Borealis

the newsletter of the

Alaska Native Plant Society

May 1996

P.O. Box 141613, Anchorage, AK 99514

Anchorage Chapter
☆May Meeting ☆

Monday, May 6
7:30 p.m.

First Congregational Church
2610 E. Northern Lights Blvd.
(Please use back entrance)

Reflections on Plant Diversity

by Dr. David Murray

Dr. David Murray, Professor of Botany and Curator Emeritus of UAF Museum, will present a program featuring illustrated comments on diversity in Arctic and Boreal regions. He will stress the role of habitat diversity created by cold climate geomorphology.

Plant Family - Ginny Moran will present a program on Shield Ferns and Lady Ferns to conclude our series on families of Alaskan ferns.

Mini-Botany - Presented by Camille Fox.

Seed Swap - seed swap seeds will be available.

A Board Meeting will be held half an hour beforehand, starting at 7 p.m.

This is the last membership meeting until our fall pot-luck in October. Borealis will also be taking a break for the summer, but we'll be back in time for fall programs. The Summer 1996 field trip schedule will be mailed separately. Thanks to everybody who has contributed to the newsletter this season.

Mystery Plant

This beautiful and deliciously perfumed orchid usually blooms at the beginning of June. Looks for its delicate, rose-purple flowers in forested areas with rich soil, where it often grows along the line of an old, rotting trunk. Three sepals and two petals sit erect above the upper lip, while the lower lip suggests the common name of the plant. In fall, the plant produces a single, dark-colored leaf that persists through the winter, but withers in summer. Plants of this genus are named for the goddess daughter of Atlas, Homer's beautiful nymph who remained hidden in the woods until found by Ulysses when he was wrecked on the island of Ogygia. The name means "concealment."

Answer on Page 3.

Mystery Plant drawings by
Toby Tyler, ANPS Kachemak Chapter.

Local Flora Classes

University of Alaska Anchorage
Department of Biological Sciences

Local Flora
Biol 075

Verna Pratt will lead a study of wild flowers and plants in the surrounding locale with emphasis on use and identification. Field trips may include Russian Jack Springs, Municipal Greenhouse, Bird Ridge and Glen Alps.

Sec. 001: Tues. 6:00 p.m. - 9:30 p.m. May 7 - May 28
Sec. 002: Wed. 9:30 a.m. - 1:00 p.m. May 8- May 29
Science Bldg. Rm. 248; one credit; pass/no pass

Recreational Botany
Biol 124Q

Learn how to identify Native plants in the field with Marilyn Barker and Verna Pratt. The class will focus on use of popular guides, food and medicinal uses of plants, and derivation of plant names. Field trips may include Arctic Valley, Eagle River, Falls Creek and Reed Lakes.

Sec. 301:Thurs. 10:00 a.m.-2:00 p.m. May 30 - June 6
Thurs. 9:00 a.m.-6:00 p.m. June 13 - June 27

Sec. 302:Thurs. 6:00 p.m.-10:00 p.m. May 30 - June 6
Sat. 9:00 a.m. - 6:00 p.m. June 8 - June 22
Science Bldg. Rm. 248; one credit

For more information on these courses call the UAA Biology Department at or Enrollment Services at .

Correction

The Plant Species of Concern list printed in the March newsletter accidentally omitted *Oxytropis arctica* var. *barnebyana*. Thanks to all the eagle-eyed readers of *Borealis* who spotted the omission and brought it to our attention.

Thanks!

Spring Garden Show
at the Sears Mall

Thanks to everybody who helped staff tables at the Spring Garden Show at the Sears Mall on April 20. A slide show featuring ANPS field trips, plus displays on Alaskan orchids, edible and poisonous plants, and winter twigs drew plenty of visitors. This annual event is a great way to raise our visibility in the community, and an opportunity to educate the public about native plants. Thanks again to: Marilyn Barker, Al Batten, Unison Hubbard, Sally Karabelnikoff, Jean Poor, Verna Pratt, and Julia & Trevor Ricketts.

