



# *The Fringe*

Newsletter of the Native Orchid Preservation and Education Society  
[nativeorchidpreservationeducationsociety.com](http://nativeorchidpreservationeducationsociety.com)

January 2020

## Letter from the President

Happy New Year everyone,

We are starting our second year as a Society!

Looking back at last year I am amazed at all that was accomplished. Jeanne Rhinehart has, with other members help, provided us with some excellent Newsletters. Our NOPES displays have won many awards at the same time informing other orchid enthusiasts about our society's goals. We had a very successful society members weekend and saw lots of orchids. I think one of the best parts has been meeting new members, going new places and seeing orchids for the first time.

As I look forward, I wanted to let everyone know about the Native Orchid Conference, which is being held in Washington state this year, June 25-29th. This is an opportunity you don't want to miss. There will be two days of lectures and two days of orchid hikes.

We have lots of hikes planned for this orchid season. Once finalized, we will have them on our calendar, and we will be sending emails with the hike details to our members.

Sincerely,

Teresa Huesman, President NOPES

**It's time to renew your membership for the new year!**

**Membership forms for the Native Orchid Preservation and Education Society are available at [nativeorchidpreservationeducationsociety.com](http://nativeorchidpreservationeducationsociety.com).**

### Planned Hikes and Workdays

Lake Hope State Park: July 17 – 19 Field trips and Annual Meeting. We have reserved 4 cabins.

ONAPA is planning work at Cranberry Bog this winter. Members of our group are planning to attend. If you would like to help, please let Jeanne know – [jeanws@me.com](mailto:jeanws@me.com).

We will be doing preview hikes to see what is available throughout the year. If you would like to be put on an email list to be notified, please let Teresa know. [huesmantj@aol.com](mailto:huesmantj@aol.com)

### Cranberry Bog November 5, 2019

Barry and Jeanne Rhinehart of the Native Orchid Preservation and Education Society (NOPES) joined with Ohio Natural Areas & Preserves Association (ONAPA) members and assistants and Ohio Division of Natural Areas and Preserves (ODNAP) members for a successful day at Cranberry Bog! The day started off with rain and we were worried that our 2<sup>nd</sup> trip would again need to be canceled. Weather reports forecasted clearing before noon, and we set off for the bog.



We continued our work of cutting and treating the woodies, especially the poison sumac.

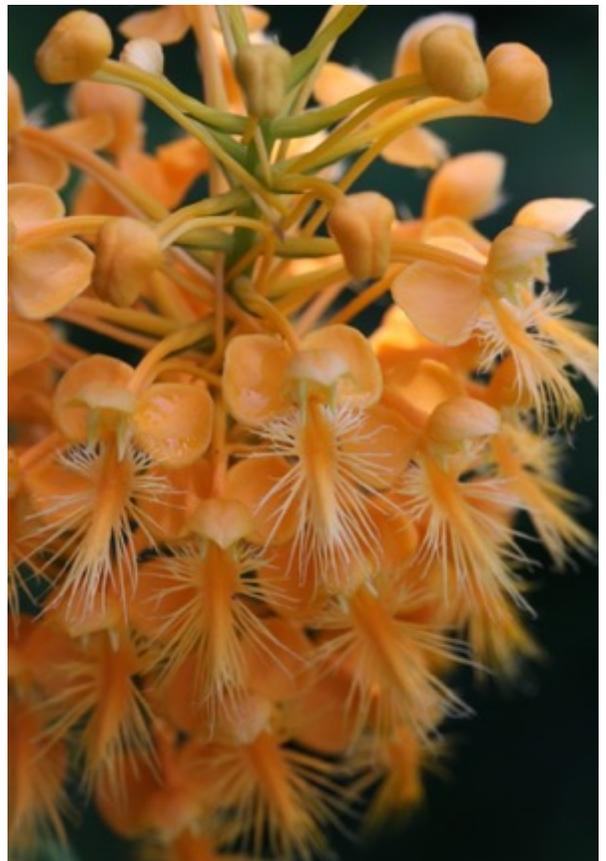


And by the end of our workday we had doubled the area cleared along the boardwalk!



