

Borealis

the newsletter of the



PO Box 141613, Anchorage, Alaska

January 2006

Join us at our Next Meetings!

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

**NOTE DIFFERENT LOCATION!!!
Alaska Museum of Natural History
201 N. Bragaw, Mt. View**

“Bring Your Fork – The Tide is Out”

Speaker: Daisy Lee Bitter

As an ANPS member from Homer, Daisy Lee has led many wonderful field trips in Kachemak Bay. Her knowledge of edible coastal plants is incredible. This is the first time for her to share her knowledge of these wonderful plants at a monthly meeting.

January Plant Family Study

Eriophorum—the cottongrasses

Presenter: Estrella Campellone

Mini Botany: Cara Wardlaw-Bailey

Monday, February 6, 7:30 p.m.

(Campbell Creek Science Center)

“Saving The Palmer Hay Flats”

Speaker: Kris Abshire

Plant Family: Trichophorum and Scirpus

Presenter: Verna Pratt

Mini-botany: Glenn Brown

**For Latest Information on
Alaska Native Plant Society events,
check out our website at:**

[http:// AkNPS.org](http://AkNPS.org)

Hares, Birch, Fires & Drugs

The two consecutive large fire seasons of 2004-2005 in Alaska have torched millions of acres of forests. Forest fires are good for snowshoe hares; they produce fresh growths of birch and willow shrubs, providing more food for hungry hares. But many shrubs and small trees defend themselves against such onslaughts, and this ability that could have started evolving during the last ice age may be useful to humans as well.

In areas of heavy browsing, the Alaska paper birch tree produces large quantities of gooey resin glands which contain papyriferic acid. This chemical discourages hares from browsing the twigs; if they munch anyway, they pass more sodium in their urine, and their overall health suffers. Some scientists, such as John Bryant, a UAF professor emeritus who now lives in Wyoming, see papyriferic acid as a potential hypertension drug think that might be a useful natural resource for Alaskans to tap.

Birches do not produce standard quantities of this acid and young birch growing in burn areas in northern North America have the strongest chemical armor. "Fire yields hare habitat, which yields hares, which yields hares eating plants, which yields juvenile plants evolving a chemical defense against hares," Bryant said.

Since the birches with the highest concentrations of the chemical are between Fort Yukon and northwest Canada, Bryant sees potential for villagers to start a new industry of harvesting young birch and other woody plants.

Researchers have established that Alaska paper birch (*Betula nealaskana*) evolved in the ice age refuge of Beringia. It is not known for sure whether snowshoe hares also originated there, and might have been browsing on birch for the last 10,000 years.

But many other browsing mammals roamed Beringia during the Pleistocene Epoch, and extinct megaherbivores such as the American mastodon might have helped to kick off the birch's chemical defense strategy. Some have speculated that the evolution of chemical defenses in plants might even have contributed to the decline of some of the Beringian megaherbivores.

Climate change in this era could also affect populations of herbivores in the North. If a warmer climate leads to more severe fire seasons, causing plants to increase their chemical defenses even more, browsers could find their normal food less to their liking in the boreal forest.

