



# ONAPA NEWS

Dedicated to promoting, protecting, and improving  
Ohio natural areas and preserves.

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## Ohio azaleas—Among ‘the handsomest’ flowers

By Allison Cusick

Henry David Thoreau was on a botanical mission. Yes, that Thoreau (1817-1862), the New England philosopher, poet, abolitionist, social critic and reformer. He also was an excellent botanist. He learned botany from the books of Asa Gray, who taught at Harvard where Thoreau had studied. Thoreau also fell under the spell of Gray’s close friend Charles Darwin. Thoreau closely and carefully observed the natural world from the mighty trees to the ferns and mosses at their feet. He was determined to seek out every plant species which grew in the vicinity of his home in Concord, Massachusetts. He recorded this years-long search in his private journals. Those journals were unpublished at his death, but fortunately they were preserved and today are in print.

The “pinxter-flower”, as Thoreau called it, proved to be elusive in Concord. He was excited upon hearing that a local hunter named Melvin knew where this rarity grew and on May 31, 1853, he set out to extract the secret from the discoverer. Thoreau found Melvin with “a pailfull of the azalea recently plucked...which he was going to carry into town at evening”—probably to sell as cut flowers for spare cash. “He called it the ‘red honeysuckle’. I told him I was a botanist and ought to know.” So off they went, Melvin, dog, and Thoreau, until they spied the flowers. Thoreau prepared an excellent herbarium specimen of the rare and beautiful pinxter-flower. This collection, together with nearly 900 other herbarium specimens of Thoreau’s, is now at Harvard University and can be viewed online.

Azaleas are members of the genus *Rhododendron* in the Ericaceae or Heath Family.



Photos by Guy Denny

Pinxter azalea, prized by Henry David Thoreau

Two rhododendrons in Ohio have evergreen leaves. The great rhododendron or rosebay, *R. maximum* L., is a tall, multi-branched shrub restricted to the unglaciated Appalachian Plateau. Labrador-tea, *R. groenlandicum* (Oeder) Kron & Judd, is a low shrub of great rarity in northeast Ohio bogs. In fact, this species possibly is extirpated from the state.

All parts of azaleas and other rhododendrons are poisonous to some extent. Even the honey made by bees which feed primarily on azalea flowers can be toxic. Don’t bring azalea flowers or plants into your home if you also have a cat or dog. The potential danger is too great. Deer are among the few mammals which browse azaleas. Those critters are quite fond of them, in fact. The overpopulation of deer in Ohio is a major reason for the decline of our azaleas in recent decades.

We have two or possibly three native azaleas in Ohio, depending on one’s taxonomic opinion. Many Asian and Eurasian azaleas are widely cultivated as well. Fortunately, those non-native species aren’t known to escape from gardens in Ohio, though they do in other parts of the United States. The New World azaleas have deciduous

(Continued on page 2)

## Ohio's azaleas, *cont'd.*

(Continued from page 1)

leaves, while those from the Old World may have either evergreen or deciduous foliage. Ohio's native azaleas bloom before the leaves emerge or expand, making the showy flowers very conspicuous. The word "azalea" is from the Greek for "arid", referring to a belief that the plants grow in dry soil. That is not necessarily the case, however. They generally are found in woodland edges and openings, but also in swamp thickets. Azaleas require sunlight for prime flowering. As forests mature, the overgrowth of leaves suppresses their growth. The plants often bloom well following fires which re-open the canopy. Azaleas grow best in acidic substrates; thus, they are absent from the limy soils of western Ohio.

The flame azalea, *Rhododendron calendulaceum* (Michaux) Torrey, is Ohio's rarest species as well as the most spectacular. The large yellow to bright orange flowers shine brilliantly on a sunny day. The uppermost petal of each flower bears a large, darker blotch of color. It's our only native azalea with this character. The other species have uniformly colored petals.

Flame azalea is a characteristic species of the unglaciated Appalachian Mountains and plateau. Its northernmost population is in Fairfield County, Ohio. From thence the species ranges south from West Virginia and Virginia to Georgia and Alabama. Flame azalea has been documented from five counties of southern Ohio. The few extant populations are chiefly in Jackson and Pike counties. Flame azalea currently is listed as Endangered in Ohio. This species flowers from mid-May to early June, a bit later than our other azaleas. The Ohio distribution of flame azalea can be linked to the ancient Teays River which flowed from the Appalachian northward prior to the Wisconsin Glaciation more than 20,000 years ago. Magnificent stands of flame azalea can be seen in sunny openings in the Carolinas, Tennessee and Georgia. That region is the heartland of the genus *Rhododendron*. There's greater diversity of these wonderful shrubs in the Southern Appalachians than anywhere outside the Himalayans of China and Nepal.

