

Borealis

the newsletter of the



PO Box 141613, Anchorage, Alaska

November 2002

Join us at our Autumn meetings!

Campbell Creek Center

Monday, November 4 , 7:30 p.m.

Topic:

**Eco-regions of Wrangell-St. Elias
Park and Preserve**

Speaker:

Blain Anderson
National Park Service

Monday, December 2 , 7:30 p.m.

Topic: **Our Northwest Parks:**

Noatak, Bering Land Bridge, Kobuk and
Cape Krustenstern

Speaker:

Tom Heinlein
National Park Service

**Plant Family Study
A New Series!!**

"THE IMMIGRANTS"

**DON'T FORGET SEEDS FOR THIS
YEAR'S
SEED EXCHANGE!!**

Please bring to the next meeting, or mail to
Kathy Swick

Anchorage, AK 99503

Keeping In Touch

Borealis Is Quarterly!

Don't forget that Borealis is now published quarterly, with issues in November, January and March and a May Field Trip Issue. Postcard reminders of monthly meetings will be mailed September, December, February and April. This schedule is an effort to cut production and mailing costs, while still providing timely information and meeting updates. The quarterly issues will be expanded to include notes on two months of Plant Family Studies as well as other articles of local interest. We hope you'll find these changes to your liking.

We're On-Line

The Alaska Native Plant Society is listed in PlantSociety.com's online reference listing. PlantSociety is the largest plant society, club, organization and supplier locator on the web, with over 20,000 listings. The site offers numerous no-cost benefits including:

- an online calendar system where we can post meeting, shows, sales and special events,
- hosting of a web site,
- online discussion groups for all plant related topics, and
- online plant related classified section.

Please explore the site and provide them with comments or suggestions. These kinds of sites are only as good as the interaction that happens when we all participate.

Contribute

So, too, the Borealis is only as good as the interaction that happens when we all participate. We encourage everyone who has an interest in any aspect of Alaska Native Plants to share their expertise, experiences, updates and questions. Please help us to make this newsletter be the connecting link between us all, wherever we are, and whatever we're doing. You can send (even hand-written) faxes, e-mails or hard copy to Ginny Moore, , Anchorage, AK 99516, Phone and Fax: , e-mail: mooretg@alaska.net. Anything sent before the 20th of the month before publication should make it into the next newsletter.

Introducing the "Immigrant" Species Asteraceae/Aster Fan

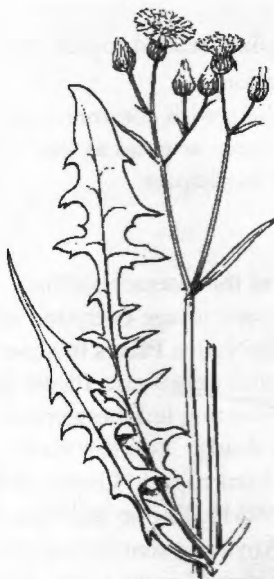
This year, instead of studying a specific plant family, we will concentrate on certain species within seven families that have been introduced in Alaska and are commonly known as weeds/exotics. Most were introduced through farming and roadside revegetation.

Each person has his/her own idea of what a weed/exotic/introduced plant means to us, and whether we should be concerned with it. Many of these plants are pretty, some are useful and some have been around for many years. Some people feel it is hopeless to be concerned about them, especially if they are pretty or widespread. Others see harm in how they threaten native plants by crowding or robbing them of nutrients. These talks are intended to enlighten people to the dangers, uses and or value of such species.

The "weed family" that will be discussed at the November meeting is Asteraceae/Aster – formerly known as the Compositae/Daisy family. Verna Pratt is the presenter. The first plant that comes to mind is the dandelion, but there are many other genera that have invaded our roadsides and fields and near settlements. Due to the heads of multiple flowers that are mostly wind distributed these species easily become overwhelming. The National Park Service is presently working on eradicating non-native dandelions in Denali National Park, and enlists volunteers each summer. They are concentrating on two areas: the Wonder Lake

area, where introduction of the plants came through the Kantishna mining district, and the Park Entrance area up to Savage River.

Another common genera is *Crepis capillaris*/Hawksbeard. These plants are 8-18 inches tall with multiple yellow flower heads similar to dandelions and are common in gravelly areas along roadsides.



