

# Borealis

The Newsletter of the



PO Box 141613, Anchorage, Alaska

February – March 2021

## Join us at our Next Meetings!

### **Monday, February 1, 7:00 PM**

Main Topic: "Ecological Land Surveys  
in Alaska: Botanical Adventures"

Speaker: Aaron Wells

Beringian Mini-Botany –  
*Therorhodon glandulosum*

Speaker: Glenn Brown

Rose Family: *Spirea* sp

Speaker: Marilyn Barker

### **Monday, March 1, 7:00 PM**

Main Topic: "ANPS Visits Pinnell Mt  
Trail"

Speaker: Marilyn Barker

Beringian Mini-Botany –

Speaker: TBA

Apiaceae Family: Introduction

Speaker: Elizabeth Bluemink

PLEASE NOTE: February and perhaps  
March monthly meetings will not be  
held in public but via computer and  
teleconference. By now you may have  
this format figured out, but if not we  
have people standing by to help you.

**For the latest information about  
ANPS events and field trips, go  
to [www.aknps.org/](http://www.aknps.org/)**

## Our Virtual Universe

We'll continue to hold our monthly meetings virtually through the rest of 2020. We will be using *Google Meetings*, as we did last spring. The bright side is that people all over the state (and world) can participate!

To join the webinar and watch the presentation:

1. Click on the Meeting ID link below to open it in a web browser. The best web browser to use for this is Chrome, but Firefox or Safari will also work. Avoid Internet Explorer.  
Meeting ID: <https://meet.google.com/vax-nosy-fzd>
2. A Google Meet window should open in your browser and your camera will turn on. You'll see an image of yourself (from your computer's camera) and "What's your name?"
3. Enter your name on the line below "What's your name?" and then click the "Ask to join" button.
4. You will be granted access to the webinar. This may take a minute or two.
5. Hover over the image of yourself and click the "Mic" icon and camera icon to mute your computer mic and turn off your camera (so we all don't see you...unless you want to be seen :), respectively.

Audio:

- 1) If you use the above link you can listen and talk using headphones connected to your computer, or
- 2) alternatively you can call the phone number below, and enter the pin and you can listen and talk through your phone while watching the live video.

Phone Number: +1 617-675-4444

PIN: 146 152 270 6175#

# World's Ugliest Orchid?

Orchids are usually prized for their grace and loveliness, but a newly described species from Madagascar probably won't be winning any beauty contests. Its small flowers are a mottled brown, and it resembles a moldy paper bag (or maybe an eyeless, wormlike head with a mouth gaping in a silent scream or to consume your soul).

It's no wonder that the newfound species has been called "the ugliest orchid in the world" by the Royal Botanical Gardens, Kew (RBG Kew) in the United Kingdom, which recently placed the homely newcomer at the top of a list highlighting species discovered in 2020.



***Gastrodia agnicellus* – a newly described orchid**

The leafless orchid, named *Gastrodia agnicellus*, grows underground in decaying leaf litter for most of its life cycle, and is nourished by fungus. In addition to the "small, brown and rather ugly" orchid, researchers and collaborators with RBG Kew described more than 150 plants and fungi this year, according to the statement.

<https://www.livescience.com/ugliest-orchid-newfound-species.html>

**Borealis**

the newsletter of the



## ALASKA NATIVE PLANT SOCIETY

### State and Anchorage Chapter Officers

President	Elizabeth Bluemink
Vice President	Zoe Meade
Secretary	Ginger Hudson
Treasurer	Aaron Wells

### Anchorage Chapter Program Coordinators

Membership	Mary Stella
Plant Family	Timm Nawrocki
Mini-Botany	Timm Nawrocki
Field Trips	Dennis Ronse

### Newsletter ("Borealis")

Editor	Ginny Moore
--------	-------------

*Borealis* is published bi-monthly, fall through spring. Articles may be sent to Ginny Moore, , Anchorage, AK 99516. Phone or FAX: , E-mail: [elfinwood@gmail.com](mailto:elfinwood@gmail.com)



