



VOL. 27 NO. 2 2025

notes

The Cinnamon Spires of the Forest Floor:

Cinnamon Fern (*Osmunda cinnamomea*)

By Jill Zdunczyk

A Fern in the Dappled Light

Dappled sunlight dances in mosaics on the path through the mesic forest, while a seep silently trickles from an unseen source towards the wetlands on the forest's edge. Near moss-covered logs and the swish of a salamander's tail, lush greenery softens the space, creating a hush that feels solitary and solemn. It's in these quiet spaces, nestled in the filtered light and saturated soils, that the Cinnamon Fern (*Osmunda cinnamomea*) finds its perfect niche.

Cinnamon in the Shade:

How to Find the Cinnamon Fern

In the cool air of the early Pennsylvania springtime, clumps of Cinnamon Fern push above the surface. Rising like a violin's head along the margins of fens, bogs, wetlands, swamps, streams, vernal pools, seeps, as well as rich forest floors, the fertile fronds of this fern are the first to see the lengthening light of spring days. Varying in chestnut-brown and light green, the fertile fiddlehead fronds are covered in pale, rusty hairs. As spring progresses, the tightly clustered spore-bearing fronds stretch vertically towards the sun and develop their signature cinnamon color for which it was named (*note: it is not edible*). Radiating from them, large, sterile fronds follow a graceful arch 3 to 5 feet from a central cluster.

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Cinnamon Fern Fertile Fronds (Source: Native Plant Trust).



PRESIDENT'S LETTER



Setting the Table at our Native Plant Festival

The PNPS Central PA Native Plant Festival has succeeded once again in drawing crowds and creating excitement for native plants. An estimated one thousand folks attended this year's festival at Millbrook Marsh in State College, which hosted a dozen native plant purveyors and featured live music, food, and educational presentations. We are thrilled to share that with plant donations from members and the help of volunteers the PNPS Plant

Sale Table raised almost \$5,300 now earmarked for the 2026 PNPS Grants Program, supporting native planting projects around the state. People love native plants!

Two Stars at the Festival

Many folks contribute to the success of this event but we would like to call out two special volunteers who have played a significant role for over a decade.

First, let us offer many thanks to Diane Albright, who after serving on the PNPS Board for many years starting in 2008, continued to manage our Plant Sale, helping to grow it while navigating numerous changes in venue. The PNPS Community owes her a big debt of thanks for her many years of dedication to this important event. And let's all cross our fingers that she isn't done yet.

Second, we acknowledge Betsy Whitman who moved to Central PA over a decade ago and established an incredible native landscape, which with her green thumb has provided thousands of natives for our PNPS member table. On behalf of our members and the PNPS Board we send them our deepest thanks.



Betsy Whitman (center) and Diane Albright (far right) working the member table at the 2024 festival.

Help Us Set the Member Table

Sadly for all those who have benefitted from Betsy's native gardening acumen, she and her husband are planning a move to Montgomery County and wants to help us find new sources of natives for our table. So we are reaching out to members, to help us set our member table at the next Central PA Native Plant Festival and Sale. If you are cultivating a native garden at your home, please consider potting-up a few plants for our member table to support our grant program. <https://forms.gle/QdC7QVQELjbDqQLq9>



It's not too early to start thinking about where you might do some fall divisions or collect some seeds for winter sowing. We'll be sharing tips and encouragement on our website starting in September. Look for reminders in our monthly e-Newsletter.

Additionally, we would love to find some plant sitters who could help with overwintering plants that are left-over from the sale. Tips and more on best practices for overwintering potted plants will be posted on our website this fall.

*Keep Growing,
Cathryn Pugh, President*

PNPS Paw-Paw Hike

Saturday, September 13
(1:00pm – 3:00pm)

Hamer Woodlands at Cove Mountain Preserve
450 Sylvan St, Marysville, PA



Space is limited so register for this free event today!

Register today!

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Join us for our 2025 Annual Meeting



Saturday, October 18th (8:30 am to 2:00 pm)
Shaver's Creek Environmental Center, Petersburg, PA

This meeting is open to the public.

There is no charge but registration is required and donations are welcome.



Mark your calendars and check our website for more details, coming soon.

PNPS BOARD OF DIRECTORS BALLOT • 2026-2027 TERM

CANDIDATES



Andrew Conboy is an urban forester and the founder/owner of Colonial Canopy Trees, a community based ecological restoration non-profit organization based in Montgomery County. Members may recall that he spoke at our 2024 Annual Meeting with a presentation titled: "Community-based Ecological Restoration: How you can cultivate and spread native plants in your area!" Andrew has already taken on the oversight of PNPS Social Media. We are excited to have him join the Board.



