (or failing to collect them in the first place).

Who Needs My Crusty Old Plants?

I studied how an invasive species of jewelweed influenced the evolution of a closely related native plant. To find places where these plants grew together, I relied, in part, on herbarium specimens collected over the past 100 years in the northeastern United States. I also identified additional communities, including those where the morphology of the native plant made me wonder whether the two species were hybridizing. I never fully addressed that question, but I did collect vouchers of both species throughout New England. If anyone ever wanted to follow up on my work, they could start with my herbarium specimens.

As far as I know, however, no one is studying the interactions of these plants. And there are probably hundreds of collections of these species already deposited in herbaria. I'm not sure what value my additional 50 plants can add. But this uncertainty is exactly the point.

The botanists who collected and pressed flowering trees and shrubs from Harvard University's Arnold Arboretum in the early 1900s could never have known the specimens would one day be used to show that plants flower earlier in response to climate change.

The naturalists who collected in the California grasslands in the early 20th century surely didn't imagine that scientists would one day sequence the viral RNA preserved in the leaves, and by doing so provide evidence that these viruses helped Eurasian grasses invade the community.

And few of the thousands of botanists who collected sweet potato relatives across the Americas over the past couple of centuries could have guessed that their specimens would one day be used to help breeders identify populations with novel genes that could improve the crop.

Flatten and dry a plant, stick it on some archival paper with a bit of water mixed with Elmer's glue (yes, some herbaria really use regular old Elmer's glue!), and it can outlast us all. In time, myriad uses become evident—most of which we collectors never anticipated.

Are Photos and DNA Better Than Pressed Plants?

Photographs are excellent additions to a sample, but they cannot capture the entire story when it's impossible

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Leaves of the President's Notebook



Well, spring is arriving in spurts, pretty much like normal. I always enjoy the “firsts” of the season, the first robin, the first geese, the first frogs and so on.

We keep track of them in a phenology notebook, so we can check up and see how the arrivals compare to other years and find out our memories sometimes play tricks on us! Some things have changed quite a bit, the geese for example. I remember when the geese were only seen flying in the spring and the fall, now they can be seen almost every day! When I went through school there were blue geese and snow geese with separate scientific names, now they are recognized as one species with color variations. Such are the changes witnessed as one grows older!

Some of the things I keep track of probably seem strange to other people, like ground squirrels (13-lined ground squirrels). I remember that in a publication by John Bowles, he gave the earliest date for the 13-lined ground squirrel as March 29. So I have been watching and I could improve on that date some years by several days. The problem I have is there is no good place to record that information.

The other thing I keep track of is the return of the chimney swifts, not something everyone has, a chimney!

I am always interested in the blooming of the pasque flowers. There was a patch of them within a few miles of our place, so it is of special interest to me.

~ *Lloyd Crim*

2017 INPS Annual Meeting and Fieldtrip, May 6th!

See the longer article on **page 7** with information about the Iowa Native Plant Society's annual meeting, including fieldtrips and a presentation, on May 6th at the Polk County Conservation Board's Chichaqua Bottoms Greenbelt. Everyone is invited, so bring family and friends!



Spring Haiku by Linda Loos Scarth

green treefrog alone

among mayapple circles

trumpets existence

Calendar of Upcoming Events and Activities

May is Iowa Wildflower Month. As our natural areas awaken from their long winter rest, we celebrate the beginning of another seasonal parade of wildflowers. The Iowa Native Plant Society coordinates the publicity for these events in hopes of attracting new nature enthusiasts. See the proclamation on page 8.

All events are free and open to the public without pre-registration unless otherwise noted; however, there can be changes so it might be wise to check first before traveling to an event. CCB stands for County Conservation Board.

INPS-sponsored events are marked with 🌸 and bold text.

Sunday, April 30

1:00pm Prairie Wildflower Walk at Sioux City Prairie with Rich Pope – Meet at the prairie's east entrance at Briar Cliff University. Sponsored by Dorothy Pecaut Nature Center. 712-258-0838

2:00-4:00pm Wildflowers and Sedges Hike at Gleason-Hubel Wildlife Area with Neal Ratzlaff
At 1434 Larpenteur Mem'l. Rd., Mondamin. Loess Hills Nature School workshop. Register with JackPhillipsrca@gmail.com.

