Borealis

the newsletter of the

Alaska Native Plant Society

PO Box 141613, Anchorage, Alaska October/November 2010

Join us at our Next Meetings!

Monday, October 4, 6:30 p.m.

(Campbell Creek Science Center)

ANNUAL POTLUCK PHOTO PARTY

Share photos, tasty treats, and tall tales. Bring a dish to share. Plates, utensils & beverages will be provided as well as napkins for any sloppy eaters who attend.

Bring photos to share on CD or Thumb Drive. Bring your own laptop ifit makes your show better, or take a chance with ours. Projector will be provided.

Please note the early meeting time of 6:30 because it's a potluck dinner.

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Monday, November 1, 7:30 p.m.

(Campbell Creek Science Center)

Main Topic: **"Flowers of Baikal Lake"**
A special pictorial presentation that is a combination of natural history, ethnobotany and what seems to be a soul/spiritual interpretation of flowers that perhaps relates to the role of shamans and other ancient understanding of the plant world that continues into the present in places like Lake Baikal.

Speaker: **Mary Plumb-Mentjes**

Plant Family: Conioselenum, Angelica
Ghlenia – Anjeanette Steer

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For latest information on ANPS events, check our website at:

http:// AkNPS.org

Seed Collecting Time

The seed is hope; the flower is joy.
- Author Unknown

The cooler days of autumn are a great time to take a walk through your garden or wildlands and enjoy the last bits of color before the long winter sets in. You might still find the ripening seed heads of late-summer and fall-blooming perennials such as aster and goldenrod. Native grasses are also full with fat seeds. Seeds, those marvelous little parcels of hope for next year's bounty in the garden, are everywhere. Squirrels and birds are taking advantage of this important fall and winter source of food. Why not you?

Why bother to collect seeds? One major reason is the satisfaction of growing your own plants to expand your garden. Because many native plants have deep tap roots, it is much easier to start new plants from seed than to try to dig and move or divide them. it is illegal to dig plants in much of the wild.

Another wonderful reason is to share them with other native plant enthusiasts. That's where ANPS fits in!

By collecting seeds of native plants and sharing them, native wildscapes can be established in home landscapes across the state—benefiting local wildlife populations, protecting native species, and drastically lowering the amounts of precious resources otherwise needed to maintain ecologically expensive lawn grass and exotics.

Each year, members of the Alaska Native Plant Society collect seeds from plants found in the local area. Some of the seeds are then offered to the Society for future sale to members and others who would like to try growing native Alaskan plants.

You can learn more about proper seed collecting practices on pages 5-6. It may already be too late for collecting some plants' seeds, but one of the joys of gardening is that there is always next year.

NOTE: If you have been/are collecting seeds for our Seed Sale/Exchange in January, please mail them to us by the end of October, or bring them to the November meeting. Please put each different species in a separate paper envelope which is clearly labeled. The mailing address is on the last page of the newsletter.

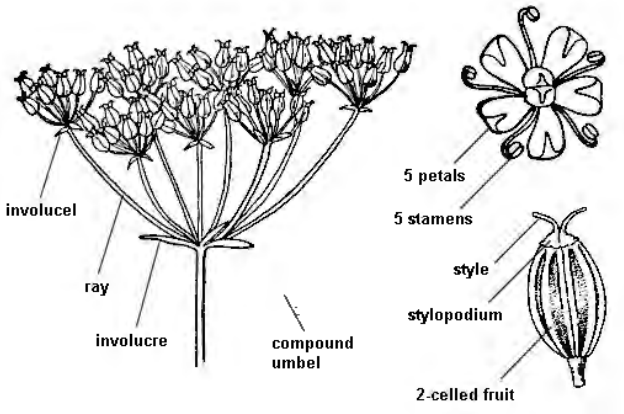
Plant Family Study

Apiaceae/Umbelliferae Family – Wild Parsley

The **Apiaceae** or **Umbelliferae** (both names are allowed by the International Code of Botanical Nomenclature) is a family of usually aromatic plants with hollow stems, commonly known as **umbellifers**. It includes angelica, anise, arracacha, asafoetida, caraway, carrot, celery, chervil, cicely, coriander/cilantro, cumin, dill, fennel, hemlock, lovage, parsley, parsnip, sea holly, the now extinct silphium, and other relatives. It is a large family with about 300 genera and more than 3,000 species. The earlier name Umbelliferae derives from the inflorescence being generally in the form of a compound "umbel", and has the same root as the word "umbrella". The botanical subspeciality that studies Apiaceae is sometimes called *sciadophytography*.

