

Borealis

the newsletter of the



PO Box 141613, Anchorage, Alaska

FEBRUARY 2000

Join us at our February meeting!

Monday, February 7th, 7:30 p.m.
at the Campbell Creek Center
off 68th and Lake Otis

Speaker: Beth Silverberg

**Topic: "Identifying and Protecting
Special Places in Anchorage: The
Great Land Trust's Open Space
Mapping Project"**

Beth Silverberg, the Great Land Trust's Executive Director, will discuss the Trust's survey and mapping of significant natural open areas in Anchorage. With the assistance of Anchorage scientists and input from a broad cross-section of the public, the Trust has compiled maps and a summary report of natural open spaces that are important because they provide critical wildlife habitat or because the public values them for recreation, outdoor education, or for other uses. She will also highlight land conservation tools that are available to protect important natural lands in the Bowl.

Plant Family Study:
BRASSICACEAE/Mustard

Draba spp.

Presenter: Beth Koltun

Anchorage Invaded by Trees!

Anchorage is presently being invaded by new tree species, an invasion which has been going for at least 14,000 years. During the Pleistocene Epoch, Anchorage was covered with a thick blanket of ice. Nearly all vegetation was eliminated. As the climate warmed, the glaciers retreated and the land was again ready for plant invasion.

The vegetation history of the Anchorage area can be reconstructed by use of fossil pollen data. The study of fossil pollen is palynology. Locally, nine lake bottoms and ten outcrops (including Point Woronzof) were sampled for fossil pollen.

The oldest pollen assemblages dating 14,000 BP (years before present) represent the post glacial flora of the Anchorage area. They show that herb-shrub tundra dominated our area soon after the glacial retreat. Dominant plants were dwarf birch, willows and members of the heath family, the same plants which dominate present day-herb-shrub tundra.

By 10,000 BP, cottonwood pollen began to appear and within a thousand years, cottonwood woodlands became interspersed with willow thickets and shrub tundra communities. Five hundred years later, alder migrated into the region and set the stage for rapid black spruce invasion. Black spruce entered from the Copper River basin by traveling through the Matanuska Valley and then quickly spread through much of the Cook Inlet region between 8,200 and 8,000 years BP.

Our most recent tree invader is the Mountain Hemlock, which arrived from the east just a mere 2,000 years ago.

Is Sitka spruce next? Then maybe Western Hemlock?

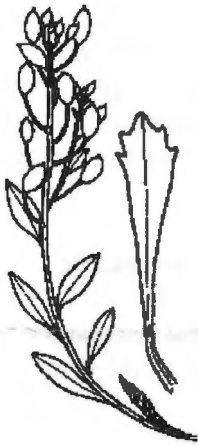
--information from: Ager and Brubaker "Quaternary Palynology and Vegetational History of Alaska".

Plant Family Study

BRASSICACEAE/Mustard Family

At the February meeting, Beth Koltun will tell us more about the genus *Draba* in the Brassicaceae/Mustard family.

The *Drabas* all have silicles for seed capsules (less than 3 times longer than wide). They are well known for being difficult to identify due to "splitting hairs" (straight hairs, forked hairs, stellate hairs, etc.) and length of pedicels in proportion to silicles. Many of the species hybridize with other species. Most species have hairy leaves, most are perennials and most flowering stems arise from a rosette of leaves. Often the plants have a branched cortex producing many rosettes and sometimes producing small dense mats. Most *Drabas* grow in dry areas.



Draba hyperborea is the only large, fleshy, non-hairy member of this genus. It is a common coastal species with small yellow flowers and long toothed basal leaves. Its range is SE Alaska through the Aleutians and the islands of the Bering Sea.

Draba nemorosa, the only annual, with its small yellow flowers could easily be missed.