Monday, May 1

9:00am-12:00pm Sedges: Ecology and Identification Field Workshop at Hitchcock Nature Center with David Sutherland and Neal Ratzlaff – At 27792 Ski Hill Loop, Honey Creek. Loess Hills Nature School workshop. Register with JackPhillipsrca@gmail.com.

6:00pm May Day Hike to Look for Wildflowers at Brown's Woods – At 465 SE Brown's Woods, West Des Moines. Sponsored by Polk CCB. 515-323-5339

Tuesday, May 2

7:00pm Bees & Butterflies; Growing Great Pollinator Gardens at the Cedar Falls Public Library
At 524 Main, Cedar Falls. Sponsored by ISU Extension and Black Hawk CCB. 319-273-8643

Thursday, May 4

6:15pm Hike at Thomas Mitchell County Park with Central Iowa Sierra Group – Meet at the Mc Donald's in Pleasant Hill. Jackie: 515-577-0375

Saturday, May 6

Iowa DNR Camping Kickoff
At numerous state parks. The list includes many special field trips and native-plant related activities:
<http://www.iowadnr.gov/Things-to-Do/Camping/Camping-Kickoff>

8:30am and also at 1:00pm 5th Annual Into the Wild

and Out with the Mustard! at Heritage Valley – Sponsored by Iowa Natural Heritage Foundation.
RSVP required: Mary Runkel at 515-288-1846 ext. 17 or mrunkel@inhf.org

🌸 10:00am-3:30pm **Iowa Native Plant Society Annual Meeting and Fieldtrips** – Meet at Chichaqua Bottom Greenbelt Longhouse, 8700 NE 126th Ave., Maxwell. Morning and afternoon fieldtrips with a bring-your-own lunch in between. Following a break for lunch, we will hold our annual meeting and Connie Mutel will provide a short program. See more info on page 7.

10:00am Spring Wildflower Bike Ride! at Heritage Trail – Begin at Heritage Trail Pond. Sponsored by Dubuque CCB. 563-556-6745

1:00-3:00pm Establish a Monarch Garden at Wetherby Park Edible Forest with Backyard Abundance – At 2400 Taylor Drive, Iowa City. Learn by planting. 319-325-6810. <http://www.BackyardAbundance.org>

Sunday, May 7

1:00pm Wildflower & Edible Plant Walk with Hartman Reserve Nature Center staff – Meet at River Hills School, 2700 Grand Blvd., Cedar Falls. \$5 prepaid. \$8 walk-ins. Katie.hrnc@gmail.com

Friday, May 12

3:00-7:00pm Plant Sale (including Natives) at Reiman Gardens for Reiman Gardens members only – At the parking lot, 1407 S. University Blvd., Ames.

Saturday, May 13

9:00am-6:00pm Plant Sale (including Natives) at Reiman Gardens – At the parking lot, 1407 S. University Blvd., Ames. The public is welcome.

Sunday, May 14

10:00am-3:00pm Plant Sale (including Natives) at Reiman Gardens – At the parking lot, 1407 S. University Blvd., Ames. The public is welcome.

Monday, May 15

9:00am-12:00pm and 1:00-3:00pm Oak Woodland and Savanna Ecology of the Southern Loess Hills at Waubonsie State Park with Katie Thompson and Jack Phillips – Loess Hills Nature School workshop. \$35. Visit www.thenaturalistschool.org. Register with JackPhillipsrca@gmail.com.

Tuesday, May 16

12:30-4:00pm ISU Forestry Extension and Iowa DNR Forestry Field Day program – Jefferson County south of Fairfield at the property of Pete & Kathy Tollenaere; www.extension.iastate.edu/forestry/education/forestry_field_day_pubs/pdf/Tollenare%20Field%20day.pdf

Tuesday-Wednesday, May 16-17

Art of Nature Retreat at Waubonsie State Park with John Price, Sarah Berkeley, Matt Low, Jack Phillips, and Madeline Cass – Loess Hills Nature School workshop. \$40 one day; \$65 both days. Visit www.thenaturalistschool.org. Register with JackPhillipsrca@gmail.com.

Friday, May 19

4:00-6:00pm Guided Whiterock Outdoor Walk (on 3rd Friday of each month through October), focus on grazing systems at Whiterock Conservancy. Phone 712-684-2697 for more information.