Botanical confusion surrounds the two other native azaleas in Ohio. Are they one species? One species with two varieties? Or two species? References disagree, but every botanist agrees that they are difficult at best to identify accurately. Unfortunately, their ranges and habitats often overlap, adding to the problem.

*Rhododendron periclymenoides* (Michaux) Shinnery is the pinxter-flower which Thoreau long searched for in Concord. It grows throughout the Appalachians from New England to Alabama. Pinxter-flower occurs in both northeast and southeast Ohio, but hasn't been seen in the



**Flame Azalea—Ohio's rarest species**

east-central counties, leaving a sizeable gap in its distribution. This species blooms in early to mid-May. The flowers are variably colored from deep to pale pink to white and sometimes are slightly fragrant. More often they lack any odor. The tongue-twisting adjective "*periclymenoides*" refers to the azalea's fanciful similarity to *Lonicera periclymenum* L., the European honeysuckle or woodbine. The latter species is a vine, however, not a shrub. The species name is ill-chosen, not to mention difficult to say and spell. Pinxter-flower usually is found in dry to moist soils in open woods and swamps. The species is listed as Threatened in Ohio due to the decline in recent populations.

The rosebay or roshell azalea, *Rhododendron prinophyllum* (Loisel.) Millais, is so similar to the pinxter-flower that some botanists consolidate these two azaleas into a single species. The scientific name of the pinxter-flower then is used for the overall species concept. Some authors, on the other hand, treat rosebay azalea as a variety of pinxter-flower. The correct name for that combination, however, is controversial. This confusion is compounded by the wide use of incorrect scientific names for these azaleas in respected works on the Ohio flora. Both E. Lucy Braun (1961) and Tom S. Cooperrider (1995, 2001) use the epithets "*nudiflorum*" and "*roseum*" for our two azaleas. Those adjectives were not validly published, so according to the rules of botanical nomenclature they cannot be used in the genus *Rhododendron*.

Rosebay azalea and pinxter-flower bloom at the same time and grow in similar habitats. Rosebay azalea has a greater geographical range than the pinxter-flower. In addition to the Appalachians, *Rhododendron prinophyllum* also is found in the Ouachita and Ozark Mountains of Arkansas, Missouri and Oklahoma, as well as in scattered sites in the mid-Mississippi Valley. Our two

(Continued on page 3)

## Founding member Renard honored by ONAPA

Katryn Renard, founding board member of ONAPA, was honored December 12 by ONAPA for her many years of service to the Ohio Natural Areas Program and the Division of Natural Areas and Preserves.

Over the last 36 years she has served as a distinguished leader of Columbus Audubon's Service in the Preserves group. It takes dedication and commitment to be a leader for such a long time. Katryn has led a multitude of projects, including constructing boardwalks, bridges, and staircases as well as building trails. Other projects include habitat improvement on preserves removing invasive species like honeysuckle, autumn olive, garlic mustard, multiflora rose and more on over half of the preserves in the state during her tenure as coordinator.

Of course, these service projects could not have happened without the commitment and dedication of Audubon members who, like her and her husband Bruce, were willing to give up Saturdays and sometimes weekends to working on the

preserves. So, without the Audubon volunteers and Katryn as the leader, the success of this program would never have happened, so she and they are to be commended for their diligence in this important work on the preserves.

The presentation of this special award was made to Katryn by Dick Moseley, ONAPA Secretary during the Annual Christmas potluck dinner of the group at the ODNR Assembly Center in Columbus. Moseley thanked her for her many years of service to the preserves and stated that the preserves are better because of what the group accomplished under her leadership.



## Ohio's azaleas, cont'd.

(Continued from page 2)

azaleas usually are distinguished by the relative hairiness on the undersurface of the leaves and the lengths of the stamens. *Rhododendron prinophyllum* flowers supposedly are consistently pink and have a spicy odor. Braun and Cooperrider point out, however, that individual plants in Ohio's azalea populations exhibit a mixture of characters, making species determination all but impossible. This has been my experience as well, not only in Ohio, but elsewhere in the Appalachians. In my opinion, it's futile to make two distinct species of these azaleas. I consider the two of them a single entity.