Crepis capillaris

Matricaria matricarioides, or Pineapple-weed is a small annual that some people use to make chamomile tea, the small flower heads being very aromatic and flavorful.



Matricaria matricarioides

Another plant oftentimes used this way is *Anthemis cotula*/Mayweed. This white daisy-like flower has very delicate leaves much like *Matricaria* but can be much taller (8-30 inches, depending on soil conditions). It is a late bloomer and blooms until the ground freezes.

Speaking of daisies, there are no native white daisies that grow along roadsides. If the leaves are fine and feathery, it is probably *Anthemis cotula*. If the leaves are similar to the common garden daisy, it is probably *Chrysanthemum leucanthemum*.

The last plant that I will single out as a severe problem species is *Tragopogon dubius*/Western salsify or Oyster Plant. This large pretty yellow daisy-like flower has now been introduced to Alaska via the Highway Department reseeding on the Seward Highway. For a few years it was completely unnoticed, but then it flowered and went to seed, with large tawny dandelion-like seed heads. Naively, I tried to convince myself that it would stay in that narrow ridge-enshrouded crevasse. It has now spread not only down that valley but all along the Seward Highway between the Weigh Station and Falls Creek. I personally would like to launch an effort (probably take several years) to eradicate it before it becomes an entry in Hultén's *Flora of Alaska*.

There are at least 20 other plant family species in this family that have been found in different parts of Alaska. Some are not prolific or problematic. Others, at the least, are an eyesore in roadside plantings. Perhaps landscapers should be personally held responsible for eradicating weeds that they have introduced through poor choice of seed mixes. It would be far more successful the first few years than after a colony gets established.

Immigrant Plants: Fabaceae/Pea Family

Next to the Aster family, the Fabaceae/Pea is probably the most problematic weed family. Many were first introduced through farming as nitrogen builders for the soil. They are now showing up in roadside grass mixtures and quickly raising havoc with roadside landscaping projects.

***Vicia cracca***

Probably the worst culprit here is *Vicia cracca*/Bird Vetch or Cow Vetch. This weak-stemmed plant climbs up and over and smothers anything in its path. The short spikes of lovely tiny violet blue flowers fool many people into believing that it is a lovely wild flower. Some have actually called it a “beautiful little lupine”! It is quickly invading state park trails along the Seward Highway.

There are a few other introduced *Vicia* species that are difficult to distinguish from the native species without careful examination.

Probably the next worst genus is *Melilotus* – the Sweet Clover. *M. alba*, (white) and *M. officinalis* (light yellow-flowered) are prolific in the Matanuska Valley farming areas and along roadsides. The sweet-scented flowers attract bees. Plants can be two-five feet tall, bloom for much of the summer, and have three-parted clover-like leaves on the stems.

***Melilotus officinalis***

Speaking of clover (*Trifolium* genus) – all have been introduced and are now very well established. Bee-keepers love this family.

The last genus of major significance is *Medicago*/Alfalfa. There are four species in Alaska. Their leaves are similar to *Melilotus* but they generally tend to be quite decumbent. The flowers are small, bright yellow or purple and in rounded clover-like clusters. At this point they are mostly around farming areas.

It is quite possible to see an introduced very large lupine along the Glenn and Seward Highways. *Lupinus polyphyllis* was undoubtedly introduced through roadside revegetation. The leaves are large and have more than ten leaflets; flowers are blue to violet and are on long racemes.

***Medicago sativa***

An interesting aside: Peterson’s Field Guide to Wildflowers of Northeastern and North-central North America lists each of these plants as “alien”, and notes that “these immigrants almost invariably grow in disturbed soils, few of them venture far from the roadside, where they apparently cannot compete with our preadapted native flowers.”

“Plant Family Study” material was provided by Verna Pratt. Drawings are from Peterson’s “Field Guide to Wildflowers of Northeastern and North-central North America”, 1968.

What is a Burl?