## Orchid of the Month – January *Platanthera ciliaris* Jeanne Rhinehart

*Platanthera ciliaris* is commonly called the Orange Fringed Bog Orchid, Yellow Fringed Orchid, but has a variety of other common names including Orange Plume, Bobwhite's Moccasin, Owl's Head, and Rattle Snake's Master. It is one of our most showy native orchids. It has synonyms of *Blephariglottis ciliaris* and *Habenaria ciliaris* with descriptions going back to 1753. Ciliaris is a Latin term meaning "like an eyelash" pertaining to its fringed lip. Cherokee Indians were said to use its flowers and pieces of the roots on their fishing hooks as bait. Other Native Americans used the roots to make a tea for medicinal purposes to treat headaches and diarrhea. Rattle Snake's Master's name was given in Florida as the roots were used both internally and externally to treat snakebite.



*Platanthera ciliaris* in Frederick, Maryland



**Description:** Plant glabrous throughout, 45–65 cm tall. Roots fleshy and tuberously thickened. Leaves 2-5, oblong-lanceolate to lanceolate, 7-12 cm long x 1.5-3.5 cm wide. Inflorescence a loose raceme of 20-30 flowers, each subtended by a lanceolate bract 10-15 mm long x 3-4 mm wide. Lip 10-12 mm long x 7-9 mm wide (including fringe), orange, oblong-elliptic with a margin of numerous filiform fringe hairs, and a basal spur 20-25 mm long. Petals orange, linear, with a fringed apex, 4-5 mm long x 1-1.5mm wide. Sepals orange, ovate, 5-7 mm long x 5-6 mm wide. <sup>1</sup>

Growing season is mid-July through mid-September

*Platanthera ciliaris* is considered globally secure but is listed as threatened in Connecticut, Florida, Maryland, Michigan, Ohio and Pennsylvania and endangered in Illinois, Indiana, New York and Rhode Island.



*Platanthera ciliaris* is a widely distributed orchid throughout central and eastern United States and central Canada. It is found from Ontario to Florida, along the Gulf coast and Ohio Valley states. <sup>2</sup>

Around 1900, thousands could be found in Connecticut, Long Island and even New York City. But by 1988 the only remaining pockets of *ciliaris* north of Virginia were along the Connecticut coast.

*Platanthera ciliaris* grows in a variety of habitats. Plants can be found in woodlands, bogs marshes, and along roadsides but prefers moist meadows to occur in abundance.

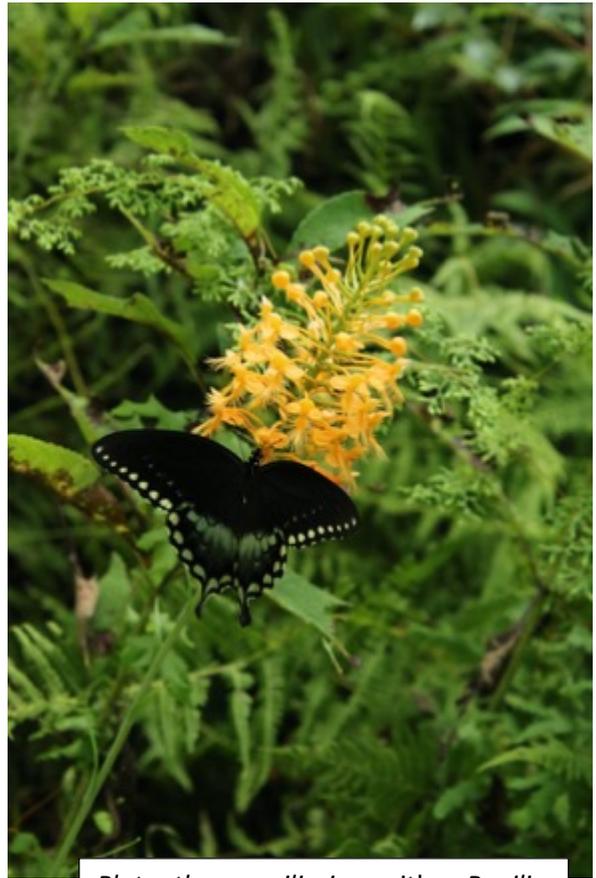


*Platanthera ciliaris* is pollinated by butterflies including *Danaus plexippus*, *Papilio glaucus*, *Papilio polyxenes*, *Papilio troilus*, *Satyrium liparops* and moths such as *Hyles lineata*.

