

Borealis

the newsletter of the



PO Box 141613, Anchorage, Alaska

Oct/Nov 2019

Join us at our Next Meetings!

Monday, October 7, 6:30 PM

ANNUAL POTLUCK and Pix

Show and tell us about your summer in the wilds. Bring a dish to share and up to 10 of your favorite photos.

Monday, November 4, 7:00 PM

Main Topic: **"Native Plants in Anchorage Gardens"**

Speaker: **Ginger Hudson**

Mini-Botany – *Aphragmus eschscholtzianus*

Speaker: **Timm Nawrocki**

Plant Family: Roseaceae: *Sanguisorba*

Speaker: **Glenn Brown**

The Alaska Native Plant Society (AKNPS) is a non-profit organization dedicated to studying and conserving Alaska native plants. General membership meetings are open to the public and are held on the first Monday of every month from October through May. Various guest speakers give presentations on topics related to native plants and AKNPS members give informative slide shows, plant family, and mini-botany talks.

All of our meetings, unless otherwise announced, are held at the Campbell Creek Science Center, 5600 Science Center Drive, just off Lake Otis Parkway, south of Tudor.

For the latest information about ANPS events and field trips, go to www.aknps.org/

SEASON OPENING

Outdoors to Indoors

Our October 7th monthly meeting will mark the beginning of the 37th season of sharing our enthusiasm and knowledge of Alaska's native plants as a community organization! **Let's Party!**

Our October meetings are always the time for regrouping after a summer season of various and sundry outdoor trips far and wide. This summer – which, with high temperatures, droughts, floods and wild fires, was an amazing summer in so many respects all around the state – gave ample opportunity for outdoor exploration.

ANPS sponsored numerous day and evening hikes within the Anchorage area, as well as several longer expeditions to the Fairbanks area, Sitka and Kotzebue and the Kobuk Sand Dunes. At our potluck meeting everyone will have an opportunity to relive or learn about those adventures.

The ANPS Board has come up with a great lineup of keynote speakers and topics for the indoor season and we'll try to keep you informed as the year progresses.

Other features of our monthly meetings involve input from all our members. There are two types of mini-botany presentations each month. This year our plant family presentations will continue with the very prolific Roseaceae family and each month will feature a particular genus.

The mini-botany series will focus on alpine Beringian endemics (see page 3 for more information. Each month we'll focus on a particular plant and how it has become so special.

These presentations are intended to be very brief, just 5 minutes of basic information and photos will be perfect, as our meetings tend to be an information overload for the average person. We're not expecting you to be an expert – but to choose a topic you'd like to spend a bit of time researching and putting together a short presentation for the group. Please contact Dennis Ronsse or Timm Nawrocki to pick a topic and month that works for you!

Botany 2020, July 18-22 in Anchorage!

Botany 2020

Anchorage, Alaska
July 18-22



Call for Proposals

Deadline for Symposia and Colloquia is October 23, 2019



In July, Anchorage will be host to a national botanical conference that will include members of the American Bryological and Lichenological Society, American Fern Society, American Society of Plant Taxonomists, Botanical Society of America, International Association for Plant Taxonomy, and Society for Herbarium Curators.

The theme of this year's conference is "**Plants at the Extremes**" and the conference will include both

symposia and colloquia formats. The deadline for submitting proposals for inclusion in either of these formats is October 23. You can find more information about how to submit a proposal at <https://2020.botanyconference.org/botany-conference-proposals.html>.

Botanical Society of America claims to be the home for ALL botanists and plant scientists and supports the breadth and diversity of botanical research and education. We are the leading Society dedicated to botany and its future. The BSA has several options for membership that accommodate professional botanists and their students, as well as K-12 teachers, community college educators, affiliated professionals, and amateurs who can benefit from what the BSA has to offer. Memberships are for a calendar year, January 1 – December 31. You may **join and/or renew your membership** at <https://crm.botany.org>.

Our own Alaska Native Plant Society is hoping to interface with the event in July by offering special field trips during that time to encourage participation of our out-of-town visitors.

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ALASKA NATIVE PLANT SOCIETY

State and Anchorage Chapter Officers

President	Dennis Ronsse
Vice President	Zoe Meade
Secretary	Ginger Hudson
Treasurer	Mary Stella

Anchorage Chapter Program Coordinators

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

Newsletter ("Borealis")

Editor	Ginny Moore
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Borealis is published bi-monthly, fall through spring. Articles may be sent to Ginny Moore, elfinwood@gmail.com, Anchorage, AK 99516. Phone or FAX: [907-451-1000](tel:9074511000), E-mail: elfinwood@gmail.com



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- For more information, please visit www.fredmeyer.com/communityrewards.