Volunteer Opportunities

Plant Rescue Volunteers:

DIG-IT!! Volunteer to save native plants this summer!! Several sites in Chugach State Park have been identified for plant rescue efforts this summer. Plants will be taken from areas where new construction or expansion of existing facilities would result in the destruction of native species. Sites include: Bird Creek, McHugh and possibly others areas. "Rescued" plants will be stored at the King Career Center greenhouse and used for projects around the city, including a native plant demonstration garden at Wendler Junior High. Volunteers are needed for plant "rescue" efforts and also to tend and possibly propagate plants at the greenhouse. If you're willing to apply some elbow grease and back-bending for a great cause, call or email organizer Ginny Moran at the USFWS office in Anchorage (or Ginny_Moran@mail.fws.gov). We will contact volunteers as soon as dates have been arranged. Together, we can "dig-it."

Wildflower Walk at Alaska Botanical Garden:

The Alaska Botanical Garden is looking for a volunteer to maintain and enhance its wildflower walk. The walk extends for approximately 100 feet through woodland, and features shade-tolerant plants in plantings on both sides of the trail. The volunteer(s) would be responsible for additional plantings, identifying existing species, weeding out exotics, and watering if necessary. Approximate volunteer commitment is 1 hour per week at whatever time your schedule allows. If you think you may be interested, call Debbie Hinchey ( ).

Polypodiophyta: Athyriaceae (Lady Ferns) and Aspidaceae (Shield Ferns)

This month, we conclude our series on the pteridophytes with a look at two large families of ferns, the Lady Ferns (Athyriaceae) and Shield Ferns (Aspidaceae). Both families include ferns with pinnately divided leaves that bear sori (clusters of sporangia) **along veins** on the undersides of leaves. All have similar fertile and sterile fronds, with the exception of Ostrich Fern, an atypical member of the Lady Fern Family discussed in the March newsletter.

In Lady Ferns, the **indusium** (an outgrowth from the leaf that forms a protective covering over the sori) is attached **beneath** the sorus, and forms a cup-like structure around it. Four genera occur in Alaska: *Athyrium*, *Woodsia*, *Cystopteris*, and *Matteuccia* (Ostrich Fern). Most are tufted (growing in clumps), and have fronds that are tapered towards the top and bottom.

In the two Alaskan species of *Athyrium*, **the indusium is rudimentary and falls off** at an early stage. Both species are large ferns that grow in vase-like clumps. Their diamond-shaped fronds somewhat resemble the shape of a lady, while stipes are short and scaly. *A. filix-femina*, a common fern in the southern half of Alaska, occurs in moist to wet forests, swamps, thickets, and meadows at all elevations. Its dark-green fronds are usually bi-pinnate. *A. distentifolium* is a coastal species usually associated with wet, rocky slopes and calcareous soils. Its range extends eastward from Prince William Sound (although populations also occur in extreme eastern Siberia). It differs in having tri-pinnate blades, smaller sori, and frequently lacking an indusium.

Cystopteris is represented by two species in Alaska, one with two sub-species. In this genus the **indusium is attached to one side of the sori,** and forms a delicate hood-like structure that soon shrivels. The name *Cystopteris* is derived from the Greek words for "bladder" (*kystos*) and "fern" (*pteris*), and refers to the hood-like indusium. Our most familiar species is *C. fragilis*, a delicate, tufted fern growing to 7 inches tall, with smooth leaflets. Stipes are short, straw-colored and hairless, although a few scales may occur at the base. Look for it on rocky outcroppings, talus slopes, and cliffs throughout Alaska except on the Arctic coast.

The two sub-species of *C. fragilis* differ in the architecture of their spores. *C. montana* more closely resembles a *Gymnocarpium* (see next page) with its almost triangular fronds; twice pinnate, narrowly dissected leaves; long stipes; and fronds produced in rows from a branching underground rhizome. With a few exceptions, its range is restricted to the interior, where it usually grows on calcareous soils.

In plants of the genus *Woodsia*, the **indusium is surrounded by a basal ring of hairy scales**.