The family includes some highly toxic plants, such as hemlock. Many plants in this family, such as wild carrot, have estrogenic properties and have been used as folk medicine for birth control. Most notable for this use is the extinct giant fennel, silphium. The cultivated plants in this category are almost all considered good companion plants, as the umbrella of tiny flowers attracts omnivorous beneficial insects, especially ladybugs, parasitic wasps and predatory flies, which then will hunt insect pests on nearby crops.

The family is closely related to Araliaceae and the boundaries between these families remain unclear. Some recent systems include Araliaceae in an expanded Apiaceae but this has not been widely followed. *Hydrocotyle* and *Trachymene*, traditionally included in Apiaceae, are now generally included in Araliaceae. (From Wikipedia)



The most obvious and distinctive feature of this family is the cluster of many small flowers, either a simple or compound umbel. The flowers are very uniform with most of the family's variation being with the leaves and fruits. Each flower is mostly small, regular to somewhat irregular, 5-merous but the calyx segments are sometimes reduced or even absent. Number of petals is 5, stamens 5, all these parts are attached at top of the ovary. The leaves of the Apiaceae may be small to large, alternate or opposite, herbaceous, leathery, or fleshy; stalked or not, simple or compound, pinnately- or palmately divided. The fruits split into 2 halves, each is 1-seeded. Most members of this family possess aromatic oils, which cause the plant parts to give off a strong smell when rubbed between the fingers.

Here's the schedule for the Alaska native plants of this family that we'll be concentrating on during the coming months:

November	Conioselenum Angelica Glehnia	Anjeanette Steer
December	Cicuta Sium	Joe Flynn
January	Ligusticum Podistera Phlojodicarpus	Glen Brown
February	Domestic Apiaceae	Beth Baker
March	Pastinaca Heracleum	Mary Hopson
April	Oenanthe Cnidium	Dianne Toebe
May	Osmorhiza Blupurum	Verna Pratt

ANSWER TO MYSTERY PLANT:
Eritrichium splendens - Showy Forget-me-not
Boraginaceae/Borage Family

Three Apiaceae Members: *Conioselìnum, Angélica, and Ghlénia littoràlis*

The Apiaceae family can sometimes be difficult to distinguish; a hand lens or microscope and identification manual are often necessary. We'll all learn a great deal as we take on the study of this family through the upcoming months. At the November meeting, Anjeanette Steer will lead a discussion of the first three Apiaceae members to be studied.

Conioselinum is a genus that is native to Eurasia and North America. It has 10 species. These are erect perennial plants with deeply toothed compound leaves and umbels of white flowers. Plants of this genus are known commonly as **hemlock-parsley.** ***Conioselìnum chinénse*** was originally, erroneously, described as originating in China; hence the species name. Hemlock Parsley can be distinguished from members of the closely-related genus Ligusticum by the involucre of 3 or more bracts and by the lack of stringy old leaf bases at the summit of the root crown.

There are two angelicas known in Alaska, ***Angélica lùcida*** (commonly known as wild celery) and ***Angélica genufléxa.***

Angélica lùcida

Angelica is from the Greek word 'angelikos' meaning heavenly or divine. Angelica were traditionally valued for their potency as a medicament and protection against evil spirits and the plague, which probably accounts for the name. The roots and fruits yield angelica oil, which is used in perfume, confectionery, medicine, and for flavoring liqueurs (such as angelica).

Both angelicas in Alaska are large plants, three to four feet tall, with stout stems; and are found most commonly along the coasts, on riverbanks, in swamps or along streams.

A. genuflexa is known as Kneeling Angelica because the ternate to twice pinnately compound leaves are distinct in having the leaf stalk bend back from the axis of the blade at the point of insertion of the first pair of leaflets, and often at the point of insertion of the other leaflets. The leaflets are also commonly reflexed downward from the stem. It has white to pinkish flowers.

A. lùcida has greenish-white flowers and the upper leaves are not reflexed The undersides of *A. lùcida* are glabrous (without hairs). In the fruiting stage, the fruits of the former have lateral wings, and those of the latter have thick, corky ribs. *A. lucida* is also known as wild celery. Its young stems and leaves are eaten by native Alaskans, and the plant, including the large taproot, is used as an analgesic.

Gléhnia littoràlis is a species known by several common names, including beach silvertop and American silvertop. The genus was named after Russian botanist Peter von Glehn.

