Winter Native Surprise

Story and photos by Yolanda Ciolli and Mike Trial

Many people shy away from winter walks because it’s cold, foliage is gone from most trees, and flowers are absent from the land. However, one thing to consider is the freedom from biting insects and oppressive heat, as well as the different perspective to enjoy the landscape—without even breaking a sweat.

We can use these seasonal comforts as inspiration to observe things overlooked or absent in the warm seasons. One native species to be on the lookout for is *Aplectrum hyemale* (also called putty root or Adam and Eve orchid). In fall and early winter, the leaf emerges and remains through the winter in rich soil in woodlands and along shaded flat areas along draws.

The leaf is quite stunning. Striped turquoise green and white, the smooth oblong leaf, 3-5 inches in length, often with a wine-colored underside, is sometimes found as a single leaf emerged from the corm, the plant’s root structure, and other times in colonies. When found after a snow, the area around them appears to be melted, as though they have their own furnace action radiating from within.

This native orchid is prevalent throughout much of Missouri and also found in our neighboring region. In central Missouri, the 2021 rainfall exceeded 56 inches as of December 11th, and the Aplectrum seemed to be having a great year. The leaf stands out and is easy to notice when walking at a slow pace.

It pays to remember where these leaves are on your winter walks, because in late spring, the leaf withers away, and a 4 to 8 inch raceme of delicate light yellow-green and wine colored blossoms emerge from the corm. They are unassuming flowers that are harder...
to find amongst the spring ground cover than the exposed leaves are in winter, but are sure to please when you find them.

References and additional information about this somewhat elusive woodland native can be found in *Flora of Missouri*, by Julian Steyermark (University of Iowa Press, 1963) and the revised edition, *Steyermark’s Flora of Missouri* by George Yatskievych (Missouri Department of Conservation in cooperation with the Missouri Botanical Garden Press 1999), and many articles and images can be found online.

**2024 MONPS Field Trip Weekends - Mark Your Calendars!**

Dates and general locations for our 2024 field trips are set. Details and lodging information will be published in the Petal Pusher and on our website (mon-nativeplants.org) as we get closer to the dates, so stay tuned for updates! Field trip weekends include botany walks on Friday afternoon, Saturday morning and afternoon, and Sunday morning; a Friday evening speaker; and a Saturday evening MONPS Board Meeting. You’re welcome to attend any or all of the scheduled events.

April 26-28: Our Spring trip will take us south to the Ozark Highlands; we’ll lodge at Ava or Gainesville. Potential sites to visit include Bryant Creek State Park, Ava Glades Natural Area, and Caney Mountain Conservation Area.

June 21-23: For Summer, we’ll be headquartered in the southeast part of the state. Among the unique sites we may visit are Sand Prairie Conservation Area, Big Cane Conservation Area, Mingo Swamp, and Sand Pond Conservation Area.

September 20-22: On our Fall trip we’ll head north to Kirksville. Some of the sites we may botanize in that part of the state are Spring Creek Ranch Natural Area, Morris Prairie Conservation Area, Dark Hollow Natural Area, and Rocky Hollow Natural Area.

**2024 MONPS Board Elections**

Two Director positions on the MONPS Board expire in 2024. These positions are currently held by Steve Buback and Rick Gray, who have both agreed to serve another term, from July 2024 through June 2027. Additional nominations may be made by the membership by a written nomination from one member and a written second by another member. Each nomination must be accompanied by a written confirmation of willingness to serve by the nominee. Please send nominations to Malissa Briggler at malissa.briggler@mdc.mo.gov. Nominations must be received by February 28.
The Webster Groves Nature Study Society (WGNSS, pronounced “Wig-ness” by the In Crowd), has for over a century allowed nature lovers to enjoy each other’s company without feeling self-conscious about knowing the names of plants, insects, and birds, or photographing and talking about them incessantly. The Botany Group is one of its original component “interest groups” whose enthusiasm has continued unabated since the start. Led over the years by such people as Edgar Denison, Art Christ, and Father Jim Sullivan, the group continues to meet on Monday mornings year-round to search for whatever rare or interesting plants may be available within an hour or so of St. Louis. The number of participants varies a bit with the seasons. In spring, when the weather is pleasant, and wildflowers are abundant, we understandably attract a large crowd. But what does a botanist find of interest in the dead of winter? You might be surprised by how much a reasonably skilled observer can identify even then. Here are a few things we look for in the winter woods:

**Plants that bloom in the winter**
The WGNSS botanizers have observed *Taraxacum officinale* (common dandelion) blooming in every month of the year, including December to February. Aside from that, there are only a few plants that preferentially bloom in winter. *Hamamelis virginiana* (eastern or American witch hazel) and *Hamamelis vernalis* (Ozark witch hazel) are notable among these and are often cited as the last- and first-blooming trees in the calendar year. In Missouri, *H. virginiana* is restricted to five counties in the eastern Ozarks but is widespread in the eastern U.S. *H. vernalis* is fairly common in southern Missouri, as well as Arkansas, Oklahoma, and eastern Texas.

