

Pennsylvania

PENNSYLVANIA NATIVE PLANT SOCIETY

# notes

VOLUME 20 NO.2 2018

## Notes on Indian Pipe

Liz McDowell, Elk Ridge Native Plant Preserve

Hiking a forested trail on the Allegheny Plateau in late summer you spy a cluster of translucent white, pipe-shaped objects poking through the earth. Though it appears at first glance to be a fungus, it's actually a native perennial wildflower, called Indian Pipe, *Monotropa uniflora*. Its other common names relate to its eerie appearance, including Corpse Plant, Ghost Flower, and Ice Plant.

Indian Pipe is waxy-white with a solitary flower and scale like-leaves. A member of the Ericaceae or heath family, it grows to a height of 8 to 10 inches from June to September in dense oak and pine woods. It can be found in temperate and boreal forests in much of North America, as well as around the globe in Europe, Himalayas, and Japan. Surprisingly, there are also disjunct populations from Mexico south into Columbia.

The single, nodding white flower, which resembles the 'bowl of a pipe', turns upright and blackens after it's pollinated by various insects, such as long-tongued bees. Its scientific name *Monotropa uniflora* describes this feature: "monotropa" — once turned and "uniflora" — one flower. Since it doesn't contain chlorophyll, it can't produce its own food through photosynthesis and so was previously considered saprophytic (absorbing nutrients from decayed organic matter). Today Indian Pipe is described as mycotrophic (an epiparasite that uses mycorrhizal fungi as 'middlemen' to obtain nutrients indirectly from the roots of green plants).

Though potentially toxic, Indian Pipe was traditionally used as a rinse for sore eyes. Modern researchers have determined that Indian Pipe has anti-bacterial effects. So instead of being associated with death, this unusual wildflower should be considered a potentially healing native plant.

Left: Indian pipe. Photo: Boyer & McDowell, Elk Ridge Native Plant Preserve (ERNPP).

Inset: Emerging Indian pipe stalks on forest floor. Photo: Janice Wells Annunziata.



## Dear Members and Supporters,



It has been a real honor to serve as the President of the PNPS Board. I am grateful to Debra Grim, Diane Albright, and Falene Hamilton who gave me the opportunity to serve; and who continue to be loyal stewards of this organization. I also want to thank Danielle Lanagan and Sarah Chamberlain for stepping into the roles of President and Vice President respectively. I look forward to supporting them as they bring fresh perspective and

energy to the Board. And I ask you to join me in supporting their efforts.

### How can you help? Let me count the ways.

Working from home:

- We need help with **administering our Facebook Group**, which now has over 6,000 members. New members join each week and need to be approved. Requiring approval helps us to reduce spam, but occasionally we still see inappropriate posts that have to be addressed. This work is currently shared by several Board members but it would be great to move this responsibility off the to do list of the Board. We are seeking a couple of volunteers to work in tandem to oversee this group.

- Any librarians in the house? We would like to **create and maintain an index** of our past newsletters. Basically, we would like to have a volunteer go through each newsletter, and index plant and people names, and article titles.

- **Outreach and Education Chair** — Setting a calendar of events for our organization is a critical role; that we would like to fill. We are seeking a volunteer who would develop a calendar of events, including: speakers, native plant walks, and workshops with feedback and support from the board. So if you have ever wondered why we don't do more events it's because we have been waiting for you.

- **Annual Meeting Chair** — Related to the role above, we are seeking an individual or team to help plan our 2019 Annual Meeting. Now is the time to start this process. So if you have ideas about where we should meet and what kind of program we should schedule, take the lead now.

We are also seeking to fill the roles of Treasurer and Corresponding Secretary.

If you have an interest in helping with any of these roles, or if you are interested in joining our Board of Directors please email me at [info@panativeplantsociety.org](mailto:info@panativeplantsociety.org).