"Alpine Beringian Endemics" - New Mini-botany Series

During the upcoming fall through spring ANPS meeting cycle, we will focus our Mini-Botany sessions on alpine Beringian endemics that obligately or facultatively occupy alpine habitats, wedged between ice/barrens and shrub-/graminoid-dominated subalpine.

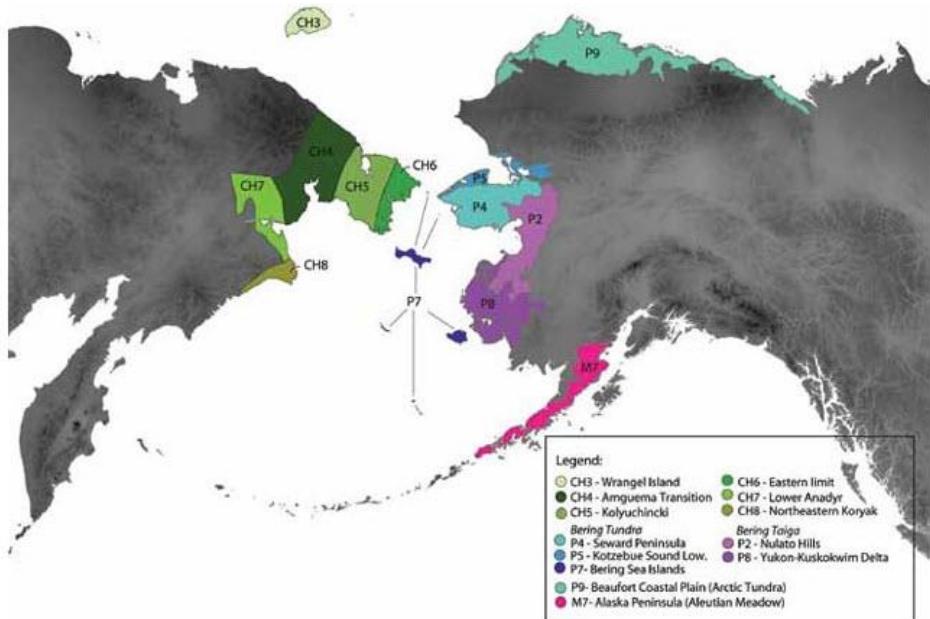
Past biogeographic circumstances have contributed to current floristic patterns in Alaska. During the glacial retreats of the Pleistocene, steppe and tundra biomes dominated a consistently ice-free region in northwestern North America and northeastern Asia with exposed land in the location of the current Bering Sea.

Eric Hultén termed the ice-free region "Beringia" to help describe common floristic patterns spanning from the Mackenzie River in Northwest Territories across Yukon, Alaska, and Chukotka to the Lena River in Siberia.

"It should be stressed that the flora on both sides of the Bering Strait is identical with few exceptions. This is what can be expected as the present northern Bering Sea more than once during its Pleistocene history has been dry permitting dispersal of plants from one continent to the other. " Eric Hultén 1937

"Alaska and the Yukon immediately present the picture of a floristic appendage to Asia... However, a closer scrutiny of the flora... demonstrates that even in the arctic parts of this territory there are a significant number of purely American taxa. Asian and American portions of the Beringian sector must be referred to different provinces."

Boris Yurtsev 1972



[Alaska ecoregions \(after Nowacki et al. 2001\) and those from Chukotka \(Yurtsev et al. 2010\) used in National Park Service study "New Insights on Beringian Plant Distribution Patterns" by Stefanie Ickert-Bond et. al. <https://www.nps.gov/articles/aps-v12-i1-c-10.htm>](https://www.nps.gov/articles/aps-v12-i1-c-10.htm)

Because of past patterns of speciation, dispersal limitations, life history characteristics, physical barriers, biotic interactions, and environmental factors, the current flora of Alaska includes species that remain endemic to Beringia. Some of these species are partially or fully restricted to what is currently alpine habitat.