Generally, these are small, tufted ferns, up to one foot tall. Of the four species in Alaska, only *W. glabella* (Smooth Woodsia), a tiny (up to 3 inches), widespread fern of interior areas, lacks scales and hairs. *W. ilvensis* (Rusty Woodsia - pictured left) is a common fern of dry rocks and scree slopes in south-central and interior areas, but absent in eastern parts of the state. It is characterized by young, silvery fronds, a thick, dull-green blade on older fronds, and many persistent dead stalks and blades around the base of the plant. Stems and undersides of leaves are covered with rusty hairs, while leaf segments are longer than broad. It may form hybrids with *W. alpina* (Alpine Woodsia), a smaller fern (up to 5 inches tall) with thinner, jointed fronds that lack or have few hairs and scales, and leaflets that are not much longer than broad. Fronds of *W. scopulina* also lack scales, but have long, flattish white hairs mixed with a few dark glands, and leaf segments that are much longer than broad. It is a taller plant (up to 1 foot tall) known from only a few locations on the Kenai Peninsula and in SE Alaska.

Mystery Plant Answer:

Fairy Slipper
Calypso bulbosa
Orchidaceae

Aspidaceae:

In our second family of ferns, the Aspidaceae or Shield Ferns, the **indusium is attached above the sorus or to one side,** although in the genus ***Gymnocarpium*** **it is completely absent.** (*Gymnocarpium* means naked fruit). **In *Polystichum* species the indusium is deltate (or circular), lacks a sinus (gap between lobes), and is attached to the center of the sori.** Leaves are evergreen and often sharply toothed. **In *Dryopteris* indusia are reniform (kidney-shaped) and deeply lobed.**

Gymnocarpium is represented by two species in Alaska. *G. dryopteris* (Oak Fern) is a common fern found throughout the southern half of the state. Its deciduous and delicate triangular fronds appear divided into three parts, and are held horizontal to the ground. Although usually solitary, they can form an almost continuous carpet distinctive for its lime-green color. A similar species, *G. robertianum*, has dull-green fronds that are glandular on the underside. It is restricted to woods in the interior.

Oak Fern

Although four species of *Polystichum* occur in Alaska, all are restricted in range. Generally, they are big, tufted, leathery, evergreen ferns, with once-pinnate or bi-pinnate (*P. Braunii*) fronds. *P. munitum* (Sword Fern), a native of Southeast Alaska, grows to 4 feet tall in moist woodlands at low to middle elevations. The long-stiped fronds are roughly triangular, with the lowest pair of pinnae as large as the next pair. *P. lonchitis* (Mountain Holly Fern) is once-pinnate like Sword Fern, but has short stipes and shiny, lance-shaped (tapered at top and bottom) blades with wide-spreading, spiny-toothed pinnules. It is largely restricted to coastal areas east of Prince William Sound, although scattered populations occur in other parts of the state. *P. Braunii* (Braun's Holly Fern) is a large and scaly fern with twice-pinnate leaves. The two varieties can be distinguished by the relative length of the basal pinnules; in *P. Braunii* var. *alaskense* basal pinnules are no longer than the next pair, in var. *Andersonii* they are conspicuously longer. Both sub-species are found in SE Alaska, although isolated populations occur in south-coastal areas and on the Aleutian Islands. *P. aleuticum*, the smallest of the Alaskan species (up to 6 inches tall), bears some resemblance to *Woodsia alpina*. Unlike other *Polystichum* species, the pinnules lack spines or teeth. A single population occurs on Atka Island.

Mountain Holly Fern

Two species of *Dryopteris* occur in Alaska. *D. dilatata* (Trailing Wood Fern) is a large species (up to two feet tall), with long stipes, and triangular blades that start approximately half way up the stem. A common fern of moist woods and meadows, it occurs throughout much of Alaska south of the Brooks range. The underground stems are covered by bases of old leaf stalks, and somewhat resemble bunches of tiny bananas. For centuries Indians of SE Alaska and Eskimos of Bristol Bay and the Lower Kuskokwim have roasted these underground stems and eaten the inner portion. *D. fragrans* (Fragrant Shield Fern), a related species of rocky, dry slopes, is a smaller, clumping fern, growing to 10 inches. It produces many stiff, coarse looking, lance-shaped fronds, covered with rusty hairs. Old, reddish brown, curled fronds and stipes persist around the base of the plant. At least in Alaska, the common name is a misnomer as it produces no obvious aroma. It occurs throughout the state, with the exceptions of the Aleutian chain, SE Alaska, and coastal regions of South-central.

Trailing Wood Fern

City of Flowers
Plant a Splash of Blue and Gold!