Sallie Tupper volunteered and was appointed to serve as Treasurer this year. We look forward to having her elected to the board. Sallie lives with her partner on 15 wooded acres where they enjoy gardening with native plants and removing invasive species that have overtaken parts of the woodland. Besides working with plants, she is an accountant and enjoys reading, fiber arts, and playing pickleball in her free time. Sallie is looking forward to continuing to work with the PA Native Plant Society to educate and advocate for the importance of native plants for ecosystems and wildlife!

BALLOT — Members are invited to cast a ballot for the PNPS Board of Directors

Look for your electronic ballot in the August eNewsletter.

Cast your vote electronically by October 18. Alternately, complete the adjacent paper ballot, and mail to the address below by October 1.

PNPS — Vote
PO Box 807
Boalsburg, PA 16827

Or, cast your ballot in person at the 2025 Annual Meeting on October 18th.

1. Cast your vote for 2 candidates.

☐ **Sallie Tupper**

☐ **Andrew Conboy**

Write in

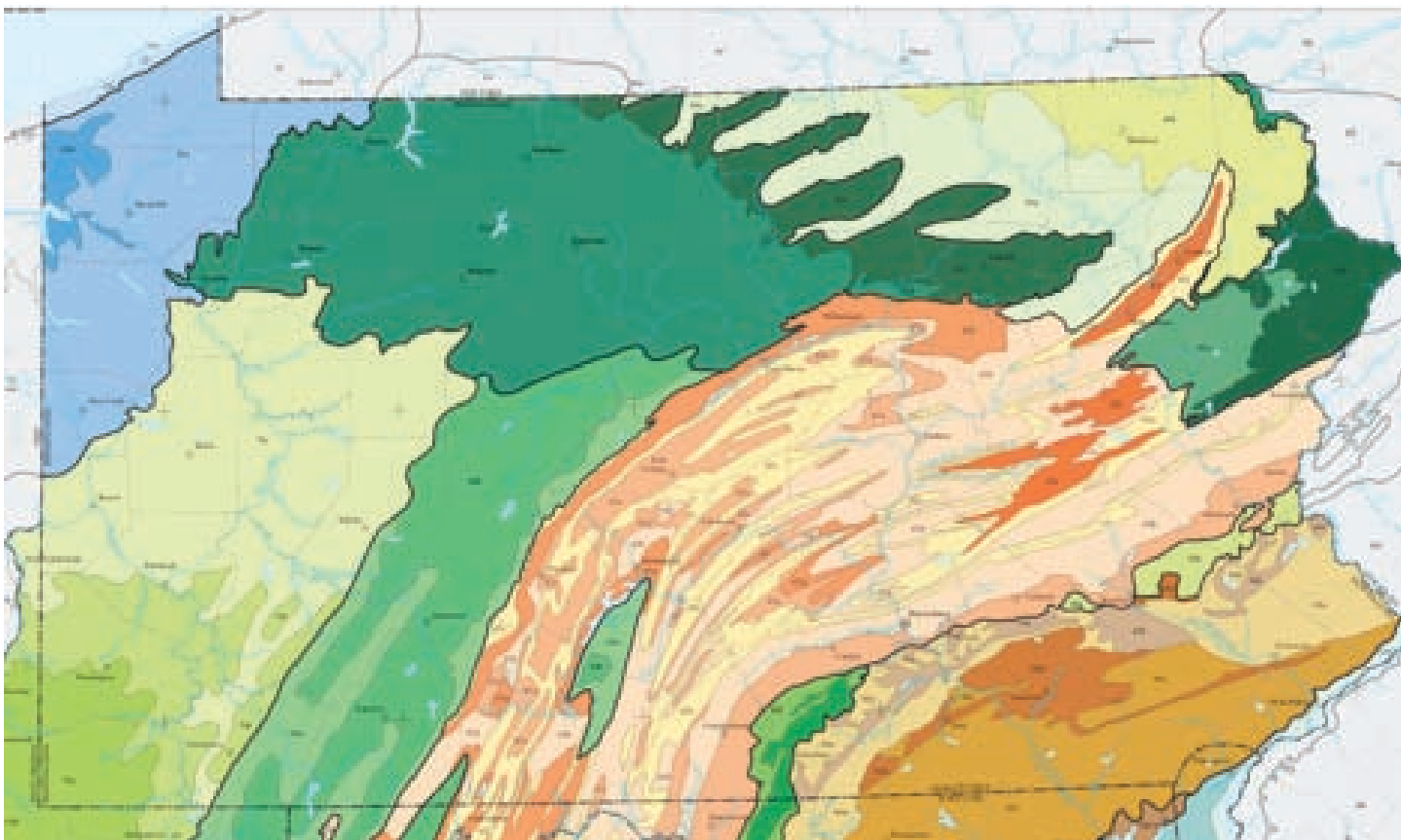


Figure 1. Level III Ecoregion Map of Pennsylvania (Source:).