*Hamamelis virginiana* (eastern witch hazel) (left) Taken on November 16th. *Hamamelis vernalis* (Ozark witch hazel) (right) Taken on February 26th. Notice the red color on the calyx at the base of the flower.

**Plants that stay green during winter**
Some plants have chlorophyll and continue photosynthesis while the trees above them have no leaves to block the sun. Some have winter rosettes of leaves that will send up reproductive parts in the next growing season. This is a large and difficult category which we may illustrate in a future issue.
For now, here are three of Missouri’s orchids that have overwintering leaves to store up food.

The leaves of *Tipularia discolor* (crane-fly orchid), top (left) and bottom (right)

*Goodyera pubescens* (rattlesnake plantain orchid) (left); *Aplectrum hyemale* (Adam and Eve orchid) (right). This fairly common orchid has leaves only during winter.

**Identifying trees and vines without leaves**

Always start with the terminal buds, they will be larger and more likely to conform to whatever key or book you are using. On the left, a terminal bud with overlapping bud scales to protect it. The leaf scars are opposite and their corners almost meet. This is typical of maple trees. This one is sharply pointed, a characteristic of the hard maples. *Acer saccharum* (sugar maple). On the right, another twig with opposite leaf scars, but this terminal bud has only two scales which meet like praying hands. Also notice the color of the twig. This is *Cornus drummondii* (roughleaf dogwood).
These small spherical flower buds grow steadily during winter and burst open with showy yellow flowers before the leaves appear. *Lindera benzoin* (spicebush)

The odd, four-sided twigs and opposite branching of *Fraxinus quadrangulata* (blue ash) (left). Also oppositely branched with its typical narrow, widespread twigs which end in a reddish-brown fuzzy bud: *Viburnum rufidulum* (rusty blackhaw).
These will never be found far from water. A small tree that usually has many helpful identifying features in winter. A member of the birch family, it has separate male (staminate) and female (pistillate) flowers in catkins as well as red-purple leaf buds. The female catkins will mature into a cone-like structure that holds the seeds. *Alnus serrulata* (smooth alder, hazel alder).

A tree with large opposite leaf scars and sharply pointed terminal buds. It drops its leaves early while most other trees are still green. This is *Aesculus glabra* (Ohio buckeye) (left). A cluster of terminal buds is a characteristic of oaks. This one has large, angular buds covered in white hairs. *Quercus velutina* (black oak) (right)

The odd architecture of a young *Asimina triloba* (pawpaw) tree. Notice how the branches are arranged in a planar, two-dimensional structure. Eventually, the tree begins to twist and loses this feature, but it is striking in young trees growing close together (left). The terminal buds on a pawpaw are “naked,” the leaf buds are not covered by scales. They are soft and pliable, like a paintbrush (right). *Asimina triloba* (pawpaw).
Marcescence
Marcescence is the retention of dead plant organs that are normally shed. Some tree families are particularly likely to show this tendency and often can be identified by their retained leaves or seeds in the winter woods. The beech family (including some of the oaks), the birch family, and the maple family are frequently marcescent in Missouri.

Marcescence: (upper left) Fagus grandifolia (American beech); (upper right) the over-wintering samaras (seeds) of Acer negundo (box elder); (lower left and right) Ostrya virginiana (hop hornbeam) retains its leaves in winter.

Frost Flowers
Frost flowers form on Verbesina virginica (white crownbeard) on December 5th. In late fall and early winter, we are often lucky enough to see frostflowers. For information about frostflowers, click here; for more pictures of frostflowers, click here. If you like seeing winter botany pictures, let us know. There are many more we didn’t have room for this time, and many more tips and tricks about identifying them.
Nominations Due May 15 for 2024 MONPS Awards

The MONPS Awards Committee seeks nominations of people who have supported the preservation of Missouri’s flora. MONPS offers five awards:

1) Erna Eisendrath Memorial Education Award, recognizing individuals who, through teaching, writing, or other activity have conveyed to others a significant appreciation and knowledge of Missouri’s native flora.