### IT WORKS!

**IN 2018-2019 ANPS EARNED ALMOST \$400  
FROM MEMBERS SHOPPING AT FREDDY'S!**

**WON'T YOU JOIN US?**

**IT DOESN'T AFFECT YOUR OWN REWARDS POINTS.**

Fred Meyer is donating \$2.5 million per year to non-profits in Alaska, Idaho, Oregon and Washington, based on where their customers tell them to give. Here's how the program works:

- Sign up for the Community Rewards program by linking your Fred Meyer Rewards Card to (non-profit) at [www.fredmeyer.com/communityrewards](http://www.fredmeyer.com/communityrewards). You can search for us by our name or by our non-profit number **GC263**.
- Then, every time you shop and use your Rewards Card, you are helping (non-profit) earn a donation!
- **You still earn your Rewards Points, Fuel Points, and Rebates, just as you do today.**
- If you do not have a Rewards Card, they are available at the Customer Service desk of any Fred Meyer store.
- For more information, please visit

[www.fredmeyer.com/communityrewards](http://www.fredmeyer.com/communityrewards).



# 2021 Washington Botanical Symposium – Zoom On In!

Save The Date! March 4, 2021 – A chance to participate from home!

This full-day program will be presented online as a Zoom webinar. An extensive network of professional, academic and amateur botanists are actively engaged in the conservation, management and study of Washington's diverse flora. Their expertise ranges from how best to manage biodiversity to understanding climate change impacts on plant communities, to naming and classifying the flora's rare, common and invasive elements. Invited speakers and poster presentations will share new insights and discoveries about these topics and more. Participants from throughout Washington and adjacent areas will have the opportunity to exchange ideas with colleagues within and across disciplines.

Cohosted by: University of Washington Botanic Gardens and the University of Washington Herbarium at the Burke Museum  
Sponsored by: Washington Native Plant Society.

Registration for this event will be posted on the Center for Urban Horticulture website: [Washington Botanical Symposium | University of Washington Botanic Gardens \(uw.edu\)](https://www.cuh.washington.edu/2021-washington-botanical-symposium/)

\*\*\*\*\*

## Coltsfoot – A Closer Look at a Medicinal Herb

One of the many Alaskan respiratory herbs that Elizabeth Bluemink tabulates in her article on the next page is coltsfoot – *Petasites* sp. There are several *Petasites* species found in Alaska, found mostly in bogs, meadows and other wet places.



### Description:

Since coltsfoot flowers appear before the leaves they must be collected separately. A single stalk bears one or several flowers, purple and covered by numerous long white hairs. After the flowers have died down, the leaves sprout and continue to grow in size throughout the summer until they are nearly a foot (30 cm.) across. They are triangular in basic outline, but their edges are cut into lobes and teeth. The top surface shines while underneath the color is silvery white, the texture woolly. Coltsfoot's small white root is shallow. *Petasites frigidus*, also called *Tussilago frigida*, has shallowly lobed, kidney shaped basal leaves. It is described as being from Lapland, Switzerland and Siberia. According to Hulten its root is eaten, roasted, by the Siberian Eskimos. *Petasites hyperboreus*, which hybridizes with *P. frigidus*, has more triangular, deeply lobed leaves.

*Petasites sagittatus*, a North American species, displays triangular, arrow-shaped leaves. These are the common Alaskan species.

### Medicinal uses:

The dried leaves or flower shoots have been used since ancient times against persistent cough. One common name for coltsfoot is coughwort, and tussilago means cough dispeller. For bronchitis, the dried leaves have been smoked since the time of Pliny, who used a hollow reed for the purpose.

