Borealis

the newsletter of the

Alaska Native Plant Society

PO Box 141613, Anchorage, Alaska May 2001

Join us at our May meeting!

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

Topic: " A Guide to Identifying the Willows of Southcentral Alaska" Coming Soon!

Speaker: **Dominique Colett,**
Writer, artist and illustrator

Identification of willows, some of the dominant plants in the Alaskan landscape, has traditionally been avoided by naturalists. This fully illustrated user-friendly guide, in which important characters will be highlighted, will allow the identification of many willows."

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Plant Family Study

Aquatic Plants, Continued
Buttercup/Ranunculus Family

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Landscaping For Birds

By planting trees, shrubs, and flowers with the needs of wildlife in mind, Alaskan can create beautiful surroundings that provide food, cover , and water to a variety of birds.

Pine grosbeaks, tree swallows, Bohemian Waxwings, Hermit Thrushes, American Robins, an Snow Buntings are just a few of the colorful songbirds that can live amidst Alaska's cities, villages, farms and homesteads – if we landscape the places we live and work with their needs in mind. Throughout the lower 48 states, many songbird populations have declined as a result of disappearing habitat – particularly around towns and cities. By landscaping for wildlife, Alaskans can help prevent such a decline in our wild bird populations – in addition to creating more enjoyable surroundings for people.

Habitat for native birds and small mammals can be easily produced by supplying them the necessities of life: food, cover, water, and space in the proper arrangement. Different species require different kinds and quantities of these necessities. Seed-, berry-, and insect-eating birds that need only small areas to live are the species whose needs can be most easily provided for by landscaping Alaska's communities.

SIX STEPS TO CREATING WILDLIFE HABITAT

1. Select an area.
2. Find out what wildlife and plants occur nearby.
3. Select plants adapted to your location that attract wildlife
4. Prepare a landscape design.
5. Obtain plants, cuttings, seedlings or seeds – then plant your own wildlife refuge.
6. Add water and bird-feeders, nest boxes or other features to meet special wildlife needs.

For more details and resources on each of these steps, see *Landscaping For Wildlife in Alaska*, Alaska Department of Fish & Game – Nongame Wildlife Program.

For more information on plants that attract wildlife, see Page 6.

Plant Family Study

Water Plants

Buttercup/Ranunculaceae Family
Presenter:

The first section of this group of plants are truly water plants and grow in shallow water throughout most of Alaska. The submerged leaves are finely dissected, dark, and hair-like. *Ranunculus trichophyllus* var. hispidulus also has floating leaves that are 3-parted and toothed. Flowers are white, ½ to 1 inch and have 10-15 stamens. The receptacle* has tufts of hair. *R. trichophylus* var. trichophyllus has no hairs on the receptacle. *Ranunculus confervoides* is similar, but has shorter leaves and smaller flowers (less than 1/3"), 4-8 stames and the receptacle has tufts of hair.

Ranunculus Pallasii grows in ponds on the tundra of the western and northern coasts of Alaska. The flowers are white, large (1-1-1/4") and have 5 or petals. The leaves have long petioles and have some teeth near the broadened end.

There are also three other genera that will grow in shallow water. They creep along on runners that root in the mud when the edge of the pond dries up later in the season. All have very small yellow flowers. *Ranunculus Gmelini* has deeply toothed leaves. *Ranunculus hyperboreus* has simple, 3-5 lobed leaves, and *Ranunculus reptans* has linear leaves.

* The receptacle is the enlarged portion of the flower stem that supports the flower parts and later the seeds.

UPDATE –ANPS hits the Haul Road

June 16-23,2001
Phil Rumpel

To date, there are 20 people and 14 vehicles signed up for the trip. Due to this large response, we are re-emphasizing that the co-leaders are only co-coordinators, not tour guides.

You may pick up the updated trip itinerary and any other new information at the ANPS May meeting. People planning to go on the tour will meet at 7:15 prior to the regular meeting on Monday, May 7th.

This is a trip where everyone is responsible for themselves, i.e. coordinating your own transportation, food, lodging, gas, and extra tires. This is not a Princess Tour and the coordinators are not tour guides.