2) Arthur Christ Research Award, recognizing an individual’s significant contribution in furthering the knowledge of Missouri flora.

3) Plant Stewardship Award, recognizing an individual or organization for the preservation of important elements of Missouri’s flora through purchase, registry, and/or management practice.

4) The John E. Wylie Award, recognizing individuals who have provided exceptional service to the Society.

5) Plant Conservation Award, recognizing an individual or organization for outstanding contributions to the conservation or preservation of native plants or plant communities in Missouri. This award differs from the Plant Stewardship Award in that it is not tied to direct acquisition or management of tracts of land, but instead may recognize various types of outstanding achievements or efforts, such as conservation planning, advocacy, or new ways of looking at old problems.

6) Julian A. Steyermark Award, the Society’s highest award, given to an individual who has made outstanding contributions to any and all aspects of Missouri botany.

The deadline for nominations is May 15. Nominations should contain the full name of the nominee and the name of the person making the nomination, and they should set forth the contributions of the individual or organization that merits recognition. Award recipients need not be members of MONPS.

Please submit nominations to: Awards Committee Chairwoman, Malissa Briggler: Malissa Briggler, State Botanist Missouri Dept of Conservation 2901 W. Truman Blvd. Jefferson City, MO 65102 573-522-4115 ext. 3200

Seeking Donations for the Stan Hudson Research Grant

Could you help us support students who are conducting botanical research in Missouri? The Stan Hudson Research Grant is available to assist with funding for research projects conducted by college or university students under the supervision of a faculty member. The grant honors the late H. Stanton Hudson (1921–2002), a long-time member of the Missouri Native Plant Society whose passion for the flora of Missouri and its conservation inspired his friends and family to create a small grants program in his memory. The grant is usually given annually.

To qualify for the Stan Hudson Research Grant, research must involve Missouri native plants in some way, but may have as its primary focus any pertinent subject area in plant biology, including conservation, ecology, physiology, systematics and evolution, etc. The grant may be used for any non-salary expenses relating to the proposed research, including travel, equipment, and supplies. At the conclusion of the project, grant recipients will be expected to prepare research results for publication in a peer-reviewed scientific journal, Missouriensis (the peer-reviewed journal of the Missouri Native Plant Society), or the society’s newsletter The Petal Pusher. Alternatively, recipients can present their research at the Missouri Botanical Symposium as either a poster or oral presentation. The symposium is held each fall in Rolla, Missouri. To learn more about the grant, check out this link to the Missouri Native Plants website-Hudson Fund (button below).

Not getting the Missouri Native Plant Society organizational emails?

Most email clients have a "safe senders" mechanism for you to make sure that your email server always sends mail from our MONPS server to your inbox.

*Some just have you add our server to your "Contacts"
*Some have you create "Rules"
*Some have an actual "Safe Senders/Domains" area in the settings.

To ensure that you get the organizational emails please add these two domains to whatever your email’s "safe senders" process is: monps.org and webapps.monps.org

OR: You may simply need to update your email address with us. If so, click this link: https://monativeplants.org/ask-a-question/
NEWS ALERTS: Extra, extra, read all about it!

Legislation Filed to Halt the Sale of Five Invasive Plants

Locally and globally, invasive plants and animals are the second leading cause of native biodiversity decline and also threaten the economic stability of the forest product, livestock, and outdoor industries. In addition, Bradford pear, sericea lespedeza, and other non-native, invasive plants are costly and time-consuming for Missouri landowners and suburban and urban homeowners to control.

Of the state’s 142 invasive plants, as assessed by the Missouri Invasive Plant Council (MoIP), many continue to be sold in Missouri, contributing to their future, unintended spread across the landscape.

On December 1, 2023, Representative Bruce Sassmann (District 061), took action to help protect the state from invasive plants by filing HB 1555 to halt the sale and intentional distribution of five invasive plant species: burning bush (*Euonymus alatus*), Callery pear (*Pyrus calleryana* and its cultivars, including Bradford and Chanticleer), climbing euonymus (*Euonymus fortunei*, also commonly known as wintercreeper), Japanese honeysuckle (*Lonicera japonica*), and sericea lespedeza (*Lespedeza cuneata*).