Tanaias soak coltsfoot root in hot water and drink the tea for tuberculosis, chest troubles, sore throat, and stomach ulcers. Old-timers also drank the tea "to make the blood soft" and chewed the root for tuberculosis. (Kari) The raw or boiled root of *P. sperosus* (a non-Alaskan relative) is used as cough medicine by the Quileute of Washington state. (Gunther) "They also mash the root and soak it as a wash for swellings and sore eyes. The Skagit warm the leaves and lay them on parts afflicted with rheumatism." (Gunther) The root decoction was used against asthma or rheumatism. (Tobe)

**Caution:** Janice Scofield, in *Discovering Wild Plants*, cautions that although coltsfoot is generally regarded as quite safe in moderation, **it is not recommended for extended use in high dosages. Like comfrey, the plant contains pyrrolizidine alkaloids that can irritate the liver, causing lesions if taken in excess. Coltsfoot tea may cause abortion.**



Coltsfoot seen at Hatcher Pass  
Stylized by Elizabeth Bluemink

# Respiratory Herbs of Alaska

by Elizabeth Bluemink

Soon after the COVID-19 pandemic reached Alaska, the local newspaper for the Yukon-Kuskokwim region, the Delta Discovery, printed a set of interviews with Yup'ik elders about the healing qualities of native plants in the region.

The article did not mention the COVID-19 pandemic or the use of native plants during prior pandemics, but it got me curious about the native plants traditionally used to treat respiratory ailments in Alaska.

I ended up suggesting this newsletter article to make certain I would look for all the Alaska native plants that have been used for these purposes.

I was surprised to find as many plants as I did. By the time I was halfway through Ann Garibaldi's [Medicinal Flora of Alaska](#), the task seemed never ending. More plants kept popping up.

So, instead of an article discussing a few interesting plants, I ended up making a long list of more than 30 plants, which appears below. The list would have been even longer if I'd included introduced plants, or native plants used elsewhere—plantain, chiming bells, twinflower, or violets, for example—but did not appear in the materials I reviewed.

Alder, <i>Alnus spp.</i>	Inner bark infusion used as gargle for sore throat (Viereck) and tuberculosis (Garibaldi).
Aspen, <i>Populus tremuloides</i>	Inner bark or sap used to treat sore throats (Garibaldi).
<i>Angelica lucida</i>	Used in tonics for colds and to soothe sore throats (Garibaldi).
Avens, <i>Geum spp.</i>	Roots boiled as infusion for colds and sore throat (Garibaldi).
Bearberry, <i>Arctostaphylos</i>	Berries chewed for colds/flu (Garibaldi).
Bedstraw, <i>Galium boreale</i>	Young shoots boiled as tea to treat colds (Garibaldi).
Crowberry, <i>Empetrum nigrum</i>	Leaves and/or stems boiled as infusion for colds and chest congestion (Garibaldi).
Coltsfoot, <i>Petasites spp.</i>	Roots boiled in hot water and drunk for tuberculosis, chest troubles, sore throat, etc. (Viereck); used as a gargle or syrup for colds and sore throats (Jernigan) Misc.: Known as coughwort; contains alkaloids that can damage liver and cause abortions; also linked to blood clots and cancer (Healthline.com).
Cow Parsnip, <i>Heracleum lanatum</i>	Root used for colds, sore throat and tuberculosis (Viereck); root and inner bark used as tea or decoction for colds and loosen chest congestion (Garibaldi). Misc.: Removes excess amounts of mucus from respiratory system (Gray); very strong medicine that can induce sweating (Garibaldi).
Currants, <i>Ribes spp.</i>	Inner bark and stripped stems boiled in tea as medicine for colds, flu and tuberculosis (Viereck); raw black currant berries chewed raw for colds (Garibaldi).
Daisy, <i>Aster subspicatus</i> Coastal fleabane, <i>Erigeron peregrinus</i>	Root used as tea or chewed to treat cold or fever (Garibaldi).
Devil's Club, <i>Echinopanax horridum</i>	Inner bark and underground portion boiled and used as tea for tuberculosis, stomach ache, colds and fever (V); teas and tinctures for colds and respiratory infections (Schofield).
Elder, <i>Sambucus racemosa</i>	Root decoctions sipped for ailments ranging from colds to tuberculosis (Schofield); flowers and berries used for colds (Garibaldi).
Fireweed, <i>Epilobium angustifolium</i>	Stems without flowers used as steam bath switch for a worsening cold (Garibaldi).
<i>Geranium erianthum</i>	Leaves used as tea and gargle (Garibaldi).
Gentian, <i>Gentiana spp.</i>	Leaves, stems and flowers boiled as tea for colds and coughs (Garibaldi).
Hemlock Parsley, <i>Conioselinum chinense</i>	Used in tonics for colds and soothing drinks for sore throats (Garibaldi).