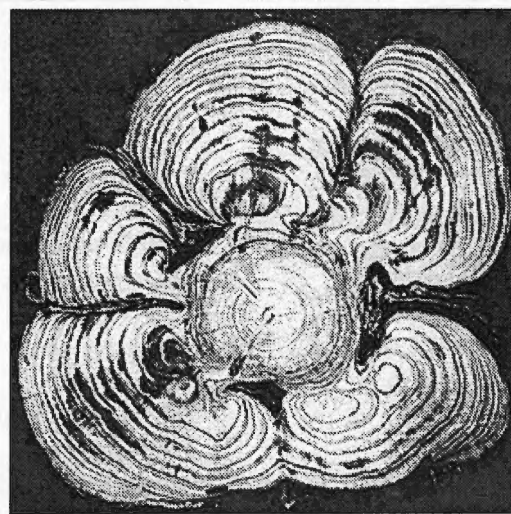
Who hasn't seen the many beautiful wood products that are carved from tree burls? For centuries burl wood has been considered a prized possession. In this respect trees are like oysters - not every oyster produces a pearl, not every tree produces a burl. The greatest demand for burls in the wood market today, is for use as veneer. These veneers adorn many of today's most expensive automobiles, and are also used in production of fine custom built furniture.

Burls are actually tight clusters of abnormally formed buds and shoots that can occur on the trunk or branches. They occur when a twig bud fails to grow normally, differentiating into the tissues needed for forming a limb, and instead just multiplies and multiplies its bud cells. That's how you get the round growth with an irregular grain structure. Many burls will sprout when placed into water, forming normal-looking shoots. Apparently the water saturation somehow helps them "remember" that they are, after all, limb buds.

The growth of the burl usually matches the growth of the tree. In young burls a number of individual buds can often be seen, however as the burl increases in age the buds tend to join together. Burls sometimes contain kino veins and are rich in lignin and other substances which harden and color the wood.

When several burls grow on a single spruce tree, it is likely that they all began growing at once. Evidence for this simultaneity is seen when annual rings in the tree and its burls are counted to determine which year each burl began. So it would seem that whatever agent controls the abnormal growth is spread throughout the tree in a single year. And there has to be some mechanism which determines where on the tree burls will grow.

Dr. Les Viereck of the Institute of Northern Forestry at Fairbanks points out that the trees which develop burls often tend to be undergoing environmental stress. Trees near timberline or on north slopes where living is tougher are prone to burl growth.



Photograph of a section cut from a tree with 5 burls that simultaneously grew at the same level on the tree. Annual growth rings can be followed around the tree trunk at center and into each of the burls. The rings show that the growth of burls began when the tree was about 40 years old. This tree was cut on a north slope near timberline by Jim Moore of Fairbanks.

Photo provided by: Geophysical Institute, University of Alaska Fairbanks

The exact reason why burls form is not fully understood. It is believed they are a response to a disturbance such as fire, frost or mechanical injury. True burls are not harmful to the tree.

Though burls are highly prized by wood workers, they should not be cut from living trees as this has the potential to seriously damage or even kill the tree. This is because a burl is mainly dead heartwood with no ability to grow new cells over the wound. The wound provides a site for decay, disease or insect attack.

One thing is for certain, the effect these dormant buds have on the appearance of the wood after it has been sawn is truly a thing of beauty.

MYSTERY PLANT

The mystery plant for this month may have been used before, but it was chosen for a special reason. During tour guide training for the Alaska Rock Garden Society Annual Meeting, this plant was found for the first time in the Chugach Mountains.

Hultén's lists it as being only in central and eastern Alaska and the Yukon Territory. This is a small cushion plant with narrow leaves similar to *Silene acaulis*. The leaves are ciliate in margin and have branched hairs on the top surface. The five small, light pink petals are joined at the base as are the calyx lobes. This was a highlight for plant enthusiasts visiting Alaska and many photos were taken of the two tiny plants we found.

Answer on Page 7.