We are your coordinators only. We provide an itinerary for proposed camping spots and information that we have gathered about the Haul Road.

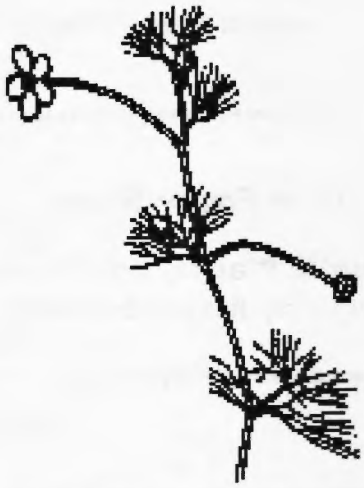
We have no designated plant specialists or planned spots other than the camping.

Check the information and make your own plans for stops of interest at your own pace.

Remember to make your own reservations for the Prudhoe Bay tours. Arctic/NANA Tours at 659-2368 or Prudhoe Bay Hotel Tours at 659-2449.

Ranunculus Gmelini

Ranunculus hyperboreus



Ranunculus confervoides

2001 Alaska Rare Plant Forum Report

by Susan Klein

Al Batten of the University of Alaska Museum Herbarium reported that Amy Denton is the new curator at the Herbarium and was unable to attend due to teaching commitments in Fairbanks. He then listed some of the additions to the herbarium in the last year. Some of those are collections from Denali National Park & Preserve by Carl Roland, collections from near Haines for BLM and the Waring Mountains for USFWS by Carolyn Parker, collections from the Aleutians by Steve Talbot of the USFWS. They also received collections from the Canadian arctic islands, from the Yukon (Cody), and are doing an exchange with the Komarov Botanical Institute in Russia.

In addition, Rob Sorenson a *Poa* expert, came up to the Herbarium earlier this year and went through and clarified specimens in their collection. George Argus did the same for willows and Reidar Elven from Norway was going to looking at their *Draba* and *Papaver* collections.

Also, Dave Murray is completing the Cyperaceae volume for the Flora of America and it is due for press at the end of July.

New projects include an Arctic Archival Observatory which is involved in climate change projects and collecting within National Parks for the Park Service's Inventory and Monitoring program.

Rob Lipkin of the Alaska Natural Heritage Program amplified on progress for the NPS I&M program. The Heritage Program has developed species lists for each park and is also involved in landcover mapping – last year at Katmai NP&P and this season in Glacier Bay NP&P. In addition, the Heritage Program is involved in an ecoregional mapping project for NPS. Rob is also finishing up a guide to sedges of Alaska, concentrating on wetland sedges, and will be collecting in Lake Clark NP&P this summer with Phil Caswell for the NPS Inventory and Monitoring program.

In addition, Rob is monitoring Oxytropis campestris (??) in Kobuk Sand Dunes. He also announced the ABI (Association for Biological Diversity) Biosource database available on line. ABI is the new name for the Natural Heritage Program.

Bruce Bennett of the Wildlife Viewing Program, Renewable Resources, Yukon, Canada gave a brief presentation on the political entities under which plants fall in the Yukon Territory. He said that the Yukon Territorial government and Canadian federal government is considering a Conservation Data Center and some progress has been made on the political level in that a botanist position is one of the first to be included. But, he noted that there is a complete list of species of concern, but it omits plants and insects. He is working on a book on the species of concern for the Yukon. He reported on occasional papers printed by his office and had copies of "paper #2".

In addition, he is sending their collection to Marker Eger. There may be a new species of *Castelleja* in the Kluane area and he is looking for more specimens to collect. He also mentioned new introduced species: *Cerasium albiflorium* that occupies disturbed sites, *Harrimanella stellariana*, a coastal heather near Cassiars and Prunella vulgaris which is new to the territory. They are also looking for Ranunculus koeni near Carcross. They also held the first plant taxonomy course in the Yukon. It was taught by George Argus and 21 people attended. Also noted that *Salix lucida cordata* has been found in a new location.