Highbush Cranberry, <i>Viburnum edule</i>	Leaf decoction used for sore throats (Viereck); berries boiled as cough syrup (Garibaldi).
<i>Iris setosa</i>	While poisonous and allergenic, small pieces of fresh root chewed for cold and sinus relief; not recommended for consumption (Garibaldi).
Juniper, <i>Juniperus communis</i>	Needles burned like incense to relieve a cold; branches boiled to use in tea to treat colds, sore throat and tuberculosis; berries also boiled as drink for colds (Viereck) or chewed raw (Garibaldi). Misc.: Can cause renal damage or convulsions if over-ingested; should not be consumed by pregnant women (Garibaldi).
Labrador Tea, <i>Ledum palustre</i>	Leaves steeped (not boiled) to make tea for colds; vapor can help clear sinuses (Viereck); leaves and stems burned during early 20 <sup>th</sup> century epidemics to protect from illness and purify homes (Jernigan). Misc.: Contains a narcotic toxin released through boiling; could be bad for the heart and even deadly if consumed in excess; not recommended for people with high blood pressure (Garibaldi).
Leatherleaf saxifrage, <i>Leptarrhena pyrolifolia</i>	Infusion prepared from leaves drunk as treatment for influenza (Garibaldi).
Low bush cranberries, <i>Vaccinium vitis-idaea</i>	Berries chewed for sore throat (Viereck). Misc.: One elder said the berries saved people during past flu epidemics on the Yukon (Jernigan).
Cottonwood/Poplar <i>Populus balsamifera</i>	Bud tea used for colds; salve from winter buds used as ointment on nose or put up nose to allow vapors to relieve congestion (Viereck); used as tincture for wet or dry coughs (Schofield). Misc.: Contains salicin but gentler on the stomach than aspirin (Schofield).
Rose, <i>Rosa spp.</i>	De-thorned stems and branches boiled as a tea for colds, fever, and other non-respiratory ailments (Viereck).
Roseroot, <i>Sedum rosea</i>	Leaf infusions and root decoctions used for colds and gargled for sore throats (Schofield).
Shrubby cinquefoil, <i>Potentilla fruticosa</i>	Cut stems boiled as tea for colds and pneumonia (Garibaldi).
Shy Maiden, <i>Moneses uniflora</i>	Roots or the whole plant collected to make tea for sore throats (Garibaldi)
Sitka Mountain Ash, <i>Sorbus sitchensis</i>	Inner bark and berries used for sore throats, coughs/congestion and tuberculosis. (Garibaldi).
Soapberry, <i>Sheperdia canadensis</i>	Stems boiled for tea for tuberculosis or berries chewed to fight a cold (Garibaldi).
Spruce, <i>Picea spp.</i>	Needles boiled and sipped in teaspoon-sized amounts for a cold (Viereck) and inner bark used as tea or chewed raw for sore throats or serious colds (Garibaldi).
Sweet Cicely, <i>Osmorhiza spp.</i>	Brewed as a tea for coughs (Garibaldi).
Willow, <i>Salix spp.</i>	Cough syrup made from buds, general pain relief (Viereck); winter bark and leaves boiled for tea to treat cough, sore throat or tuberculosis (Jernigan).
Wormwood, <i>Artemisia spp.</i>	A sipping tonic or gargle to treat sore throat (Gray); steam inhalation to relieve congestion and body pain; smoke from dried leaves used for sinuses and respiratory system (Jernigan); used to treat pneumonia and whooping cough (Garibaldi).
Yarrow, <i>Achillea borealis</i>	Fresh or dried root chewed, or steam from boiled plant inhaled to relieve sinuses; younger plants used to make tea for coughs (Jernigan).