PLANT-RELATED CLUBS IN THE ANCHORAGE AREA

| <u>CLUB</u> | <u>MEETINGS</u> | <u>WHO TO CONTACT</u> |
|---------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Alaska Botanical Garden | 3rd Wednesday, 7:00 p.m. | ABG Office: 770-3692 email: garden@alaskabg.org |
| Alaska Ikebana Society | 3 Meetings per year | Nancy Knuutila: |
| Alaska Master Gardener Association, Inc. | 3rd Monday, 7:00 p.m. | Mary Shier, President: - email: mshier.anch@juno.com |
| Alaska Native Plant Society | 1st Monday, 7:30 - 9:00 p.m. | Frank Pratt: |
| Alaska Orchid Society | 4th Tuesday, 7:30 - 9:00 p.m. | Sally Karabelnikoff: |
| Alaska Pioneer Fruit Growers | 2nd Thursday, 7:00 - 9:00 p.m. | Dan Elliot, President: |
| Alaska Rock Garden Society | 2nd or 3rd Saturday, 2:00 p.m. | Florene Carney:) or Annie Nevaldine: |
| Alaska Rose Society | 2nd Tuesday, 7:00 p.m. | Lonnie Chace, President: info@alaskarosesociety.org (for general information queries) membership@alaskarosesociety.org (for membership queries) programs@alaskarosesociety.org (for queries about meetings and activities/events) |
| Alaska State Beekeeping Association | 3rd Monday, 7:00 p.m. | David Ownby: - email: ownby.clan@worldnet.att.net |
| Wildflower Garden Club | 2nd Thursday, 10:00 a.m. | Janet Brower: Voice Mail: |
| Anchorage Garden Club | 1st Thursday, 7:30 p.m. | Hotline: or Sally Mallory: . |
| Anchorage Horticulture Coalition | Mondays, 5:00 p.m. | Voice Mail: 644:HORT(4678) email: anchoragehorticulture@gci.net |
| Aurora Borealis African Violet Society | 3rd Tuesday, 7:30 p.m. | Helen Krumrey, President: |
| Cook Inlet Bonsai Study Group | First Wednesday, 7:00 p.m. | Paul Marmora, email: pmarmora@aol.com |
| Greater Anchorage Mycological Association | To be announced | Blanch Tinius, or Diane Pleninger, |
| Herb Study Group | 4th Thursday, 7:30 p.m. | Contact: Cooperative Extension Service: |
| South Central Alaska Beekeepers Association | 4th Monday, 6:30 p.m. | Tang Johnson: or Ed Marshall: |
| Valley Garden Club | 1st Tuesday, 10:30 a.m. | Pat Newcomb: |
| Willow Garden Club | 3rd Thursday, 7:00 p.m. | Dorthea Taylor, President: |

Geologists Use Lichens To Track Climate Changes

Lichens — those ubiquitous plants that dot rocks around the globe — may help provide answers to where, and how rapidly, the Earth's climate is changing.

There is little question that many of the Earth's great glaciers have been retreating since the Little Ice Age reached its most recent advanced position in the mid 1800s. The bigger questions remain. How fast has that change occurred, and were the dramatic changes reported in Europe similar in other parts of the world?

Traditional geological dating methods aren't always useful in tracking such recent climate changes.

Radiocarbon dating doesn't always work, and neither does a technique called dendrochronology which relies on counting tree rings. There aren't always trees to measure, which rules out using that technique in some areas.

It turns out tiny, but durable little lichens might serve as a useful biological calendar for the time period up to 300 years ago. Lichens are hardy combinations of fungi and algae that can grow on rocks and live for hundreds of years. *Rhizocarpon geographicum*, the lichen used in the technique, is widespread in areas where glaciers have recently retreated and grows at a relatively constant rate.

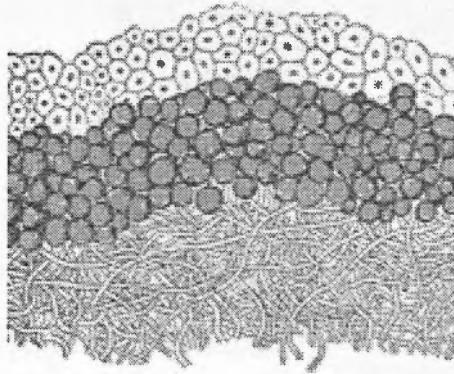
Katie Schoenenberger, now a professor at the University of Dayton is using a modified version of a technique called lichenometry to help track the most recent glacial changes.

Schoenenberger has sampled lichen populations in New Zealand, Iceland and the Canadian Rockies over the past several years. In 2001 she sampled four different glaciers in south central Alaska with the help of students from the University of Cincinnati. Schoenenberger has set out to create a geologic time clock based on lichen sizes.

"The idea is to sample the whole population to reduce error," explained Schoenenberger. While traditional lichenometry technique focused solely on the largest lichen in a

particular area, Schoenenberger has used lichen size to track the retreating glaciers in New Zealand. She was also able to confirm her findings using historic records and other dating techniques. Now, she hopes to establish a similar calibration curve for North American glaciers.

