Borealis

The Newsletter of the

Alaska Native Plant Society

PO Box 141613, Anchorage, Alaska — December 2022 – January 2023

Join us at our Next Meetings!

Monday, December 5, 7:00 PM

Main Topic: **"Plant Pathology at the Alaska Plant Materials Center"**
Speaker: **Todd Steinlage**

Mini-Botany: "**Campbell Creek Science Center Herbarium"**
Presenter: **Preston Villumsen**
Plant Family - Apiaceae: *Osmorhiza*
Presenter: **Glenn Brown**

Monday, January 9, 7:00 PM

Main Topic: **"Wildflower Meadow Plants and Their Propagation"**
Speaker: **Patricia Holloway**

Plant Families – Aquatic Plants
Zanichilliaceae: *Zanichillia* and
Zosteraceae: *Zostera*
Speaker: Glenn Brown

Mini-Botany: Medicinal Plants

Virtual Meeting Link: **Join via Zoom**
Meeting ID: 938 2833 2935
Passcode: 362610

In-Person Meeting: **Campbell Creek Science Center**, located at 5600 Science Center Drive in Anchorage

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

What's Happenin"?

Native Plant Seeds

In mid-November, 3 ANPS volunteers packaged up seed from Alaska native plant species collected by our members this year to offer in our upcoming native seed fundraiser.

Due to heavy rain in the second half of the summer, collecting seed was a bit more challenging this year. Nevertheless, our inventory will include seeds collected from 26 native species. This year's inventory includes seed from plants successfully propagated from last year's fundraiser!

Like last year, our native seed inventory will be published online with instructions on how to make an order. We will kick off the seed fundraiser and subsequently notify the public on our Facebook page.

Questions? Interested in joining our 2023 native seed collection efforts? Contact seeds@aknps.org.

Alaska Native Plant Month Proclamation

Every Alaskan gardener know that May is about the most important month on our calendar. It is a good time to remember our native plant heritage, as well.

The Alaska Native Plant Society is coordinating with other Alaska organizations as well as the Garden Society of North America to request that Governor Dunleavey proclaim May as ***Alaska Native Plant Month***. There has been a nationwide effort to declare April ***National Native Plant*** **Month**, but in Alaska we have to do it our own way! And this way we can celebrate for two whole months!

In the State of Alaska, we have over 2,500 native plant species. Given the importance of native plants, a Proclamation would encourage groups across the State of Alaska to celebrate the importance of native plants. Events such as planting native trees, creating pollinator gardens, removing invasive plants, or hosting native plant hikes, workshops, or seminars, will help educate the public about why native plants are so important.

Winter Steps for Growing Native Plants

By Lili Naves

December is a good time to sow seeds of Alaska native plants. Outside during winter these seeds will follow their natural life cycle and will be ready to germinate next spring. Native perennials take up to three years to mature and flower, so now is an excellent time to get yours started.

Native plants are essential for our wildlife, are low maintenance in local environments, and give a special sense of place to Alaskan gardens. Our beautiful native plants offer great options for formal and informal garden designs.

Sources for acquiring Alaska native plants and their seeds can be limited. Commercially-available seed mixes labeled as "Alaska wildflowers" often include non-native species, some of which will not thrive in Alaska or, on the other hand, can be invasive in Alaska. An updated directory of native seed and plant sources is forthcoming.

The Alaska Native Plant Society offers seeds donated by its members in an annual fundraiser. Seeds become available in the winter and are advertised on the Society's Facebook page and member announcements. You can learn more by contacting seeds@aknps.org.

Networking with local gardeners who have established native plants and harvest seeds is another way to get some seeds in your hands. Reach out and join local plant societies and gardening clubs.

Winter is also a good time to get familiar with federal and state regulations to harvest seeds of wild plants. This learning would allow you to procure required seed harvesting permits, research potential harvesting sites, and be ready to gather some wild seeds when they ripen next year.

The book "Wildflowers for Northern Gardens" (Holloway & Gauss 2021) and the website of the Ontario Rock Garden and Hardy Plant Society are among top resources on propagation of native plants. Some Alaska native species easy to grow from seeds include the common and the dwarf fireweeds (*Chamaenerion angustifolium* and *C. latifolium, formerly known Epilobium*), Alaska and Portage poppies (*Papaver alaskanum* and *P. alboroseum*), shooting star (*Dodecatheon pulchellum*), lupine (*Lupinus nootkatensis*), and common harebell (*Campanula rotundifolia*).