*Platanthera ciliaris* is sometimes confused with *Platanthera cristata* which is similar in appearance to *Platanthera ciliaris*. The flower of *Platanthera cristata* is half the size of *ciliaris* but is a much deeper orange with larger petals and more fringe.



*Platanthera cristata*,  
Salisbury, Maryland



*Platanthera ciliaris* with *Papilio polyxenes*, Shawnee State Park



*Platanthera blephariglottis*,  
Salisbury, Maryland

*Platanthera blephariglottis* is similar in habit to *ciliaris* and was once considered to be the alba form of *ciliaris*. They often grow in the same locations. *Platanthera blephariglottis* grows mostly in moist regions while *ciliaris* can be found in a more varied habitat. Dried specimens are hard to distinguish.

*Platanthera ciliaris* is easily cultivated and can be obtained from many sources. When buying plants, remember to only buy from reliable sources.

Yellow-fringed orchids are attractive and easier to grow than most fringed orchids. They do well in either partial shade or full sun. The plants grow in slightly acid soils with a pH from 5 to 6. Pictured here, *ciliaris* growing in our fenced bog.



*Platanthera ciliaris* forms natural hybrids with *Platanthera blephariglottis* and *Platanthera cristata*.

Hybrid of <i>Platanthera ciliaris</i> with <i>Platanthera blephariglottis</i> is <i>Platanthera x bicolor</i>	with <i>Platanthera cristata</i> is <i>Platanthera x channellii</i>
 <p data-bbox="240 779 488 829">David McAdoo</p>	 <p data-bbox="954 779 1117 829">Cressler, Alan</p>

1. US Department of Natural Resources, <https://plants.usda.gov/core/profile?symbol=PLCI2>
2. *Orchids of Indiana*, Michael A. Homoya, Indiana Academy of Science, 1993, p. 145

**References:**

US Department of Natural Resources, <https://plants.usda.gov/core/profile?symbol=PLCI2>

*Orchids of the Western Great Lakes Region*, Frederick W. Case, Jr. Edwards Brothers, Inc., 1987, pp. 99-102.

*Native Orchids of the Southern Appalachian Mountains*, Stanley L. Bentley, University of North Carolina Press, 2000, pp198, 154-157.

*Orchids of Indiana*, Michael A. Homoya, Indiana Academy of Science, 1993, pp. 145-148.

*Wild Orchids Across North America*, Philip E. Keenan, Timber Press, 1998, pp.185-191.

*Native Orchids of North America North of Mexico*, Donovan Stewart Correll, Stanford University Press, 1978, p. 64.

Florida’s Native and Naturalized Orchids,

[http://www.flnativeorchids.com/natives\\_gallery/platanthera\\_blephariglottis.htm](http://www.flnativeorchids.com/natives_gallery/platanthera_blephariglottis.htm)

Lady Bird Johnson Wildflower Center

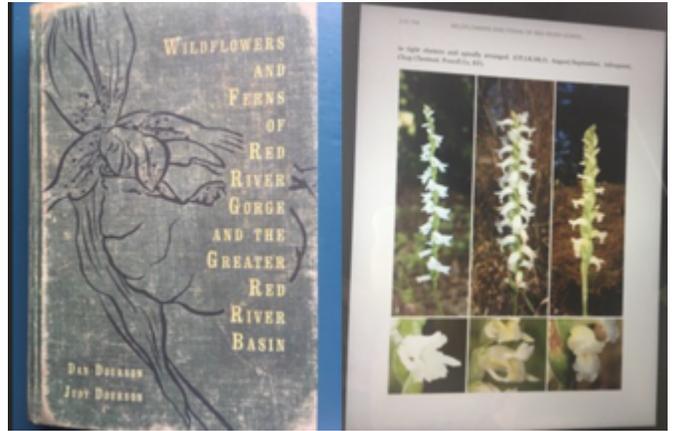
[https://www.wildflower.org/plants/result.php?id\\_plant=PLBI](https://www.wildflower.org/plants/result.php?id_plant=PLBI)