There are six upright fairly tall *Drabas*. Most have a single rosette of hairy leaves and a tall flowering stem with many alternate leaves. *Draba aurea* is the only one in this group with yellow flowers. It is common in Southcentral and Eastern Alaska. Of the tall, white-flowered species, *Draba maxima* is the most distinct as it has strongly toothed fairly large leaves. *Draba lanceolata*, *D. cinerea* and *D. praealta* are species of Eastern and E. Central Alaska and require careful verification. *D. borealis*, although indicated to be a western Alaska coastal species, is common in some areas of Southcentral Alaska. Its stem leaves are slightly toothed.

The remaining twenty-five species are small plants, under six inches high. There are six white species that can be real common in their own areas but may require careful keying for accurate identification. Some of them share the same habitats and the difference could be the presence or absence of hairs on the pedicel (stem of the flower/capsule) or the lack of leaves on the flowering stem. Size of the plant is not always significant, as

growing conditions may affect height. The toothed stem leaves are a big help in identifying it and the minute size of *Draba nivalis* (less than 2 inches in height) aid in its identity. The tiny flowers on this tiny plant appear almost as soon as the snow leaves.

The most common yellow species in Southcentral Alaska is probably *D. incerta*. Sprawling clumps covered with flowers drape over the south facing cliffs along the Seward Highway just south of Potter Marsh in mid-May. *D. alpina* (glabrous silicles) and *D. macrocarpa* (pubescent silicles) make a very impressive sight in Denali National Park and on the North Slope.

The remaining species are small, often very close to the ground, easily missed except in bloom and again require careful identification. Usually this requires blooms for flower color, and capsules for pedicel length comparison and hairs.



Draba stenopetala, however, is easier to recognize in flower than in seed. Its specific name says narrow petals. The flowers look like tiny narrow yellow crosses on the small patches on the ground. Once you are familiar with it the seed capsules are also distinct. They are found, hairless and have a fairly long style.

At any rate, the *Drabas* will give you a challenge. They are usually very floristic, early bloomers and often very impressive, though small, and appealing.

Definitions

Glabrous - having a smooth and even surface, devoid of hairs

Pedicel - the stalk of a single flower in a flower cluster

Pubescent - covered with soft, short hairs

Silicle - a short silique

Silique - a two-part fruit, separated in the middle by a thin membrane, and with seeds in both sides

If you didn't receive it as a Christmas gift, you might want to buy "*Plant Identification and Terminology*" by James and Melinda Harris, Spring Lake Publishing ISBN 0-9640221-5-X.

Ice Breaker Botany, Part II

By Carolyn Parker, Herbarium
University of Alaska Fairbanks

In early July I flew to Resolute Bay on Cornwallis Island in the central Canadian Arctic to catch the Canadian Coast Guard icebreaker 'Louis' and its crew of Swedish and Canadian biologists. The sea below was frozen solid and the lack of an opened channel assured me I had not 'missed-the-boat.' As we approached for landing, there was no real indication of plant life at all; frost-shattered rock covered the entire island. This was the infamous polar desert which dominates the Canadian arctic and is unlike any landscape found in Alaska.

