

# Borealis

the newsletter of the



PO Box 141613, Anchorage, Alaska

MAY 1998

## JOIN US AT OUR MAY MEETING

**Monday, May 4, 7:30 p.m.  
at the Campbell Creek Center**

### MAIN PROGRAM

**"Visits To Unalaska"**

**Presenter: Forrest Baldwin**

Unalaska is next to Dutch Harbor on Unalaska Island at the east end of the Aleutian Islands. There are still many World War II ruins to visit there as well as a vast array of plant species to identify. Unalaska was originally treeless. Russian settlers planted Sitka spruce trees, and some that were in somewhat protected areas have survived and are growing quite well, though slowly.

Forrest visited Unalaska twice last year, in July and August. Being an avid hiker and a free spirited person, he explored a large portion of the island. Come listen to his slide lecture on this wonderful place in Alaska to visit..

### PLANT FAMILY STUDY

**Polygonaceae/Knotweed Family**

**Presenter: Sally Karabelnikoff**

## HELP US BUILD A HERBARIUM!

This summer the Alaska Native Plant Society will be working with the Campbell Creek Science Center to begin the establishment of an herbarium that will be located at the Science Center.

Verna Pratt will be heading up ANSP's efforts and you can participate! One evening each month, during June, July and August, Verna will be leading a group to specific areas within the BLM's Campbell Tract for collection of sample materials to preserve for contributing to a permanent collection that will be maintained as a herbarium. You can join us each month as we identify some of the many plant species that inhabit Campbell Tract. You'll learn how to properly collect and prepare specimens for scientific study, and you'll be contributing to the project as well!

You'll notice on the Summer 1998 Field Trip Calendars located on pages 7 and 8 inside that the dates that have been set aside for the BLM Herbarium Evenings are Monday June 8, Tuesday July 14, and Tuesday August 11. Each evening we'll meet at a different location within the Campbell Tract to collect different kinds of plants.

Verna will be available at the May meeting, on May 4, to tell you more about the project and give you specific information about when and where to meet on those dates. If you can't attend the meeting, you can contact Verna at or Brian Lax or Jeff Brune at the Campbell Creek Science Center ( ).



**IT IS SPRING!!!**

# APPRECIATING SUNDEWS

By Janice Schofield  
Fritz Creek, Alaska

*United Plant Savers, a non-profit education corporation dedicated to preserving native medicinal plants is sponsoring a book featuring species that are at risk or potentially endangered. The following feature on Sundews will be included in this book. If you wish to reserve a copy of the book, contact PO Box 420, East Barre, VT 05649.*

Appreciating sundews requires humility. You must sink to hands and knees, shrinking ego and opening eyes to the wonder of a miniature plant that thrives in the acidic nutrient poor conditions of a sphagnum bog.

On a sunny day, you will discover *Drosera's* jewels: dewy drops with ruby centers extend from each leaf and shimmer like diamonds. Perhaps you'll notice an unfortunate fly that mired its feet in the superglue strength dew. Sundew patiently awaits the insect's struggle to cease; the presence of protein signals leaves to close and digest the airborne expressed meal.

I've been fascinated with, and appreciative of sundews ever since our first meeting. I feel fortunate to live in the midst of their American stronghold, yet even in the last frontier of Alaska, "progress" marches, bringing new roads, bog drainage, and disruption of native habitat. The tiny size of sundews and their intimate relationship to sphagnum bogs places them at severe risk to both overzealous foragers and wetland developers. In Germany, *Drosera* is threatened with extinction and harvest is strictly prohibited. <sup>1</sup> In the United States, only 3-5% of carnivorous plant habitat is estimated to remain. My fervent wish is that as appreciation grows for this fascinating healing herb, more efforts will be expended to expand preservation of its native habitat, to practice sustainable foraging, and to promote cultivation.

## Botanical Features

*Droseraceae*, the sundew family, comprises 4 genera of carnivorous herbs; these plants attract, capture, kill and digest flies, gnats and moths. The largest genus, *Drosera* (from the Greek for "dewy") is of a worldwide distribution and includes about 8 dozen (mostly perennial) species. American natives include *Drosera rotundifolia*, *D. anglica*, *D. brevifolia*, *D. capillaris*, *D. filiformis*, *D. intermedia*, and *D. linearis*. <sup>2</sup>

The circumboreal *D. rotundifolia*, commonly called round-leaved sundew, is of amazing adaptability, extending in range from northern Florida to Alaska's Arctic Circle. This diminutive herb has a basal rosette of round leaves fringed with dewy insect-trapping hairs.