Pinxter azalea's name has nothing to do with its color

Pinxter-flower is a peculiar name for these beautiful shrubs. It's surprising to learn that "pinxter" has nothing to do with the color pink. Pinxter is an English corruption of the Dutch word for Pentecost. The language of the Dutch colonists in the Hudson River Valley of New York strongly influenced American English. Remember that Netherlanders were in New York and New Jersey before the English settlers. Dutch speech became deeply entrenched. And I'm not referring to the so-called "Pennsylvania Dutch", who actually spoke German. We still today use many common words of Dutch origin, such as coleslaw, sleigh, snoop, yacht, and, most importantly, Santa Claus and

Yankee. Pentecost is an important day in the church calendar, falling on the seventh Sunday after Easter. That's often in mid-May—when the azaleas bloom. Pinxter or pinkster—both spellings were used in the nineteenth century-- evolved from a religious holiday to a festival day for the many slaves of the Dutch merchants and farmers along the Hudson.

On pinkster, slaves were excused from their regular duties and given free rein to dance and sing, eat and drink, as much as they wished — for one day. Pinkster was the earliest African-American holiday recorded in the United States. The pinkster holiday has been revived in recent years in the Hudson Valley, notably in Sleepy Hollow, New York. The earliest use of pinxter or pinkster flower I've uncovered is from the early 1850's. Prior to that,

azaleas were commonly called honeysuckles. To many rural people of the Appalachians, they are honeysuckles even yet.

Our native azaleas carry the weight of history along with their beautiful blooms. The peculiar name "pinxter" conceals a tale of religion, celebration, and a day's relief from onerous slavery. As for the beauty--we all can agree with the assessment of Melvin the hunter, who said it was "the handsomest flower that grows".

Allison Cusick is a Research Associate in the Section of Botany at Pittsburgh's Carnegie Museum of Natural History and retired Chief Botanist of the Ohio Dept. of Natural Resources.

## Stewardship projects help preserve the preserves

Our ONAPA volunteers help the managers of our state’s natural areas control the invasive plants that often crowd out the botanical heritage of Ohio.

Please consider volunteering at one or more of our year-round stewardship opportunities.

The work parties blend elbow grease and education—after the work, participants enjoy a guided ramble in the preserve. No training other than what is demonstrated at the start of each project is needed. Tools are provided.

For more information and to register, please visit [www.onapa.org](http://www.onapa.org). Project registration is required so we can plan ahead appropriately. If the project is cancelled, it will be posted on the website and you will receive an email the day before, if you registered. The project will be rescheduled.



Volunteers survey results of pulling garlic mustard.

### 2019 Dates

### Natural Area

#### April-May

Thursday, April 11<sup>th</sup>

Tuesday, May 7<sup>th</sup>

Tuesday, May 21<sup>st</sup>

#### June

Wednesday, June 5<sup>th</sup>

Saturday, June 22<sup>nd</sup>

#### July

Wednesday, July 10<sup>th</sup>

Saturday, July 20<sup>th</sup>

#### August

Wednesday, August 14<sup>th</sup>

Wednesday, August 28<sup>th</sup>

#### September

Saturday, September 7<sup>th</sup>

Thursday, September 12<sup>th</sup>

Wednesday, September 25<sup>th</sup>

#### October

Tuesday, October 8<sup>th</sup>

Saturday, October 19<sup>th</sup>

#### November

Wednesday, November 6<sup>th</sup>

Tuesday, November 19<sup>th</sup>

**Rhododendron Cove** – garlic mustard control

**Christmas Rocks** – garlic mustard control

**Lawrence Woods** – garlic mustard control

**Milford Center Prairie** – teasel & other invasives’ control

**Daughmer Savanna** – teasel & other invasives’ control

**Cedar Bog** – woody species control in fen meadows

**Jackson Bog** – woody species control

**Springville Marsh** – cattail & woody species control

**Kiser Lake Fen** – cattail & woody species control

**Gallagher Fen** – woody species control

**Myersville Fen** – woody species control

**Cranberry Bog** – woody species control in bog meadows

**Karlo Fen** – woody species control

**Brinkhaven Barrens** – woody species control

**Medway PFO site** – woody species control

**Whipple Preserve** – cedar removal on new parcel

***Volunteers will be notified by email of cancellations due to weather; cancelled projects will be rescheduled and posted to the website.***

## Field trips start May 19 with shorebird identification along Lake Erie

ONAPA begins the Field Trip season on Sunday, May 19, with Spring Shorebird Identification along Lake Erie.

Leader Jason Larson, naturalist, expert birder, and Director of the Richland County Park District and Gorman Nature Center, will lead a shorebird identification field trip to several of his favorite sites along Lake Erie during the peak of spring shorebird migration.