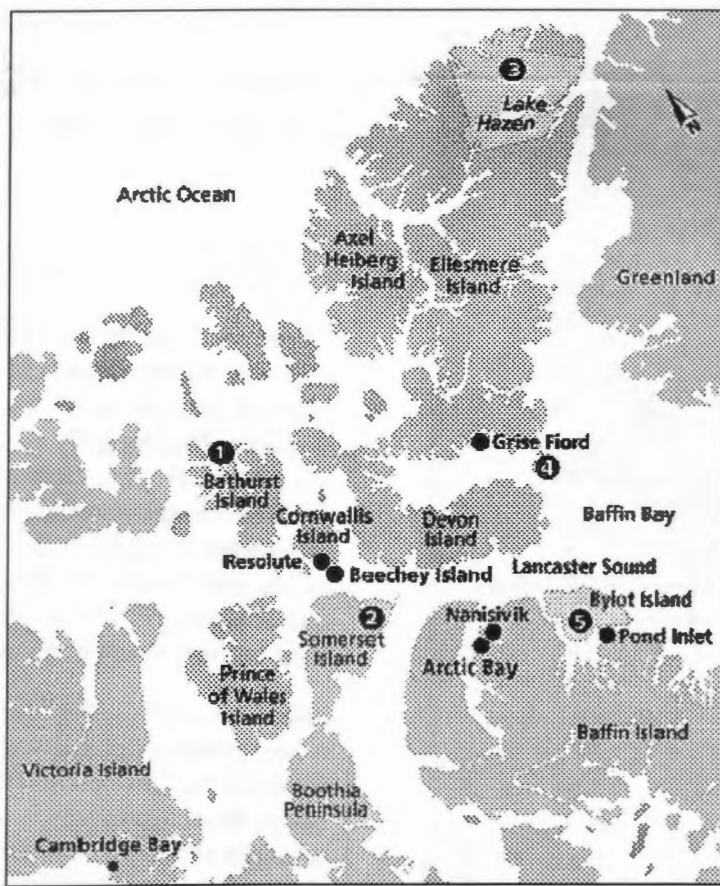
I wasted no time heading out to see 'who' was here. Many familiar flowers were among the most common. Purple Mtn. Saxifrage (*Saxifraga oppositifolia*), Tufted Saxifrage (*Saxifraga caespitosa*), Arctic Poppy (*Papaver radicum* var. *polare*), and Bering Sea Chickweed (*Cerastium beeringianum*), all displaying the largest blossoms and tightest cushions I had ever seen for these species. And two unfamiliar plants: *Potentilla pulchella*, a high arctic circumpolar cinquefoil, and *Parrya arctica*, which is endemic to this region and displays a range of flower color from white to deep purple, as does the closely related Parry's Wallflower in Alaska. But the landscape appeared barren and plants were sparsely distributed or hidden among rocks. Many plants were found associated with the occasional bird perch, snowmelt seeps, shallow ponds, and ancient Thule house sites (enriched by very, very old garbage).

Wildlife here included arctic fox, parasitic jaegers, buntings, ravens, arctic terns, glaucous-winged gulls, and polar bear sign; and just off shore sleeping on the ice, seals. Life does thrive here, you only need take the time to watch, or wait, for it.

The Louis arrived! We headed north while I got to know the ship and my fellow travelers. We lacked nothing. Laboratories, computers, helicopters, boats, one snow machine, library, videos, 2 bars (one with a piano!), aerobics, ping pong, weight room, 2 dining rooms, and the 'science' crew included an Inuit artist, an arctic historian, and a mathematician (who also played the piano)! Our next stop was Bathurst Island where I got introduced to the camp routine that had already been established. A row of orange tents weighed down by rocks against a persistent icy wind, quick simple meals loaded with calories, long arctic days to accomplish our work, and polar bear watches at night while others slept. The flora was small, and distinct 'communities' were difficult to define, but we nurtured the attitude of a treasure hunt and enthusiasm ruled. New for all of us were *Puccinellia bruggemannii* and *Cerastium regelii*, both endemic to this region.

Thick sea ice stopped us from going further north. Here the ice pack thins long after peak flowering and one wonders if botanizing by dog team would be a more reasonable solution! We turned south and after a couple more stops, were in the Northwest Passage.

The latitude here is similar to Alaska's Brooks Range, but the climate, landscape, and flora remained truly arctic. Finally we reached Banks Island at the southwestern tip of the archipelago. The landscape seemed lush compared to our previous stops and the flora told me I had reached 'Beringia'. Indeed, this portion of Banks Island is believed to have remained ice-free during the most recent glacial advances and the plants suggested this.



(Continued on Page 4.)

Mystery Plant

FROM WHAT WE GATHER

Dr. Garry Davies former president of the ANPS was selected by the UAA students as Teacher of the Year, an honor he has certainly earned. When asked what makes a good teacher, Garry said "Students make a good teacher". He feels he learns more from the students than they do from him. He says he tries to treat students as academic equals. And perhaps it is that respect for students that makes Davies so popular.