Sincerely,  
Jean Najjar

## 2018 CENTRAL PA NATIVE PLANT FESTIVAL AND SALE FINDS A NEW HOME ACROSS THE STREET!

Boal Mansion, Boalsburg PA  
[www.boalmuseum.com](http://www.boalmuseum.com)

By Diane Albright

Our new location at the Boal Mansion in Boalsburg provided a relaxed, natural setting for this year's plant sale. And the weather even cooperated! Sunshine helped to bring out between 800-1000 people, requiring us to open extra parking lots! We like having that kind of problem. Plans are already in place to deal with that issue next year.



Lots of people took advantage of pre-ordering from our vendors, which ensures you won't miss out on that special plant you've been looking for. Our presentations were well attended and lot's of plants found new homes.

*Mark your calendar for next year — May 4, 2019.*

The festival featured over 14 vendors and five information booths. As we continue to grow, we will continue to need volunteers — both in the planning stages and the day of the event. So let us know if you are interested in helping!

Email us [Info@panativePlantSociety.org](mailto:Info@panativePlantSociety.org)



Attendees at the PNPS Central PA Native Plant Festival take a break to catch up with friends.

### BOARD OF DIRECTORS – 2019-2020

President .....	Danielle Lanagan
Vice President .....	Sarah Chamberlain
Corresponding Secretary .....	[vacant] <a href="mailto:Correspondence@panativeplantsociety.org">Correspondence@panativeplantsociety.org</a>
Recording Secretary .....	Merrill David
Treasurer .....	[vacant]
Directors at Large .....	Falene Hamilton

# 2018 PNPS Annual Meeting Review



By Jean Najjar

We were thrilled with the turnout of our 2018 Annual meeting in State College with 91 attendees joining us to renew old acquaintances and enjoy our program of speakers.

PNPS was very fortunate to have renowned Botanist Dennis Whigman from the Smithsonian Environmental Research Center speak about his work with Orchids. His passion is to establish the North American Orchid Conservation Center (NAOCC), an initiative of the Smithsonian and the United States Botanic Garden. NAOCC's mission is to secure the genetic diversity of native orchids for future generations. The NAOCC model for orchid conservation is based on public-private collaborations and there are currently more than fifty collaborating organizations



Left: Dennis Whigman and Danielle Lanagan admire the display of orchid origami kits that were shared with attendees. Above: Orchid Origami Kit

distributed across the continent from Florida to Alaska. To learn more about these efforts and how you can support the conservation of our Native orchids visit these websites:

- <https://northamericanorchidcenter.org>
- <https://goorchids.northamericanorchid-center.org>

For fun, Dennis shared some samples of the Orchid-Gami with attendees. These pre-cut origami sheets have been developed by the Center for educational purposes. To learn more about it visit: <https://northamericanorchidcenter.org/orchid-gami/>

Our second speaker, Debbie Naha, the Wild Edibles Lady presented a slide show on edible plants of Pennsylvania, after which she offered a tasting of chilled Spicebush tea (*Lindera benzoin*). Debbie emphasized plant identification, forage safety, look-alike plants, sustainable harvesting and nutrition. PNPS has gotten a number of questions about native plants that are edible and we appreciate being

## EDIBLE NATIVE PLANTS OF PENNSYLVANIA

(from Debbie Naha's presentation)

**Acorns / Oak** *Quercus* spp.

**Persimmon** *Diospyros virginiana*

**Shagbark Hickory** *Carya ovata*

**Pawpaw** *Asimina triloba*

**Eastern White Pine** *Pinus strobus*

**Redbud** *Cercis canadensis*

**Stinging Nettle** *Urtica dioica*

**Staghorn Sumac, Smooth Sumac, etc**

*Rhus* spp.