Sources:

Garibaldi, Ann, **Medicinal Flora of the Alaska Natives** (1999)

Gray, Beverly, **The Boreal Herbal: Wild Food and Medicine Plants of the North** (2011)

Jernigan, Kevin, **A Guide to the Ethnobotany of the Yukon-Kuskokwim Region** (2014)

Schofield, Janice J., **Discovering Wild Plants: Alaska, Western Canada, The Northwest** (1989)

Schofield, Janice J., **Alaska's Wild Plants, Revised Edition: A Guide to Alaska's Edible and Healthful Harvest** (2020)

Viereck, Eleanor, **Alaska's Wilderness Medicines: Healthful Plants of the Far North** (1987)



# FROM WHAT WE GATHER



## “What wood is that?”: Expanding the toolbox for species identification

The [National Museum of African Art](#) at the Smithsonian holds many beautiful works of art made from wood, but only rarely do records indicate what species of wood the artist used. This is not unusual for a museum, but it is a shame since so much can be learned about a piece of art from understanding the materials that were used to make it. Artists choose their materials carefully for their physical characteristics but also, especially in the case of art originating on the African continent, for their symbolic value. Certain tree species can impart meaning, or even metaphysical powers, to an object made from its wood. The identification of which tree species used in African art and belongings can help researchers recreate the history of artworks with uncertain provenance and elucidate the symbolic worlds of those who created them.

Increasingly, species identification is also important in the context of the enforcement of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), an international treaty to prevent species from becoming endangered or extinct because of international trade. Without proper documentation demonstrating that objects are not made with endangered species, museum artworks travelling to exhibitions abroad may be held, confiscated, or even destroyed by customs officials. Knowing which wood was used can help protect artworks when they travel.

Using a collection of 64 hand samples representing over 50 species of West African woods, Julia Campbell-Such has been comparing traditional wood anatomy to newly developed methods that use the tree's chemistry, as well as its anatomy, to identify it. She has been preparing and examining wood slides from this collection and then comparing the results of that anatomical analysis to direct analysis in real time mass spectrometry (DART-MS) of the same samples, conducted at the Smithsonian Museum Conservation Institute.

One of the reasons wood species are not often identified for works of art is the size of sample required to do traditional anatomy. The 1 cm cube generally necessary for an accurate identification is a huge chunk for art conservators who usually measure their sample sizes in millimeters or even microns. DART-MS, which requires only a splinter-sized sample, is therefore a promising compliment, to anatomy for wood species identification. This technique uses an ambient ionizing source, the DART, to desorb and ionize small molecules from the surface of the wood, which are then transmitted to a mass spectrometer for analysis. Spectra representing the mass-to-charge ratios of ionized molecules in the sample can then be compared to a database of knowns using computer learning algorithms.

The technique of using DART-MS to identify woods was developed at the U.S. Fish and Wildlife forensics lab that has been using this system to enforce CITES-based regulations on the trade of endangered tree species. The Smithsonian has adapted their protocol to identify the species of West African woods most commonly used by African artists. They hope that this collaboration will not only help us to protect and care for the important art in our museums but will also help to further the protection and care of the forests and communities who created those works.



The [Botany 2020 meeting](#) was held virtually on July 27-31 this year, as an alternative to the on-site meeting originally planned to be held in Anchorage, Alaska. The virtual meeting was a great success considering the circumstances of the pandemic. The virtual platform and the low registration fees (\$100 per person to pay for IT support to manage all the video talks) enabled many international colleagues to participate in the conference, most of whom may not have been able to attend the meeting if it was held on-site. Many international researchers, especially students, were able to attend the meeting and interact with colleagues in a conference setting for the first time.

Botany 2020 was attended by 1,323 botanists, substantially higher than the typical attendance for a Botany meeting. The conference attendees hailed from over 45 countries and all 50 U.S. states; there were 439 contributed papers and 202 posters presented, as well as 14 workshops, 7 special lectures, 5 symposia, and 10 colloquia. Many attendees praised the thorough organization and seamless execution of the meeting, and [an article published in Science Magazine on virtual scientific meetings](#) highlighted the Botany meeting as a success story.