Thinly sow seeds on moistened potting soil. Water gently for good contact between soil and seeds. Write species names on plastic plant labels using pencil for long-term identification. Plan for adequate drainage of pots and trays during spring snowmelt. Place pots outdoors protected from excessive wind and keep them covered with snow. Do not let seeds to dry as this induces dormancy. Sow small batches so you can attend to the young plants. Wish your potted seeds a safe winter and a vigorous spring as you tuck them in their snow blanket!

The Changing of The Board –

Welcome! and Thank You!

Volunteers are the backbone of our organization. While they don't necessarily have the time, they have the heart that continues to make the Alaska Native Plant Society thrive. Our board of directors, our field trip leaders, meeting presenters and behind-the scenes "do-ers" are what makes it all happen for the rest of us.

At the Alaska Native Plant Society's Nov. 7, 2022 member meeting, members elected board officers (president, vice president, treasurer and secretary) for the 2023-2025 term. Elizabeth Bluemink and Aaron Wells will continue in their roles as President and Treasurer – We really appreciate your continuing gifts of time and energy!

Thank You to our outgoing Board Members!

Zoe Meade, outgoing Vice President will continue to be available to share her botanical expertise as well as her natural and artistic creations offered through *Wild Sleepy Roots*. She works seasonally as a field biologist studying Alaskan native vegetation and creates her resin/pressed plant jewelry in the winter when she can only dream of the flowers she collected.

Ginger Hudson is the Manager of the Jensen-Olson Arboretum in Juneau. Prior to that, she operated her own landscape design and business in Anchorage, AK. She moved to Juneau in the midst of her service as Secretary of our Board, but modern technology was able to help her continuously participate in Board and membership activities. We did miss her on the trails, though. Visit her in Juneau!

Welcome

Preston Villumsen will become our new Vice President. He describes his main interest as "ecoreconnaisance" and his email address includes one of his favorite species, tiger beetles. We hope to hear more about his pursuits in the future!

Preston grew up in Colorado, where he began his love of nature. He spent time in the US Army before beginning his career at CSU where he was able to was able to watch proteins be assembled in real time. In Wyoming he cut beetle-killed trees and built hiking and biking trails, before moving to Anchorage in 2018. He is currently at UAA working on finishing his degree in biological sciences. He has spent much of the last year learning about the lichens of the Anchorage and Chugach, having found this group to be extremely challenging, beautiful, interesting.

Margaret Stern, our incoming Secretary, was born and raised in Texas. She moved to Maine to study Botany and Natural History at College of the Atlantic. While earning her degree in Maine, Margaret acquired skills in draft horse work, farming, and taxidermy. After graduation, she promptly landed in Alaska to work at a wood-fired oven bakery. Margaret has guided in Alaska and the Patagonian Andes and has also worked as a Fisheries Technician for the Alaska Department of Fish and Game. Currently, she is the Outreach and Communications Coordinator for the Susitna River Coalition.

Margaret is an ethnobotanist beginning a graduate program in Fisheries and Wildlife Management. Margaret is also a private pilot. She loves identifying plants, tracking, exploring via foot, saddle and raft, and finding any excuse to safely spend time outside.

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the newsletter of the
Alaska Native Plant Society

ALASKA NATIVE PLANT SOCIETY

State and Anchorage Chapter Officers

President	Elizabeth Bluemink
Vice President	Preston Villumsen
Secretary	Margaret Stern
Treasurer	Aaron Wells

Program Coordinators

Plant Family/Mini Botany	Marilyn Barker
Field Trips	Dennis Ronsee
Seed Fundraiser	Erika Wolter
Technology	Aaron Wells and Timm Nawrocki

Newsletter ("*Borealis*")

Editor	Ginny Moore

Borealis is published bi-monthly, fall through spring. Articles may be sent to Ginny Moore, 14530 Echo Street, Anchorage, AK 99516. Phone or FAX: 345-1355, E-mail: elfinwood@gmail.com

AQUATIC PLANTS in ALASKA –

The PLANT FAMILIES we'll highlight in 2023-2024

By Marilyn Barker

This year I decided it would be fun to look at an oft-ignored group of plants—**the aquatics**—for our Plant Family Study. If you are new to the Alaska Native Plant Society, we study plant families, usually one at a time, at our member meetings. Volunteers sign up to give five-minute talks on Alaska native species within the family.