6:00pm Native Plants for Your Garden Class at Annett Nature Center – Meets at 15565 118th Ave., Indianola. Register at www.WarrenCCB.org/nativeplants.

Saturday, May 20

8:00am-12:00pm Native Plant Sale at Annett Nature Center – At 15565 118th Ave., Indianola. www.WarrenCCB.org/nativeplants

8:30am-4:00pm ISU Forestry Extension and Iowa Woodland Owners Association Forestry Field Day program – Jones County (two sites near Anamosa and Central City); www.extension.iastate.edu/forestry/education/forestry_field_day_pubs/pdf/2017IWOA_spring_field_day.pdf

9:00am-12:00pm Pedal the Prairie at Neal Smith National Wildlife Refuge – At 9981 Pacific Street, Prairie City. Ride or walk the newly paved Prairie Parkway bike trail.

9:00am-1:00pm Whiterock Conservancy Volunteer


Trails Maintenance Workday, To RSVP or for more info: guestinfo@whiterockconservancy.org.

Saturday-Sunday, May 20-21


Citizen Science Weekend at Gleason-Hubel Wildlife Area -- At 1434 Larpenteur Memorial Road, Mondamin. Biotic surveys and workshops across a wide swath of taxa including trees, shrubs, wildflowers, sedges, butterflies, and birds with expert naturalists and scientists. Loess Hills Nature School workshop. Visit www.thenaturalistschool.org. Contact JackPhillipsrca@gmail.com.

Sunday, May 21

12:00-4:00pm Native Plant Sale at Annett Nature Center – At 15565 118th Ave., Indianola. www.WarrenCCB.org/nativeplants.

 2:00-5:00pm **Iowa Native Plant Society Field Trip: Native Plants Walk in the Middle Raccoon River Valley at Whiterock Conservancy with Rob Davis and Beth Henning** -- Join us May 21st from 2-5pm to explore the unique wetland seep, woodland, savanna, and prairie communities that make the Middle Raccoon River Valley an amazing place. Please park in Whiterock Conservancy's River Campground (1314 Fig Ave, Coon Rapids, IA) and meet at the shelter house just across the road. Contact Rob Davis at landmanager@whiterockconservancy.org with any questions.

Thursday, May 25

 7:00pm **Doolittle Prairie Walk with Lloyd Crim** – **Iowa Native Plant Society**, Iowa Prairie Network, and Story County Conservation Board will be sponsoring 4 evening prairie walks at Doolittle State Preserve again this summer: May 25, June 22, July 27, and August 24 at 7:00 pm, rain or shine. The walk format is casual and informational, focusing on questions from participants and identification of both blooming and vegetative plants. This is a good opportunity to view the prairie as it changes during the summer. Insect repellent, long pants, and sturdy shoes are recommended. The site has potholes so be prepared for some wet spots. 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. The walk leader will be Lloyd Crim - lloydcrim@gmail.com.

Friday-Monday, May 26-29

Raccoon River Days at Whiterock Conservancy, including many activities, visit their website or phone 712-684-2697 for more information.

Tuesday, May 30

12:30pm-4:00 pm Bill Winke Farm – Midwest Whitetail Forestry Field Day – Monroe County near Albia; www.extension.iastate.edu/forestry/education/forestry_field_day_pubs/pdf/Winke_Field_day.pdf

Friday, June 2

9:00am-12:00pm G.R.A.S.S. event before the Loess Hills Prairie Seminar -- Contact: MRunkel@inhf.org or Doug.Chafa@dnr.iowa.gov

Friday-Sunday, June 2-4

 **Loess Hills Prairie Seminar in and near Onawa – Iowa Native Plant Society** and many other organizations, agencies and individuals help support the annual LHPS. Sponsored by the Monona County Conservation Board and Iowa DNR Missouri River Unit, this 41st seminar is now organized by Monona County Conservation. Visit the new website at www.loesshillsprairieseminar.com. There is a poster and registration form there.

Andrea Porter is the new coordinator and can be reached at (712) 433-2400 or by email at mccbnat@mononacounty.org. Educators may register for credit at NWAEA. There are many opportunities to learn more about native plants during the seminar. Session leaders include botanists Katie Thompson, Tom Rosburg, Brian Hazlett, and Bill Pusateri, among others. **INPS** will have an exhibit at the evening programs.