"It is interesting to note that authorities such as Eric Hultén and Boris Yurtsev had very differing views about the history of the Beringian Flora that continue to spur investigations into the origin and evolution of this flora. While Hultén has emphasized taxonomic similarities between eastern and western Beringia, Yurtsev emphasizes more of their differences. A major contribution to today's flora arrived in Alaska via the Bering Land Bridge as it was exposed during successive intervals of continental glaciation (Ice Ages) and retreat (Hultén 1937). The Arctic portion of this flora is of relatively recent origin (Murray 1995). Traditionally, investigations of the Arctic have emphasized Beringia's role in the intercontinental exchange of fauna and flora (Ickert-Bond et al. 2009). Exchange was characterized as asymmetric (Hopkins 1967) with most taxa originating in Northeastern Asia and moving to North America (Flerow 1967). In contrast, eastern Beringia (Alaska) was effectively isolated from the rest of North America by the Laurentide Ice Sheet (Pielou 1991) and therefore was then the easternmost extent of an Asian biome." (Ickert-Bond, et. al)



FROM WHAT WE GATHER



The Botanist in The Kitchen - Where Botany Meets the Cutting Board - <https://botanistinthekitchen.blog>

A person can learn a lot about plants through the everyday acts of slicing and eating them. This blog is devoted to exploring food plants in all their beautiful detail as *plants* – as living organisms with their own evolutionary history and ecological interactions. The goal is three-fold: to share the fascinating biology of our food plants, to teach biology using edible, familiar examples, and to suggest delicious ways to bring the plants and their stories to your table.

The blog delves into the topics while suggesting recipes and activities that highlight the botanical aspects of food. Think of it as part botany lab, part home cooking show.

They focus on food plants because they make terrific botanical subjects: they are familiar and available, their parts have been greatly exaggerated through breeding, and they are usually not dangerous. There would be nothing to talk about here if the plants we eat did not have a history stretching much farther back than 19th-century heirloom varieties or even the dawn of agriculture. Eggplant and okra, rhubarb, artichokes, pomegranates, figs, and Brussels sprouts . . . where did all this vegetative diversity come from? Like all living things, food plants have been shaped by a long and complicated evolutionary history of struggling to survive and reproduce in the midst of others struggling to do just the same.

If the chemical makeup of plants depended on only the basic biochemical processes required to sustain life, plants might all taste pretty much the same – probably watery and a bit green. Instead, the shape and texture of various parts have evolved according to the role that each part plays in the life of the plant, such as support, photosynthesis, storage, or reproduction. The flavors and nutrient content of plant foods also reflect many thousands or even millions of years of co-evolution with animals that disperse their seeds or eat their leaves. In the end, the way plants taste and behave in our kitchens depends on which parts we eat, how those parts function, and the way they interact with friends and foes – all of which are inextricable from evolutionary history.

Both Katherine Preston and Jeanne Osnas are PhD plant ecologists and evolutionary biologists who love to cook. They call themselves plant nerds with knives. Between them, they have been teaching college courses in basic botany, taxonomy, ecology and evolution for nearly 30 years, but never get tired of looking at plants and learning new things about how they work. They are self-taught cooks with pretty different diets. Katherine is a long-time vegetarian who could eat her weight in broccoli any given day, especially with an excellent baguette. Jeanne is an omnivore, especially fond of wild-caught foods and garden-grown veggies.

Jeanne has an Anchorage affiliation as she is a Vegetation Ecologist at the Alaska Center For Conservation Science at the University of Alaska Anchorage. She is a plant ecologist interested in the physiological and ecological determinants of plant population biology, plant community dynamics, and feedbacks between plant and ecosystem function. She combines field and statistical approaches to understand vegetation patterns and their responses to environmental variation and global change.

An especially interesting post is from December 2018, discussing Angelica and its uses in holiday fruitcakes. Jeanne discusses the domestic and wild members of the Apiaceae that make interesting edibles or might be toxic.
<https://botanistinthekitchen.blog/2018/12/14/angelica-holiday-fruitcake-from-a-sometimes-toxic-family/>

HOW WE SPENT OUR SUMMER VACATION

Walking barefoot in shorts while spending 3 full days botanizing north of the Arctic Circle? Who woulda thunk it? But that was what we did on this past summer's ANPS field trip to Kobuk Valley National Park's Great Kobuk Sand Dunes.

The group came up with a list of over 100 different plants identified. "This is the most Latin I've heard since high school" said my husband, after our first day of exploration.

