

Borealis

the newsletter of the



November 1994

P.O. Box 141613, Anchorage, AK 99514

Anchorage Chapter November Meeting

Plant Communities of the Copper River Delta

Monday, Nov. 7 Alaska Aviation Heritage
at 7:30 p.m. Museum, 4721 Aircraft Dr.,
near Lake Hood

Keith Boggs, a vegetation ecologist with the Alaska Natural Heritage Program, will give a presentation on the plant communities and ecosystems of the Copper River Delta. He will describe the major ecosystems, and the major plant communities, their successional pathways, and processes driving succession. Wetland systems include barrier islands, deltas, floodplains and outwash plains. The processes driving succession are highly dynamic and include glacial retreat and advance, regional subsidence, tectonic uplift, and abrupt changes in the rate of stream flow and sedimentation.

The study area contains the largest wetland complex along the Pacific Coast of North America, supports one of the top four shorebird staging grounds in the western hemisphere, and is highly productive in terms of timber, waterfowl and salmonid fisheries. Don't miss a fascinating program.

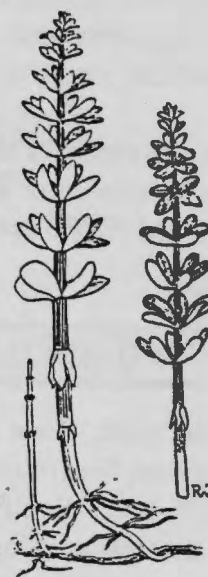
Plant Family - Verna will start our series on the Figwort Family; this month she will feature the genus *Castilleja*.

Mini-Botany - Julia Ricketts will give a short presentation on fall changes.

A board meeting will be held half an hour beforehand, starting at 7 p.m.

Mystery Plant by Jason Grant

The appearance of this seed plant, as well as the meaning of its scientific name (derived from Greek roots), may be confused with an entirely unrelated plant whose name is derived from Latin roots. While some species of the second genus may occur in marshy areas, our mystery plant is found exclusively in the aquatic bed, especially along the shallow margins of ponds and streams. Its stem and leaves are glabrous (without hairs) and somewhat succulent. The leaves are positioned in whorls along the stem, above which small sessile flowers are borne. The flowers are often inconspicuous due to their underwater position on the stem. Answer on Page 3.



Mystery Plant drawings by Toby Tyler, ANPS Kachemak Chapter.

Anchorage Chapter Elections

Election of a new board of officers for the Anchorage Chapter will take place at the November meeting. The slate proposed by the nominating committee is as follows:

Anchorage Chapter Board Members

| | |
|----------------|----------------|
| President | Jean Poor |
| Vice-president | Julia Ricketts |
| Secretary | Andrea Woods |
| Treasurer | Unison Hubbard |

Additional nominations will be taken from the floor.

Anchorage Municipal Park Inventory Project

Thanks to everybody who participated in the Municipal Park Inventory Program field trips this summer. Although we didn't turn up anything unusual we enjoyed discovering several parks that many of us had never visited. Some of them are right on our doorstep here in Anchorage. Maybe we'll be inspired to visit them more often.

Seed Swap Volunteer Still Needed

A volunteer is still needed to coordinate the seed exchange project this year. Don't be shy! If you are interested call Verna at 333-8212.

If you have any seeds for this event please bring them to the November or December meetings, or mail them to the ANPS care of the post office box address.

The Books Have Arrived

Copies of the book "Plant Identification Terminology: an illustrated glossary", by James G. Harris and Melinda Woolf Harris, are available for pick-up at the next meeting.

See the October newsletter for a review.

Recipe of the Month

Raspberry Breakfast Cake



2 eggs, separated
3/4 cup sugar
1/2 cup soft vegetable shortening
1 1/2 cups sifted flour
1 teaspoon baking powder
1/2 teaspoon salt
1/3 cup milk
1 teaspoon vanilla

2 cups fresh raspberries

1. Preheat oven to 375 degrees. Oil a 9-inch cake or tube pan.
2. In a mixing bowl, beat together egg yolks, sugar and shortening. Sift together flour, baking powder and salt. With a wooden spoon, stir dry ingredients into egg mixture along with unbeaten egg whites just until well-mixed. Stir in milk and vanilla. Fold in raspberries.
3. Pour into prepared pan and bake until center springs back with a light touch, about 30 to 40 minutes. Serve warm.