Also Friday-Sunday, June 2-4

The Illinois Native Plant Society invites the Iowa Native Plant Society to participate in the 2017 Illinois NPS Annual Gathering at Augustana College, Rock Island, IL. The agenda, registration and dues info, and description of the programs and field sites are available at <http://www.ill-inps.org/2017-annual-meeting/>. **Iowa Native Plant Society** members Bob Bryant, Dan Mays, Connie Mutel, and Linda Scarth are on the program.

Tuesday-Thursday, June 13-15

Iowa Cyperaceae Workshop with Tom Rosburg and Bill Norris – Tom Rosburg and Bill Norris are offering a three-day sedge identification workshop with instruction on the genus *Carex* and supplemental instruction on *Scirpus*, *Schoenoplectus*, *Bolboschoenus*, *Eleocharis*, *Cyperus*, *Eriophorum*, and *Rhynchospora*. The workshop includes field scouting throughout the Middle Raccoon River Valley at Whiterock Conservancy near Coon Rapids, IA, and guided species identification. The course offers an advanced curriculum for professional conservationists, NRCS technicians, and avid amateurs. Guided course work will increase participants' recognition and ability to identify sedge species and conduct field assessments. Field work will be conducted in several ecological communities including floodplains, oak savanna, and woodland communities. Contact Rob Davis at Whiterock Conservancy, phone number 712-684-2697 ext. 103 or email landmanager@whiterockconservancy.org to register or for more information. The cost of the workshop is \$200 and includes workshop materials, room, and board. Registration is payable to Whiterock Conservancy. The course may be taken for continuing education credit or for graduate credit. Continuing education credits are available through Heartland AEA for \$35 or for graduate credit through Drake University for \$100.

Friday, June 16

4:00-6:00pm Guided Whiterock Outdoor Walk, focus on seeps at Whiterock Conservancy. Phone 712-684-2697 for more information.

Tuesday, June 20


9:00-11:00am Monarch Habitat on Farms Demonstration Day at Luze Farm Corp., Dysart, IA. Sponsored by Monarch Joint Venture, Tallgrass Prairie Center and the Xerces Society. The program, covering diverse aspects of creating monarch habitat, is free, but preregistration is requested. To register or for more information, contact ashley.kittle@uni.edu

Thursday, June 22

9:00am-12:00pm Monarch Habitat on Farms Demonstration Day at ISU Borlaug Learning Center, Nashua, IA. See June 20 for more details. To register or for more information, contact ashley.kittle@uni.edu

 7:00pm **Doolittle Prairie Walk with Lloyd Crim**
See May 25

Friday-Saturday, July 14-15

 **Iowa Prairie Conference at Iowa Western Community College in Council Bluffs – Iowa Native Plant Society** is a sponsor of this conference and will hold a membership meeting at 6:00pm on Friday at Hitchcock Nature Center, prior to the dinner there that evening. There are speakers and break-out sessions both mornings and field trips both afternoons. Even if you have attended the Loess Hills Prairie Seminar many times, this is your opportunity to get to know the Loess Hills further to the south. Many special areas will be visited.


The \$80 registration fee includes the field trips and five meals. Student registration is \$60 and Iowa Prairie Network is offering scholarships. (To apply email iowaprairienetworkorg@gmail.com.)

Contact lance@goldenhillsrca.org / 712-482-3029 with any questions. www.goldenhillsrca.org/prairie-conference.html

Friday, July 21

4:00-6:00pm Guided Whiterock Outdoor Walk, focus on prairie communities at Whiterock Conservancy. Phone 712-684-2697 for more information.

Saturday, July 22

 10:00am **Iowa Native Plant Society Field Trip to Nelson Paradise Wildlife Area in Mitchell County (northeast Iowa) with Mark Leoschke – BRING BOOTS!** The Nelson Paradise Wildlife Area is owned by the Mitchell County Conservation Board and occurs northeast of the small town of Otranto (also the name of a town in Italy). The sedge meadow/fen in the southeast portion of the wildlife area has a number of interesting species including dwarf raspberry (*Rubus pubescens*), fen thistle (*Cirsium muticum*) and purple angelica (*Angelica atropurpurea*). Mark J. Leoschke, botanist for the Wildlife Bureau of the Iowa Department of Natural Resources in Des Moines, will lead us on an exploration of the wetland flora. Directions: From the intersection of U.S. Highway 218 and State Highway 9 in Osage (Mitchell County) drive north and west on U.S. Highway 218 to St. Ansgar. Take U.S. Highway 218 north out of St. Ansgar and drive about 5.5 miles to County Road A19 (480th