**Common Greenbrier** *Smilax*

*rotundifolia*

**Cattails** *Typha* spp.

**Ramps / Wild Leek** *Allium tricoccum*

**Trout Lily** *Erythronium americanum*

**Spring Beauty** *Claytonia virginica*

**Wild Bergamot** *Monarda fistulosa*

**Black-seeded Plantain**

*Plantago rugelii*

**Wild black cherry** *Prunus serotina*

**Black Raspberry** *Rubus occidentalis*

**Jewelweed** *Impatiens capensis*

**Chickweed** *Stellaria* spp.

**Spicebush** *Lindera benzoin*

**Elderberry** *Sambucus canadensis*

**Wintergreen** *Gaultheria procumbens*

**Black Walnut** *Juglans nigra*

Learn more: [www.wildediblesnjsa.com](http://www.wildediblesnjsa.com)

able to share the list of natives (above) that Debbie included in her wild edibles talk — more reasons to plant natives. To find her recipe for Spicebush tea and more visit her website: [wildediblesnjsa.com](http://wildediblesnjsa.com)

It is time to start planning our 2019 meeting. If you are interested in hosting our next meeting or if you would like to be involved in finding speakers we would appreciate your help. Please email [info@panativeplantsociety.org](mailto:info@panativeplantsociety.org)

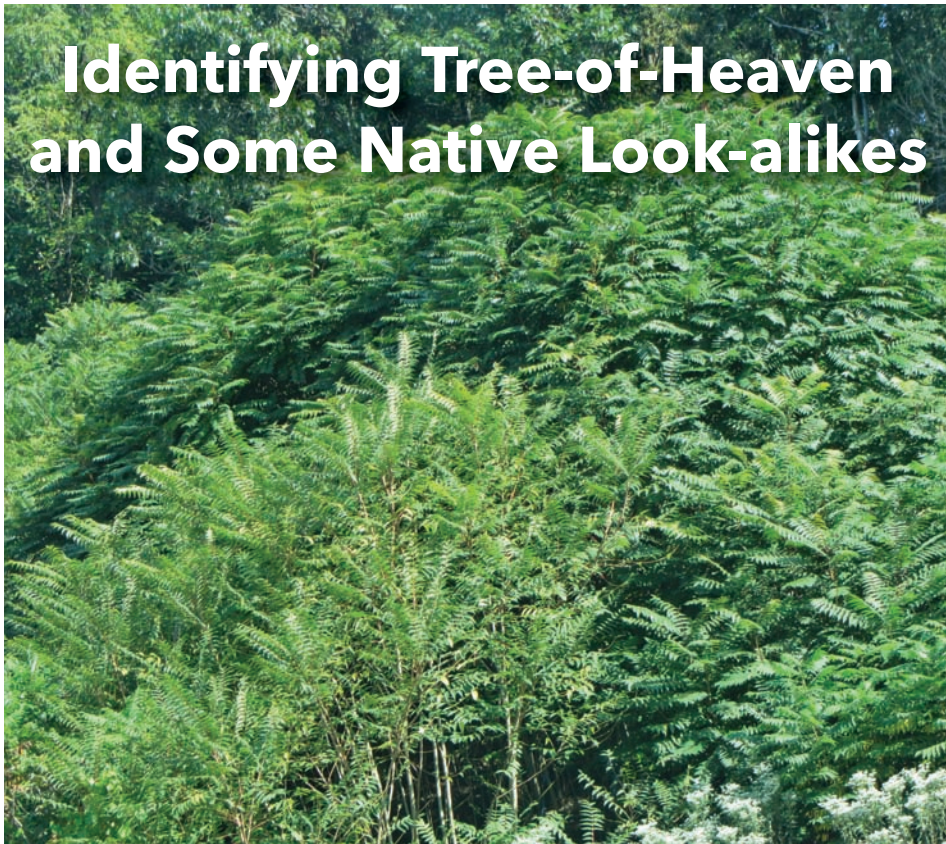


Debbie Naha and Danielle Lanagan enjoy a tasting of chilled Spicebush tea.



Debra Grim and Diane Albright welcome attendees.

# Identifying Tree-of-Heaven and Some Native Look-alikes



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By Dave Jackson  
Forest Resources Educator  
Penn State Extension-Centre County

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**T**his article covers the key characteristics on how to identify tree-of-heaven and distinguish it from a couple of common native look-alikes. From observations we have found that tree-of-heaven is one of the preferred hosts of the introduced spotted lanternfly. Interestingly enough, we have found this to be good news, as we are able to use this to our advantage to help control spotted lanternfly populations. Correct identification of the tree is essential since several native trees can be easily confused with tree-of-heaven.