--excerpted from the Northern Light, the UAA student newspaper

Bargain Price on Alpine Book!!

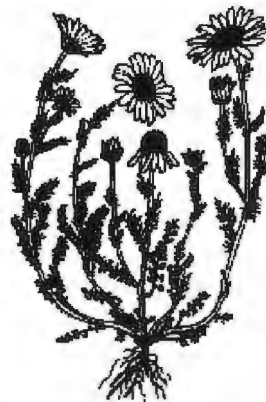
Alpine Flora of the Rocky Mountains

Mark McDonough of Pepperell, Massachusetts sent recently this message to the Alpine Plants listserver:

" [Another subscriber] wrote about the availability of this book from Edward R. Hamilton, Bookseller, for \$19.95 US + \$3.00 shipping... a huge bargain considering the \$110 list price.

I too ordered *Alpine Flora of the Rocky Mountains*, but from Daedalus-Books or <http://www.daedalus-books.com> for the same discounted price and low shipping (considering the book weighs about 8 lbs). I believe it is still available from that site, along with the wonderful NARGS project... the recent publication *Rock Garden Plants of North America*, still available for only \$9.98 US (+ about \$2 shipping)... a terrific book that should be in the library of any rock gardener, well worth the meager price for the superb new color photographs alone. The book has a list price of \$49.95 and is now sold out from the NARGS bookstore (where it was sold at the same incredible discount)."

This species has become better known since it has been introduced to home gardening, but is still not well known or understood. It is a coastal perennial species of North Western Alaska and the Arctic Coast. Size depends on habitat (6-12 inches). Leaves are glabrous, very finely divided, flower heads are white, 1-1/2 -2 inches across.



Confusion over this plant arises from the common name. We know of a situation where an individual "trashed" a whole tray (32 plants) of young plants. They assumed that the person (knowledgeable, I might add) who donated them didn't know what they had. Grown neglected or between stepping stones (walked on) it stays low to the ground. In good garden soil it reaches 12" and is quite bushy.

ICE BREAKER BOTANY, *Continued from Page 3*

On one south-facing slope I found a mini subarctic steppe bluff with Pasque flowers (*Pulsatilla patens*) and several other species best known from similar Beringian steppe sites in Alaska. Eroding gully walls were covered with *Papaver spp.*, *Potentilla spp.*, *Draba spp.*, *Ranunculus spp.*, and *Polemonium spp.* too numerous to list. Being constantly surrounded by Muskox, the huge Arctic Hares, and serenaded by Sandhill Cranes only heightened the sense that this was a special place. We had crossed a phytogeographic boundary and I felt very much 'at home' botanically.

Indeed we were all soon to be home, as this was our last stop. A new group of biologists was headed to Inuvik to take our bunks on the Lois before it headed north again. All three camps hiked to a nearby lake to enjoy an evening of Cassiope schnapps (brewing since our Victorian Island camp), fresh char grilled over dwarf Salix, and a saxophone-shorebird concert to celebrate our last camp together. A fitting end for a productive and fascinating field trip.

Alaska Native Plant Society - Seed Exchange List -2000

The Alaska Native Plant Society sells native plant seeds which have been collected by members during the year. Seeds can be purchased at the regular monthly meetings or by mail order. The price is \$0.50/package. If seeds are to be mailed, include an additional \$0.50 for 1-5 packages or \$1.00 for 6 or more packages. Send your check and seed order to: Gary Rasmussen, , Anchorage, AK 99503-1917