Ecoregions of Pennsylvania

Jaci Braund, PNPS Vice President

What is an “ecoregion”? It may sound complicated, but it is simply where ecosystems are generally similar within a given region. The EPA has mapped out the ecoregions for the United States and determined boundaries with four levels of clarity. Level I is the most coarse view of the ecoregions and Level IV is the most fine view of the ecoregions. I find viewing Level III as the most helpful when specifically looking at Pennsylvania (Figure 1). Defining these regions supports further ecological and biodiversity research and serves as a foundation for the understanding of ecosystems. By studying these maps, we can get a better sense of the natural distributions of Pennsylvania’s flora.

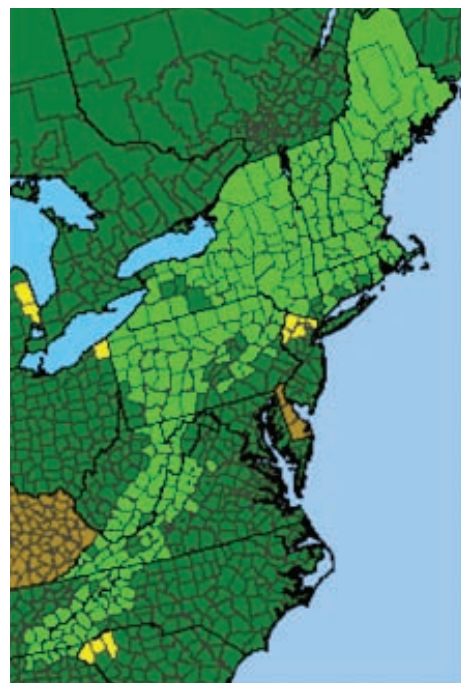
Ecoregions are determined from a combination of geology, soils, landforms, and climate. The map of Pennsylvania’s ecoregions in Figure 1 shows some distinctive patterns. The northern tier is nearly all considered to be North Central Appalachians — which is dominated by hemlock, beech, and striped maple. The Ridge and Valley region of Pennsylvania



Figure 2. Painted trillium (Source: Forest Service).

Figure 3. County level range map for painted trillium (Source: bonap.net).

also shares its name with the Ridge and Valley ecoregion. This was coined due to the numerous parallel sandstone ridgelines followed by limestone valleys throughout this region. Chestnut oak, mountain laurel, and huckleberries continue for miles in this area, along with many vernal pools. The southwestern corner of PA is considered to be within the Western Allegheny Plateau and ecologically resembles southern Appalachia much more closely than the rest of the state, with



tuliptree, magnolia, basswood, and a rich herb layer.

Based on this foundation of ecoregions, we can also see some additional patterns emerge with plants. Some plant species tend

to be fairly strict in their native range, such as painted trillium. Painted trillium (*Trillium undulatum*) is a beautiful species of trillium known for a splash of pink surrounded by white on the petals (Figure 2). It has largely been documented in the northern tier of PA, and down along the higher elevation mountains into Somerset County. Extending our view outside of PA, we can see that in the south, it is only known from higher elevations and becomes a lot more common throughout the northeast (Figure 3). The pattern isn't exact though, but from this, I gather that painted trillium prefers cooler temperatures and perhaps was documented within wooded coves that remain cooler in some of the outlier counties. Another interesting species to look at in consideration with ecoregions is the shale-barren evening-primrose (*Oenothera argillicola*, Figure 4). This species is



Figure 4. Shale-barren Evening-Primrose (Source: Flora of the Southeastern United States).