For full story, see: <http://www.gi.alaska.edu/ScienceForum/ASF17/1761.html>

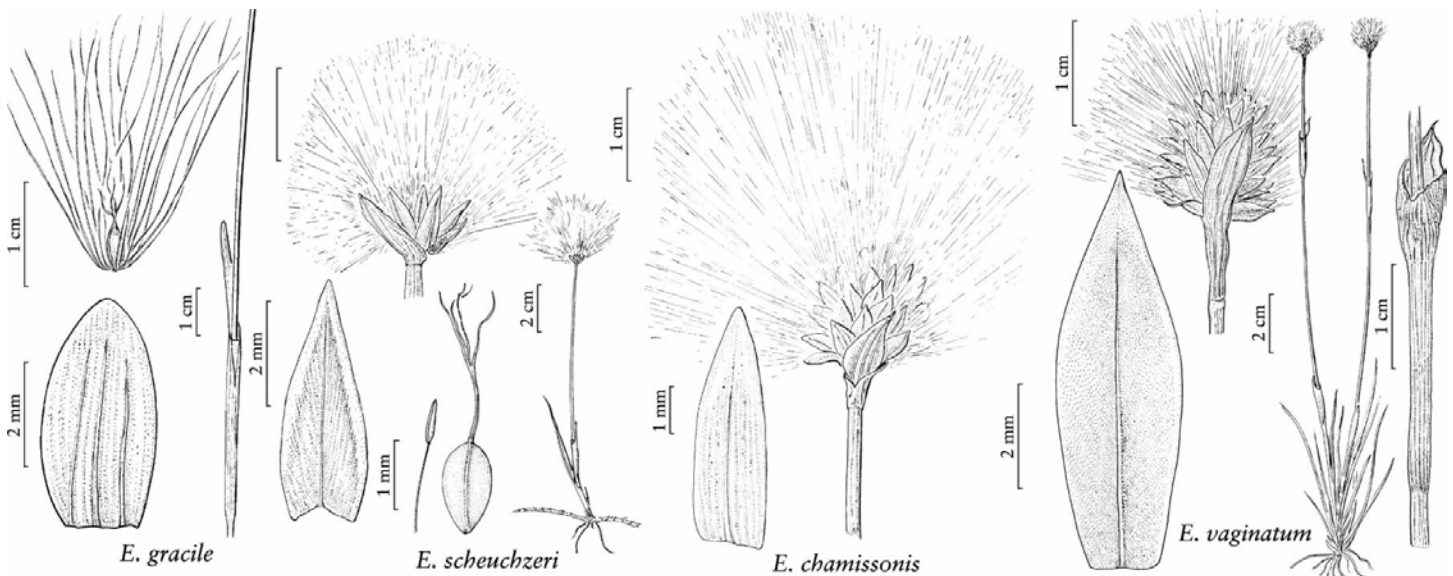
and <http://www.taiga.net/yourYukon/col438.html>.

Eriophorum—The Cotton Grasses

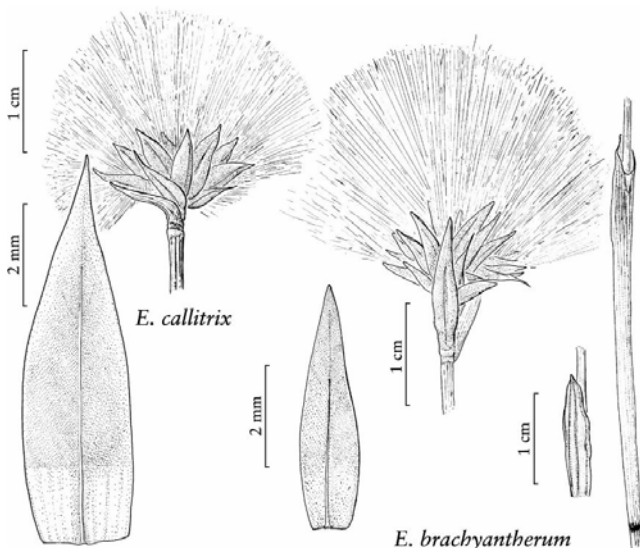
The Eriophorums are sedges of cold swamps and bogs. They have been described as extensive patches of erect stems with grass-like leaves, topped by 2-8 white, cottony heads in a cluster. The genus name “Eriophorum” comes from the Greek, *erion* (*erion*), "wool", and *phoreo* (*phoreo*), "to bring or carry"; hence, "wool bearing".

The cotton grasses are keyed to genus by having perfect flowers and a perianth composed of numerous bristles. The bristles elongate at maturity to appear as tufts of cotton on a stem. There are 8 species and 14 taxa represented in Alaska.

Two of the species are notable as they form vast landscapes. *Eriophorum vaginatum* is responsible for the development of tussock tundra, and *Eriophorum angustifolium*, the tall cotton grass has a vegetation province named for it, the “cotton sedge tundra”. The latter species produces an edible underground tuber, called “mouse nuts”. Because the cotton grass forms a dense rhizomatous mat, it is very difficult to dig through and collect the mouse nuts, this is not a problem for mice. The tundra mice collect them and cache them for winter use. So before freeze-up, one simply finds and raids the mouse pantry.