Meet in the parking lot of the Ottawa National Wildlife Refuge at 10:00 AM. There is no participation limit but participants must sign up for this event ahead of time so that you can be contacted with any schedule changes.

Ottawa National Wildlife Refuge is located on State Route 2, Oak



Harbor, Ohio, in eastern Lucas County. Bring binoculars, bird book, and a spotting scope if you have one. Participants should dress for the weather (rain or shine), pack a lunch unless you plan on eating at the restaurant.

This field trip will last well into late afternoon. Plans are to visit several shorebird sites before noon, eat lunch at Jason's favorite local restaurant, and then head out to do more birding at Magee Marsh Wildlife Area. To sign up or if you have questions, contact Guy Denny at:

[guydenny@centurylink.net](mailto:guydenny@centurylink.net)

*Be sure to watch the ONAPA website for more field trips this year which are being planned.*

## Delores Cole receives honor from OIPC

At the Ohio Invasive Plants Council (OIPC)'s Research Conference and Annual Meeting on February 13, our ONAPA Board member and webmaster, Delores Cole, received the OIPC 2018 Award of Recognition.

OIPC awards this distinction each year to someone who has been outstanding in their contribution to OIPC, invasive plant control, education, or other related issues at a statewide or regional level.

Delores received the award for her contributions during the past four years with the redesign and management of the OIPC website, registration for all OIPC events, design of event programs, and numerous IT services.

Congratulations, Delores and thank you for all you do for OIPC and ONAPA!



**Delores Cole**



At the OIPC conference, Cole's award was accepted on her behalf by (left to right) Mark Dille, Shana Byrd and Jennifer Windus.

## ONAPA looking for stewardship assistants in 2019

ONAPA had 3 excellent stewardship assistants in 2018: Brad Small, Brad Von Blon, and Valerie Sasak. We are now looking for 2-3 new stewardship assistants this year to help with various stewardship projects on nature preserves and natural areas.

We are looking for recent college graduates who are interested in a part-time field position during May-November. If you are interested or know someone who may be, see our website for more information and contact us to apply.

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# Hepatica is harbinger of spring

By Guy Denny

One of the earliest plants to bloom in Ohio is the hepatica. Each flower is comprised of five to nine conspicuous white, pink or blue petal-like sepals. Specimens with different colored sepals can be growing side by side. Under these colorful sepals are three tiny green modified leaves or bracts which are easily mistaken for sepals since most wildflowers have green sepals. Hepatica flowers have no petals, a common characteristic of the Buttercup Family (*Ranunculaceae*) to which hepatica belongs. In late March, or sometimes earlier on warm south-facing slopes, the flowers open long before the new leaves emerge. However, they open only on sunny days when insects are active to pollinate the flowers.

The leathery semi-evergreen leaves of hepatica remain all winter long, but by spring are buried beneath leaf litter and replaced by new leaves. The stems of the flowers and new leaves are heavily covered with a fuzzy coating comprised with minute, hair-like structures that expand and contract with freezing and thawing. This adaptation reportedly protects the plants from moisture loss.

The name hepatica is Latin for “like a liver”, in reference to the broad three-lobed leaves which somewhat resemble the



lobes of the human liver. Additionally, the leaves take on a dull reddish-brown, liver-like color during the off growing season. Based on these characteristics, hepatica could, according to the doctrine of signatures, cure liver ailments. The doctrine was an ancient belief that plants, based on their color, shape, texture, or other “signatures,” could be used to treat illnesses in the human body. It was up to the practitioner to figure out just what ailment a plant could cure. Even though it was commonly used to treat chronic hepatitis of the liver in Europe ages ago, hepatica is not a treatment for liver disease. Supposedly, Native American Indians used the root and leaves to make a tea for treating dizziness and for relieving sore throats and coughs.



***Hepatica americana*, featuring rounded leaves (left) and *H. acutiloba*, with its pointed tipped leaves (below).**

Photos by Guy Denny



Two species of hepatica occur in Ohio, though seldom growing in close proximity to one another. They look alike except for the shape of their leaves. The round-lobed hepatica (*Hepatica americana*) with its rounded tipped leaves tends to be found growing in acid soils such as found throughout unglaciated Ohio. The sharp-lobed hepatica (*H. acutiloba*) with its pointed tipped leaves is more common on the calcareous soils of glaciated Ohio. More recently, some taxonomists have treated each as simply varieties of the Old World hepatica (*H. nobilis*). Regardless of its scientific name, excellent displays of hepatica can be discovered in several state nature preserves, especially Clifton Gorge, Miller Sanctuary, and Fowler Woods preserves. Hepatica is truly a harbinger of spring.