It is a long-taprooted plant forming a basal patch of leaves, with each leaf made up of several rounded, lobular segments. It reaches a maximum height exceeding 20 inches and its erect stem is topped with an umbel of carrot-like white flowers. The flowers are hermaphrodite (have both male and female organs). This plant, as well as its subspecies *G. littoralis leiocarpa*, has been found all along the Pacific Coast of North America, from Alaska down to California. Both the leaves and roots are edible. The plant is perhaps best known as a Chinese herbal remedy for coughs.

Ghlénia littoràlis

Summer Work Parties Were A Great Success!

Featuring Dianne Toebe, Weed Warrior Extraordinaire


Dianne Toebe

Many thanks to **EVERYONE** who helped with our three work projects this summer. Immense progress has been made in all of the areas. Persistence pays off.

The gardens at the Science Center are phenomenal now. They are full of wonderful plants and with the help of hardworking dedicated people they were kept neat and tidy. Dianne Toebe became obsessed with dandelion removal near the gardens – and that persistence will give us a big head start next year. As we all know, if your neighbors have dandelions, so will you. **Thank you, Dianne**!

Dandelion removal on the Lowenfels trail at ABG is a project started by Sue Jensen. Persistence has paid off. We are now removing mostly small non-flowering plants. 's obsession, again has been an enormous help. She made many unscheduled trips to remove all the dandelions from around the fence that surrounds the Botanical Garden. **Many thanks, again, Dianne!** You have made a great contribution to our cause.

Our third project was Verna Pratt's idea, and it started about two years after the rebuilding of the Seward Highway just south of Potter Marsh. While on the way to the Kenai Peninsula, she spotted the "tell-tale" huge seed heads of *Tragopogon dubius* glowing in the afternoon sunlight on a very steep slope above a rocky cliff. At the time she assumed they might not cause a problem, as Tragopogon likes sunny dry fields and these were perched in a concave depression with cottonwoods and devil's club on either side and backed by a steep rocky cliff that ended at the highway. When they started appearing at the highway and some distance away, she knew we needed to do something.

Fortunately Tragopogon is a biennial and does not have viable seeds beyond the 1st year, making eradication easier. We've walked the area from Beluga Point to Indian many times and even found stray plants as far away as Bird Point. We've delivered truck loads of bagged weeds to the landfill, and have noticed how there are less and less each time. It hasn't been a "walk in the park" by any means as the terrain between the road and the railroad tracks is rough. Surprisingly enough we have seen some nice plants and experienced great camaraderie despite very unpredictable and downright terrible weather.

Until this year we could never find the original source of the villains, as the trees by the road had grown taller and blocked the view of the nursery bed from the road. Needless to say, we stayed longer the night of that discovery. It was our last scheduled trip and we now know where to concentrate our energy next year to remove the remainder of young plants.

Although Dianne Toebe was not with us from the very beginning, she was excited to see what progress we had made. She has returned to the area on her own time and time again to remove more plants. We all owe her a great sense of gratitude for her tremendous effort. **Thank you, Dianne Toebe, again, and again, and again**. And many thanks from the entire community to all of our avid "Weed Warriors"! Thanks to your work, it was a successful summer campaign!

"So, Jack, is this bean stalk introduced species?"

Guidelines For Seed Collecting

Collecting seeds at the correct time is crucial for propagation to be successful. Gather fruits from the ground only if they have recently dropped. Reject fruits or seeds that have been on moist ground for some time, or any seed that may have begun to decay, mold, or become infested with insects. They could contaminate the rest of your seed harvest if combined with other seeds during storage. Delayed harvesting of species with persistent pods often results in insect-infested seeds.

The tools and material you will need depends on the size of the harvest. Basic equipment includes gloves, boots, drop cloths, pruning shears, boxes, baskets, paper bags, and/or canvas bags. Although plastic bags may be used for collecting, storing seeds in airtight containers or plastic bags will encourage mold growth. Many plants can be stripped by hand or the seed can be beaten onto drop cloths.

Seed Maturation

Proper seed harvesting is aided by an understanding of seed ripening, dispersal mechanisms, and the influences of weather on the timing of seed maturation. Flowering and fruiting dates vary from year to year. You should be familiar with the approximate flowering and fruiting dates and then be able to recognize mature fruit or seeds. An early spring and dry summer, for example, may cause seeds to set early. Seed quality also varies from year to year and from location to location. Experience is often the best teacher in learning to determine whether a seed is mature. When seeds are mature you should begin collecting.