ERIOPHORUM



HUMAN USES OF ERIOPHORUM

Native Americans often ate the young stem bases - raw or cooked – they were usually cooked and eaten with seal oil.

The leaves and roots are considerably astringent and have been used in the past as a treatment for diarrhea.

Some native North American Indian tribes ate the stems raw in order to restore good health.

Oil from the stem of arctic cotton grass collected in the spring may be effective against warts.

The cottony seed hairs are used to make candle wicks. They are also used for stuffing pillows, paper making etc and as a tinder. Experiments have been made in using the hairs as a cotton substitute, but they are more brittle than cotton and do not bear twisting so well.

The dried leaves and stems have been woven into soft mats or covers.

Trichophorum and *Scirpus*

Not too long ago these two genera were combined into one genus—those of you with a copy of Anderson's Flora of Alaska will note they are all 8 are in the genus *Scirpus*. If you search the internet for some of these species, however, you'll find that they may have two or three or even more alternate names. For instance, the plant listed in Hulten as *Scirpus vailidus* is officially *Schoenoplectus tabernaemontani*, but may also be found as *Scirpus tabernaemontani* and *Schoenoplectus validus*. More complex genetic testing will no doubt result in future name changes as genera are split and combined.

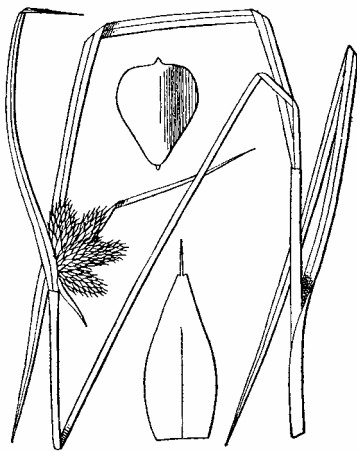
The key visual difference between these two genera is that *Trichophorum* has silky bristles (1-12) which elongate in age and *Scirpus* does not. (These are not to be confused with *Eriophorum*, as *Trichophorum* has far fewer bristles, 1-12 vs. numerous.)

The plant genus *Scirpus* consists of a large number of aquatic, grass-like species in the family Cyperaceae (the sedges), many with the common names **club-rush** or **bulrush** (see also bulrush for other plants so-named). Other common names are **deergrass** and **grassweed**.

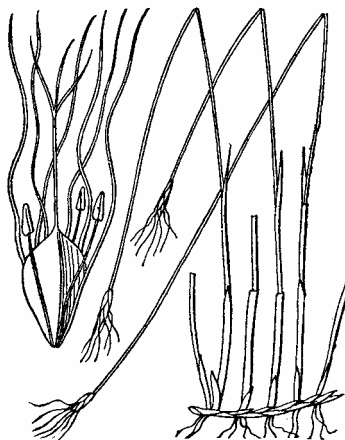
The genus has a cosmopolitan distribution, and grow in wetlands and moist soil. Some species specialize in saline, marshy, environments such as intertidal mud-flats; others prefer ponds or lake-sides and river-beds. They have grass-like leaves, and clusters of small spikelets, often brown in colour.

Scirpus species are often employed by environmentalists to inhibit soil erosion and provide habitat for other wildlife. They are also used in some herbal remedies; the plant's rhizomes are collected in the autumn and winter and dried in the sun before use.