Pennsylvania's floral diversity has been determined by the geology and landforms that have come before it, and it has all been thoroughly studied and documented in the form of ecoregions. If you are reading this and curious what should be chosen for your next native planting, I suggest looking to see which ecoregion you are located within first. Next, I suggest checking out a local natural area within your ecoregion to see what's growing. If you are having a difficult time growing something specific in your yard, it could be due to the ecoregion. Is it too hot for that northern species in the summer? Is it too cold for this southern species? Perhaps it thrives on rocky, acidic soils such as the sandstone outcroppings of the Ridge and Valley region.

considered to be Threatened in PA based on relatively few populations and a specialized habitat. As the name suggests, this species is only found on shale barrens. We can see from

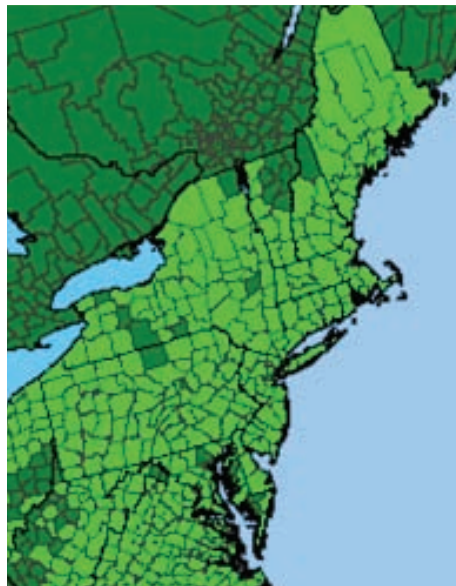


Figure 5. County distribution of cardinal flower (Source: bonap.net).

the ecoregion map that shale ecosystem types are found within the Ridge and Valley ecoregion and then we can get a sense for how limited in scope this plant is. Upon reviewing where shale is found within PA, it is understandable that this plant is a threatened species and it is important to protect this habitat. This scenario is a common occurrence for Pennsylvania's rare flora.

Still, many plants do not seem to need to follow the ecoregion maps. Cardinal flower (*Lobelia cardinalis*) is documented from nearly every county (Figure 5). How can that be? I suspect that cardinal flower is happy just to be along an open streamside, of which we have many in PA. Cardinal flower, among a few other common choices for native gardens, likely do so well in these areas because they are open and non-forested. Other species such as Canada goldenrod (*Solidago canadensis*) and red maple (*Acer rubrum*) are simply generalists in their preferred habitat and can be found in a multitude of places.

Today's News is Bleak | Share Your Garden Bliss

By Jean Najjar

On the wall by my kitchen table there is an old greeting card that I framed years ago as a reminder that there is a refuge from my worries just a step outside my door. "When the world wearies, and society ceases to satisfy, there is always the garden.æ There is a good chance that you have heard this line before and perhaps you know of the author. Minnie Aumonier was an artist and writer, born in England in 1865, and known for her poetry and illustrations. Her record is inspirational and a model for creativity in the garden.

I've been pulling together content for our PNPS newsletter for several years and recently I took on the role of managing our e-Newsletter. I plan to send out this electronic version monthly and hope to engage members in this effort by inviting contributions.

To that end, we are seeking contributions of poetry, stories, drawings, and photographs that highlight the beauty of native plants and gardens to share with our community. Contributions may appear in PNPS Notes (our print newsletter), monthly e-Newsletter, and perhaps on our website and social media pages. We will credit all work according to the submitters wishes.

Please consider sharing your garden bliss with PNPS. Email your creativity, to info@panativeplantsociety.org | Attention Jean Najjar



Cinnamon Fern

continued from page 1

Wandering through Hemlock and Oak forests and various wetland communities, Cinnamon Ferns are often found with three-way sedge (*Dulichium arundinaceum*), skunk-cabbage (*Symplocarpus foetidus*), partridge berry (*Mitchella repens*), violets (*Viola* spp.), turtlehead (*Chelone glabra*), jewelweed (*Impatiens* spp.), winterberry (*Ilex verticillata*), highbush blueberry (*Vaccinium corymbosum*), swamp azalea (*Rhododendron viscosum*), spicebush (*Lindera benzoin*), buttonbush (*Cephalanthus occidentalis*), plants that, like the fern itself, thrive where soils are saturated and the canopy filters the light.

Cinnamon Ferns often share their damp, shaded homes with a diverse mix of tree species that thrive in wet or seasonally saturated soils. In forested wetlands, streambanks, and fens, you may find them growing beneath a canopy of bitternut hickory (*Carya cordiformis*), blackgum (*Nyssa sylvatica*), green ash (*Fraxinus pennsylvanica*), swamp white oak (*Quercus bicolor*), pin oak (*Quercus palustris*), black ash (*Fraxinus nigra*), eastern hemlock (*Tsuga canadensis*), tamarack (*Larix laricina*), red maple (*Acer rubrum*), and eastern white pine (*Pinus strobus*).