NOTE: Fresh blueberries may be substituted, but lightly flour them before adding to batter so they will not sink.

Jean Tam found this recipe in the Anchorage Daily News. It was originally from "Hollyhocks & Radishes" by Bonnie Stewart Mickelson. Jean made this recipe with blueberries for last month's Pot Luck Supper (the cake in the square pan), and the editors would like to add that it was delicious. She tells us the cake is also good with low-bush cranberries.

The Figwort Family: Scrophulariaceae

The featured family this year has many familiar plants, including some garden favorites: foxglove, snapdragon, slipper flower and speedwell. Hulten lists 15 genera in Alaska representing 58 species.

Most have simple leaves, with the exception of the genus *Pedicularis*; usually the leaves are alternate or whorled although some are opposite. The flowers are often subtended by bracts which may be large and showy, as in the genus *Castilleja* featured this month. Usually the flowers have 4 stamens, often in 2 pairs. The fruit is a capsule. Many plants in this family form mycorrhizal relationships (relationship between the root and a fungus); several are partially or completely parasitic.



**Aleutian
Speedwell**

The 9 species of *Castilleja* in Alaska can be found in habitats ranging from marshes to the alpine. The genus is typified by its showy bracts that may be yellow, pink, purple, red or green; the small green flowers often go unnoticed. The most familiar species are: *Castilleja unalaschensis* (Coastal Paintbrush) found in lower alpine meadows in Southcoastal Alaska; *Castilleja parviflora* (Mountain Paintbrush), a pink species found in mountain meadows from Prince William Sound to Oregon; *Castilleja caudata* (Yellow Paintbrush) a green to red species found in meadows and along roadsides and streams throughout Alaska except for southern Alaska; and *Castilleja elegans* (Elegant Paintbrush), a pink to purple species found in mountainous areas with rocky soils outside of Southcoastal Alaska.

Plant Family Presenters Needed

We need volunteers to give short Plant Family presentations each month. Verna will start the ball rolling with the genus *Castilleja* (Paintbrush) at the November meeting. The rest of the family has been split into six groups as follows:

Linaria (Butter-and-Eggs) and *Penstemon* (Beardtongue)

Mimulus (Monkey Flower) and *Veronica* (Speedwell)

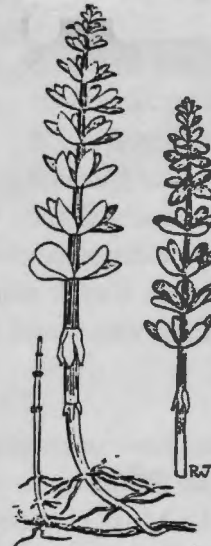
Lagotis (Weasel Snout) and *Synthyris* (Eyebright) and *Rhinanthus* (Rattlebox)

Pedicularis (Lousewort - Pink Species)

Pedicularis (Lousewort - Yellow Species)

If you have a favorite group and would like to give a ten minute presentation on them at a membership meeting, give Verna a call. You don't need to have slides as Verna has an extensive collection. Presenting is a great way to learn about the plants - why not give it a try?

Mystery Plant Answer:



Hippuris vulgaris Linnaeus, Mare's Tail, of the Haloragaceae, or the Water milfoil family. The name is derived from *Hippuris* from the Greek, *hippos* "horse" + *oura* "tail".

The other genus referred to was *Equisetum*, derived from the Latin, *equus* "horse" + *etus* "having the nature of".