Botanist Lewis Clark writes: "Like small green frying-pans, the leaves contain chlorophyll for sun-chemistry, but the sparse roots pick up from their watery surroundings very deficient amounts of minerals, and compounds of nitrogen and phosphorous. Hence the plant must make up this deficiency, and this is only possible in its wet habitat by a supplement of insect fare." <sup>3</sup>

Though sundews can live without insect protein, those with access to an entomologic feedings product more robust plants and higher quantity of seed. Clark further explains how the modified leaf-hairs are gland-bearing filaments that secrete, and are enclosed by, chlorophyll derivatives of ruby-red fluid.

"The colour is attractive to small crawling and flying insects, which are at once trapped. Then the tentacles bend inward, the leaf-edges curl, and the insect's juices are soon assimilated by digestive enzymes. Finally the leaf flattens, the chitinous husks of the insects blow away, and the glistening beads again appear."<sup>4</sup>

In the late 1800s, Charles Darwin studied sundew in depth (his *Insectivorous Plants* includes more than three hundred pages devoted to *Drosera*). Darwin found that raindrops and inorganic materials had negligible response on sundew, but if the leaf was touched by a protein material (like a fly) the tentacles were rapidly stimulated.

Sundew's white to pinkish flowers (petals may vary from 4 to 6 though 5 are most common) are borne on a stalk 2 to 8 inches high. Flowers, which open singly, may number from 5 to 25 per stalk. *Drosera's* French name, "rose du soleil", as well as its English name, "sundew", refer to the flower's fondness for blue sky days; in cloudy and cool weather the buds remain patiently closed. Other common names range from "daily dew" and "moor grass" to "red-rot" and "youth root".

## Historical Background

Sundew was regarded as a remedy for "consumption of the lungs" in the 16th century. However Gerarde warned of its "biting nature" and ballyhooed diet as preferred consumption treatment. Other writers like Geoffroi promoted *Drosera* infusions for asthma and lung ulcerations. The *Medicinal Flora* of Rafinesque recommended sundew juice to remove warts and corns. Schenk and Valentin recognized *Drosera's* value in coughs, bronchitis, and pulmonary disease. <sup>5</sup>

Kwakiutl men are reported to have made a complex love charm with *Drosera* and other herbs to make women fall in love with them. Interestingly, when flower essence practitioner Jane Bell prepared Sundew Flower Essence\* (after waiting patiently for four years for sundew to flower!), she reported feeling oneness with Divine Love through the process. "I had the concept before of being one with God, but the attunement with sundew gave me the all encompassing experience of it. There was no separation between me and the Beloved. The image I had was of looking at a luminous Buddha-like figure and it was looking back at me with the same eyes of wonder and heart of Divine Love." Sundew flower essence, says Jane, fosters "the unification of personal and higher selves, our humanity and divinity. Our divinity is no less than oneness with Spirit. There is no separation."<sup>6</sup> Whether our approach is via a sundew love charm or Sundew Flower Essence or simply sitting and observing the sundew in the bog, we can marvel at life's interrelationships and our oneness with all life.

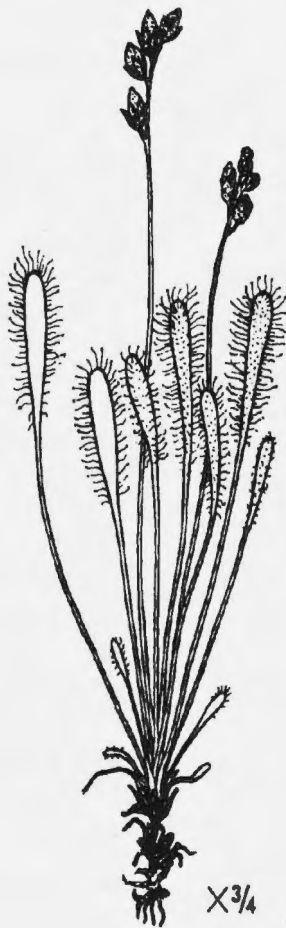
\*Those interested in additional information on Sundew Flower Essence may contact the Alaska Flower Essence Project, P. O. Box 1369, Homer, Alaska 99603; phone ; fax ; e-mail: [afep@Alaska.net](mailto:afep@Alaska.net)

### Modern Medicinal Uses

A variety of species of *Drosera* (including *D. rotundifolia*, *D. anglica*, *D. peltata*, *D. ramentacea*) are used medicinally. Constituents include 1,4-naphthoquinone derivatives - plumbagin, ramentaceone, ramentone (similar to Venus Flytrap which is used in Germany for Cancer). Sundew's medicinal properties are classified as antispasmodic, antibacterial, and antiviral.