The scientific name for tree-of-heaven is *Ailanthus altissima*. Many people simply refer to it as Ailanthus. Some other common names include Chinese or stinking sumac. It is an invasive tree native to China, originally introduced to the Philadelphia area by an amateur gardener in 1784, more than 200 years ago. It was valued as a street and shade tree as it showed great tolerance to harsh urban environments. It also established easy, had rapid growth, and an absence of serious pests. It was widely planted in the Baltimore and Washington DC areas, even into the 20th century. However, enthusiasm

soon waned after gardeners became familiar with its suckering habits and foul smelling odor.

Tree-of-heaven has become naturalized across much of the United States and now occurs in 42 states from Maine to Florida and west to California. It is very common in the mid-Atlantic and mid-west and is now found on the west coast where it was introduced by Chinese immigrants.

Tree-of-heaven has rapid growth and can grow into a very large tree, reaching heights of 80 to 100 feet and up to six feet in diameter. However, the species is also relatively short-lived and rarely survives more than 50 years.

The leaves of tree-of-heaven are pinnately compound, meaning they have a central stem, called a rachis, in which leaflets are attached on each side. One leaf can range in length from 1-4 feet with anywhere from 10 to 40 leaflets. The leaflets are long and narrow or what is referred to as “lance” shaped.

The margins, or edges, of each leaflet are smooth or “entire” with no teeth or “serrations” along the edge of the leaflet. However, at the base of each leaflet you will find one to two protruding bumps on the margin. These are commonly referred to in the literature as glandular teeth. This is a great diagnostic characteristic to look

for when trying to identify this tree during the growing season. In addition to the glandular teeth at the base of each leaflet, when crushed, the leaves and all plant parts give off a strong rancid smell similar to cat urine or burnt peanut butter.

The bark of tree-of-heaven is smooth and green when young, eventually turning light brown to gray. It resembles the skin of a cantaloupe when young, later turning darker gray and rough.

The twigs of tree-of-heaven are alternate on the tree. They are stout, greenish to brown in color with small lateral buds and lack a terminal bud at the end of the twig. They have large V or heart-shaped leaf scars. The leaf scar is the area exposed when the leaf falls from the stem. Lateral buds are located at the top of each leaf scar, but not enclosed by the scar. The twigs can be easily broken to expose the large brown center, or pith. This is one of the trees most convincing identification feature. The pith is spongy in texture, and brown in color. It also has a similar unpleasant odor as the crushed leaves.

Any tree with pinnately compound leaves could likely be mistaken for tree-of-heaven. Here are some examples of trees with this feature: staghorn sumac (*Rhus typhina*), smooth sumac (*Rhus glabra*), black walnut (*Juglans nigra*), butternut (*Juglans cinerea*), hickory (*Carya* spp.), white ash (*Fraxinus americana*), Green ash (*Fraxinus pennsylvanica*), and box elder (*Acer negundo*). This is only a short list without images.

Note however, a combination of features including branching pattern (opposite vs. alternate), leaf margin, bud, leaf scar, and bark (and possibly smell depending on the time of year) can be used to differentiate each. Recall, a pinnately compound leaf is a leaf with a central stem, called a rachis, with leaflets along each side. A pinnate leaf can have either an odd or even number of leaflets contained on the leaf. Tree-of-heaven typically have an even number of leaflets.

For this article we are going to focus in on just two of these native look-alikes; staghorn sumac and black walnut. Both of which appear to be preferred hosts for spotted lanternfly. Sumac is probably the most likely species to be confused with tree-of-heaven. After all, one of the common names for tree-of-heaven is Chinese sumac. Again though, leaf margin, twigs, leaf scars, and fruit (and possibly smell) are easy to use to separate the species.