Early Russian Expeditions

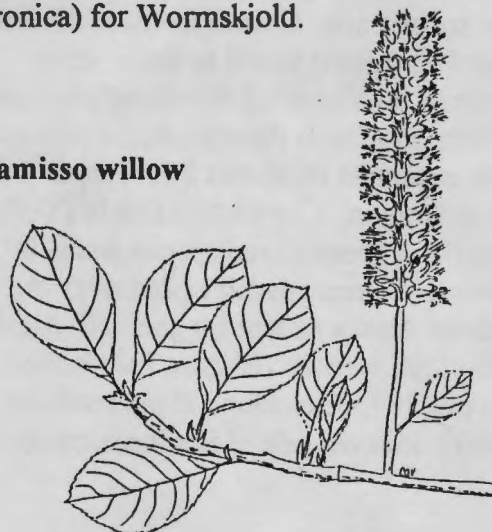
Many plant species in Alaska are named for navigators and explorers from early expeditions of discovery to these shores. The first known botanical collections were made by Georg Wilhelm Steller, a German-born naturalist who was personal physician to Vitus Jonassen Bering, on the voyage of 1741. Bering and his crew, in the ship *St. Peter*, were the first Westerners to land in Alaska. They landed on Kayak Island (near the Copper River Delta) to take on fresh water, giving Steller a brief opportunity to make collections and observations of the flora and fauna. It was here that he first described the blue and black jay we now know as Steller's Jay; he also collected salmonberry shrubs (*Rubus spectabilis*). The *St. Peter* never made it back to its home port in Siberia. Its crew weakened by scurvy and beset by storms, the boat ran ashore on Bering Island, where Bering and a number of crew members died and were buried. The surviving members of the expedition rebuilt the ship the following year, and managed to limp back home. Steller died while traveling overland in Siberia en route to St. Petersburg and the Royal Academy of Sciences. However, some of his specimens found their way to Linnaeus, the eminent Swedish botanist, by an unknown route; in addition a manuscript detailing the plants collected on Kayak Island, and written in an unknown hand, was found much later in Russian archives.

A number of plants have been named for Steller, including *Artemisia Stelleriana*, *Cassiope Stelleriana* (Alaska Moss Heather), and *Cryptogramma Stelleri* (a relative of Parsley Fern). Bering's name was given to a great number of geographical features, including the Bering Sea, Bering Island and the Bering Straits. It's also reflected in a number of both scientific and common plant names, e.g. *Artemisia arctica* subsp. *beringensis*, *Cerastium beerlingianum* (Bering Sea Chickweed) and Bering Sea Spring Beauty (*Claytonia acutifolia*).

Bering's discovery, plus reports of fabulous sea otter and seal populations, were the impetus for many other expeditions. A few plants were collected on many of them. However, the first extensive plant collections in Alaska were made by Adalbert Ludwig von Chamisso, a French-born poet and naturalist, and Johann Friedrich von Eschscholtz, a German surgeon. They accompanied Otto von Kotzebue on his voyage of circumnavigation in 1816-1817. Collections were made along Kotzebue Sound, St. Lawrence Island, the Pribilofs and Unalaska, and the botanical findings published. Other members of the Kotzebue expedition who are remembered in the names of our native plants include Ludwig Choris, a 19 year old artist, and Morten Wormskjold, a Danish lieutenant and naturalist.

The names of Chamisso and Eschscholtz crop up many times in our flora. Examples include: *Aconitum delphinifolium* subsp. *Chamissonianum* (a coastal subspecies of Monkshood), *Arnica Chamissonis*, *Claytonia Chamissoi* (a relative of Spring Beauty), *Salix Chamissonis* (Chamisso Willow), *Draba Eschscholtzii* (Eschscholtz Draba), *Ranunculus Eschscholtzii* (Eschscholtz Buttercup), *Saxifraga Eschscholtzii* (Cushion Saxifrage) and *Veratrum viride* subsp. *Eschscholtzii* (False Hellebore). *Platanthera Chorisiana* was named for Choris, *Trifolium Wormskjoldii* and *Veronica Wormskjoldii* (Alpine Veronica) for Wormskjold.

Chamisso willow



An Orchidaceous Italian Discovery

by Ginny Moran

While early winter may not be a good time to discuss orchids, I keep a little book entitled Mediterranean Wild Flowers by Roger Phillips (Elm Tree Books, 1988) on my kitchen table so that I can relive the fond memories of my May, 1994 trip to Italy. While I'm staring out the window at the snow and the moose that's devouring the birch tree in the front yard, I can flip to any page in this little book and be thousands of miles away . . .