Additional actions listed in the British Herbal Pharmacopeia include demulcent, and expectorant (with a relaxing effect on bronchial musculature, (as in asthma attacks). Indications include asthma, bronchitis, pertussis, and gastric ulceration. Sundew is generally used in formula with other herbs.

In organoleptic tests (i.e. determining properties of an herb based on sensory effects on one's taste buds, etc), Robyn Klein, director of Sweetgrass School of Herbalism noted that



sundew is both acrid and mucilaginous, creating "... an irritation not unlike mustard, which then seems to encourage coughing and most likely a loosening of phlegm. The mucilage would be soothing to the mucous membrane."<sup>7</sup>

British herbalist Simon Y. Mills points out that the bronchial tubes are embryonically linked with digestive tract and share common nerve roots. Herbs like sundew that stimulate or soothe the upper digestive mucosa could in theory have a reflex action on the musculature of the bronchial tree. This could explain a number of expectorant properties witnessed in practice.<sup>8</sup>

New Jersey herbalist David Winston uses sundew clinically "...in small amounts for dry, spasmodic explosive coughing - especially whooping cough (Pertussis), Bronchitis, Measles, or other conditions where the person cannot control coughing spasms. It combines well with Bloodroot, Wild Cherry, Mullein and Licorice. I've also used it as part of a Cancer Protocol but cannot claim any specific activity separate from the overall formula."<sup>9</sup>

New Mexico herbalist, Anne Clement-Hill used *Drosera* tincture to calm a dry cough caused by postnasal drip from allergies.<sup>10</sup> Anita Hales of Ketchikan, Alaska has used it mostly "...in combination with other herbs for strep and staph infections and bronchitis."<sup>11</sup>

### Preparation

In clinical practice, David Winston makes a fresh extract of Sundew at 1:2.5, 50% ETOH, i.e. each ounce of fresh herb is covered with 2 1/2 ounces of 50% alcohol (such as 100 proof vodka). Steep two weeks and then strain and rebottle.

Winston advises a therapeutic dose 1-5 drop three times per day, mixed in formula with other herbs. Winston warns that too much will cause intense irritation, inflammation and spasmodic coughing.<sup>12</sup>

### Harvest Techniques

The entire herb is gathered, usually in flower (when it is easiest to locate). Michael Moore, director of Southwest School of Botanical Medicine advises cleaning as well as possible. "This sounds easy, but imagine

trying to wash off a huge, wet Gummy Bear covered in sand."<sup>13</sup> (And flies!)

### **Propagation and Cultivation, if known**

Though tropical species of *Drosera* flourish year round, dry climate species tend to be tuberous, dying back in drought conditions and reappearing in the wet. American natives like *Drosera rotundifolia* survive cold by shedding leaves and forming hibernacula, tight budlike clusters as their winter residence. The Botanique nursery, one of several sources for sundew plants, recommends "...a soil mix of 1/3 sand and 2/3 peat moss as a bog garden or container mix. When planting, keep the small crown above the soil surface and firm the soil gently around the plants to reduce splash from rain. Water transplants well and keep moist but not continuously flooded."<sup>14</sup> If planting from seed, sprinkle on soil surface. Seeds germinate best after exposure to cold (stratification).

When cultivating carnivorous plants, avoid fertilizers and overfeeding. The plants are acclimated to nutrient poor conditions. As supplementary fare, they will trap small fruit flies and other small insects, luring them with nectar gland secretions, capturing them with adhesives, and digesting them with their enzymes. Sundews are one of the easier carnivorous plants to raise, are self-pollinating, and will generally spread after several seasons. Terrariums are recommended. Those desiring in depth information on cultivation, and on terrariums for raising carnivorous plants may contact:

### **Conclusion**

Dr Earle Sweet D.C. M.H. describes sundew as "a very noble but rare plant."<sup>15</sup> In the mainland United States (and much of the world), sundews face untold challenges in remaining on the planet. Wherever we live, it is up to us to collectively work to keep this noble herb a native herb, and not a casualty in that thing called progress.