## Staghorn Sumac

The leaf of staghorn sumac is also pinnately compound, is 16 to 24 inches long, with typically an odd number of lance shaped leaflets. Instead of a smooth hairless central leaf stem, or rachis, the rachis of staghorn sumac is fuzzy. One of the best ways to differentiate the leaves of staghorn sumac from tree-of-heaven is to look at the leaf margin. The margins on staghorn sumac leaflets are toothed or “serrated.” The fruit of staghorn sumac is also much different from tree-of-heaven. Staghorn sumac fruits are red, fuzzy drupes; found in upright dense clusters. A drupe is a fleshy fruit with thin skin and a central stone containing the seed. They mature in late summer, but persist on the tree through winter.

Staghorn sumac also has stout, brown twigs covered with fuzz, resembling a deer’s antlers in velvet. Of course, this is the characteristic that gives the tree its common name of “staghorn” sumac. The bark of staghorn sumac remains fuzzy for several years ultimately turning gray-brown and smooth with numerous horizontal marks, called lenticels. It becomes a bit scaly later in life as stems mature.

Similar to tree-of-heaven, staghorn sumac is also dioecious; again meaning a tree is either male or female. Also similar to tree-of-heaven, it grows in colonies, or “clones,” where all trees in a single colony are the same sex. Large clumps can form that are all either male or female plants.

## Black Walnut

The leaf of black walnut is also pinnately compound, 12 to 24 inches long, with a stout rachis that is somewhat pubescent, or hairy. The terminal leaflet is often missing or poorly formed. Similar to staghorn sumac, the leaflets of walnut are also finely toothed, or serrated. Most are familiar with the fruit of walnut, it is a round nut covered with a green husk that quickly turns black once it drops from the tree.

The twigs of black walnut are stout and light brown in color. The leaf scars are one of the distinguishing characteristics as they are 3-lobed and resemble a “monkey face.” The center of the twig, called the pith, on walnut is also a distinguishing characteristic of the tree. The pith is divided into chambers, referred to as a “chambered” pith. By comparison, the bark of black walnut is much darker and rough; ridged and

furrowed with a rough diamond pattern.

To summarize, we will briefly cover the key characteristics used to distinguish tree-of-heaven from staghorn sumac and black walnut. We will start with the leaves. All three trees have pinnately compound leaves containing a central rachis with multiple leaflets. Tree of heaven leaves are typically much longer, reaching lengths of 3-4 feet. The margin of the leaves on tree-of-heaven are smooth containing just 1-to-2 teeth at the base of each leaflet while the leaf margins of both sumac and walnut are toothed, or serrated. When crushed, the leaves of tree-of-heaven give off a strong

offensive odor. The twigs of tree-of-heaven are stout and hairless with large v or heart-shaped leaf scars, and contain a spongy brown center, or pith. The twigs of staghorn sumac are fuzzy, similar to deer antlers in velvet, while black walnut twigs are much less stout with leaf scars that resemble a “monkey face.” They also contain a chambered center, or pith. Lastly, the bark of tree-of heaven resembles a cantaloupe; staghorn sumac bark is smooth with horizontal lenticels; and black walnut bark is ridged and furrowed with a rough diamond pattern.

## Summary – Leaf, Twig, and Bark

### TREE-OF-HEAVEN



### STAGHORN SUMAC



### BLACK WALNUT



# Invasive Plants:

## Don't grow, don't sell, and don't plant!

The modern landscape has degraded into a dull and repetitive view composed of large seas of lawn and specimen shrubs and trees. There is little diversity among the trees and shrubs. They are chosen from a small pallet of mostly non-native plants offered by local garden centers and nurseries. A good number of commonly used landscaping plants have been identified as invasive.

These plants are so common in our

landscapes that they market themselves. Homeowners can't help but admire the bright fall color of Japanese maple (*Acer japonica*) and Burning Bush (*Euonymus alatus*) and so they seek them out their local nursery. Nurseries and garden retailers know this and so these plants are well stocked, while native plants are hard to find.

Now you might say that it's too late to stem the tide of this invasion but I don't

think so. Let's start with the list of invasives provided here. Commit to removing these plants from your own yard. Then plant natives! To the right of each invasive you will see one or more native alternatives. If you have trouble locating one of these natives visit our website and check the list of native plant sources under the resources tab. There are numerous native plant sales held around the state and you can find a list of these on our website as well.