While I expected to see community-types characteristic of a "Mediterranean climate", such as evergreen forest, maquis, garigue and steppe, I did not expect to find a temperate component to the flora. Interestingly enough, I found it in a little woodland of secondary-growth chestnut (*Castanea sativa*), no doubt planted, as nearly all the chestnut is in Italy (but that is a different article). This little piece of disturbed but quiet forest was tucked behind the village of Olevano, where I was staying, and I walked in it often. It offered me discoveries I never expected, one of which I dreamed about 20 years ago. I remember as a junior high student (a million years ago), my biology book featured a kind of orchid (called the "bee orchid", in the genus *Ophrys*) that supposedly evolved to mimic a female wasp or bee in order to "seduce" the male wasp into copulating with it. The joke was on the male wasp (no doubt frustrated), because even though copulation would not take place, he had been "tricked" into carrying the pollen sac, or pollinium, to another flower, thereby pollinating it. As a 14 year old adolescent this captured my imagination just about more than anything else could. Twenty years later while hiking through my "enchanted forest", adjacent to the village of Olevano, I finally found my own *Ophrys* orchid. I identified it as *Ophrys bombyliflora* (the genus for the bumblebee is *Bombus*). Suddenly the 14 year old girl emerged again. I was awed and enchanted. The lip of the corolla was indeed "furry" and the pattern on the lips resembled the stripes on a wasp; the most incredible part of the corolla were the lobes which

resembled perfectly the hairy legs of a bumblebee. Nature had once again left me stunned. The most splendid part of the discovery was (because I hadn't yet been able to find a copy of Flowers of the Mediterranean by Oleg Polunin and Anthony Huxley) that I didn't know what to expect from the flora and this was a welcome surprise. The mimicry adaptation marks this species as "evolutionarily advanced", in contrast to those primitive beetle-pollinated flowers, whose flower parts or pollen may simply be eaten!

Once home from Italy, I decided a review of Alaska's orchids was in order. Although there are no exotically adapted *Ophrys* sp. orchids anywhere near the 61 line (however, if I decide to use former taxonomic treatments, I could find a *Listera* sp., *Malaxis* sp. and *Hammarbya* sp. that were once in the genus *Ophrys*), we can boast 31 species of orchids, counting subspecies (according to Hulten, published in 1968; for an update see related article on Kartesz in this issue). A rough count of the orchids listed in Polunin and Huxley is over 50, not counting subspecies. Alaska's orchid species are:

Cypripedium guttatum guttatum (Pink Lady's Slipper)
Cypripedium guttatum Yatabeanum
Cypripedium calceolus parviflorum (Yellow Moccasin Flower)
Cypripedium montanum
Cypripedium passerinum (White Lady Slipper)
Dactylorhiza aristata (Rose-purple Orchid)
Amerorchis rotundifolia (Round-leaf Orchid)
Coeloglossum viride viride islandicum
Coeloglossum viride bracteatum (Frog Orchid)
Platanthera orbiculata
Platanthera convallariaefolia (Fisher Orchid)
Platanthera hyperborea (Northern Green Bog Orchid)
Platanthera dilatata (Bog Candle)
Platanthera saccata
Platanthera gracilis
Platanthera tipuloides behringiana

**Eagle Scout Project in the Pamela Joy Lowry
Memorial Park**

This summer, Brad Lowry completed an Eagle Scout project in the Pamela Joy Lowry Memorial Park, named in memory of his sister. Residents in Brad's neighbourhood were instrumental in creating this community park. The following is a letter he sent to Verna.

Dear Ms Pratt,

I wish to thank you for your help this summer with my Eagle Scout Project -- that of building a kiosk, trail markers, and a display for the Pamela Joy Lowry Memorial Park, which is part of the Anchorage City Park System. Your donated time of walking the park on August 3rd is greatly appreciated along with the Xerox copies of the identified plants that you had found and sent me. I feel that my project enhances this community park and adds to the enjoyment of those who use it.

Located in the Sand Lake area, just south of Strawberry Road along Northwood Drive, I invite you to experience this park for yourself. Enclosed are two photos of the finished product. Again, thank you very much for supporting my Eagle Scout Project.

Sincerely,

*Brad J. Lowry
Troop No. 129*



Platanthera Chorisiana
Platanthera unalaschcensis
Platanthera obtusata (Small Northern Bog
Orchid)
Spiranthes Romanzoffiana (Hooded Ladies
Tresses)
Listera caurina
Listera convallarioides
Listera cordata (Twayblade)
Listera borealis
Goodyera oblongifolia
Goodyera repens (Rattlesnake Orchid)
Corallorrhiza maculata Mertensiana (Coral Root
Orchid)
Corallorrhiza trifida (Coral Root Orchid)
Malaxis monophylla
Hammarbya paludosa
Calypso bulbosa (Fairy Slipper)

Looking at Hulten's range maps for these species (or known ranges in 1968), the three species with the most restricted global range in Alaska appear to be: *Platanthera gracilis*, *Cypripedium guttatum* *Yatabeamum* and *Cypripedium montanum*. Species with the most restricted range in Alaska, in addition to the above, appear to be: *Cypripedium calceolus parviflorum*, *Platanthera tipuloides behringiana*, *Platanthera unalaschcensis*, *Listera convallarioides*, *Malaxis monophylla* and *Hammarbya paludosa*.