### **References**

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## **Alaska Rare Plant Forum Was Huge Success**

The Alaska Rare Plant Forum met in Fairbanks March 25-27. This meeting was one of the best attended ever, with over 30 people arriving from all over Alaska. These annual meetings offer a unique opportunity for botanists and ecologists working throughout the state to share ideas, results, and future plans for their respective areas. Presentations of various projects were given

Here are some of the highlights from this year's forum. Phil Caswell (NPS) reported on several species being tracked by the Alaska Natural Heritage Program (AENRP) from Lake Clark NP where he has volunteered as a botanist for the last two seasons. Bruce Bennet (Canadian Wildlife Service) has found several new species for the regional plant checklist during his work in the Beaver River area of SE Yukon, Canada, and has revised the list of rare plants for the Yukon working closely with Dr. William Cody. Mary Stensvold (USFS-Sitka) recorded the occurrence of *Polystichum kruckabergii*, new to the state from a serpentine slope in SE Alaska.

Rob Lipkin (AKNRP) presented the new "Alaska Rare Plant Field Guide", authored by him and David Murray (UAF Museum Herbarium) and published jointly by several federal agencies and the AKNRP. Carolyn Parker (UAF Museum Herbarium) summarized the first season of a BLM-sponsored floristic survey of the Nulato Hills, western Alaska, including finding a large population of the recently described rare species *Douglasia beringensis*, known previously from only 2 sites on the Seward Peninsula.

Carl Roland (NPS) compared the endemic floras of Wrangell-St. Elias NRP, Nulato Hills, and Yukon-Tanana Upland, and suggested that probable patterns of plant migration into different regions of Alaska could be supported by looking carefully at their respective endemic floras. Using maps he had generated, Keith Boggs (AKNRP) demonstrated the extent to which some concentrations of our rare species, such as in southern Seward Peninsula and the central Arctic North Slope, are poorly, if at all, protected by existing management policy.

David Murray updated us on the Flora of North America project, which has grown to over 30 volumes! Elena Conti (UAF Museum Herbarium) described how molecular information can be used to address taxonomic and phylogenetic problems and included an example of a rare species from the Southern Alps of Italy.

*Continued on Page 6*

## MYSTERY PLANT

by Verna Pratt

This small plant (4-5 inches) grows in wet meadows or along creeks in coastal areas of Northwest Alaska, along eastern portions of the Arctic Ocean, and a limited area along the Steese Highway. It is easily overlooked when not in bloom, as its small reniform leaves are mostly basal and hidden by other plants. The 3/4" white flowers have 5 clawed petals and 10 stamens. The leaf shape might lead you to the family, but can you guess the genus and species??

### What is this plant?

For the answer, turn to page 9

#### ALASKA NATIVE PLANT SOCIETY

##### State Officers

President	Marilyn Barker
Vice President	Open
Secretary	Jean Poor
Treasurer	Yaso Thiru

##### Anchorage Chapter Board Members

President	Marlena Mooring
Vice President	Nancy Krieger
Secretary	Marilyn Upton
Treasurer	Jean Poor

##### Anchorage Chapter Program Coordinators

Main Program	Open
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:

## Plant Terminology



Here is a definition of a plant term used in this month's newsletter.

**Reniform:** Kidney shaped

Did you know that 'Lavender' (*Lavandula*) comes from the Latin word 'to wash'? Ever wonder why the daylily is called *Hemerocallis*? Or what *angustifolia* means? There is a web site that provides over 1000 root words of botanical names from a- to zyg-. Check out Garden Gate's "Roots of Botanical Names" at [www.prairienet.org/ag/garden/botrts.htm](http://www.prairienet.org/ag/garden/botrts.htm). Here are a few of the roots that start with the letter "r".