By definition, aquatic plants are the plants growing submerged or emergent along or in lakes and marshes and shorelines. They can be freshwater or saltwater. It is always fun to find new treasures along a shoreline, also fun to know their names!

Alaska's aquatic plants are spread among many plant families, so I selected plant families which are predominantly aquatic. This excludes a few. For example the Ranunculaceae (buttercup family) plants like *Ranunculus trichophyllus* or *R. gmelinii* are aquatic, but the vast number of plants in the Ranunculaceae (buttercups, monkshood, columbine….) are terrestrial so that family was left out.

Aquatic families are found in both the monocot and dicot lineages. Most of the families are quite small, some monotypic. Those not monotypic are limited to one or two genera, and rarely three. Interestingly enough, most of the aquatic families are monocots.

If you are scanning through Hultèn, you might not find some families listed on our tentative schedule, like Ruppiaceae or Zanichilliaceae. That is because the Potamogetonaceae was a very large group that has been broken up into five families: Potamogetonaceae, Zosteraceae, Zanichilliaceae, Ruppiaceae and Najadaceae.

There are great common names among the aquatic plants, like water nymph, ditch grass, eelgrass, frog spit, duck weed and of course the water lilies! I am sure there are some good stories to go along with these names.

Glenn Brown volunteered to start our aquatic series in January with the two "Z" families: Zanichilliaceae and Zosteraceae, both of which were part of the Potamogetonaceae. In February, Al Batten volunteered to take on the challenge posed by Potamogetonaceae—the largest of these families. We are still looking for volunteers for March and May.

For Fall 2023-Spring 2024, the only month spoken for is December, when Justin Fulkerson will present on bur-reeds and cattails.. The exciting news is that Justin has found a new Sparganium species for Alaska, not a new species, but new to Alaska!

If you are interested in presenting one of these families, please use our online signup sheet or contact me at marilynbarker29@gmail.com to reserve your spot. The tentative schedule below shows which months have already been chosen by and which months need to be adopted. Remember, this is not meant to be a thesis presentation, but a 5 minute highlight of a plant family.

Tentative 2023-2024 Schedule:

January 2023: **Zanichilliaceae** and **Zosteraceae**: Glenn Brown

February 2023: **Potamagetonaceae** (Potamogeton): Al Batten

March 2023: **Ruppiaceae** (Ruppia) and **Najadaceae** (Najus): _____

April 2023: **Juncaginaceae** (Triglochin): Glenn Brown

May 2023: **Alismataceae** (Sagitaria): _____

November 6: **Scheuchzeriaceae** (Scheuchzeria): _____

December 4: **Sparganiaceae** (Sparganium) and **Typhaceae** (Typha): Justin Fulkerson

January 2024: **Araceae** (Calla and Lysichiton): _____

February 2024: **Isoetaceae** (Isoetes): _____

March 2024: **Haloragaceae** (Hippurus & Myriophylllum): _____

April 2024: **Lentibulariaceae** (Utricularia and Pinguicula): Beth Baker

May 2024: **Nymphaeaceae** (Nymphaea, Nuphar, Brasenia) and **Ceratophpyllaceae** (Ceratophyllum): _____

Plants That Grow in the Littoral Zone

The aquatic plants grow in an area known as the **littoral zone**--the shallow transition zone between dry land and the open water. Within this zone there is an array of niches in which plants have adapted themselves to thrive.

Shoreline Plants

Shoreline plants grow along edges of lakes, rivers, streams, and ponds or on wet ground away from open water. They have at least part of their stems, leaves, and flowers emerging above the water surface and are rooted in the sediments. Some plants that typically grow in deep water may be found along the shoreline in late summer when water levels are low.

Jamie Fenneman

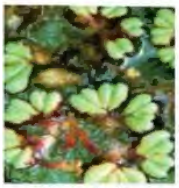
Floating Leaved Rooted Plants

These plants are rooted in the sediment with floating leaves along the water surface, but may also have underwater leaves. Their stems are often not firm enough to keep them upright when removed from the water; at low water they may be found collapsed on the lake bottom. These often form a band of vegetation along a lake margin, in water one to three meters deep.