# Native Orchid Book Recommendations

## Jan Yates

*Wildflowers & Ferns of the Red River Gorge & the Greater Red River Basin* by Dan and Judy Dourson

Published this year, in flexibind (like a sturdy paperback with glossy pages, this covers the Red River Gorge area wildflowers generally but the orchid section (pp 283-312) has good photographs and descriptions of the plants, habitats, bloom seasons and counties in Kentucky where they have been found. For some species/varieties, it flags helpful features to distinguish them or to be aware of. Available for Amazon for \$ 39.95 with a Kindle edition for \$ 22.99. When I ordered the paperback, I got a Kindle version free which I think will be very useful - I think it must have been a special because I couldn't find the pairing on the Amazon web site. But you have choices, which is good.



*Wild Orchids of South Carolina* by James A. Fowler      Hardback

*Orchids, Carnivorous Plants & Other Wildflowers of Green Swamp, North Carolina*  
Flexibinding

If you don't know of Jim Fowler, let me preface this by saying he's probably the finest photographer of native orchids and other wildflowers I know and when I read his blog (jfowlerphotography.com), it has sometimes been the best part of my day. He's also a fine writer and this is reflected in both books and the blog. They are available from him directly via his blog site for \$ 30 apiece (and he autographed my copies) or from Amazon, for \$16.92 and \$ 29.95, respectively.



*Orchids of Indiana* by Michael Homoya      Hardback

*Wildflowers & Ferns of Indiana Forests*      Paperback



The opening chapters to *Orchids of Indiana* contains useful charts of blooming times, differing habits, descriptions of habitats and extensive keys to identifications, then reinforces the information in the later chapters which list the species, and describes in more detail counties in which the orchids have been found and in which habitats. For some species which look like each other, the keys are repeated, and distinguishing characteristics are noted. Photographs are good, text is informative with occasional historical anecdotes or things Homoya has learned from actually hiking and observing the orchids.

The *Wildflowers and Ferns of Indiana Forests* sorts the plants by color, is dense with information but well written and the photographs are better. This book was a recent purchase so hasn't gone on the road with me much yet but given that wildflowers don't stop at the Indiana state line, I expect it to be helpful on many hikes in Ohio and

Kentucky.

Available from Amazon for \$ 36.76 and \$ 17.28 respectively.

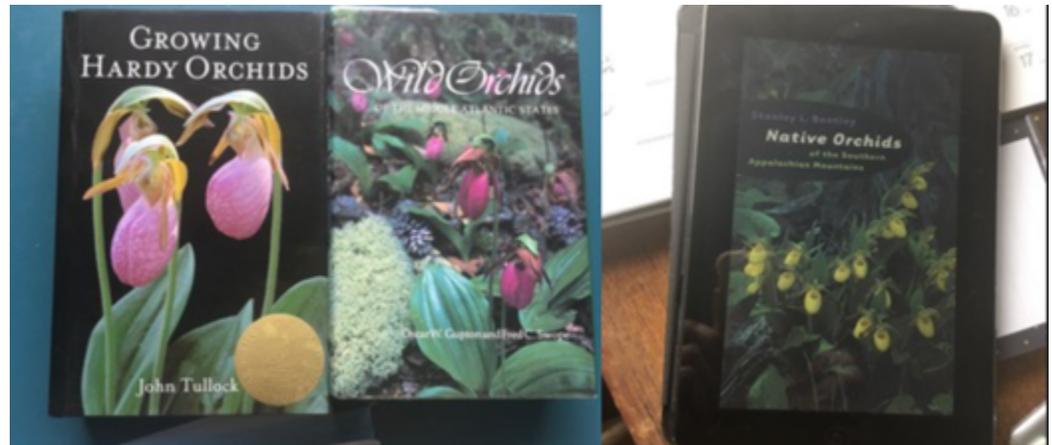
The following books have been in publication for a while and may be harder to find. Amazon is a good place to start, one is also available on Kindle so is portable and readable in color on iPads and iPhones using the Kindle app.

*Wild Orchids of the Middle Atlantic States* by Oscar W. Gupton and Fred C. Swope

Hardback \$ 4.25 approx.  
from Amazon third party sellers

*Growing Hardy Orchids* by John Tullock

Hardback from Amazon for \$ 24.00



If you want to create a bog or need cultural information on native orchids which may grow in our gardens, you will like this book.