Street). Turn left (west) on County Road A19 and drive approximately 2 miles (you will pass Oak Lane Cemetery on the north side of the road, a small prairie remnant owned by the Mitchell County Conservation Board). Turn right (north) on Dancer Avenue and drive about 0.6 mile. Park in the Mitchell County Conservation Board parking area on the left (west) at the curve in the road or along the road after it turns east. We will walk to the sedge meadow/fen. **BRING BOOTS!**

Thursday, July 27

 7:00pm **Doolittle Prairie Walk with Lloyd Crim**
See May 25

Friday, August 18

4:00-6:00pm Guided Whiterock Outdoor Walk, focus on savanna communities at Whiterock Conservancy. Phone 712-684-2697 for more information.

Thursday, August 24

 7:00pm **Doolittle Prairie Walk with Lloyd Crim**
See May 25


Sunday-Saturday, September 10-16

Iowa Prairie Heritage Week – Watch the website calendar for events as they get scheduled. Iowa Prairie Network coordinates these events and publicizes them. As events are scheduled, they'll be on the IPN calendar at www.iowaprairienetwork.org/about/calendar.html

Friday, September 15

4:00-6:00pm Guided Whiterock Outdoor Walk, focus on the Garst Farm District at Whiterock Conservancy. Phone 712-684-2697 for more information.

Sunday, September 17

 **Monarch Festival at Blank Park Zoo – Iowa Native Plant Society** is a sponsor of Plant.Grow.Fly and has hosted a booth at this event in recent years. Register your pollinator garden at www.blankparkzoo.com/conservation/plantgrowfly/ and indicate that INPS sent you.

Wednesday, September 20

9:00am-12:00pm Monarch Habitat on Farms Demonstration Day at Renewable Farm, Cedar Falls, IA. See June 20 for more details. To register or for more information, contact ashley.kittle@uni.edu

Thursday, September 21

4:30-6:30pm Monarch Habitat on Farms

Demonstration Day at J.H. Roadman Memorial Park, Dike, IA. See June 20 for more details. To register or for more information, contact ashley.kittle@uni.edu

Saturday, September 23

9:00am-1:00pm Whiterock Conservancy Volunteer Prairie Work Day Seed Harvest. Phone 712-684-2697 for more information.

Saturday-Sunday, September 23 - October 1

Loess Hills & Heritage Week – Sponsored by the Iowa DNR, numerous CCBs, Golden Hills RC&D, Loess Hills Alliance, and Western Iowa Tourism, this “week” will provide an opportunity to experience and enjoy the hills, and to learn more about them and their special plants, animals, geology and pioneer and Native American history.

Sunday, October 1

1:00pm-3:00pm Mount Talbot Prairie Hike, Stone State Park. 1-3pm. Celebrate Loess Hills Prairie and Heritage Week! Join wildflower enthusiast Rich Pope as he leads us on a walk to find fall prairie bloomers. Wear sturdy walking shoes and dress for the weather. Mount Talbot State Preserve is located on Talbot Road on the northeast side of Stone State Park. Sponsored by the Dorothy Pecaut Nature Center



Iowa Native Plant Society Annual Meeting and Fieldtrips – Saturday, May 6th

The Iowa Native Plant Society’s 2017 Annual Meeting will be held on May 6th, 10:00am-3:30pm, at the Polk County Conservation Board’s Chichaqua Bottoms Greenbelt. It will include morning and afternoon fieldtrips, as well as the Society’s business meeting and a short presentation on climate change.

Meet at the Chichaqua Bottoms Greenbelt Longhouse, 8700 NE 126th Ave, Maxwell (directions below). Morning and afternoon fieldtrips will be offered at special sites in the Greenbelt. PCCB biologist Loren Lown will provide a description and orientation to these sites before the morning fieldtrips begin. Between the morning and afternoon fieldtrips, a break for a bring-your-own lunch and for the annual

meeting and a program and discussion by Connie Mutel will take place at the Longhouse.