Want to take a more active role: Stop by your local garden retailers and nurseries to see if they are selling these plants. Talk to them about why they shouldn't.

### Invasive Plant:

A plant that is both non-native and able to establish on many sites, grow quickly, and spread to the point of disrupting plant communities or ecosystems.

Terminology: As defined by the USDA Natural Resources Conservation Service ([www.nrcs.usda.gov/wps/portal/nrcs/detail/ct/technical/ecoscience/invasive/?cid=nrcs142p2\\_011124](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/ct/technical/ecoscience/invasive/?cid=nrcs142p2_011124))

### INVASIVE PLANTS

#### Burning Bush

*Euonymus alatus*  
(sum)

#### English ivy

*Hedera helix*

#### Tree of Heaven

*Ailanthus altissima*

### NATIVE ALTERNATIVES

- **Black chokeberry** (*Aronia melanocarpa*)
- **Highbush blueberry** (*Vaccinium corymbosum*)
- **Fragrant sumac** (*Rhus aromatica*)

- **Allegheny spurge** (*Pachysandra procumbens*)
- **Wild Ginger** (*Asarum canadense*)

- **Redbud** (*Cercis canadensis*)
- **Serviceberry** (*Amelanchier canadensis*)
- **Alternative-leaved Dogwood** (*Cornus alterniflora*)

#### Japanese Barberry

*Berberis thunbergii*

#### Purple loosestrife

*Lythrum salicaria*, *L. virgatum*

#### Butterfly bush

*Buddleia davidii*

#### Bradford Pear

*Pyrus calleryana*

#### Non-native Honeysuckles

*Lonicera maackii*, or *L. tatarica*

- **Witch Alder** (*Fothergilla gardenii* or *F. major*)
- **New Jersey Tea** (*Ceanothus americanus*)
- **Sweetspire** (*Itea virginica*)

- **Great Blue Lobeli** (*Lobelia siphilitica*)
- **Mist Flower** (*Eupatorium coelestinum*)
- **Native Asters**

- **Buttonbush** (*Cephalanthus occidentalis*)
- **Milkweeds:** (*Asclepias tuberosa*, (*Asclepias incarnata*), or (*Asclepias syriaca*)

- **Winterberry** (*Ilex verticillata*)
- **American Cranberrybush** (*V. trilobum*)
- **Serviceberry** (*Amelanchier canadensis*)
- **Alternative-leaved Dogwood** (*Cornus alterniflora*)

- **Winterberry** (*Ilex verticillata*)
- **Spicebush** (*Lindera benzoin*)
- **Red Osier Dogwood** (*Cornus sericea*)
- **Silky Dogwood** (*Cornus amomum*)

There are many native alternatives to invasive species:



## PNPS LOCAL CHAPTERS — UPDATE

By Danielle Lanagan

The PNPS is in the process of creating chapters throughout the state. The goal of having chapters is to offer local events and activities for our members spread throughout the state and to create opportunities to educate non-members about the benefits of native plants. Some of the activities the chapters could provide to a local area are: garden tours, identification walks, workshops, talks and plant sales.

The exciting news is that there are several groups of people already in the process of creating a couple chapters! We will keep you informed when a chapter becomes official. Each chapter will have a page on our website as well as their activities added to a state-wide master calendar.

If you are interested in getting involved in a chapter in your area, please write to us at [info@panativeplantsociety.org](mailto:info@panativeplantsociety.org) so we can put you in touch with other interested people in your area.

## END OF YEAR GIVING

Support our mission to promote native plants by making an end-of-year donation

**Please send your donation to:**

PNPS – Outreach  
PO Box 807 • Boalsburg, PA 16827

**Or donate through PayPal at:**

[www.panativeplantsociety.org/join-us.html](http://www.panativeplantsociety.org/join-us.html)



*The carnivorous Drosera relies on first trapping its prey with its sticky, glandular hairs before it slowly rolls up the edges of the leaf to capture insects. Drosera is often called sundew because the way the glandular leaf hairs glisten like dew. Michaux State Forest, Adams County, June 25, 2018. Submission in 2018 Facebook photo contest. See all the submissions on our website: [www.panativeplantsociety.org](http://www.panativeplantsociety.org)*

## PNPS Membership – Now Is the Time to Renew!

Your membership support goes to producing our annual newsletter and supporting programming at our annual meeting. It also helps us to produce and distribute educational and promotional materials at a variety of outreach events. In addition, PNPS uses its funds to support community projects with donations of plants or grants to purchase plants. We sponsor scholarships and educational programming.