L. K. Sawyer

Free Floating Plants

Free-floating plants float in the water column, on the surface of the water, or lie on the bottom. This category includes some of the smallest members of the plant kingdom, such as watermeal plants, which look like green specks on the water surface. These plants do not root in the sediment, although some species have roots that dangle in the water. They sometimes form extensive green mats on the water surface.



Clayton Anticau

Submersed Rooted Plants

The entire plant is usually underwater, but the flowers and fruits may rise above the water surface. Submersed species are rooted in the sediment and have underwater leaves. They can grow from shallow water to depths greater than ten meters in very clear water.

Gary Larson

Macroscopic Algae

Macroscopic algae lack stems and leaves, although sometimes they have structures that can be mistaken for stems and leaves. These algae are green with cylindrical, whorled branches. They lack roots, but some species attach to the sediment. Macroscopic algae tend to lie on or just above the sediments. They are found from shallow water to very deep areas (20-30 meters) in clear water.

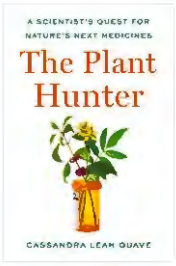
Clayton Anticau

Aquatic Moss

Aquatic mosses are small plants with delicate stems and small closely overlapping leaves. These plants can have branched, stem-like and root-like structures. Unlike most other plants described in this book, the aquatic mosses never produce flowers. Aquatic mosses are often seen growing attached to rocks in mountain streams, but they also grow in shallow to moderately deep water of lakes.

Clayton Anticau

From Our Bookshelves – Review by Carolyn Parker



The Plant Hunter : A Scientist's Quest for Nature's Next Medicines

Author: Cassandra Leah Quave
Viking (September 2021)
ISBN-10 : 1984879111

Ethnobotanist Cassandra Leah Quave was the Plenary Speaker for the Botanical Society of America meetings in Anchorage this summer (BSA 2022). Having barely dipped my own toes into the inter-disciplinary topic of ethnobotany I realized that during her career she had bridged a gap that I had long felt was rarely discussed in our program; the gap between basic fieldwork (living with and interviewing knowledgeable people, learning their culture, language, flora and healing skills), and moving on to the testing of plant extracts prepared in different ways to be tested for their effectiveness on the medical issues you are hoping to treat within the lens of western medicine.

However, her book 'The Plant Hunter', leaves few gaps in her amazing story. From the age of three, her own life was a challenge of several surgeries in attempts to correct the bone defects in her right foot and lower right leg, a curvature of her spine that was worsening, with some oral surgery thrown in as well. All that lead to a below-the-knee amputation, a bone-fused spine, and the serious bacterial infections which will often follow. But she had the blessings of steadfast parents who assured her she could (still) do anything she wanted to, and she had developed a fascination for the diverse natural history that surrounded her home in southern Florida. By high school she was winning science fairs and volunteering at the local hospital ER. She was completely hooked on medical science, the scientific process, and the natural world in general when she headed to Emory University in Georgia.

Taking a few anthropology classes to break up her intense pre-med course work, Cassandra was introduced to cultures unlike her own, and to the study of ethnobotany that offered alternative ways of learning, knowing, and interacting with plants that included healing. After two trips within one year to the Peruvian Amazon Basin, working with both an indigenous healer and a local Peruvian medical doctor, she had found a new direction. She was asked to give a talk entitled 'Plants and Pills: Health Consequences of Western Medicine in the Peruvian Amazon' based on her data from these trips for the annual meeting of the International Society of Ethnobiology held at the University of Georgia shortly after her graduation from Emory. As one thing so often leads to another, she was soon invited to spend a summer in rural southern Italy, home to a large group of ethnic Albanians where an Italian ethnobotanist she had met at the meeting had his own study of the wild food gathering of the Albanians living there. She could help him, and maybe spin off onto something that interested her as well.

After her first two summers in Italy a lot of things changed quickly. She started (and finished) a PhD in Biology at Florida International University (conveniently close to the Fairchild Tropical Botanic Gardens), acquired a handsome and multitalented husband/life partner, collected hundreds of plant samples from southern Italy and SE USA, all having an oral or literature record for treating bacterial infections used by traditional indigenous healers, several publications, more training in microbial lab techniques, some job efforts that did not work well, two children for starters, but finally (!) getting her dream job that included her own research lab (the Quave Lab) and a Herbarium all back at Emory University in Atlanta, Georgia. You could say she was 'off and running' after a lot of hard work.