# FROM OUR BOOKSHELVES



## A Journey of Trees

Zach St. George  
W. W. Norton & Co.  
July 2020



An urgent and illuminating portrait of forest migration, and of the people studying the forests of the past, protecting the forests of the present, and planting the forests of the future.

Forests are restless. Any time a tree dies or a new one sprouts, the forest that includes it has shifted. When new trees sprout in the same direction, the whole forest begins to migrate, sometimes at astonishing rates. Today, however, an array of obstacles—humans felling trees by the billions, invasive pests transported through global trade—threaten to overwhelm these vital movements. Worst of all, the climate is changing faster than ever before, and forests are struggling to keep up.

A deft blend of science reporting and travel writing, *The Journeys of Trees* explores the evolving movements of forests by focusing on five trees: giant sequoia, ash, black spruce, Florida torreya, and Monterey pine. Journalist Zach St. George visits these trees in forests across continents, finding sequoias losing their needles in California, fossil records showing the paths of ancient forests in Alaska, domesticated pines in New Zealand, and tender new sprouts of blight-resistant American chestnuts in New Hampshire. Everywhere he goes, St. George meets lively people on conservation's front lines, from an ecologist studying droughts to an evolutionary evangelist with plans to save a dying species. He treks through the woods with activists, biologists, and foresters, each with their own role to play in the fight for the uncertain future of our environment.

An eye-opening investigation into forest migration past and present, *The Journeys of Trees* examines how we can all help our trees, and our planet, survive and thrive.

Zach St. George grew up in Anchorage and, while he is now residing in Baltimore, his book includes extensive information from his experiences in Alaska and he hopes to someday return to the state.



## Apiaceae – New Plant Family Study

At our March 2021 meeting Elizabeth Bluemink will introduce us to a new mini-botany plant family study - **Apiaceae** (also known as Umbelliferae), We are looking for members to help us learn about them. Pick a genus in this family and give us a 5 minute presentation at one of the monthly meetings. Marilyn Barker is spearheading the sign-up process.

We're all set for presenters for the rest of this winter and spring, but we hope you'll be interested in signing up for something later. Pick a genus or a pair off genera, then select 3 months when you might be available to present, listed in order of preference. Send your choices to [marilynbarke29@gmail.com](mailto:marilynbarke29@gmail.com).

Available Genera: Osmorhiza ( 3), Bupleurum (1), Sium(1), Angelica (2)

Open meeting dates are: November 2021, December 2021, January 2022, February 2022, March 2022, April 2022 and May 2022. For more information contact Marilyn Barker.

Alaska Native Plant Society  
P.O. Box 141613  
Anchorage, AK 99514

**PLEASE RENEW OR JOIN TODAY!**  
ANPS Membership is on a calendar-year basis so please be sure to renew for 2021.  
Check your mailing label to make sure this isn't your last newsletter.

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Telephone: (Home) \_\_\_\_\_ (Cell) \_\_\_\_\_ E-Mail: \_\_\_\_\_

CATEGORY	E-Mail Newsletter	Snail-Mail Newsletter	Both Mail Deliveries
<input type="checkbox"/> Full-time Student	\$12	\$22	\$22
<input type="checkbox"/> Senior Citizen	\$12	\$22	\$22
<input type="checkbox"/> Individual	\$15	\$25	\$25
<input type="checkbox"/> Family	\$20	\$30	\$30

STATUS  NEW  RENEWAL

Alaska Native Plant Society  
P. O. Box 141613  
Anchorage, AK 99514

The Alaska Native Plant Society was organized in 1982 by an enthusiastic group of amateur and professional botanists. It is a non-profit educational organization with the goal of uniting all persons interested in the flora of Alaska. Membership is open to any interested individual or organization. If you wish to join us, please indicate the category of membership you desire, fill in the form below, and mail it with the appropriate remittance to:

## ANNUAL MEMBERSHIP APPLICATION/RENEWAL