Phil Caswell a volunteer with Parks Canada (and Lake Clark NP&P) spoke on his summer looking for *Draba yukonensis* in Kluane. It is endemic to the town of Macintosh and had been found twice previously – when the AlCan was being built and in the 1960's (both times on a gravel bench). He finally located a specimen after talking with the local barkeep who had it in her garden, which he had avoided all summer since it was private property. He found *Festuca idohensis, Veronica spicata, Verbena histata* and an Arabis. In addition, he found a good range extension for *Osmorhizza purpourea* and *O. depauperata.*

Jennifer Line a graduate student at the University of Manitoba spent time at Trout Lake near the Babbage River in Ivvavik National Park that is in northern Yukon territory. She charted the vegetation and found four communities. A cotton grass-tussock tundra; a sparse community; a shrub community; and a *Carex*-dominated community. The two dominant species were Carex lugens and C. capillaris. She also found *Carex lachenhali, Ranunculus lapponicus*, and *Spiraea beauverdiana*, which are species of concern in the Yukon. In addition, *Isoetes* sp. and *Dianthes repens* were found near the lake. She also reported on range extensions for *Ranunculus offenala* var. *filiformis, Utricularia minor, Ranunculus flamma, Aquatilis var. audacious and Pyrola minor.*

Nancy Robertson of the Arctic Plant Germplasm Repository covered viruses in native plants. She gave a brief discussion on the brown wheat mite which is the vector for the barley yellow streak mosaic virus. This virus was found in some fields in Fairbanks two years ago, but not last year. She was interested in seeing whether she could find it in grasses adjacent to he barley. She also isolated a polyvirus found in *Delphinium glaucum* at the botanical garden. She thinks it may be transmitted by

aphids and hopes to research that this year. In 1999, she found disease in two species of native plants: *Pyrola asarifolia* that had leaves with blotches or mosaic. *Lupinus nootkatensis* found along the Gold nugget and Reed Lake trails at Hatcher Pass had vein clearing. The first year she found 5 plants and the second year she found 30 plants. These were only found along streams so she thinks the vector may be in the water.

She also drove the Dalton Highway and found leaf curling in some Arctic Lupine at Atigun Pass that may be due to insects. On the Marion Falls trail near Coldfoot she found a whole patch of grass covered with signs of a viral infection but laboratory analyses found nothing. She is hoping to return for more samples to test.

Michele Hebert of the Cooperative Extension spoke on the problems of exotic plants. She said that Canada thistle (*Cirsium arvense*) has been found in the MatSu area and Orange hawkweed on Kodiak and the panhandle. She also mentioned Foxtail barley found along roadsides and Yellow hawkweed (Crepis tectorum) at Denali and Soldatna. She also mentioned that over half of invasive plants (in the lower 48) are originally introduced to the area as garden plants which then escape and are able to compete with local native plants. She also discussed a relatively new group that has formed to track and educate people about noxious weeds. The group is the Alaska Statewide Committee for the Management of Noxious and Invasive Plants.

Ed Berg of the Kenai National Wildlife Refuge spoke on some of the research at the refuge and on the Kenai Peninsula. One area of research is global change and looking at some of the indicators in vegetation. These were glaciers retreating; tree line rising, ponds drying up, black spruce invading wetland perimeters, meteorological records showing a slow warming as well as tree-ring chronologies also indicating this warming, and intensified spruce bark beetle outbreaks.

He amplified on the spruce bark beetle epidemics. He has set up 17 sites to examine historical spruce bark beetle outbreaks for about the past 2500 years. He noted that they seem to follow 2-3 summers of drought or that are warm and dry. The trees become drought stressed and are more susceptible to beetle infestation. Warmer summers have been drying things out. In 1968-69 there was a large drought and large change in water balance from 5.8"/year to 3.1"/year. In the Homer area there was a change in1989 from 11.3"/year to 5.8"/year.

He also reported on research done by graduate students at various universities. Scott Anderson of Northern Arizona University is doing work at Paradox Lake on pollen and fire history. He has found that spruce entered the area about 8000 years ago. He also touched on tephra chronology and magnetic susceptibility.