But I would suggest you read Cassandra's story in her own words. What I most appreciated about her book was how she included all aspects of her life as she moved along; a growing family, the ethnic communities she worked with, her challenges with keeping up in a career-driven life, nourishing academic relationships, running her own lab, and details of the research she was pursuing, primarily finding treatments, based on both natural plant sources as well as western-manufactured treatments for skin-related bacterial infections. All this is woven together with a deep sense of honesty, humor, and humility, and include her clear explanations of the medical aspects her work. There is something to treasure for everyone in her well-written story.

For more information about Dr. Cassandra Quave see:

http://biology.emory.edu/home/people/bios/associated/quave-cassandra.html

https://humanhealth.emory.edu/people/faculty-bios/quave-cassandra.html

From What We Gather

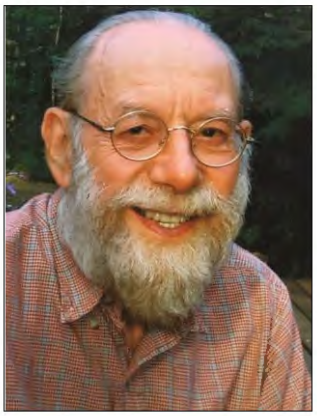
George W. Argus, “Salicologist For Life” (1929-2022)

In October, the botany grapevine carried the news of the recent death of George W. Argus. Maybe you haven’t ever heard of George Argus, but you have likely profited from his life-long fascination with willows. He is known by many as “Mr. Salix”, and is responsible for the creation of numerous identification keys and guides. At the time of his death at the age of 93 in Ottawa he had long been retired from his post as Professor and Curator at the Canada Museum of Nature, but was still involved in scientific research, editorial work, and identification of specimens.

He didn’t start his career as a botanist, but Alaska played a large part in that shift. Early in his life Argus developed a passion for living and working in Alaska, taking time out from Valparaiso University where he had studied engineering for two years in order to spend time there. Working as a laborer on the Alaska Railroad (1949) he became interested in patterns of glaciation in the Kenai Peninsula and later, as a lineman's assistant in the gold mines of Interior Alaska, he searched for bones in the 'muck pits' in his spare time. In this way Argus took an interest in geology and paleontology and decided to complete his undergraduate degree at the University of Alaska. He majored in biology and geology and by the time of his graduation in 1952 he had developed a firm interest in botany and general systematics.

George and *Salix. arctica*, Anchorage. Alaska 2011

He became involved with willows during his graduate studies, when the key he was using for identification proved cumbersome and unhelpful. Challenged to create a better one, he was “lured into the domain of Salix by continuous knots of nomenclature to be unravelled, samples to be organized, and characteristics to understand. A prolific writer, Argus finished numerous systematic monographs for different regions, contributed to the Flora of North America (2010), and collaborated with the University of Alaska to create an interactive identification guide on New World willows (INTKEY), a free and web-accessible tool (Argus, 2012).”



After a brief spell as a surveyor on the Juneau Icefield Research Project George entered the US army as an instructor in arctic techniques. He was a founder of the Alaska Alpine Club and in April, 1954, George joined with three others (including Les Viereck, another prominent early Alaskan botanist) in an expedition to make the first traverse of Denail including a first ascent of the South Buttress. This impressive story involving tragedy as well as Argus’s survival in extreme conditions as well as a lively biography can be found at http://skvortsovia.uran.ru/2014/1201.pdf

Measuring *Salix arctica* on Attu
photo by Steve Talbot

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 or to renew, you can either use our convenient on-line method by going to https://aknps.org/membership, or 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	E-Mail Newsletter	Snail-Mail Newsletter	Both Mail Deliveries
☐ **Full-time Student**	**$12**	**$22**	**$22**
☐ **Senior Citizen**	**$12**	**$22**	**$22**
☐ **Individual**	**$15**	**$25**	**$25**
☐ **Family**	**$20**	**$30**	**$30**

Name: _____

Address:_____

City _____**State:** _____**Zip:**_____

Telephone: (Home)_____**(Cell)**_____**E-mail**_____

PLEASE RENEW OR JOIN TODAY!
ANPS Membership is on a calendar-year basis.

Dec 5th Meeting in person at Campbell Creek Science Center or
Via Zoom: Meeting ID: 938 2833 2935 Passcode: 362610

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