Once passed, the Missouri Department of Agriculture is expected to be the agency tasked with enforcement of the legislation, issuing violations if any of the five plants listed above are found to be sold or intentionally distributed. Because of the investment that nursery owners and other plant sellers must make before many shrubs and trees are large enough to sell, two species on the list of five—burning bush and Callery pear plants—acquired by a licensed Missouri wholesale or retail plant nursery before January 1, 2025, shall be exempt from enforcement until January 1, 2028.

The legislation also provides for the creation of a Missouri Department of Agriculture “Invasive Plant Watchlist,” comprising more than 70 species, which, if sold, must be labeled as such.

Read more about the legislation [here](#).

Building Native Habitats at Federal Facilities Legislation

U.S. Senators Martin Heinrich (D-N.M.) and Mike Braun (R-Ind.) and U.S. Representatives Mikie Sherrill (D-N.J.) and Dave Joyce (R-Ohio) are introducing new, bipartisan, and bicameral legislation called the Building Native Habitats at Federal Facilities Act. The bill will protect pollinators, conserve water, and reduce pesticide usage near federal buildings and federal government facilities.

“Federal facilities are ideal proving grounds for scaling best practices in managing our landscapes, prioritizing healthy and resilient native plants,” said Heinrich. “Native plants provide key benefits for pollinators and our environment. And the savings from their lower maintenance needs also make them a responsible and cost-effective use of taxpayer dollars.”

“Indiana is home to a great variety of native plants that provide a significant purpose to our ecosystems, such as shelter for local species or retaining stormwater that would otherwise flood communities,” said Braun. “This legislation would promote the use of native plants across the country which helps fulfill our responsibility as stewards of the environment and saves taxpayer dollars.”

“I am excited to expand on New Jersey’s storied history as the ‘Garden State’ with the Building Native Habitats at Federal Facilities Act. Native plants offer a wide range of benefits, including providing natural habitats for animals, offering flood protection by filtering and retaining stormwater, and requiring less maintenance – which will save money for New Jersey families, businesses, and municipalities,” said Sherrill.

“I am grateful to the environmental advocates across New Jersey who brought this issue to my attention and I look forward to our continued partnership as I work to address flooding, protect our planet, and lower costs for New Jerseyans.”

Read more about the legislation [here](#).
**Ferns That Stay Green All Winter**

*Photos by Kathy Bildner*

*Asplenium bradleyi* (Bradley’s spleenwort), Hickory Canyon Conservation Area, 11-9-2020; Habitat: sandstone, exposed or shaded

*Asplenium pinnatifidum* (pinnatifid spleenwort), Hickory Canyon, 11-20-2017; Habitat: shaded sandstone

*Asplenium platyneuron* (ebony spleenwort), 8 months old grown from spores, 12-21-2023; Habitat: limestone or sandstone, open woods or glades

*Asplenium rhizophyllum* (walking fern), St Francois State Park, 3-13-2023; Habitat: shaded limestone or sandstone

*Asplenium ruta-muraria* (wall-rue), Washington State Park, 3-25-2023; Preferred habitat: shaded limestone

*Dryopteris marginalis* (Marginal shield fern), Royal Gorge hiking trail, 11-27-2023; Preferred habitat: open woods or shaded sandstone or in this case rhyolite
**Myriopteris gracilis** with sori (Fee’s lip fern), Washington State Park, 3-25-23, Preferred habitat: exposed limestone

**Myriopteris lanosa** (hairy lip fern), Hughes Mountain Conservation Area, 11-8-21, Preferred habitat: exposed sandstone

**Pellaea atropurpurea** (purple cliff brake fern), Washington State Park, 3-25-23, Preferred habitat: exposed sandstone or limestone

**Polypodium virginianum** (polypody), Hickory Canyon, 12-18-23, Preferred habitat: shaded sandstone

**Polystichum acrostichoides** (Christmas fern), Hickory Canyon, 12-18-23, Preferred habitat: open woods

**Sceptridium dissectum** (bronze or grape fern), Miller County, Preferred habitat: open woods
From the Editor

Thank you to our Assistant Editor, Pam Barnabee for getting everything in good shape before it came to me. Thanks also to our Board members who proofread each issue and all authors, chapter representatives, and other contributors. Please consider making a submission for a future Petal Pusher! Here is some information for submissions:

A. The theme for the March 2024 Petal Pusher is "Funny Botany" (send in your botany jokes!) but other submissions are encouraged, especially Genus or Family descriptions ("Better know a genus/family."). Conundrum Corner, Invasive Tip of the Month, Name Change of the Month, Terminology, and Poetry Corner.