Maybe you've never even heard of the Kobuk Valley National Park. Situated a couple of hundred miles east of Kotzebue, it is the least visited national park in the country. That's one reason it is so special. Unlike in Denali Nat'l Park (where other visitors are the most common thing you'll see) we never saw another person or park regulation or amenity after we took off in our charter planes and landed right in the middle of the sand dunes. We were on our own. Shortly after landing, we raced to pitch our tents during a 5-minute downpour, which turned out to be the only rainfall we were to experience on the entire trip. And, as long as we stayed on the dunes, there weren't even significant bugs – or bears – to worry about.

Relics of the last ice age, the dunes are 25 square miles of shifting sand. From a distant perspective it is difficult to believe there could be such diversity of life in this harsh environment. We had been told we might see moose, wolves, bears or caribou. We did see quite a few tracks but no actual land animals. There were



also some cool birds, including long-tailed jaegers that let us get quite close.

The 10 of us had varying levels of botanical expertise – everyone else much more than we Moores have! Carolyn Parker, our leader, and former curator for the herbarium at UAF, had already done several botanical surveys in the area and knew just what we should be looking for. And everyone was eager to share and pore over the treasures we found – and even translate some of the names into English. The difficult part for the real botanists was trying to keep abreast of the many name changes that have occurred as a result of advances in molecular biology. The rest of us were glad we'd never learned the old names!

We saw grasses, sedges, wild rye and quite a variety of wildflowers still in bloom. At a future monthly meeting you'll hear more of the botanical details and see some of the many plants that we were able to find in only three days in mid-July.

They say that 14,000 years ago there were over 200,000 acres of sand dunes along the Kobuk River. The plants we saw were examples of how vegetation is very gradually stabilizing the sand and paving the way for a succession of mosses and algae, lichen and shrubs before the aspen, birch and spruce of the forest take root. You'd better hurry if you want to see it before the dunes are gone!

- Ginny Moore



The Kobuk locoweed, or *Oxytropis kobukensis*, is a small, flowering herb in the Fabaceae (pea) family. It produces purple flowers during late June and July. It is endemic to the sparsely vegetated dunes and slopes of the Great Kobuk Sand Dunes.



Remembering Scott and Jean

(Michael) Scott Christy (Nov 20, 1945 – Jun 28, 2019) - Jean Tam (December 27, 1949 - June 26, 2019)



Scott Christy and his wife, Jean Tam, well-known in the conservation and wildlife community in Anchorage, died together on June 28, 2019 when the plane Christy was piloting crashed into a mountain on the north side of Tern Lake on the Kenai Peninsula.

They were involved in many local wildlife organizations including Anchorage Audubon Society and the Alaska Native Plant Society. They are probably best known for having spearheaded a popular “loon cam” that allowed armchair naturalists all around the world to follow the travails of a pair of Pacific loons nesting on a local lake.

When they wanted to really get away, they flew to their remote wilderness property near Resurrection Bay, where they'd constructed nest boxes for birds. The next boxes were donated to Anchorage Audubon for selling to the public.

A Celebration of Life for them was held in Anchorage on July 12. Our ANPS past president Beth Baker did not get to go to it, as she was on an ANPS trip to Kotzebue and the sand dunes. If she had attended the ceremony she might have said something like.....

“The October meeting at ANPS is always a potluck and an opportunity for members to show slides of their summer activities. It is usually pictures of lovely flowers and cool places to visit. It was Jean’s time to share her and Scott’s summer with us. She showed the usual slides of lovely flowers up until one unusual slide appeared which surprised us all. It was a mammal of some sort....but what mammal was it?

Now ANPS members know their Alaskan fauna...not just their Alaskan flora. But this slide was a stumper. It wasn’t because it was a bad picture like of a fuzzy Loch Ness monster....No this was a full frame, sharp as a tack, shiny eyed, bushy- tailed....what? There was silence in the room. After a long pause one weak guess came from the audience. Is it a fisher? Lucky guess...yes it was a fisher!

Now fishers are like weasels...they eat birds and bird eggs. So if you were bird lovers like Jean and Scott were and if you owned a gun like many Alaskan cabin owners do, it would not be unexpected to have shot the animal in defense of avian friends.

Is that what Scott did? No.... he built a fisher house which appeared on Jean’s next slide. Now none of us had ever seen a human made fisher house before... (Had anyone ever made one before Scott did?) None of us knew what the fisher thought of the house either, but we all agreed that if we were fishers we would have moved right in.

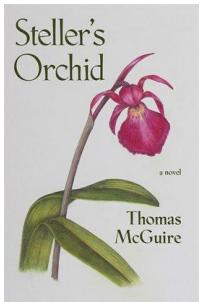
Jean and Scott were delighted in their fisher and its house....and so delighted to share their delight with us....Just like they made sure we could all share in the life of loons they so enjoyed.