racem- referring to a raceme (*racemosa*)

radic- referring to a root (*Radicula* = little root)  
(*radicans* usually means that the plant tends to root from its stem)

radio- / radia- rayed, radiate (*radiatus*)

ramos- referring to branches

(*ramosus* / *ramosissima* = very- branched)

ran- referring to a frog (*Ranunculus* = little frog, because most of the species grow where frogs live, i.e., marshes, ponds)

raph- / rhap- / rhaph- referring to a needle

(*Rhaphidophyllum*, a palm genus, = needle-leaf)

reclin- reclined, bent backwards (*reclinatum*)

recurv- recurved (*recurvatus*)

refulg- bright (*refulgens*)

regin- referring to a queen (*regina*)

rep- creeping (*repens reptans repanda*)

resect- cut off, curtailed (*resectus*)

reticul- reticulated, referring to a net, net veined (*reticulata*)

retor- twisted back (*retortus*)

retro- backwards (*retroflexus* = bent backwards)

retus- notched (*retusus*)

rex / reg- referring to a king, royal (*regalis*)

rhiz- referring to a root (*Acanthorrhiza* = thorny root)

rhod- referring to the color red/rose

(*Rhododendron* = rose + tree) (*rhodantha* = red-flowered)

rhomb- rhomboid, (*rhomboideus* / *rhombifolia* = rhomboid-shaped leaves)

rhop- referring to a club (shape) (*Rhopalostyle* = club-shaped flower style)

rhync- referring to a nose or snout (*Rhynchanthus* = snout-shaped flower)

## Polygonaceae/Knotweed Family

Presenter: Sally Karabelnikoff

This month we will continue with the Knotweed family and cover the *Polygonum* genus, for which the family is named. One member, *Polygonum amphibium*, water smartweed, is an aquatic, found in lakes in Southcentral, Eastern and Interior Alaska. The long floating leaves and spikes of pink flowers are often seen only by boat.

A species with similar flowers is *Polygonum bistorta*, a perennial of wet tundra covering most of the state except the Aleutian chain, SE and Coastal Southcentral. So far the closest we have seen it to Anchorage is a few specimens on Mt. Eklutna.

A similar common white species is *Polygonum viviparum*, Alpine meadow bistort, which is plentiful in meadows throughout the state. This is a prolific reproducer producing baby plants on the stem of the plant that are already growing when they fall to the ground. *Polygonum alaskanum*, wild rhubarb, is common throughout eastern, central and western Alaska. It is showy with its long flowing inflorescence of creamy white flowers. The leaves of the tall plant may be eaten and have a slight sour taste. The other major group of this family is composed of knotweeds - most are introduced, weedy, and have very small flowers. They usually grow in waste areas and along roadsides. Two are *P. lowleri* and *P. cavrine*.



*Polygonum bistorta*



*Polygonum alaskanum*

## Pronouncing Botanical Latin

### Oh, Those Names!

Probably nothing causes more anxiety, embarrassment, and contention for gardeners than the attempt to pronounce botanical Latin, particularly the names of species. The problem is two-fold: first, the names are often long and complex; second, botanical Latin is something we have frequent occasion to read, but seldom hear spoken.

Some people just give up, pronounce the names however they guess, and hope that listeners will pick up on what they mean. If this approach suits you, you are welcome to it--but be aware that it's a bit like talking about the "Treaty of Vur-SALES". Folks may understand what you intend to say, but may also question how knowledgeable you are.

The good news is that pronouncing botanical Latin is not as horrid as it seems to the novice: Latin is a phonetic language. There are rules for the pronunciation of these names. Once the rules are mastered, it becomes possible to pronounce an unfamiliar name accurately, without having to go to an expert or check a book (both of which are as often sources of error as of good information, by the way). You can get a tutorial on Latin pronunciation on the Web at [www.rt66.com/~telp/latin.htm](http://www.rt66.com/~telp/latin.htm).

### Alaska Rare Plant Forum (continued from page 4)

UAF graduate student Jan Jorgensen introduced her project using DNA sequencing in an attempt to sort out the taxonomy of *Oxytropis arctica* var. *barnebyana* of northwestern Alaska.

The workshop on sedge and grass identification offered by Carloyn Parker and Mary Stensvold was so popular we now realize similar events should be planned for future meetings. Jim Anderson (UAF Biosciences Library) demonstrated electronic scientific indexes available on the web. Other various electronic resources such as interactive keys, web sites, species lists, mapping programs, etc. were also introduced.

If attendance and energy level are any indication, the meeting was a great success. Next year's meeting will be in late March in Anchorage, and will be announced later in the ALA Newsletter. Anyone wanting to contact any of the researchers mentioned above can contact them through the Alaska Rare Plant address list at: <http://www.uaf.edu/museum/herb/rareaddr.html>

# 1998 Alaska Native Plant Society Field Trip Schedule

## General Information:

The purpose of the Alaska Native Plant Society field trips is to enjoy our Alaskan plants in their native habitats. The trips are designed to explore a variety of plant communities for educational and appreciative values. Hikes are leisurely paced to allow plenty of time for plant observation. Trips will be held rain or shine, so be prepared.