Brandon Minor of APU investigated stem density in birch trees on the Kenai. Over the years agencies have used various methods to create browse for moose on the Kenai Peninsula. Brandon evaluated the different treatment methods and years since burning/crushing to determine the most effect method.

Carlos Peyez did some work in the early 1990's on the effect of introduced caribou (1987-1988) on browse and lichen species present. He found that lichen height was most important for caribou and noted an increase in a white sterile crust between 1988-1998. Doug Fisher is now looking at the composition of lichen communities in the area.

Mike Gracz reported on some finding *Pedicularis groenlandicum* on the Kenai Peninsula in five areas that are road accessible. He was surprised no one else has found it.

Dave Murray gave an update on a possible sedge workshop in June or July.

Reidar Elven from Norway spoke about the Panarctic Flora Project that was a botanical-political corporation started in the 1980's. In terms of size, Russia and Canada dominate the arctic, then Alaska and Greenland, then Northern Iceland, Northern Norway and Mainland Norway. He discussed the problems encountered in taxonomy when working with a European constituent, a North American constituent and a Russian constituent. The European approach (and Alaska and the Yukon) tends to take a broad species approach with subspecies and varieties. The Russian approach creates many species and no subspecies or varieties. The Lower 48 and the rest of Canada uses wide species with little use of varieties.

There are five contributing nations to the project and three people on the board. The three board members are Dave Murray from Alaska, Boris Yurtsev from Russia and Reidar Elven from Norway. Right now there are 1600-2100 entries at the species level, but 25% of the species are not in agreement due to the differences in taxonomic convention. They expect to have a complete checklist by the end of 2001 and to try to write a flora for all arctic countries by 2002-2003.

Reidar also discussed explained some history that led to the differences in taxonomy. Before World War I was an age of scientific exploration in which scientists exchanged information freely. With the advent of World War I and communism the Russian scientists have been isolated from the rest of the world and developed on their own. This project is trying to reestablish contact and methods of addressing taxonomic differences.

After the lunch break, **Rob DeVelice** of the U.S. Forest Service explained the Roadless Areas issue, the implementation of which has been delayed to May 12, 2001. Inventory Roadless Areas (IRAs) were mapped following the passage of the Wilderness Act in 1964 and are mostly in western states. He looked at DEM, ecoregion maps, landcover maps using AVHRR data, land management status, designated wilderness areas and within IRAs areas where road building is allowed and areas where road building is prohibited. . He noted most IRAs are in areas of lower elevation than designated wilderness areas and thus contribute to a greater biodiversity.

Carolyn Parker of the UAF Herbarium discussed her trip to the Waring Mountains in the Selawik National Wildlife Refuge. This area is heavily used for subsistence and shares a boundary with the Kobuk National Park. The object of the study was to record and document what is there and look at habitats for possible rare and endangered species. Four sites were selected to visit.

The first site had gravel fell fields and conglomerate outcrops. Species found were *Festuca lugencis* that is listed as rare and is about 200 miles from the nearest next site where it is found. Other species are *Phlox alaxensis (siberica)*, *Eritrichium splendens* which is an East Beringian endemic and the most exciting that they found is a *Saussurea* which is not in Hulten, the North America Flora or other flora's Caroline has consulted. It seems that its nearest relatives are in Russia, but Russian taxonomists have also not been able to identify the plant.

The second site was an isolated summit separated from the ridge system with different weathering patterns. Species found were *Stellaria dicrenoides (chamisoines)* which is considered rare, *Artemisia glomerata,* a *Fescue,* and a *Smelowski.*

The third site is in the eastern portion of the Waring Mountains on bedrock, dark lava and poorly drained. It was wet moist to very wet shrub tundra. *Saxifraga hieracifolia* was found at this site.

The last site was selected because there were a number of open sandy blowout areas. Species found here were *Lupinus kuschei* which has been found in Little and Great Kobuk Sand Dunes, Carcross, Wrangell-St. Elias and Nabuhabovek. The leaflets have soft hairs and frequently flowering stems with a decumbent attitude. Other species are *Eritrichium splendens* and *Dianthus repens.* Lists were kept for each blowout and each blowout had different species composition and not all species were found in each blowout. But, all species are found in the Great Kobuk Sand Dunes that are nearby.