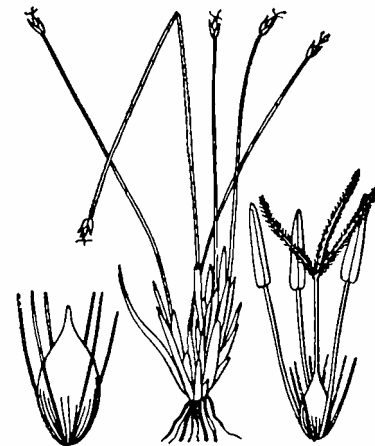
The taxonomy of the genus is complex, and under discussion by botanists. Recent studies by taxonomists of the Cyperaceae have resulted in the creation of several new genera, including the genera *Schoenoplectus* and *Bolboschoenus*; others (including *Blysmus*, *Isolepis*, *Nomochloa*, and *Scirpoides*) have also been used. At one point this genus held almost 300 species, but many of the species once assigned to this genus have now been re-assigned, and it now holds an estimated 120 species



Scirpus paludosus



Trichophorum alpinum



Trichophorum caespitosum

Botanical Medicines

Our guest speaker for the December monthly meeting was Kaycie Rosen N.D., a naturopathic doctor in Anchorage. Her presentation "Wild Plant Medicines of Alaska" provided lots of useful information but was only the tip of the iceberg and Kaycie has promised to return to share more information at a future meeting.

Many plant substances are considered powerful medicines. Naturopathic medicine believes that where single chemically-derived drugs may only address a single problem, botanical medicines are able to address a variety of problems simultaneously. Their organic nature makes botanicals compatible with the body's own chemistry; hence, they can be gently effective with few toxic side effects.

Some of the plants that Kaycie shared information about included:

Devil's Club (*Oplopanax horridum*): herbalists report that the roots of devil's club (and to a lesser extent the inner stem bark) are a strong respiratory stimulant and expectorant and recommend their use for rheumatoid arthritis and other autoimmune conditions, as well as to treat eczema, sores, and a number of internal and external infections.

Yarrow (*Achillea millefolium*): has been used to stop bleeding and treat wounds and inflammations in a number of conditions, especially in the intestinal and female reproductive tracts; also utilized as a mild sedative. The ancient Chinese fortune-telling system known as the I Ching first used dried yarrow stems.

Chickweed (*Stellaria media*): Although formerly used as a tea, chickweed is mainly used today as a cream applied liberally several times each day to rashes and inflammatory skin conditions (e.g., eczema) to ease itching and inflammation.

Cleavers (*Galium aparine*): Cleavers is one of numerous plants considered to act as a diuretic. It has therefore been used to relieve edema and to promote urine formation during bladder infections. It has also been used by people with lymph swellings, jaundice, and wounds.

Invasive Species

I am the last in line
But the first to see
Dandelions lurking
around disturbed rocks.
"Look!" I shout to the others,
"Dandelions. The bad kind;
the kind our kind carried here.
They don't belong."
The Ranger pulls out her field guide.
These so-called flowers are invaders.
Bad flowers, riff-raff, illegal immigrants.
It is virtue to eradicate them.
We pull and pull and still
Their silly yellow heads
Mock us. When I close my eyes,
I see dandelions. When I open my eyes,
I see dandelions.
My fingers are stained yellow.
When I get home, I brag to my friend,
The arctic botanist, that I have erased
The blight of common dandelions
From the perfect complexion of the Park.
She clears her throat. "There are several species
Of native ass-ter-aye-see-aye similar to the common,
But very rare, endangered. They grow
Only on disturbed rocks." My face colors.
"How can you tell them apart?"
"Only under the microscope," she says.
I close my eyes and see
Rare, endangered yellow heads
Cut down in their prime.
I should have known
Whatever seems simple
Is never simple
Any more than a common dandelion
Is ever common.

By Anne Hanley

Summer Field Trips

It is time to start planning for the summer field trip season. People need time to plan for their summer (especially lengthy, expensive, or holiday time trips). Let's plan a great summer. Anjanette Steer will coordinate field trips this summer. You can find the field trip forms on our web site at: [http:// AkNPS.org](http://AkNPS.org)

Contact: Anjanette Steer, anj@ak.net

ALASKA NATIVE PLANT SOCIETY 2005 Seed Exchange

The Alaska Native Plant Society sells seed of plants native to Alaska, which have been collected by members during the year. Seeds can be purchased at the regular monthly meetings or by mail order.

NOTE to Donors: The plea for seeds for the exchange did not get into the last newsletter, but if you have gathered seeds that you'd like to donate, please do. We will offer them at meetings and upcoming mall shows.