Please read the individual trip listing to determine the level of difficulty, allotted time and special requirements for each trip. Trip leaders' telephone numbers are provided and they are happy to answer specific questions about their trips. **Please call the leader** a few days before the outing, as unforeseen things can come up and plans may change.

## Items to Bring:

All trips will require sturdy hiking shoes, drinking water (it is unsafe to drink stream water), rain gear, warm clothing and insect repellent. A hand lens is helpful for up-close plant identification. You may also wish to bring your camera, binoculars, field notebook, and lunch or snack.

## Caution:

These are not plant collecting trips! Digging plants and/or collecting specimens is strongly discouraged by the ANPS. Collecting is illegal in many of the locations we will visit.

## Meeting Place:

Unless specifically noted in the field trip description, the common meeting place for ANPS field trips is the Southeast corner of the Sears Mall parking lot, located at the intersection of Benson Boulevard and the New Seward Highway. Trip leaders will wait a few minutes for latecomers, but please be prompt.

## Thank you to Field Trip Leaders:

This summer schedule is the result of the efforts of ANPS members in suggesting and arranging outings. Thank you to everyone who gave their time toward providing these botanical opportunities!

**NOTE: Some trip particulars were not available at press time, but we wanted to be sure you got them on your calendars. Please contact the trip leaders for more information.**

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## TRIP DESCRIPTIONS

### May 11 (or maybe 18<sup>th</sup> – will tell us right before this goes to press!) Potter Marsh

#### Trip Leaders:

Marilyn Barker and Rick Sinnott

Meeting Time and Place: Meet at 9AM at south end of Potters Marsh.

Be prepared to slog through the marsh and water, i.e. hip waders, and canoe is helpful.

Time Alloted: 6 hours (9 to 3)

Bring lunch, snack, and hot thermos.

### May 17 - Wishbone Hill/Palmer

Leader: Curvin Metzler ( )

### May 25 - Eklutna Lake-

Leader: John Wenger

(Joint with Anchorage Audubon)

Time: 9AM to 12N; EASY

Meeting Place: Meet at campground by trailhead, by the interpretative sign and the public viewing scopes. Bring lunch and water. Possible entrance fee (?\$3)

Look for: Cypridium passerinum – Bird egg orchids in bloom; Possible Dall sheep lambs; birds, mammals, and tracking in addition to plants and flowers

### June 6 - Bodenber Butte/Palmer

Trip Leader: Carol Hoblitzell

### June 14 -Bike along Turnagain

Trip Leader: Susan Willhoff :

Time: 9AM to 12 Noon

Meeting Place: Railroad station at far end of Potter Marsh on Old Seward Highway

Bring bike. Bike from Potter Marsh to Beluga Point

Look for: Drabas and Saxifrages

**June 20 -Ballpark/Glen Alps**

Trip Leader: Joel Hubbard

(In conjunction with Anchorage Audubon)

Look for: Alpine Plants and Birds

**June 26,27,28 -Eagle Summit/Circle**

Trip Leader - Dianne Toebe

Call about car pooling

Eagle Summit north of Fairbanks and Circle hot springs

**July 7: Russian Jack Springs**

Trip Leader: Susan Willhoff

Hike to the springs and see the Monkey flowers and orchids

**July 11 and 12 – Saturday & Sunday : Homer**

Leader: Daisy Lee Bitter

, Homer 99603

Contact: Dianne Toebe

Time allotted: 2 days

Level of difficulty: Easy

**Saturday July 11**

8:30 – 11:30

Marine and Shore Plants, emphasis on edible marine algae;  
minus 3.2 tide at 10:28

Meet midway down the Spit on the left at gold colored  
building. Park on left (NE) side of Spit.

1:30 – 3:30

Calvin and Coyle Trail – ¼ mile nature walk

Mixed old growth forest to Beluga Wetlands

4:00 - Check-in for Rainbow Tour boat trip

4:30 – 6:00- Bird Island viewing boat trip – special fare of  
\$10!