Rooted in the Wetlands: The Quiet Work of the Cinnamon Fern

Year-round, the Cinnamon Fern quietly anchors the forest floor, spreading via underground rhizomes. The fibrous root system helps stabilize the soil along stream embankments, wetland margins, seeps, and other sensitive areas, thereby reducing erosion in these vulnerable locations.

Long after the fertile fronds have crumbled and disappeared, autumn arrives to paint the sterile fronds in warm tones—yellows, oranges, and browns—before they also fade with the season and join the slow decomposition on the floor of forested wetlands and stream-fed woods.



Cinnamon Fern, *Osmunda cinnamomea* (Photo credit Liz McDowell)



Cinnamon Fern, *Osmunda cinnamomea* (Photo credit Liz McDowell)

The shade of the tall, arching sterile fronds creates a microhabitat beneath their canopy that wildlife, such as ground-nesting birds, small mammals, and amphibians, can use as shelter.

The Cinnamon Fern also serves as a host plant for several moth species, including the *Olethreutes osmundana*, whose larvae feed on its foliage.

Botany in Process: The Ongoing Debate Over the Reclassification of the Cinnamon Fern

Science is constantly testing its theories. It is under this ongoing spirit of inquiry that scientists have reexamined the long-held classification of the Cinnamon Fern in the *Osmunda* genus alongside its relatives the Interrupted Fern (*Osmunda claytoniana*) and Royal Fern (*Osmunda regalis*).

Advances in molecular genetics, combined with in-depth studies of morphological traits, led researchers (Daniel Potter, 2008) to reconsider the relationships within the *Osmunda* genus. Closer examination revealed that the Cinnamon Fern (*Osmunda cinnamomea*) differs significantly enough to warrant its own genus: *Osmundastrum*.

While this reclassification has been accepted by institutions such as the Native Plant Trust, a Massachusetts-based organization dedicated to native plant conservation, it has not been universally adopted. The USDA PLANTS Database, for example, continues to list the species under its former name, reflecting the gradual process of taxonomic change.

Kindred in the Understory: Cinnamon, Interrupted, and Royal Ferns

Cinnamon Fern is not the only fern to be chanced upon when wandering through these forested and wetland communities. Its two close relatives — Interrupted Fern (*Osmunda claytoniana*) and Royal Fern (*Osmunda regalis*) — also make their home in Pennsylvania's woodlands and wetlands, each with its distinct characteristics.

Interrupted Fern inhabits the upland edges of wet habitats, favoring slightly drier soils than its cousins, yet still thriving in the dappled light beneath the hardwood canopies. It takes its name from the distinctive rust-brown fertile pinnae (spore-bearing leaflets) that "interrupt" the middle section of the otherwise brilliant green frond, creating a noticeable darkened gap. These fertile leaflets wither early in the season, much like the Cinnamon Fern's fertile fronds, in this case, leaving behind a frond that appears curiously segmented, as if something had nibbled through it. Interrupted Fern's fronds tend to grow in a more upright, fountain-like shape, and their color leans toward a cool, bluish-green hue.

Royal Fern, on the other hand, delights in standing water and richer, waterlogged open wetland conditions such as swamps, bogs, wet meadows, and fens. Its fronds are more widely spaced, giving a swishy, layered look that almost resembles compound leaves. The fertile and sterile fronds are similar in form, but the fertile structures appear at the very top of the fertile frond in a plume-like flourish of golden or rusty-brown pinnae. This floral elegance gives the Royal Fern its stately appearance.

Though these three ferns often share the same habitats, a closer

look reveals their unique signatures — Cinnamon Fern with its central cinnamon spires, Interrupted Fern with its mid-frond gap, and Royal Fern with its open, regal crown.

In the tranquility of Pennsylvania's forests and wetlands, the Cinnamon Fern helps shape and sustain the habitats it's part of—rooted, resilient, and quietly essential, offering shelter, stabilizing soil, and supporting the web of life around it. With fronds that return and rise in rhythm with the seasons, it provides more than a visual sign of spring or autumn. Its presence signals the health of its surroundings.

Welcome the Cinnamon Fern to Your Landscape

With its preference for moist, shady woodlands and wetland edges, Cinnamon Fern thrives in rain gardens, stream edges, wetlands, and other moisture-rich environments. It will tolerate more sun if provided with supplemental water during the warm, sunny months. Plant the Cinnamon Fern in your landscape, and let it echo the quiet strength of Pennsylvania's forests and wetlands.

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