The day ended with **Garry Davies** of the University of Alaska Anchorage giving a presentation on flora and landscapes of northern Canadian rivers he has floated by raft and canoe.

MYSTERY PLANT

The leaves of this plant appear very early in the spring in woodlands and open coastal meadows. The finely divided leaves have the appearance of a broad, shiny carrot leaf. Usually they have one or two stem leaves with a broad sheath at the base of the petiole. Height varies depending on habitat (up to two feet). The small, 5-petalled white flowers are in double umbels. This plant looks similar to Queen Anne's Lace.

Answer on Page 7.

Illustration by Cara Wardlaw-Bailey©

Obtain Seedlings, Cuttings, or Seeds

Check first with local greenhouses to find out what plants, seedlings, cuttings or seeds you can obtain locally. Also, check with the University of Alaska Cooperative Extension Service for a list of greenhouses and companies that stock native plants. Those plants that cannot be obtained commercially can be obtained fro the wild, either by transplanting or by collecting cuttings or seeds.

Cuttings

Softwood Cuttings – Cut leafed out branches 3-8" long with 2-6 leaf nodes, during spring or early summer when the plant is growing rapidly. Protect the cutting from sun and drying winds by collecting only on cool, cloudy days and by loosely wrapping each cutting in wet cloth. As soon as possible after collecting, remove the lower leaves and place the base of the cutting in a wet rooting medium (vermiculite, perlite, or a sand-peat mixture). Rooting hormones such as indolebutyric acid will increase success. Until roots are formed, the cutting should be kept moist. Warm, and protected from direct sunlight. Once roots are established, the plants should be transferred to soil.

Hardwood Cuttings – These should be cut when plants are dormant, preferably March or early April.

Transplanting

This method is attractive because plants are relatively large when put in place, but one must be careful to avoid harming wild areas from which one is transplanting. Digging up a few small, young plants is less visible and less destructive than digging up large plants. In addition, seedlings less than 3 years old survive transplanting much better than large plants.

BEFORE DIGGING UP ANY PLANTS, be sure to obtain permission from the landowner or responsible agency. The Alaska Department of Natural Resources, Forestry Division sometimes has selected areas for seedling thinning and will give permission and directions to a specific area. Areas scheduled for building projects also provide good places to obtain plants for transplanting, provided the landowner gives permission. Successful transplanting requires a lot of care and attention to individual plants. Each plant must be replanted the same day it is dug up. Thus, you will have more success if you transplant no more than 2 or 3 plants in a single day.

Choose a small healthy seedling from an area of soil, moisture, and shade similar to the area you are landscaping. Plants should be dug up ONLY if they are abundant in the area. In many areas of Alaska, soils are shallow and underlain by permafrost, so plant roots often extend farther horizontally than vertically. The older the plant the farther the roots may extend. For example, a blueberry plant's roots may extend out 10 feet from the plant stem. If most of a plant's roots are destroyed during transplanting, the plant will not survive.

Transplanting is best done in late fall or early spring when plants are dormant, and on cool, cloudy days to reduce plant moisture loss. Dig up the plant by digging far enough from the main stem or trunk to keep the roots intact. To find out how far the plant's roots extend, scrape the plant litter and a few inches of surface soil away with your hands. If the roots extend more than 1 or 2 feet out, you should select a different plant.

Ball the roots and soil in wet burlap and cut the bottom roots away with a sharp tool. Carefully remove the plant from the hole, being sure to keep the root-soil ball intact.

Wrap the root ball in plastic to keep the burlap wet. Replace any loose dire to the hoe and cover with plant litter.

Planting

Dig a hole about 12" wider than the diameter of the root ball. If necessary, partially fill the hole with soil so that the plant will be at the same depth as it was when dug up. Us a board leveled across the hole to insure the depth is correct. If the soil is wet, a foot of gravel in the bottom of the hole will improve drainage.