Seabirds and chicks rookery; +18.5 tide at 5:00 for close  
viewing

7:30 Potluck at Daisy Lee's house –

With local Homer Plant Society. Daisy will provide  
beverages.

Directions – go through Homer on Pioneer Drive and  
continue .8 of a mile to top of hill. Turn left at stop sign on  
to E. End Road. Then, 1.7 miles to E. Skyline. Daisy Lee's  
house – log food cache by driveway; 25 acres property with  
view!

Overnight at Daisy Lee's. Bring a sleeping bag or plenty of  
space for parking and tents.

Daisy Lee has a domestic garden to visit. She will be  
returning from a two week trip to Kamchatka in Russia on  
July 2<sup>nd</sup>, so will have much to share about Russian plants.

**Sunday, July 12 (Homer trip continued)**

8:30 – 11:30 Whin Nature Center – Center for Alaska  
Coastal Studies - \$5

1:00 - Toby Tyler Gardens –

Kachemak Heritage Land Trust - \$6

Evening – Herbarium

Driving to Homer – Visit the Fish and Wildlife Center on  
Loop Road, west of Soldotna

Bring camera, binoculars. No pets. Well behaved children  
are welcome.

**July 18 - Archangel/Lane Cabin**

Level of Difficulty: Moderate: Age 7 and up

Time Allocated: All day

Meeting Time and Place: Call trip leader for meeting time.

Meet at Sears parking lot.

Driving distance is approximately 60 miles.

Reserve your place by July 17<sup>th</sup>

**July 19 - Palmer Lakes**

Trip Leader: Warren Jones and

Dianne Toebe:

**July 24 - Pribilofs/ St.Paul**

Trip Leader: Dianne Toebe

Contact Dianne for more information

**August 8 Hatcher/Willow**

Trip Leader: Marilyn Upton

(With the Chugach Gem and Mineral Society)

Meeting Time and Place: Meet at 9 AM at mile 69.5 of  
Parks Highway at the Willow Trading Post. Willow end of  
Hatcher Pass Road.

Look for serpentine and gather seed of wild flowers.

Bring lunch. Bring pot luck dish for supper at Willow  
Lake!!!

**August 15 - Arctic Valley/Hiland**

Trip Leader: Sue Jensen

Contact Sue for more details.

Emphasis: Blueberry hunt!