Mature seeds are usually dark in color, firm, and dry. Seeds that are green and moist are immature and generally will not germinate or will produce unhealthy seedlings. The flesh of pulpy fruits often becomes soft and changes from green or yellowish to reddish or blue-purple when ripe. Seeds are often mature a week or more before the fleshy fruits turn color and fall from the plant. You can determine seed maturity by cutting open the fruit and examining seeds for firmness, fullness, and dark color. A delay of only a few days may be the difference between success and failure in collecting a good crop, especially for
those species with seeds that are dispersed quickly or are attractive to birds and other animals.

Many pods or capsules dehisce when ripe and mature at staggered intervals making a quantity difficult to collect. Once maturation begins on a plant, check it every few days to collect any newly matured seeds. You may also try inverting a paper sack over the immature seed and tying it off with string.

Seed Cleaning and Preparation

Seeds should be collected just before, or, as the pod or capsule turns brown and dries, and before it dehisces. The pods should be dried in single layers spread thinly on canvas cloths, screens, or trays elevated from the ground. Curing on the pod may take longer for species other than legumes. Air-drying takes one to three days, depending on the humidity. After the seeds have dried, you can extract them from the pods by beating or thrashing. A mature pod will often twist and split open to drop the seeds.

Although not all seeds need to be cleaned before storage, those with pulpy fruit should be cleaned to reduce mold. Remove the pulp of large fruits by hand by rubbing on a screen or mashing with a wooden block, rolling pin, or fruit press being careful not to damage the seed. You can clean smaller fruits with a blender, as long as you are careful not to damage the seeds. It is best to start with a small batch and check to be sure they are not being damaged. Blend a small amount of the seeds in a two to one ratio with water.
Use brief, intermittent agitation at low speed and then strain the mixture to separate the seeds from the pulp.

Thrashing seeds (separating seeds from the rest of the collected plant material) is optional, but it does have at least two advantages: it reduces the volume of seeds to be stored, which saves on storage space; and more seed-predators such as insect eggs, mold spores, and other seed disease vectors may be removed with the discarded chaff. The easiest way to thrash seeds is to rub the collected material against a coarse screen with a gloved hand.

Seed Storage

The two most critical necessities for storing seeds are constant temperature and low humidity. A temperature of 50 degrees Fahrenheit or less and 50 percent humidity or lower is ideal. In general, fluctuating temperature and humidity harms seeds more than slightly higher constant values of each.

Store seeds in the refrigerator, not the freezer, until you are ready to plant. Low temperatures, humidity, and darkness protect seed longevity. If it is not practical to store seeds in your refrigerator, store them in any place that is cool, dark, and dry, protecting them from insects as much as possible. Store the seeds in paper sacks to allow good air circulation and prevent molding. Do not store seeds in plastic bags or other non-breathable containers unless they are air-dried thoroughly first. It is important to include basic information on labels, including date of collection, species name, location of collection, and name of collector.

Dusting the seeds with a mild insecticide will help prevent insect infestation and kill any pests collected with the seeds. Or, you can insert a pest strip for several days while leaving the paper bag open to allow insects to escape. Freezing the seed for a brief period may also be a viable alternative. Seeds of fleshy fruits should be kept moist to maintain viability. If allowed to dry out, they will either germinate prematurely or not at all. This type of seed should be planted immediately or mixed in a one-to-one ratio of moist sand, sphagnum moss, or a peat and perlite mixture, and stored in a cool place. If the root emerges from the seeds during storage, the seedling should be removed and planted immediately.

Seed storage longevity varies from species to species. Some seeds may be viable after ten years of storage, while others may not germinate after two years in storage. Ideally, seeds should be planted within one year of collection.

from Lady Bird Johnson Wildflower Center
http://www.wildflower.org/

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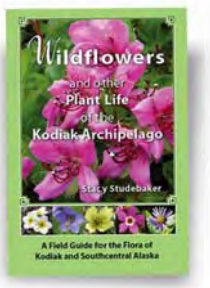
Wildflowers and other Plant Life of the Kodiak Archipelago

A Field Guide for the Flora of Kodiak
and Southcentral Alaska

By Stacy Studebaker



Billed as “the first comprehensive field guide to cover the flora of this unique region”, Stacy illustrates and describes 365 species of vascular plants with over 650 full color photographs. The plants are organized by flower color in an easy-to-use format and is full of interesting tidbits on habitats, uses, folklore, history, and other fascinating natural history information sprinkled throughout. In addition to wildflowers, the book also includes ferns, horsetails, clubmosses, shrubs, trees, grasses, sedges, rushes and aquatic plants that are found throughout Southcentral AK.