Connie’s presentation is entitled **Climate Change Reflections**. Since her climate-change book *A Sugar Creek Chronicle* was published a year ago, Connie has given dozens of talks on that subject across Iowa. How do Iowans receive the messages of climate change, and what can be done to better our communications on this major subject? Connie will give her reflections and then lead a discussion that will enable us all to better address this “elephant in the bathtub,” which is crucially important to the native plants we love (and all of us, too).

Everyone is invited to participate in the INPS Annual Meeting and all of the day’s activities, and there is no cost to attend.

Directions: Chichaqua is a half-hour northeast of Des Moines near Elkhart, Bondurant and Farrar.

From Interstate 35: take exit 96, go east on NE 126th Avenue through Elkhart, at the T-intersection turn north (left) on NE 72nd Street/NE Yoder Drive, turn east (right) on 134th Avenue/County F22, turn south (right) on NE 80th Street, turn east (left) on NE 126th to Longhouse. (Note that NE 126th does not go straight through to Chichaqua, but requires these north to east to south to east turns to reach the Greenbelt.)

From east on Interstate 80: turn north at exit 143 (first Altoona exit), go north on NE 72nd Street to south edge of Bondurant, turn left to cross US 65 to continue to go north on NE 72nd/Grant Street through Bondurant, then continue north ~7 miles to 134th Avenue (next road intersection after crossing the South Skunk River). Turn east (right) on 134th Avenue/County F22, turn south (right) on NE 80th Street, turn east (left) on NE 126th to Longhouse.

From east on US Hwy 30: the Greenbelt can also be reached from IA 330 (just west of Marshalltown) south to US 65 to north on W 140th Street N to curve to the west to become N 83rd Avenue W, which becomes NE 134th Avenue/F22 to Farrar, then continue west from Farrar on 134th Avenue/F22 4 miles to left on NE 80th Street to left on NE 126th Avenue to Longhouse.

Address: 8700 NE 126th Avenue, Maxwell, IA 50161.

See more at: <http://www.mycountyparks.com/county/polk/Park/Chichaqua-Bottoms-Greenbelt.aspx#sthash.9JNaKNpz.dpuf>.

2017 Iowa Wildflower Month – Proclamation by Governor Terry Branstad



IN THE NAME AND BY THE AUTHORITY OF THE STATE OF IOWA

PROCLAMATION

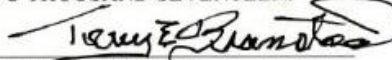
- WHEREAS,** Iowa is at the intersection of several important native plant ecosystems; and
- WHEREAS,** the blooming of many of Iowa's wildflowers in May creates an ideal time to introduce Iowans to our native plants; and
- WHEREAS,** Iowa's native plant species are an important part of our state's heritage and provide valuable aesthetic enjoyment and boost economic status by encouraging tourism and recreation; and
- WHEREAS,** native plants stem soil erosion, provide habitats for insect and bird pollinators, cleanse water, and provide other vital ecological services; and
- WHEREAS,** native plants are important research subjects for evaluating and protecting the State's prairies, woodlands, wetlands, and water resources; and
- WHEREAS,** there are 390 native plants included on the endangered, threatened and special concern list in Chapter 481B of the Code of Iowa and because the 2017 Endangered Species Day and National Wildflower Week fall in May:

NOW, THEREFORE, I, Terry E. Branstad, Governor of the State of Iowa, do hereby proclaim the month of May, 2017 as

IOWA WILDFLOWER AND NATIVE PLANT MONTH



IN TESTIMONY WHEREOF, I HAVE HERE-
UNTO SUBSCRIBED MY NAME AND CAUSED
THE GREAT SEAL OF THE STATE OF IOWA TO
BE AFFIXED. DONE AT DES MOINES THIS 23rd
DAY OF MARCH IN THE YEAR OF OUR LORD
TWO THOUSAND SEVENTEEN.


TERRY E. BRANSTAD
GOVERNOR OF IOWA

ATTEST:


PAUL D. PATE
SECRETARY OF STATE

Have You Seen This? If So, Where?

by Linda Scarth



Some years ago we were somewhere in Eastern Iowa photographing spring blossoms and pretty fungi. This scanned slide of a mayapple (*Podophyllum peltatum*) blossom was one of delicate blooms we found. We have been trying to figure out where we were that day because we would like to see if they are still there. This mayapple (may apple, may-apple) had pink lacey lines at the edge of its petals. Otherwise it looked like a regular *Podophyllum peltatum*.