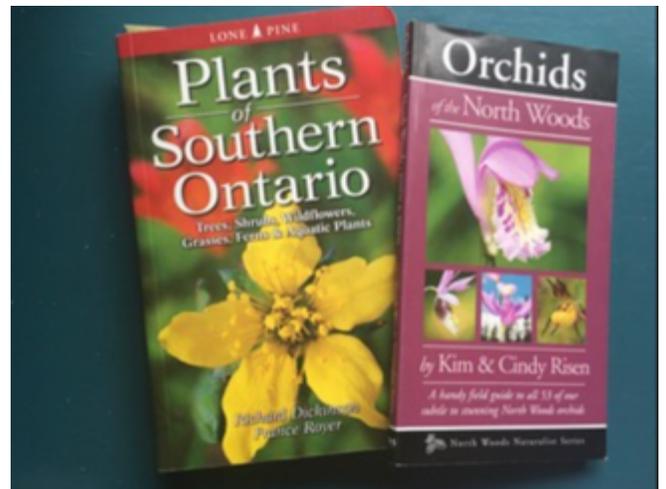
*Native Orchids of the Southern Appalachian Mountains* by Stanley Bentley is available from Amazon in hardback for \$\$\$, paperback for approx \$ 18 and in a Kindle version for \$9.99. I have the Kindle version. It's an older book and others I have listed here have more information and/or better photographs. But I got my money's worth in the Kindle version.

If you have hunted orchids in the Bruce Peninsula, Michigan and possible even northern Ohio, I recommend two books, both available from Amazon.

*Orchids of the North Woods* by Kim and Cindy Risen  
Paperback, available from Amazon for \$ 18.95

*Plants of Southern Ontario* by Richard Dickinson and France Royer  
Paperback available from Amazon for \$ 29.95

I purchased both of these in a Tobermory, Bruce bookstore which was a wonderful place to browse for plant/animal/critter books. *The Orchids of the North Woods* book is compact with good photographs of plants and close-ups of flowers, loaded with information about blooming times, habitats, and distinguishing characteristics. It's a go-to book for me.



*The Plants of Southern Ontario* is probably my most used book when going through my photographs of orchids and their companion plants - I just adore this book and the pages are studded with post-it notes flagging orchids, companion plants and shrubs I have seen hiking the Bruce and elsewhere. Even though there are other good books that cover the Ohio Valley, this one is still very helpful and it goes with me on many trips.

## Olympic National Park and Native Orchids

- Jun Lao

The 2020 Native Orchid Conference is slated to be held at Port Angeles in the state of Washington, next to Olympic National Park. I've had the opportunity to visit Olympic National Park twice, the second time, looking for native orchids on the side. The park is extensive in size, and my 2 days going around each time were definitely not enough to fully enjoy this magnificent park (or looking for orchids).

### Park Overview

Olympic National Park covers a big portion of the Olympic peninsula in Washington state, and in it, one can go from the Pacific Ocean coastline, to temperate rain forests, and up to alpine terrain. We may be familiar with tropical rain forests, but temperate rain forests are not very abundant.



Trees with moss at the Hoh rain forest

Washington state has these temperate rain forests - think moss hanging down on pine tree branches and growing in high humidity. In fact, if you've watched the Twilight movies, then you have an idea of temperate rain forests. The city of Forks, on the western side of the park, was where Anne Rice, the author of the Twilight novels, got her inspiration and the locale for these novels.



Moss on rocks along the Sol Duc waterfalls



The logging city of Forks has taken the Twilight popularity in stride and have capitalized on it (see sign above as you head to La Push and the Pacific shores).



The Olympic mountains, from the Hurricane Ridge visitor center, at an altitude of 5,242 feet.

The Olympic mountains are tall mountains to the west of the Cascades, and a great view of these snow-capped mountains can be had from the Hurricane Ridge Visitor Center, a 45-minute (from Port Angeles) drive up a one-lane road that usually punches through the cloud cover until you reach the Visitor Center - just make sure your lights are on if you are driving through the clouds as visibility drops significantly, but then as you go above the cloud bank, you get into sunshine.