## Rare magnolias showy

By Jennifer L. Windus

Of the four magnolias found in Ohio, bigleaf magnolia (*Magnolia macrophylla* Michx.) is the showiest and the rarest. It has the largest simple leaves of any North American tree, reaching a size of 32 by 10 inches. The leaves are lobed at the base and hairy on the underside. This slow-growing, medium-sized magnolia grows in sheltered, damp, wooded ravines. Its large showy, and fragrant flowers are cup-shaped and cream-colored, with petals 6-8 inches long. The flowers are pollinated by beetles. The fruit is globed-shaped and hairy, with red seeds which dangle from the fruit by fine, transparent threads when mature.

The bigleaf magnolia's primary range is across Mississippi and Alabama, with a scattered distribution in other southeastern states. It reaches the northernmost extent of its range in Ohio where it is found in only three valleys in Jackson County. This distribution in Ohio originated from a major tributary of the preglacial Teays River. This river acted as a migration corridor from the Southern Appalachians for millions of years. The populations of bigleaf magnolias in Ohio are now restricted to deep, rocky, protected, mesic gorges of the Sharon Conglomerate sandstone. These sites provide this southern tree with relatively stable habitat, moisture, and protection from the extremes of wind and temperature.

Bigleaf magnolia is listed as endangered in Ohio. Of the three locations where it is found, only one is protected—the Rock Run valley, now encompassed by Lake Katharine State Nature Preserve. Staff from the division's Monitoring and Research Program have been monitoring the bigleaf magnolia since 1985. The monitoring project has included a complete census and mapping of the species within the preserve, tagging of individual plants, collection of growth data on tagged plants, and the collection of soil data. For the purposes of the project, the species is studied within six different ravines. As of 1989, the total number of bigleaf magnolia at Lake Katharine is estimated to be 2,600: 37 trees, 960 saplings and 1,600 seedlings (less than 20 inches in height).

The six sites at Lake Katharine which we studied range from 100 to 1,590 individuals. We have tagged 155 individuals, of all size classes, and we measured height and/or diameter of these plants each year. In general we have found the plants to grow very slowly when less than 3 feet in height (2-4 inches/year), whereas their growth increases between the heights of 3-9 feet (6-7 inches/year). Mature trees may be 30-40 feet in height and 10 inches in diameter. Sprouting is common, either at the base of the plant, or as a side bud when the main bud is damaged. Soil conditions of each of the six sites are generally acidic (pH of 4.8-6.5), cool (39-46 degrees F), and moist (20-60% moisture).

Umbrella magnolia (*Magnolia tripetala* L.) is another magnolia you will see at Lake Katharine. It looks similar to the bigleaf magnolia, although the leaves are not lobed at the base nor are they hairy on the underside. This magnolia is also rare in



Photos by Guy Denny

### Bigleaf magnolia (top) and umbrella magnolia

Ohio, listed as threatened, and has populations in Hocking, Jackson, Scioto and Vinton counties. Umbrella magnolia seems to occupy the lower slopes and bottoms of ravines more than the bigleaf and can tolerate a wider range of habitat conditions, including openings in the woods. Umbrella magnolia can be seen along the trails at Lake Katharine. Bigleaf magnolia is found in more remote areas of the preserve where an access permit is required. It is a spectacular sight to see these magnolias in bloom in late May or early June.

**Editor's Note:** This article was originally published in the *Division of Natural Areas & Preserves Newsletter* (May-June 1990) when Windus was Administrator of the Monitoring and Research Program. In 2002, when the division was dismantled, the DNAP Monitoring and Research Program was abolished. Monitoring and research are critical functions of any natural areas program for only through such efforts can preserve managers track the well-being of the species or natural features for which the preserve was protected and therefore understand the impact, beneficial or detrimental, of their habitat management efforts on those species and/or natural features. We at the Ohio Natural Areas & Preserves Association are working hard to get DNAP and its Monitoring & Research Program re-established under the newly elected DeWine Administration.

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Stay tuned for more information on our website and our eNews about all our 2019 stewardship projects! Projects may be rescheduled due to weather, so check back often for updates! Go to **VOLUNTEER**.



## Ohio Natural Areas & Preserves Association

PO Box 415

Johnstown, OH 43031

*Protecting Ohio's Natural Legacy*

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