I will always remember that fisher house. I will miss them both.

- Beth Baker



FROM OUR BOOKSHELVES



Steller's Orchid

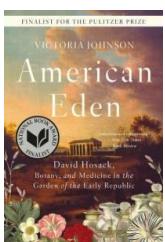
by Thomas McGuire

2016 – 2019 Paperback by Boreal Press

“Steller’s Orchid,” Tom McGuire’s first published fiction, was released this year by Boreal Books, an Alaska-based imprint of independent California publisher Red Hen Books.

The novel takes place in 1924 and follows John Lars Nelson, a young botanist, who embarks on an expedition to the Shumagin Islands in the Aleutians in search of a fictional Alaska orchid. “Steller’s Orchid” explores a little-known time in Alaska history, said McGuire, the period after the Nome gold rush when the fur trade with Siberia was flourishing.

The young Yale student has been hired to do a plant survey, but his real mission is to find an orchid described by Georg Wilhelm Steller, the naturalist on Vitus Bering’s 1741 expedition and never seen again. During his journey, John Lars hitches a ride on a schooner whose bootlegger captain has a hidden past. John Lars also meets a young Aleut woman, Natasha Christiansen. She becomes his guide and leads him to question the validity of everything he thought he knew. Together, they reach Nagai Island where the search for the orchid comes to a violent conclusion. While the story itself is fiction, the landscape, the culture and the botany are true. You can find this book at the Alaska Museum of Science & Nature giftshop.



American Eden

By Victoria Johnson

Royal Horticultural Society

October 2018

The untold story of Hamilton’s—and Burr’s—personal physician, whose dream to build America’s first botanical garden inspired the young Republic.

On a clear morning in July 1804, Alexander Hamilton stepped onto a boat at the edge of the Hudson River. He was bound for a New Jersey dueling ground to settle his bitter dispute with Aaron Burr. Hamilton took just two men with him: his “second” for the duel, and Dr. David Hosack.

As historian Victoria Johnson reveals in her groundbreaking biography, Hosack was one of the few points the duelists did agree on. Summoned that morning because of his role as the beloved Hamilton family doctor, he was also a close friend of Burr. A brilliant surgeon and a world-class botanist, Hosack—who until now has been lost in the fog of history—was a pioneering thinker who shaped a young nation. Born in New York City, he was educated in Europe and returned to America inspired by his newfound knowledge. He assembled a plant collection so spectacular and diverse that it amazes botanists today, conducted some of the first pharmaceutical research in the United States, and introduced new surgeries to America. His tireless work championing public health and science earned him national fame and praise from the likes of Thomas Jefferson, James Madison, Alexander von Humboldt, and the Marquis de Lafayette.

One goal drove Hosack above all others: to build the Republic’s first botanical garden. Despite innumerable obstacles and near-constant resistance, Hosack triumphed when, by 1810, his Elgin Botanic Garden at last crowned twenty acres of Manhattan farmland. “Where others saw real estate and power, Hosack saw the landscape as a pharmacopoeia able to bring medicine into the modern age” (Eric W. Sanderson, author of *Mannahatta*). Today what remains of America’s first botanical garden lies in the heart of midtown, buried beneath Rockefeller Center. Whether collecting specimens along the banks of the Hudson River, lecturing before a class of rapt medical students, or breaking the fever of a young Philip Hamilton, David Hosack was an American visionary who has been too long forgotten. Alongside other towering figures of the post-Revolutionary generation, he took the reins of a nation. In unearthing the dramatic story of his life, Johnson offers a lush depiction of the man who gave a new voice to the powers and perils of nature.

ANNUAL MEMBERSHIP APPLICATION/RENEWAL

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:

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

STATUS **New** **RENEWAL**

CATEGORY

<input type="checkbox"/> Full-time Student	\$12
<input type="checkbox"/> Senior Citizen	\$12
<input type="checkbox"/> Individual	\$15
<input type="checkbox"/> Family	\$20
<input type="checkbox"/> Organization	\$30

Name _____

Address _____

City: _____ State: _____ Zip: _____

Telephone: (Home) _____ (Work) _____ E-Mail: _____

Membership is on a calendar year basis.

**WELCOME BACK TO OUR 37th SEASON OF the
ALASKA NATIVE PLANT SOCIETY'S
Informative and Entertaining Monthly Meetings!**

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