Port Angeles is the city on the northern part of the peninsula, about a 3-hour drive from Seattle. It is a city on the shores of the Strait of San Juan de Fuca. From the city, one drives south to Olympic National Park's Visitor Center, and then on to Hurricane Ridge.

One thing you can do in Port Angeles is to book a whale watching tour, which tends to be less crowded than the

ones in Anacortes, north of Seattle, and where most tourists take whale watch tours.



Humpback whale breaching the surface of the water. The whale watch tour groups radio each other on sightings so that they can go to the locations where humpbacks and orcas go.

### **Native Orchids at Olympic National Park**

Given the temperate rain forest conditions, snow melt, and high humidity (not just here, but west of the Cascades), it is no wonder that this area can be an orchid and plant paradise. When I was going here, I consulted John Lamey and asked for ideas of what to see and where to go, as he spent about a week botanizing here. When I got there, I consulted with the naturalists at the visitor center, and they provided me with locations where native orchids might be found. I had a tight schedule, so there are more to see in the park than I found.

On the roadside up Hurricane Ridge road, you will see a lot of wet seeps, as snow and ice melt and run down. Bog orchids love these, as they are constantly damp with clean cool water.

The Tall White Bog Orchid is one that you can see up in Ontario and Michigan, but it is quite nice to see this orchid in bloom on the roadside among the wildflowers.

It was somewhat cold and raining when I went up Hurricane Ridge, so I was not able to appreciate the fragrance of this orchid. Once you see it, you'll be able to identify it in bloom on the roadside of Hurricane Ridge Trail.

Hidden further back, and I mean hidden in plain sight, are tall bog orchids with tall stalks of green flowers - the Slender Bog Orchid (*Platanthera stricta*) and possibly the Alaskan Orchid (*Platanthera unalascensis*). It is just amazing to see how tall they can get as they thrive on the clean cold waters.



Tall White Bog Orchid (*Platanthera dilatata*)



Tall White Bog Orchid (*Platanthera dilatata*) up close



Western Coral Root (*Corallorhiza mertensiana*)

As you head to the western side of the park, you head into the temperate rain forests. In the Salmon Cascades area going toward Sol Duc, the naturalist said to look for native orchids there, and yes, they were there - Western Coralroot here and there, together with the parasitic Pinesap. There were a number of downed trees in the area, and with the water rushing downstream and crashing on rocks, the place was quite damp, and provided moisture for moss and plants.



*(these two orchid pics may be different orchid species - would need an expert to identify..., but I think the lower one is the Slender Bog Orchid)*



Yellowish Pinesap (*Monotropa hypopitys*)

Further down the road lay the Grove of the Ancients, where a number of old trees could be found. There is a nice hiking loop trail around the area, but the orchid I found here was not too far away from the parking pullout. You can easily miss it because they are quite small.

Sunlight going through the trees helped show that these small paired leaves amidst the moss and mulch on the forest floor were actually orchids, with a lot of them having small spikes with buds. There was only one plant that had open flowers amidst the number of orchids around the area.

Going a bit further on the trail did not yield more orchids, at least within the next tens of feet further down the trail - the forest became a bit drier as you went further down the grove. If I had more time, I would have gone through the whole trail.

There were likely more native orchids as you head toward the Sol Duc waterfalls, but as it was getting late in the afternoon, I had to drive to Cape Flattery, where I would try to catch the sunset at the northwestern-most point in the continental US, and where I would stay the night.



Northwestern Twayblade (*Neottia banksiana*). Only one plant had a flower open.



There were two big surprises I had when I was in Cape Flattery - one was of bald eagles flying around the area, and another was a coral root orchid that turned out to be a quite rare one found only in the Olympic Peninsula and in British Columbia - the Ozette Coral Root (*Corallorhiza maculata* var. *ozettensis*), named for the Ozette area where native Americans lived close by. This rare orchid was discovered in 1967 and first described in 2001 by Mr. Ed Tisch of Port Angeles, Washington. This variety lacks the spotting of the typical Spotted Coral Root and typically have green flowers lightly striped in red-purple and a white labellum, though the one I saw were redder in color.