What could be more Alaskan than a profusion of blue and gold flowers in front of homes and businesses this summer. The Anchorage City of Flowers Program aims to bring beautiful blooms to all parts of the city and in the process grow a renewed sense of community spirit in each of us. Lists of non-native blue/violet and gold/yellow plants, plus tips on planting and maintenance are available.

Native plant enthusiasts may want to extend the challenge and create blue and gold plantings featuring Alaskan wildflowers. A few favorite blue/violet species include: Aleutian Speedwell, Forget-me-nots, Bluebells of Scotland, Chiming Bells, Violets, Iris, Jacob's Ladder, Nootka Lupine, Monkshood, Larkspur and Geranium. Yellow species could include: Arnicas, Potentillas, Alaska Poppy, Yellow Dryas, Monkeyflower, Marsh Marigold and some Saxifrage species. The Wildflower Garden Club and Anchorage Garden Club plant sales are coming up soon, and are a great source of native plants (see field trip schedule for more information).

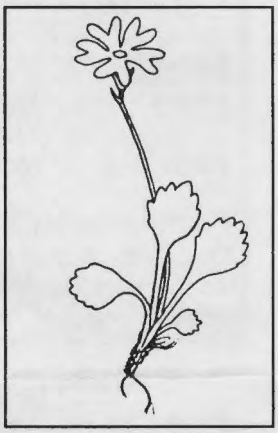
Help brighten Anchorage with flowers, so that visitors and fellow Alaskans will marvel at the glorious display. If you have any questions or need additional information on the City of Flowers Program, **please call Kathy Kingston, Director, Anchorage Beautification at**

What's In A Name?

Primula cuneifolia (Pixie-eye Primrose)

It is easy to see how this tiny primrose earned its common name. The flowers are often produced almost flush with the ground, their bright yellow centers peeking upwards like tiny pixie-eyes staring from the tundra.

The common name of "primrose," however, is a classic mis-interpretation. Plants of the primrose family are not related to roses, as a close look at their flowers will clearly show (roses have numerous stamens and one to many carpels, while primroses always have five of each). The original Latin name was probably either *prima vera* or *flor di prima vera* meaning the "first flower of spring." A French version *primaverole* was corrupted in English to *primerole* and then to *pryme rolles* from which "primrose" came.



The scientific name *Primula cuneifolia* is easy to trace from the Latin *primus*, meaning "first," and *cuneifolia* from *cunei* meaning "wedge-shaped" and *folia* meaning "leaves."

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 aim 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, then clip and mail this application with the appropriate remittance to: **Alaska Native Plant Society, Membership Dept., P.O. Box 141613, Anchorage, AK 99514.**

Select the membership category you desire:

Full Time Student	[ ] $5	Name: _____
Senior (over 65)	[} $10	Address: _____
Individual	[ ] $12	City: _____ State: _____ Zip: _____
Family	[ ] $18	
Organization	[ ] $30	Telephone: (Home)_____(Work)_____

Membership is on a calendar year basis.

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Plant Family	Verna Pratt
Mini-Botany	Marilyn Barker
Field Trips	Kathy Burke

Borealis

Editors	Julia Ricketts
	Trevor Ricketts
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The newsletter of the ANPS is published monthly except for June, July, August and September. Material for the October issue should be mailed to the ANPS P.O. Box to arrive by September 20.

Another Early Season Field Trip

McHugh Creek:
Friday, May 3 at 7 p.m.

The early season trip to McHugh on April 19 was so much fun that we're going to do it again! We'll identify leaves of early emerging plants, study buds on winter twigs, and be there to catch the early bloomers. Meet at 7:00 p.m. in the bottom parking lot at McHugh Creek (mile 111.8 on the Seward Highway). This will be an easy trip, but come prepared for whatever the weather might throw at us. **For more information, call Verna at** .

Field Trips Schedules

Coming Soon! The summer 1996 field trip schedule will be available for pick-up at the May 6 meeting of the Anchorage Chapter, or will be mailed out to ANPS members immediately afterwards. Thanks to everybody who has volunteered to lead a hike this summer!

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

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Please take a moment to check your mailing label and make sure that your name, address and renewal date are correct. If your due date is circled in red and your mailing label says PD thru 95, this is your last newsletter! Take a moment to fill out the renewal form on Page 5.