As an organization PNPS has not been as proactive as we should be, reminding our members about renewing. We are going to try to do a better job going forward.

We would like to kick off the coming year by clarifying our membership renewal process and asking you to join or renew today. Your membership expiration date is listed above the address label of this newsletter. If you have questions or think there is a mistake regarding your member status please email Falene Hamilton, our Membership Chairperson: [membership@panativeplantsociety.org](mailto:membership@panativeplantsociety.org)

### RENEWAL

If you are a new member who joined in this current year (2018) or if you are a current member who wishes to renew for next year (2019); your renewal is due by December 31st, 2018. If you are a new member who joined after September 1st of this year (2018) you don't need to renew until December 2019.

### DUES

Membership dues remain unchanged: \$15 for individuals, \$20 for families, \$25 for organizations or businesses, and \$200 for a Life Membership. Since then you have no more worries about whether you are paid up for the year or not! As always, we appreciate your support at whatever level you choose.

### JOIN OR RENEW

Please complete the form below and return it along with your check to the address on the form. **Now you can join or renew online! Visit our website: [www.panativeplantsociety.org/join-us.html](http://www.panativeplantsociety.org/join-us.html)**

Name

Address

City

State

County

ZIP

Phone

Email

Check one:

- New Membership  
 Renewal

**Membership Category**

Check one:

- Individual — \$15/year  
 Family — \$20/year  
 Lifetime — \$200/year  
 Organization — \$25/year

Please make checks payable to:  
PA Native Plant Society

Mail to:  
PO Box 807, Boalsburg PA 16827

As a 501c-3 non-profit educational organization, PNPS welcomes your contributions in addition to, or instead of, regular membership. Ongoing memberships in PNPS coincide with the calendar year. Please make sure that you inform us of your current email address. Newsletters and event notices are sent electronically. Send email address and change of addresses to [Correspondence@PaNativePlantSociety.org](mailto:Correspondence@PaNativePlantSociety.org). Thank you!



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Return service requested.

Please remember to renew.

**Inside this issue:**

- Page 1 **Notes on Indian Pipe**
- Page 3 **PNPS Annual Meeting Review**
- Page 6 **Invasive Plants**
- Page 7 **Membership Renewal**

Photo by Janice Wells Annunziata

*Monotropa uniflora*, Common names: Ghost Plants and Indian Pipe July, 26, 2018, Pike County.



Join PNPS on Facebook: [facebook.com/groups/panativeplantsociety](https://facebook.com/groups/panativeplantsociety)

## 2019 EVENTS

**FEBRUARY 23** Winter Woody Plant

Identification at Shaver's Creek Environmental Center with Eric Burkhart, Ph.D., Petersburg, PA

**APRIL 27** Lancaster Native Plant

and Wildlife Festival, Manheim Township Public Library, Lancaster, PA, Seeking volunteer please email [info@panativeplantsociety.org](mailto:info@panativeplantsociety.org)

**APRIL 28** Earth Day Birthday at

Millbrook Marsh Nature Center, State College, PA Seeking volunteer please email [info@panativeplantsociety.org](mailto:info@panativeplantsociety.org)

**MAY 4** Central Pennsylvania Native

Plant Festival and Sale, Boalsburg, PA

**JUNE 5–8** Native Plants in the Land-

scape Conference Millersville University, Millersville PA, Seeking volunteer please email [info@panativeplantsociety.org](mailto:info@panativeplantsociety.org)

Visit our website for an up-to-date listing of events:  
[www.panativeplantsociety.org](http://www.panativeplantsociety.org)