1	Alpine Spiraea	<u>Luetkea pectinata</u>
2	Anemone, Cut-leaf, white (limited #)	<i>Anemone multifida</i>
3	Arnica, Lessings' (limited #)	<i>Arnica lessingii</i>
4	Arnica, Meadow	<i>Arnica chamissonis</i>
5	Aster, Coastal Fleabane	<i>Erigeron peregrinus</i>
6	Aster, Fringed Fleabane	<i>Erigeron glabellus ssp.pubescens</i>
7	Aster, Siberian	<i>Aster sibiricus</i>
8	Bear Flower	<i>Boykinia richardsonii</i>
9	Chocolate Lily	<i>Fritillaria camschatcensis</i>
10	Columbine, Western	<i>Aquilegia Formosa</i>
11	Corydalis, Pale	<i>Corydalis sempervirens</i>
12	Dryas, Eight-petaled/Mountain Avens	<i>Dryas octopetala</i>
13	Dryas, Yellow	<i>Dryas, drummondii</i>
14	Grass of Parnassus/Bog Star	<i>Parnassiopalustris</i>
15	Harebell	<i>Campanula rotundifolia</i>
16	Iris, wild	<i>Iris setosa</i>
17	Jacob's Ladder, Low or Beautiful	<i>Polemonium pulcherrimum</i>
18	Jacob's Ladder, Tall	<i>Polemonium acutiflorum</i>
19	Larkspur	<i>Delphinium glaucum</i>
20	Monkshood	<i>Aconitum delphinifolium</i>
21	Northern Wormwood	<u>Artemisia compestris</u>
22	Poppy, Alaskan	<i>Papaver alaskanum</i>
23	Poppy, Arctic	<i>Papaver lapponicum</i>
24	Poppy, Iceland	<i>Papaver nudicaule</i>
25	Poppy, Portage	<i>Papaver, alboroseum</i>
26	Prickly Saxifrage (limited #)	<i>Saxifraga tricuspidata</i>
27	Shooting Star	<i>Dodecatheon pulchellum</i>
28	Shooting Star, Frigid (limited #)	<i>Dodecatheon frigidum</i>
29	Sitka Burnet (limited #)	<i>Sanguisorba stipulata</i>
30	Strawberry Spinach	<i>Chenopodium capitatum</i>
31	Whitlow Grass (limited #)	<i>Draba incerta</i>
32	Wild Sweet Pea	<i>Hedysarum mackenzii</i>

SEED EXCHANGE CONTINUED – NON-NATIVE SEEDS

Greg Williams, an ANPS member from Wolcott, VT provided one packet for each of the following non-native seeds. They will be available on a first-come, first-served basis. If there are multiple requests for any of the packets at or before the January meeting, we will divide the packet. You will have to do your own research for additional information.

Botanical Name	Variety	Notes
1. <i>Acantholinum hokewackeri</i>		
2. <i>Aconitum columbianum</i>		(Aconitum = Monkshood) poison
3. <i>Asclepia tuberosa</i>	Hello Yellow	Asclepia = Swamp Milkweed, 150 days to bloom!
4. <i>Asclepia tuberosa</i>	Yellow Parent	Asclepia = Swamp Milkweed, 150 days to bloom!
5. <i>Aster himalaticus</i>		
6. <i>Leiditzia Anandia</i>	Nana	
7. <i>Lilium formosianum</i>	Parryi	White, fragrant, 4-5 ft, trumpet-shaped flower, may need winter protection
8. <i>Saponaria ophnzlis</i>	Dazzler	
9. <i>Teucmn montanum</i>		
10. <i>Acantholinum araxanum</i>		Evergreen, mat-forming plant from high elevations of central Asia
11. <i>Asclepias tuberosa</i>		Butterfly weed, zone 4, yellow parents, 2-3 feet
12. <i>Eriogonum flavum</i>		Wild Buckwheat, 8", silvery, mat forming, yellow flowers
13. <i>Eriogonum</i>	"Grand Ridge"	
14. <i>Eriogonum potatus</i>		
15. <i>Gentiana Asclepiadea</i>		Willow Gentian, mountains of central Europe, 2 ft
16. <i>Heracleum sibirica</i>	Angustifolius	Siberian? Zone 3-4
17. <i>Heuchera micrantha (?)</i>	diversifolia	"Palace Purple", Zone 4
18. <i>Lychnis Flos-cuculi</i>		Ragged Robin, dwarf form, bright pink, zone 4
19. <i>Lychnis flos-cuculi</i>		White
20. <i>Plantago coronopsis</i>		
21. <i>Plantago holostrum</i>		
22. <i>Plantago sp.</i>		Purple leaf
23. <i>Saponaria caespitosa</i>		Rock garden plant; 6", mat forming, pink to purple flowers, zone 4
24. <i>Saussurea alpinola</i>		
25. <i>Saxifraga callosa</i>		Rock garden plant from the Alps, lime-encrusted type, 10" in flower, white
26. <i>Solidago sp.</i>		Variegated goldenrod
27. <i>Telekia speciosa</i>		From Russia, very tall, large yellow daisy-like flowers