Remove plastic, loosen burlap, then spread the roots evenly in the hole, Careful prune all damaged roots and apply a commercial preparation of indolebutyric acid (rooting hormone) according to the package instructions. Fill in the hole with top soil about half way, then soak the soil with water. When the water has soaked in to the soil, finish filling the hole with soil, then soak once more with water.

Care For The Transplant

Trees larger than 3 feet should be supported by guy wires and poles for 1-2 years until the roots become established. Pruning some branches from trees or shrubs may improve their survival, but do not cut away the top branch of a conifer.

Fertilize the plant carefully, according to the specific soil type in your area – be careful not to over-fertilize. Keeping the roots of a transplant wet until it becomes established is critical. This should be accomplished by soaking the ground around the tree whenever the soil appears dry. Shallow watering may do more harm than good. Do not fertilize after mid-July or the plants will suffer more frost damage.

For more information, See the Alaska Department of Fish and Game publication "Landscaping For Wildlife in Alaska".

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, pleas 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.

Denali National Park and Preserve Seeks Volunteer Dandelion Diggers

Denali National Park and Preserve is once again seeking volunteers to assist in the war on dandelions. Last year volunteers removed over 500 pounds of dandelions from the shoulders and ditches of over 30 miles park road. Considered an exotic plant, the dandelion seeds find their way to Denali by hitching a ride on the tires of vehicles that enter the park each summer. Though the dandelions do not yet threaten native plants, an effort is made each June to slow their spread.

The first phase of the dandelion removal is scheduled for Tuesday, June 12, 2001 through Friday, June 15th. The second phase is scheduled for Tuesday, June 19, 2001 through Friday, June 22nd. The removal teams typically work six to eight hours a day, regardless of the weather and all of the necessary tools are furnished. Camping space for the volunteers is provided free of charge, with the option of additional nights at the end of their four-day work session. Transportation from the park entrance area to the campsites and the work-sites is also provided.

If you are interested in volunteering to help rid Denali of this exotic pest, please call .

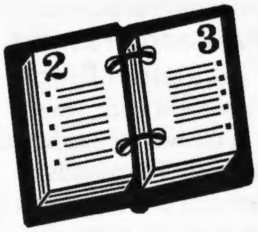
MYSTERY PLANT ANSWER

Conioselinum Chinese
"Hemlock Parsley"

Parsley/Apiaceae Family

Thanks!!

Thanks to those who helped at the Sears mall on April 14. This year was very busy and successful. We sold all of the remaining sweatshirts, only a few packages of seeds were left, and we sold 15 prints. Your efforts were very much appreciated.



UPCOMING PLANTS & NATURE EVENTS

May 7, 7:30 PM	**Alaska Native Plant Society** Monthly Meeting *Campbell Creek Science Center*

Training Tour Guides Hike: Wed, June 12 and Thursday June 13

UAA Classes:

May 8,15,22,29	**"Local Flora"**, Biology 075, UAA, 1 credit; Verna Pratt; Tue. Eves., 6-9:30 PM
May 30-June 13	**"Discovering Wild Plants"**, UAA, 1 credit, Alaska Outdoor Experimental Education Wed. eves., 6-9PM and Sat. and Sun., June 9 & 10: 9AM-6 PM; Verna Pratt
June 5-21	**"Recreational Botany"** Tues and Thurs. eves 6-10 PM and Sat. June 16, 9AM-6 PM

PLANT SALES

Sunday, May 20,	Alaska Rock Garden Society, 9 AM-4 PM 7435 Old Harbor Avenue, Muldoon
Saturday, May 26	Valley Garden Club, 9 AM-4 PM; Wasilla Alternative School, across from Spenard Builders Supply, Wasilla
Saturday, June 2	Wildflower Garden Club, 9 AM-4 PM, 7435 Old Harbor Avenue, Muldoon
Saturday, June 2	Anchorage Garden Club, 9 AM-4 PM, 33734 W. 35th Avenue, Turnagain

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

Non-profit
Organization

PRESORTED STANDARD