B. Send ONE email saying "here is my contribution on _____," and attach (don’t embed) the following:
   1) an article in Word format with photo captions at the end (no photos in the Word document) and your name in the text.
   2) Images, in JPEG format--NOT in a document file.
C. Use only one space between sentences
D. Even short notes with pictures would be great!
E. Send to: pamela.barnabee@gmail.com (don’t send them directly to me!)

F. Due date for the next issue is: February 20

Thank you so much,
Michelle Bowe

Do You Have a Plant Story?
Learn more about Missouri native plants at the newest feature on the MONPS website (monativeplants.org): Plant Stories. Do you have a favorite Missouri native plant? A photo you’re particularly proud of? Please submit your story to pamela.barnabee@gmail.com for posting.

We Welcome Member Submissions!
The Petal Pusher wants YOU … to write articles for the newsletter.

Consider these possibilities:
- Conundrum Corner: Tips on how to distinguish between tricky, look-alike species.
- Invasive Tip of the Month: How to identify and eradicate a particular invasive species.
- What's Cooking: Recipes using native Missouri plants.
- Name Change of the Month: Latin names, they keep on a-changin'; help us all stay up-to-date.
- Poetry Corner or Quotation Corner: Give us your suggestions for poems or quotes, or submit your original poetry. (Note that for poems, we must have permission from the publisher.)

Shop Online for Embroidered MONPS Logo Apparel

A new feature has been added to the MONPS website: from the “MONPS Logo Apparel” link on the menu bar of our home page (monativeplants.org), you’ll be able to access our online store. Short-sleeved and long-sleeved t-shirts, sweatshirts, and ball caps with embroidered MONPS logos are available in five colors. There’s also a booney hat with embroidered logo, in dark brown. The tote bag has a direct-to-garment print of our logo. Our vendor, Fast Yowi, is located in Columbia, so you can pick up your order there if it’s convenient, or have it shipped.
New Members
St. Louis
Suzanne Chisum, St. Louis
Caity Sims, St. Louis

Hawthorn
Judith LaRose, Columbia

Perennis
Steve Schell, Cape Girardeau

State Level
Alex Bolack, Joplin
Nancy Hayes, Washington

Chapter Reports and Events

HAWTHORN
by Cindy Squire, Chapter Representative
16 November - Monthly group lunch at First Watch - Stadium location.
8 December - Wreath making holiday event graciously hosted by Nadia at Lincoln University Teaching Greenhouse.
11 December - Zoom meeting - Mushroom Presentation given by MDC State Botanist Malissa Brigler. Bi-Annual elections were held. Results: Vice President - Nadia Navarrete-Tindall, Treasurer - Jayne Young, Chapter Representative - Cindy Squire.
21 December - Monthly group lunch at First Watch - Stadium location.

Upcoming Events
8 January - Annual Planning meeting via Zoom. Please come with ideas for activities and events.
18 January - Monthly group lunch at First Watch - Stadium location.
Adopt a Spot Work Days will resume in springtime - check emails.
12 February - Zoom Meeting. Elena Vega and Nadia Navarrete-Tindall share native plant garden photos.
15 February - Monthly group lunch at First Watch - Stadium location.

See www.columbianativeplants.org for an updated posting of newsletters and activity details.
# Missouri Native Plant Society Membership Form

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**Membership Level (check one):**

- Student $5
- Goldenrod $10
- Sunflower $25
- Bluebell $50
- Blazing Star $100

**Chapter dues (optional, check all that apply):**

- Empire Prairie (Saint Joseph) $5
- Hawthorn (Columbia) $5
- Kansas City $5
- Osage Plains (Clinton) $5
- Ozarks (West Plains) $5
- Paradoxa (Rolla) $5
- Perennis (Cape Girardeau) $5
- Saint Louis $5
- Southwest (Springfield) $5

**Newsletter Delivery (normal delivery is via email):**

- Check here if you prefer to receive your newsletters via postal mail! $10

**Other contributions (optional, check all that apply, specify amount, tax deductible):**

- Hudson Grant Fund
- Other contributions

**Total:**

| Total amount | $ |

Make checks payable to the *Missouri Native Plant Society* and mail to:

Missouri Native Plant Society  
PO Box 440353  
Saint Louis MO 63144-4353

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Please recycle!

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