Send your check and seed order to: Gary Rasmussen

Anchorage, AK 99503-1917

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.

FIELD TRIPS

It is field trip planning time again. Diane Toebe is our chairman again this year, so give her a call (337-0328) or start thinking about where you'd like to lead a trip. Let's make this another great field trip year.



ALASKA NATIVE PLANT SOCIETY State and Anchorage Chapter Officers

President Marilyn Barker
 Vice President Frank Pratt
 Secretary Beth Koltun
 Treasurer Sue Jensen

Anchorage Chapter Program Coordinators

Main Program Susan Klein
 Plant Family Verna Pratt
 Mini-Botany Verna Pratt
 Field Trips Diane Toebe

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

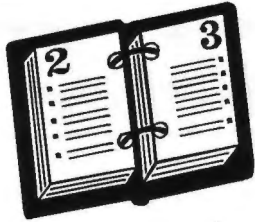
ODE TO A BOTANIST

There should be no monotony
 In studying your botany
 It helps to train
 And spur the brain –
 Unless you haven't gotany
 It teaches you, does botany
 To know the plants
 And spotany,
 And learn just why
 They live or die –
 In case you plant or potany.

-Author Unknown

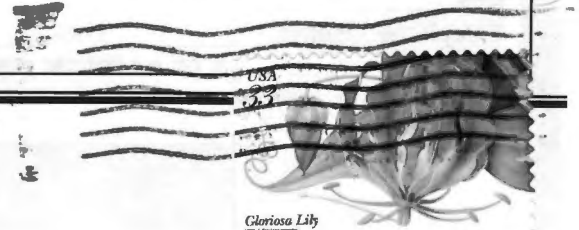
MYSTERY PLANT ANSWER

Wild Arctic Chamomile
Tripleurospermum phaecephalum



FEBRUARY PLANTS & NATURE CALENDAR

- February 7, 7:30 PM – ANPS January monthly meeting Campbell Creek Science Center
- February 8, 10:00 AM – Wildflower Garden Club monthly meeting (call _____ for more info)
- February 11, 3:PM - UAA Campus (parking is free Friday afternoons!) ENGR 110 Kieth Boggs Seminar, Natural Heritage Program topic TBA .
- February 14, 7:15 PM - UAA Campus, Wendy Williamson Auditorium. Don Spalinger : "Moose Menus".
- February 21, 7:15 PM - UAA Campus, Wendy Williamson Auditorium. Terry Nauman : "Volcanos in the Galapagos and Alaska".
- February 28, 7:15 PM - UAA Campus, Wendy Williamson Auditorium. Walt Tape: "Halos in the sky: Sun dogs and other phenomenon".
- February 24, 7:30 PM – Alaska Herb Study Group, Carleton Trust Bldg, 2221 E. Northern Lights .
- March 3, 3:PM - UAA Campus (parking is free Friday afternoons!) ENGR 110 Todd Eskelin a TBA topic on birds
- March 6, 7:30 PM – ANPS February monthly meeting. Campbell Creek Science Center..



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

It's Membership Renewal Time!
Check your mailing label to see if you're Y2K Compliant!