Cross Section of Lichen



Cortex (top)

Algal Layer

**Medulla
(bottom)**

Schoenenberger worked in collaboration with University of Cincinnati geology professor Thomas Lowell and Jessica Black from the University of Maine. Lowell said the work should help answer questions about how severe the Little Ice Age was in less populated areas of the world. "There's a people filter Katie's trying to eliminate. The traditional view is that Europe was hit hardest, but that's also where most of the population was at the time."

The ultimate goal of the research is a better understanding of how quickly climate can change and whether there are differences in the Northern and Southern Hemispheres.

This material was compiled from:

<http://www.uc.edu/news/lichennz.htm>

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

- Full-time Student \$ 5
 Senior Citizen \$10
 Individual \$12
 Family \$18
 Organization \$30

Name _____

Address _____

City: _____ State _____ Zip _____

Telephone: (Home) _____ (Work) _____

Membership is on a calendar year basis.

MYSTERY PLANT ANSWER



Douglasia Gormanii
Primulaceae/Primrose family

Thanks!!

A heartfelt **THANK YOU!** to all of the ANPS members who helped as tour guides for the Alaska Rock Garden Society's Annual Meeting in June. Many visitors have commented on how great it was to have such great guides and so much personal attention. The field trips were a major part of the conference and your dedication and assistance were greatly appreciated.

Volunteers Are Needed!

- To present Immigrant Plant Family information at the monthly meetings:

Call Verna at _____ and specify which unit and the month you prefer:

Scrophulariaceae/Snapdragon
 Brassicaceae/Mustard
 Plantaginaceae/Plantain
 Menthaceae/Mint
 Polygonaceae/Buckwheat
 Chenopodiaceae/Goosefoot

Dec. 2, Jan. 6, Feb. 3, Mar 3, April 7, May 5

- To provide mini-botany presentations at monthly meetings.

Call Marilyn Barker, _____

SEEDS FOR SEED EXCHANGE!!

Kathy Swick has agreed to be this year's seed organizer. Please bring your seeds to the next meeting or mail to:

Kathy Swick,

Anchorage, AK 99503.

She plans to package them in December.

ALASKA NATIVE PLANT SOCIETY State and Anchorage Chapter Officers

| | |
|----------------|--------------|
| President | Frank Pratt |
| Vice President | Leonard Grau |
| Secretary | Beth Koltun |
| Treasurer | Sue Jensen |

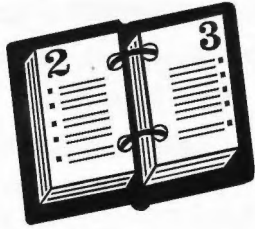
Anchorage Chapter Program Coordinators

| | |
|--------------|----------------|
| Main Program | Susan Klein |
| Plant Family | Verna Pratt |
| Mini-Botany | Marilyn Barker |
| Field Trips | Open |

Newsletter ("*Borealis*")

| | |
|-------------|--------------|
| Editor | Ginny Moore |
| Circulation | Martha Hatch |

Borealis is published monthly October through May. Articles may be sent to Ginny Moore, Anchorage, AK 99516. Phone or FAX: _____ or E-mail: mooretg@alaska.net



UPCOMING PLANTS & NATURE EVENTS

(See List of Clubs and Contacts on page 6)

November 4

Alaska Native Plant Society: 7:30 p.m., Campbell Creek Science Center off 68th and Lake Otis

November 7

Anchorage Garden Club: "Making Anchorage More Livable Through the Landscaping of Public Spaces - Looking at the Park Strip, Midtown Park, Fairview and other Public Places" by Elise Huggins; 7:30 p.m., Pioneer School House basement, corner of Third & Eagle, contact

November 18

AMGA Meeting: "Video of Abkidgz Garden Restoration" by Erma MacMillan; 7 p.m., CES rm. 130, Carlton Trust Bldg, 2221 E. Northern Lights Blvd. Contact

November 19-20

Anchorage Garden Club: "42nd Annual Holiday Flower Show" at Wells Fargo Bank, C Street & Northern Lights - Open to the public

December 2

Alaska Native Plant Society Monthly Meeting: 7:30 p.m., Campbell Creek Science Center.

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