I was walking the trail headed for the sunset point when I saw these coralroot orchids (*above*), totally unexpected and unplanned for.

#### **Native Orchids at North Cascades National Park**

Other orchids that might be in the park, but which I saw at North Cascades National Park, to the northeast of Seattle, were likely Spotted Coralroots (*Corallorhiza maculata*) and Western Coral Root (*Corallorhiza mertensiana*) that were past prime and had seed pods.

While the Spotted and Western Coralroots were past prime blooming, there were a number of Giant Rattlesnake Plantains (*Goodyera oblongifolia*) that were in spike - they were even growing on fallen tree trunks together with mulch and moss.



Likely Spotted Coralroot (*Corallorhiza maculata*) with seed pods. A number of coralroots were past prime across northern Washington state.



Giant Rattlesnake Plantains (*Goodyera oblongifolia*) in spike.



Giant Rattlesnake Plantain (*Goodyera oblongifolia*) growing on moss above a fallen tree trunk.



Red pinesaps (*Monotropa hypopitys*) in the area

What I missed out was seeing the Striped Coralroot (*Corallorhiza striata*), which were present in a hiking trail to Diablo Lake, but unfortunately, the road was closed for maintenance. I was also told by the naturalists that the Fairy Slipper orchids (*Calypso bulbosa*) were already done blooming for the season.

### Sight Seeing Side Trips to Other National Parks

Aside from Olympic National Park, you can take side trips to a number of scenic spots in Washington state, including Mount Rainier National Park, where you can drive up close to the summit, at Sunrise Point visitor center (when I drove up here on July 3, it had just snowed overnight, so there was a thick snow pack, and the ranger started the fire in the fireplace to warm the center up - in the peak of summer!), and see a number of waterfalls, often with no name, as they are part of the snowmelt. There is also a part of the park on the west side that has a temperate rain forest.



Sunrise Visitor Center, July 3, 2012



North Cascades National Park is another one which is quite scenic, but is a bit more remote, so you have to reserve lodging early. It has one lake, Diablo Lake (*above*), that has a turquoise color, similar to that of Lake Louise in Banff National Park (which I haven't gone to yet) up north in the

northern Rockies of Canada. The trail to see the Striped Coral Root is close by.



Washington Pass (*above*) is a high elevation road on the eastern side of the park, that looks down toward land east of the Cascades.

North of the North Cascades National Park, and so close to the Canadian border that your cellphone tells you "Welcome to Canada", is the road to Mount Baker and Artist Point. Mount Baker is one of the tall volcanoes in the Cascades (which include Mount Rainier, Mount St Helens, and Mount Adams). Even in summer, the area still has glistening white snow packs. There are two very scenic areas here.



One is Mirror Lake, where you can see alpine wildflowers and snow-capped mountains (such as Mount Shuksan, *above*).



Think this is White Beauty (*Erythronium revolutum*).



From a pullout on the drive (*above*) heading to Mirror Lake, you can see the North Cascades mountain range.

Pushing further up brings you to Artist Point, where there is a parking lot and restrooms, and where you are at one of the highest elevations (more than 5,000 feet) in the area where you can bring a vehicle, giving you views of Mount Baker and Mount Shuksan.



Mount Baker from Artist Point (*above*). Restroom at the parking lot (*below*).



A long drive (96 miles) south from Seattle is Mount St Helens National Volcanic Monument, which erupted in 1980, after a number of years of being dormant. It is actually quite worth it to drive and visit this volcano. You first encounter the Visitor Center early on as you turn into the drive from Interstate 5. The visitor center has a far-off view of the volcano from its grounds.

From there, you go up in elevation and get better views of the volcano, and then you get a chilling reminder that you are heading to a volcano, when you see a sign that you are entering the Blast Zone - the radius around the volcano where you will likely get impacted by the volcano's eruption.



There is another visitor center at the end of the drive that gives you a very nice view of the volcano (*above*) and the side that collapsed in the eruption - the Johnston Ridge Observatory, at the heart of the blast zone, and named after the dedicated geologist, David A Johnston, who died while monitoring the volcano at the height of the eruption. In fact, the place is located at the camp where he died the morning of the eruption. From here, you can also see the surroundings that have since grown vegetation after the lahar swept through the surroundings - you can still see parts of it as a whitish grey material near the river.