How many have you seen? (Orchids are species frequently subjected to forced "transmigration" to people's backyards, only to die because the mycorrhizal fungi that develops a symbiotic relationship with the roots and augments nutrient uptake from the soil is not present at the new "home". To try to transplant an orchid is to essentially kill it.) Perhaps, next spring, we can take a special trip to photograph the orchids in the Anchorage area, Mat-Su Valley and the Kenai Peninsula. Just for fun, I'll be looking for an *Ophrys*.

Viva Kartesz!
by Ginny Moran

Who is this masked man, Kartesz? (That's Kartesz, not Cortez!) Frequently you may hear botanists referring to "Kartesz" and the big news is, he's out! (The second edition of his book that is.) What is "Kartesz"? ANSWER: A Synonymized Checklist of the Vascular Flora of the United States, Canada and Greenland by John T. Kartesz of the Biota of North America Program of the North Carolina Botanical Garden. This invaluable reference is a summary of the latest taxonomic treatments for over 350,000 species, subspecies and varieties of vascular plants. In this 2 volume manual, lumpers and splitters meet head to head (or bud to bud) as species names are updated according to published treatments. The book is arranged by family and then the genus of each family is highlighted. Cost for the set is around \$145. If you cannot afford to purchase it, you can always call your friendly local botanists for a double-check of a species. Referring to an article in this issue listing the orchid species of Alaska, the following changes are noted in "Kartesz":

Cypripedium calceolus parviflorum
= *C. parviflorum*

Platanthera convallariaefolia
= *P. hyperborea viridiflora*

Platanthera saccata = *P. stricta*

Platanthera gracilis = *P. hyperborea*

Platanthera unalaschcensis
= *Piperia unalaschcensis*

Coeloglossum viride bracteatum = *C. v. virescens*
Corallorrhiza maculata Mertensiana
= *C. Mertensiana*

Malaxis monophylla = *M. brachypoda*

Hammarbya paludosa = *Malaxis paludosa*

New names are on the right.

Unlike plants, the common names of bird species are often changed (and I am thankful common names of plants do not go through this process), some of us may feel resistance to calling Audubon's or myrtle warbler the yellow-rumped warbler, so we obstinately hang on to the old common name. I can't help but feel a little of the same way with some of the plant names, simply because you learn them as one genus (maybe very long ago) and it sticks (in fact, I still "slip" and say *Habenaria* occasionally instead of *Platanthera*. Plus, it can be quite a task to keep up with the taxonomic changes of the flora of a whole state! Maybe that's why we have botanists!

For more information about "Kartesz", you can write to the publisher: Timber Press, Inc., 9999 S.W. Wilshire, Suite 124, Portland, Oregon 97225, or you can write to the Biota of North America Program, North Carolina Botanical Garden, University of North Carolina at Chapel Hill, Chapel Hill, N. C. 27599-3280.

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, P.O. Box 141613, Anchorage, AK 99514

Select the membership category you desire:

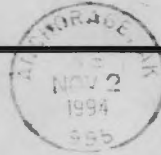
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| Full Time Student | [] \$5 | Name: _____ |
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| Family | [] \$15 | City: _____ State: _____ Zip: _____ |
| Organization | [] \$25 | |

Membership is on a calendar year basis. Any renewals before the end of 1994 will be valid until December 1995.

Last T-Shirt Competition Reminder

Time's running out for entries to the ANPS T-Shirt Competition! We need some free advertising in the form of a T-Shirt, but what to put on it? For anyone with artistic inclinations this is the chance of a lifetime. Tell all your creative friends! In addition to the artist winning a mystery prize, limitless prestige will follow for years to come.

Submissions will be taken until November 7, and judging will take place at the Anchorage Chapter December meeting. To submit your entry either mail it to Ginny Moran, C/O ANPS, P.O. Box 141613, Anchorage, AK 99514, or bring it to the November Anchorage Chapter meetings. Call Ginny Moran for more details at w() or h().



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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 your renewal date are correct.