There are pink mayapples in Asia and elsewhere, but they have been moved to other genera and pictures of them do not closely resemble this eastern North American species.

There are 2 photos of a pale pink mayapple on the plants.usda.gov site. I suspect that since the leaves on the ground underneath one of the photos are also quite warm and pinkish colored, the white balance of the camera was not set properly or could not be corrected from the jpg capture.

A brief comment in the November 1915 issue of *The American Botanist* noted a pink form of mayapple was seen in Iowa. However it had semi-double blossoms so was not the one we saw and photographed.

Has anyone else come across this mayapple patch? If so, please contact me at scarth@infionline.net.



INPS Small Grants – A Success Story

Our small grants program has awarded over \$24,500 (including \$2,000 from the gift from the Iowa Natural History Association) and our Restore Iowa! program has awarded \$6,682. Restore Iowa! began in 2012 in an effort to involve youth in ecological restoration and has been entirely funded by donations from an anonymous source that is no longer available. At this time we ask for special donations to be designated to this fund that aims to get more young people out and working to restore nature in Iowa.



2017 INPS Grants Recipients

Your membership contributions at work!

We are pleased to announce the eight recipients of this year's INPS grants. All are fine projects that are well worthy of our awards. Thank you so much for your contributions to INPS, which make this funding project possible! *The INPS Board*

EDUCATION PROPOSALS:

Jack Phillips / Loess Hills Nature School / Golden Hills RC&D

“Bryophytes, Lichens, and Fungi of the Southern Loess Hills”

Education: \$500.00

Mike Fallon / Backyard Abundance

“Fire, Seed & Soil; Exploring the Relationship between Fire and Iowa's Native Flora”

Education - \$217

INVENTORY, RESTORATION, MANAGEMENT PROPOSALS:

Amy Yoakum / Story County Conservation

“Prairie lily (*Lilium philadelphicum*) in a Cemetery Prairie Remnant, Story County”

Restoration/management, \$760

Rob Davis / Whiterock Conservancy

“A toolbox for volunteers – Connecting recreational trail users with the land”

Restoration/management, \$1000

Bill Norris / Western New Mexico University professor

“Floristic Inventory of Backbone State Park (1994-2017): Final Phase”

Inventory/restoration/management, \$1000

Carl Kurtz / Iowa Natural Heritage Foundation (Ryan Schmidt)

“Plant Species Inventory of Spring Hill Prairie”
Inventory / restoration / management, \$1000

NOTE: Both the Kurtz and Norris inventories were funded by the gift received last year from the former **Iowa Natural History Association**. Again, we gratefully acknowledge this contribution!

RESTORE IOWA!:

Kenneth Slocum / Clayton County Conservation
“Clayton County Conservation Youth Conservationist Program”

Restore Iowa!, \$537

Shaun Vecera / Hawkeye Area Council Conservation Committee

“Boy Scouts of America - Invasive removal and education”

Restore Iowa!, \$845



News of a New Botanical Nonprofit

by Bruce Barnes

Flora ID, a 501(c)(3) nonprofit organization with the mission of promoting botanical education and research, and developing plant identification tools, is now continuing the production and development of the interactive plant identification software previously produced by Flora ID Northwest.

One of our first actions has been to release new comprehensive apps for Android devices. These apps, simply named “(state/province/region) Plants,” are a major step forward. Each of the new apps include all the native and naturalized vascular plants of each region named in the app title, including one for Iowa. They are in effect a complete flora on your phone or tablet in your pocket, independent from wifi or cell towers. The apps are now on the Google Play store; search for “flora id” including quotation marks, and look for their mostly white icons. They work the same as the wildflower apps published 3 years ago which are still available (with mostly green icons).

All net proceeds from the sale of apps or PC software go to support the mission of the organization. For more information, contact: Bruce Barnes, Volunteer Executive Director, 541-377-2634, flora.id@wtechlink.us; www.flora-id.org

Confessions of a Herbarium-Savvy Field Botanist, (continued from page 1)

to foresee how the story will end. Perhaps the glandular hairs at the base of a leaf will one day prove that a specimen is an entirely new species. Or the spacing between branches on a stem will suggest the point in time when two species began hybridizing. Or the width of a seed will show evidence of a significant drought. We would need a daunting number of photographs to capture a plant from every angle of potential evolutionary or ecological significance.