The price is \$0.50 per package. Package sizes vary considerably due to the number or amount of seeds collected. Some rare or difficult to collect species may contain few seeds, while some easy to collect species may contain a large number of seeds. For mail orders, include an additional \$0.50 for 1 -5 packages, or \$1.00 for 6 or more. Make checks payable to: Alaska Native Plant Society. Send order to: Alaska Native Plant Society, PO Box 141613, Anchorage, AK. 99514

Seed Germination Information

Use a sterile mix for best results. Fine seed should be sprinkled on the surface. Cover large seeds with soil. Keep mixture moist by covering with plastic. For best results water from the bottom of a tray or spray with a fine mister.

If your only seed starting experience has been with easily germinated vegetables or annual flowers, more patience is going to be required when it comes to growing perennials from seed successfully. Some types germinate within days, others take several weeks, and a large number of perennials require what is called **stratification** -- basically, simulating the conditions that exist outside over the winter. These types of seed are sometimes described as "cold germinators". The usual trick is to place the seed with some moist, sterilized commercial seeding mix inside a plastic bag, then storing it in a refrigerator for a period of time to break down the natural chemical germination inhibitors within the seed. A typical period of time is about three to four months. Then the seed is sowed as usual and started indoors under lights. Another approach is to sow the seed in late fall in pots, then leave it outside in a protected (but unheated) coldframe for the winter.

ANPS SEED EXCHANGE ORDER FORM

Orders will be filled in the order that they are received

Order by plant number appearing before the name

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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The price is \$0.50 per packet. For mail orders, add \$0.50 for 1 -5 packets, or \$1.00 for 6 or more.

Name _____

Address _____

City _____ State _____ Zip _____ Total enclosed _____

Make checks payable to: Alaska Native Plant Society

Send order to: Alaska Native Plant Society, PO Box 141613, Anchorage, AK. 99514

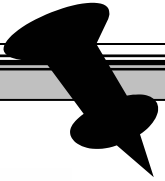
ALASKA NATIVE PLANT SOCIETY

2006 SEED LIST

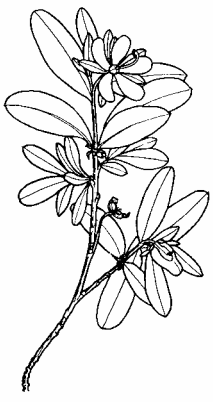
	<i>Scientific Name</i>	Common Name	Height	Flower Color	Comments
1.	<i>Agoseris aurantiaca</i>		9-10 in.	Orange	
2.	<i>Aster subspicatus</i>	Leafy Aster	16-18 in.	Lavender/blue	Germination easy – no stratification. A spreader; dead head and it blooms for months
3.	<i>Dodecatheon pulchellum</i>	Shooting Star	12-15 in.	Magenta	Cold and damp; stratify; may take 2yrs to germinate
4.	<i>Draba incerta</i>	Whitlow grass	4-5 in.	Yellow	Easy; no stratification
5.	<i>Fritillaria camschatcensis</i>	Chocolate Lily	12-16 in.	Brown	Damp/cold; stratify. Will probably take 2 yrs to germinate
6.	<i>Hedysarum Mackenzii</i>	Wild Sweet pea	14-16 in.	Light pink	Easy; no stratification. Forms nice clumps.
7.	<i>Iris setosa</i>	Wild flag	16-18 in.	Purple	Soak seeds or stratify; slow to germinate but highly successful.
8.	<i>Mimulus guttatus</i>	Monkeyflower	12-15 in.	Yellow	Easy; no stratification. Will bloom the first year and reseeds. Not real aggressive if you don't plant it near water
9.	<i>Papaver alaskanum</i>	Alaska Poppy	6-8 in.	Light yellow	Easy, no stratification; gravely well-drained soil lets it reseed. Tiny seeds; don't cover.
10.	<i>Papaver alboroseum</i>	Pale pink poppy	2-3 in.	Light pink with yellow center	Easy; no stratification; may flower the first year; reseeds. Gravelly soil.
11.	<i>Papaver alboroseum</i>	White poppy	2-3 in.	White	Easy; no stratification; may flower the first year; reseeds. Gravelly soil.
12.	<i>Papaver lapponicum</i>	Arctic Poppy	3-5 in.	Light yellow	Easy; no stratification; may flower the first year; reseeds. Gravelly soil.
13.	<i>Polemonium acutiflorum</i>	Tall Jacob's Ladder	20-30 in.	Lavender/blue	Easy; no stratification.
14.	<i>Primula eximia</i>	Chukchi Primrose	5-7 in.	Bright pink	Cold/damp; stratification. Slow growing; needs dampness. Tiny seeds – don't cover but keep moist.
15.	<i>Saxifraga bronchialis</i>	Yellow spotted saxifrage	5-6 in.	Light yellow	Easy; no stratification. Tiny seeds – don't cover.
16.	<i>Tellima grandiflora</i>	Fringed Cups	15-18 in.	Green	Easy - stratification helpful. Great shade plant.