The visitor center has also put back wildflowers on the sides of the area, as you walk down to the sides. There is a trail that goes above the visitor center, to allow you even higher views of the volcano.

There are also places to see and things to do in the city of Seattle. That is a short overview of what awaits you in northwest and western Washington state during late Spring and early Summer - one of the nicest times to be in the state.



## Native Orchid Protection and Education Society (NOPES)

### Membership Meeting Minutes of January 6, 2020

**Attendees:** Teresa Huesman, Jeanne Rhinehart, Angela Carter, Jan Yates, Ann Tsui, Barry Rhinehart, Connie Peebles-Wolfson, Alan Wolfson, Margaret Cullen, Diana Dwight, Lois Shadix, Ken Mettler (via Skype), Barry Jones, Jane Jones, Cheryl Jaworski, John Jaworski.

*President Teresa Huesman started the Meeting of NOPES at 7:05 pm on Monday January 6, 2020 at the home of Jan Yates, 4110 Rose Hill Ave, Cincinnati Ohio. A motion to approve the minutes of the October 13, 2019 Meeting was made by Jeanne, seconded by Angela and approved by voice vote. Discussion was as follows:*

**Regulations:** Jan Yates presented the proposed NOPES official document ***Native Orchid Preservation and Education Society Code of Regulations***. She asked for input on specific items and, after discussion, decisions were made as follows:

- 1) Officers (President, Vice President, Secretary, Treasurer and Communications) are considered members of the NOPES Board and are also Directors.
- 2) The Law requires 3 Directors, but the members present decided to require a minimum of 5 Directors and aim for at least 7. Staggering officers' terms of office is highly desired for optimal continuity.
- 3) The Board will meet a minimum of 4 times a year.
- 4) At the Annual Membership Meeting, new officers will be voted in and will assume office immediately.

***The motion "To adopt the Regulations" was made by Diana and seconded by Lois. This passed unanimously by voice vote.***

***The motion "To file the Regulations with the State" was made by Cheryl and seconded by Diana. This passed unanimously by voice vote.***

**Cranberry Bog Progress Report:** Barry and Jeanne worked with ONAPA volunteers at the second Cranberry Bog fall workday. Cranberry Bog is now cleared to the left side of the boardwalk from the entrance to where the trees are established. The goal is to continue further out to the East Meadow, where there are the least invasives and where past surveys have recorded the most blooms.

Part of the MAOC grant money was used for protective equipment and chemical blocks against the poison sumac. However, despite these efforts, volunteers have reported poison sumac reactions. The grant amount remaining, \$219, will be used for more, and possibly different brands, of suits and gloves, and especially Ivy Block lotion to apply liberally beneath these. Since the sumac is less potent in winter, another workday may be scheduled soon.

**Fieldtrips for next year:** Dates and destinations will appear on the NOPES calendar page when they are confirmed. The July outing at Lake Hope is confirmed. This begins the evening of Friday July 17, all day July 18 and ending the morning of July 19. Cabins are reserved and our Annual Membership Meeting will take place during this time.

***Aplectrum hyemale Study:*** The Aplectrum leaves are readily seen in our study area. We are interested in whether the loss of ash trees will make a difference in survival. Aplectrum has also been reported in the Dayton area parks.

***The motion for “Jeanne to provide a write-up on the Aplectrum study” was made by Angela and seconded by Jan. It was carried unanimously by voice vote.***

**Newsletters:** All agreed that The Fringe has been fantastic and full of fascinating, well researched and reported information. Jeanne asked how often they should be produced. It was decided at least quarterly.

**Fundraising:** Booklets containing photos and information on all native orchids in each of the states of Ohio, Kentucky and Michigan are printed and available for sale at \$20 each! This covers the cost of printing and a small donation to NOPES. Thank you Jeanne for such beautiful and useful booklets!

T-shirt printing was explored by Teresa. So far, places contacted quoted prices too high for our purposes.

**Membership:** Membership Applications for the 2020 calendar year were handed out.

*The NOPES meeting adjourned at 8:47 pm. The next meeting is TBA.*

Respectfully submitted,

Ann Tsui