DNA can tell us a great deal about where a plant falls on an evolutionary tree. It may even tell us about physical or ecological traits like color, scent, and flowering time. But unless that DNA is accompanied by an actual voucher specimen, there is no way to verify a plant's true identity. If a biologist discovers a specimen with an unusual set of genes for that species, it is impossible to know whether these are truly meaningful results or whether the plant was misidentified. Furthermore, if DNA suggests that the sample is a new species altogether, a scientist cannot assign that species a name without a herbarium specimen of the plant in flower.



A botanist mounting a plant to paper takes great care to preserve it from every viewpoint. Some flowers are pressed face out; some on their sides. Some leaves are gently twisted so their undersides are visible. Extra flowers, fruit, or broken-off leaves are carefully folded into an envelope attached to the sheet. Some of this dried material can later be used for molecular studies.

Last year, an article in *Science* sparked a debate over whether it's always advisable to collect voucher

specimens. The authors suggested that by replacing vouchers with photographs and DNA samples, scientists could avoid adding to the extinction risk of small populations of animals and plants. Curators across the globe responded by arguing that scientific collectors are not the cause of species extinctions. They begged researchers to collect more, not fewer, voucher specimens. As Frank-T. Krell and Quentin Wheeler wrote in one response, “With millions of species threatened by extinction, it would be tragic were we left with no more than a few photographs and sequences as evidence they were once here.”



Where Do I Send My Plants?

With increasing numbers of universities and museums cutting costs by closing herbaria and other natural history collections, figuring out where to deposit specimens can be complicated. Researchers who previously could place plants in their institutions' own herbaria may now need to search for a new home.

But according to Rusty Russell, the collections manager of the United States National Herbarium at the Smithsonian's National Museum of Natural History, those homes are waiting. Larger herbaria are absorbing many of the smaller ones and are still actively accepting newly collected plants. "It's the responsibility of major collections like the Smithsonian to make sure that orphaned collections are not lost to science. We may not keep all of these collections ourselves, but we grab them before they get thrown out and then put them in other herbaria where they are better served," he says. And when botanists submit new plant specimens, Russell says that the Smithsonian rarely turns anything away as long as the specimens are well labeled and well prepared.

The Smithsonian isn't the best place to deposit every voucher. Researchers should consider where the people who are most likely to use the plants can most easily access them, and then contact the collection managers at those herbaria. Specimens from ecological collections that involve sampling the same species within a single county or state are most valuable to the herbaria closest to that region. Specimens from large-scale biodiversity surveys are often collected in duplicates. One duplicate of a species might go to the herbarium associated with the collector's institution (if there is one). Another could stay within the host country, and another could be sent to whatever herbarium already has the largest collection of that species, so that a botanist interested in studying it could travel to one central location for research.

The bottom line, according to Russell: “Every single study that involves a plant species needs to be vouchered because you can't reproduce it without original material. You can describe a plant in a million words and it's still not as good as the plant itself.”

A Rightful Place for Raw Data

Before I could publish two of my dissertation chapters, the journal required that my raw data be deposited in a database where any reader could access it. This policy is part of a movement within the scientific community to safeguard and share raw data. By making all of my spreadsheets of plant height, seed number, and flower size publicly available, I can greatly assist those who might want to reproduce my results or build on my findings for future studies.

Plant specimens are also an invaluable form of raw data. Many journals require that systematic or phylogenetic studies be supported by voucher specimens deposited in a herbarium. But for other plant studies, it's often up to the researchers to decide what, if anything, to do with their samples. When we chose not to deposit our plants in a permanent collection, we contribute to the huge amount of lost raw data in science.

It's time for my plants to join a herbarium collection. Maybe someone will use them to pursue my own unanswered research questions. More likely, the plants will sit in a cabinet for decades or more, untouched, until one day, just maybe, a scientist will pull them out and think, “Yes! This is exactly what I was searching for!”

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<http://www.communityfoundationofjohnsoncounty.org/give/established-funds-z-partners-philanthropy/iowa-native-plant-society/> (See our website at www.iowanativeplants.org for more information.)

The INPS mailing list is never distributed to other organizations or companies.

Dues are payable on a calendar year basis from January 1 to December 31. Please use this form for changes of address.

* Annual contributions over \$10 are tax deductible. Iowa Native Plant Society is a 501(c)(3) non-profit organization.

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