NON-NATIVE SEEDS

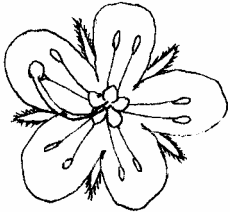
20.	<i>Geranium "Johnson Blue"</i>		24-30 in.	Violet	Easy; no stratification; sun to semi-shade.
21.	<i>Saxifraga manchuriensis</i>		8-12 in.	White	Easy but stratification helpful Semi-shade. Original seeds from Siberia.
22.	<i>Thlaspi alpinum</i>		4-5 in.	White	Easy; no stratification.



MYSTERY PLANT



This plant is a 3-6 ft tall shrub with copper colored shredding bark. The light green leaves have a powdery coating, are oblanceolate and are smooth around the edges. Although they are alternate on the stems, they often appear whorled as they are bunched together near the end of the stems.



The flowers consist of 5 narrow sepals with ciliate hairs, 5 rounded, connected, copper colored petals, 10 stamens and a long, curved, distinct style, producing a round 5-parted capsule. When not in bloom this shrub might easily be confused with another shrubby species in the same family that grows in similar areas.

Those wishing to see this shrub might very well find it necessary to gain some elevation and get into the sub-alpine coastal zones of Prince William Sound, Southeast Alaska or travel southward into British Columbia, Washington, or Oregon.



To **Kaycie Rosen, N.D.**, our guest speaker in December for a very interesting talk on medicinal native plants;
To **Anjanette Steer** for a mini-botany class on Alaskan poppies;
To **Marilyn Barker** for introducing us to the plant family Luzula—the wood rushes.

YOU MAKE IT HAPPEN!

ALASKA NATIVE PLANT SOCIETY

State and Anchorage Chapter Officers

President	Andy Anderson	258-1414
Vice President	Ken Johnson	562-9787
Secretary	Cara Wardlaw-Bailey	696-3385
Treasurer	Sue Jensen	243-5425

Anchorage Chapter Program Coordinators

Main Program	Luise Woelflein	345-5308
Plant Family	Verna Pratt	333-8212
Mini-Botany	Marilyn Barker	333-0602
Field Trips	Verna Pratt	333-8212

Newsletter ("*Borealis*")

Editor	Ginny Moore	345-7004
		FAX: 345-1355

Borealis is published bi-monthly October through May. Articles may be sent to Ginny Moore, 14530 Echo Street, Anchorage, AK 99516. Phone or FAX: 345-1355, or E-mail: tgmoores@gci.net

Mystery Plant Answer
Copperbush or Copper-Flower
Cladotamnus pyrolaeiflorus
Heath/Ericaceae Family

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 | \$ 5 |
| <input type="checkbox"/> | Senior Citizen | \$10 |
| <input type="checkbox"/> | Individual | \$12 |
| <input type="checkbox"/> | Family | \$18 |
| <input type="checkbox"/> | Organization | \$30 |

Name _____

Address _____

City: _____ State _____ Zip _____

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

Membership is on a calendar year basis.

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

DIFFERENT LOCATION FOR JANUARY MTG!!!

Alaska Museum of Natural History

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