**August 22 - Winner Creek**

Trip Leader; Jonathan Schilk

Meeting Place:Meet at Carrs Huffman at 9:45 or  
at Prince Alyeska Hotel at 11

Time Allotted: 11AM-4PM

Emphasis: Forest flowers

**August 30 - Glen Alps**

Trip Leader: Dianne Toebe

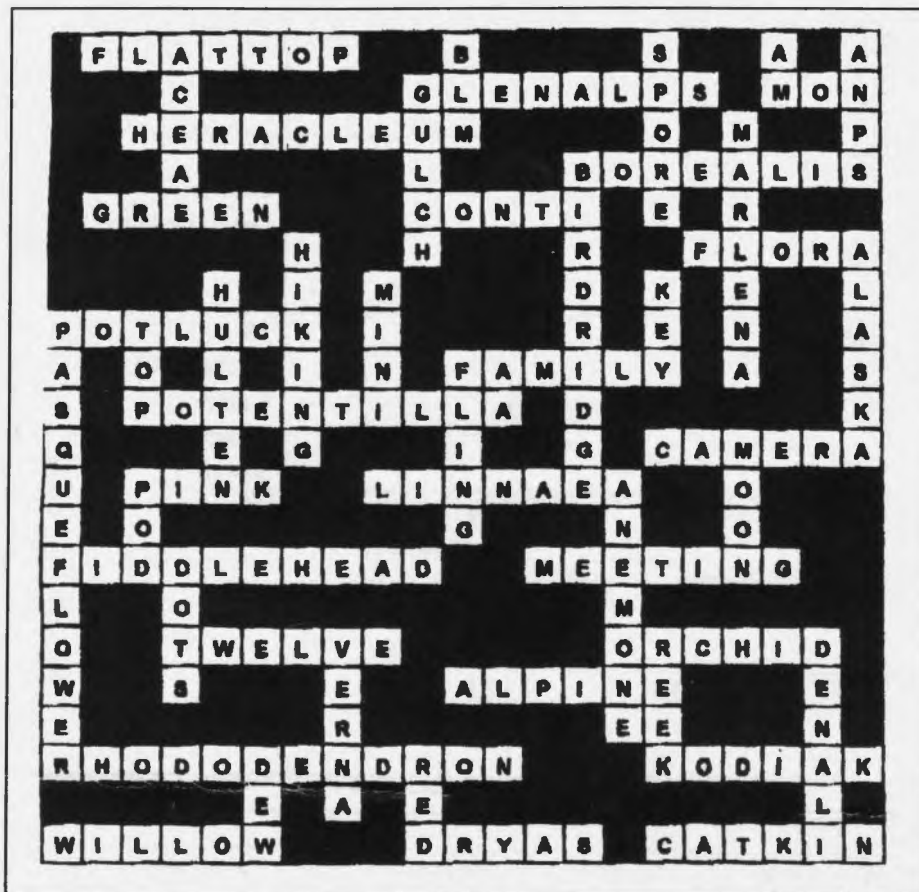
Level of Difficulty: Easy

Meeting Time: 9AM to 11AM

Meeting Place: Meet at Glen Alps parking lot (\$5 parking  
fee or carpool!)



ANSWERS to Last Month's Crossword Puzzle



**Mark Your Calendar**

Lobelia Basket Class (\$45): May 16 - 10AM-12N  
Call

Sage Herb Garden Herb Plant Sale:  
May 16-17 and May 23-24 - 10AM-5PM

Wildflower Garden Club Plant Sale: May 30 - 9AM-4PM. Call

Anchorage Garden Club Plant Sale: June 6  
Call

Les Brake Plant Sale: May 18-June 7 11AM-6PM  
Mile 41.6 Hatcher Pass Road, Willow Call

Sally Arant/Lorri Abel Plant & Garden Craft Sale:  
May 23-24, June 13-14, June 27-28  
Road next to Bell's DeArmoun Greenery:

**HELP WANTED**

APU graduate student is looking for volunteers to help him catalog invasive, non-native plants in Campbell Tract this summer. He will be doing transects along three types of trails, and is especially interested in getting help from people who can identify plants in the area, but he is willing to spend some time training. If you're interested, or for more information contact Brian or Jeff at the Campbell Creek Science Center: ( ) or Brian at home ( )

**Alaska Native Plant Society Field Trip Calendar - Summer 1998 Please contact trip leaders for updates**

<b>July 1998</b>						
<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
			1	2	3	4
5	6	7 Russian Jack Springs Susan Willhoff	8	9	10	11 Homer Daisy Le Bitter (Dianne )
12 Homer Daisy Lee Bitter	13	14 Herbarium Evening BLM Verna Pratt	15	16	17	18 Archangel/Lane Cabin Nancy Krieger
19 Palmer Lakes Warren Jones (Dianne )	20	21	22	23	24 Pribilofs/St. Paul Dianne Toebe	25
26	27	28	29	30	31	

<b>August 1998</b>						
<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
						1
2	3	4	5	6	7	8 Hatcher/Willow Marilyn Upton
9	10	11 BLM Herbarium Evening Verna Pratt	12	13	14	15 Arctic /Hiland Sue Jensen
16	17	18	19	20	21	22 Winner Creek Jonathan Schilk
23	24	25	26	27	28	29
30 Glen Alps Dianne Toebe	31					

**Alaska Native Plant Society Field Trip Calendar - Summer 1998 Please contact trip leaders for updates**

<b>May 1998</b>						
<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
					1	2
3	4	5	6	7	8	9
10	11 Potter Marsh Egg count Marilyn Barker	12	13	14	15	16
17 Wishbone Hill Curvin Metzler	18 Potter Marsh Egg count Marilyn Barker	19	20	21	22	23
24	25 Eklutna Lake John Wenger	26	27	28	29	30
31						

<b>June 1998</b>						
<b>Sunday</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Saturday</b>
	1 Neighborhood Walks (See Paper)	2	3	4	5	6 Bodenberg Butte Carol Hoblitzell
7	8 Herbarium Evening BLM Verna Pratt	9	10	11	12	13
14 Bike from Potter Marsh Susan Willhoff	15	16	17	18	19	20 Ballpark/Glen Alps With Audubon Joel Hubbard
21	22	23	24	25	26	27 Eagle Summitt/Circle Dianne Toebe
28	29	30				

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



**DON'T MISS THE SUMMER 1998 ANPS FIELD TRIP CALENDAR INSIDE!!!**

**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.