In the book’s introduction, readers will learn about the geology, glacial history, soils, the Kodiak glacial refugium, the recovery of plant life after the ice age, Alaska’s early and modern botanists and how they work to document the plant life of Alaska.

Stacy has researched, documented, and photographed the flora of coastal Alaska since 1973 and has made her home in Kodiak since 1980. The excellent photography in this book expresses Stacy’s lifetime of dedication to the mastery of macro photography as a means to examine and appreciate botanical detail and beauty. She has owned over 30 cameras from her first Eastman Kodak Brownie in 1952 through the years of lugging around heavy 35mm slide film cameras and all their lenses, to her present array of lightweight digital cameras. The spectacular photos in this book were taken by Stacy and selected from a collection of over 15,000 photos taken over the last 30 years. The book was published by Sense of Place Press, printed and bound in China. The technical editor was Carolyn L. Parker, Research Botanist of the University of Alaska Museum of the North Herbarium, a recognized expert on Alaskan flora. Stacy did the layout herself on a MacBook Pro computer using Adobe InDesign. The eye-catching cover is somewhere between a paperback and hardback and features one of Kodiak’s special native plants, the bright pink Kamchatka Rhododendron. The sturdy, flexi-binding allows for the repeated use that any well-loved field guide must endure.

This book is so new that it is not yet available in all bookstores but can be ordered from *Sense of Place Press* P.O. Box 970, Kodiak AK 99615. TitleWave Books has carried it at their Fireweed store They are available at the Homer Bookstore, Kenai Fjords Natl. Park Information Center in Seward, Orca Books in Cordova, the Museum Store at the University of the North Museum in Fairbanks, as well as 10 stores on Kodiak.Contact: Stacy Studebaker email: kodiakwildflowers@gmail.com

MYSTERY PLANT

This specie is never a mystery to plant lovers once they have found it in the wild as it is an unforgettable sight! The small (3/8 inch) breathtakingly blue flowers make its common name so appropriate. Generally it is only found in small local patches near or just above tree-line. Excellent drainage is apparently a priority for its survival. Look for it in piles of rock rubble or on exposed dry sandy south or east facing slopes. Other plants found in these areas are zygadenus, senecio and Artemisia species. The plants are barely 3 inches tall in exposed areas but under protection of large rock rubble they can be 5 inches tall and up to 5 inches wide. Such is the way we saw them on our June field trip to Antler Creek on Mt. Healy. Such a glorious sight and just a short hike! It brightened a very gloomy, rainy day.

This plant has a clump of hairy linear leaves and branched stems with short clusters of intense blue flowers consisting of 5 hairy sepals, and 5 connected salviform petals.

Answer on Page 2.

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Alaska Native Plant Society

Borealis is published bi-monthly October through May. Articles may be sent to Ginny Moore, , Anchorage, AK 99516. Phone or FAX: , E-mail: tgmoore@gci.net

Volunteers Needed

ANPS is looking for a Program Coordinator for the 2010-2011 year. Some months have already been assigned and there are many stories waiting to be told, but we need someone to orchestrate it for future monthly meetings. You may be able to line up everyone in one sitting! Please let our President, Mel Langdon know if you are interested and willing to help with this very valuable task.

ANPS annual election of officers will take place at the general membership meeting in December. If you are interested in taking on any of these duties, please let us know so we can be sure to get your name on the published slate and you won't have to run a write-in campaign!

To
All of the Field Trip Leaders who took us out on some great botanizing trips
and made it fun in spite of the weather!

You make it happen!

101 Botany Puns – Botanists Have All The Anthers!

Who is the mother of the mother of a botanist?	A Granule
What do you call an undressed fruit?	Indehiscent
What was the greenhorn botanist sent on?	A stipe hunt
How was the botanist paid?	With a stipe-nd
What does a botanist call beurocratic red tape?	STIPULE-ations
Who is a plants favorite action movie star?	Silvester Stolon
What keeps a botanist going?	Tomentum
What is an herbologists favorite soup?	Tomentum soup
Why is the body of a plant so vulgar?	It is a thallic symbol
Why couldn't the botanist see very well?	She had A-stigma-tism
Why was the botanist crying?	She had THYRSE in her eyes (what can I say it was a tendril moment)

from http://boomsblog.blogspot.com/2006/09/101-botany-puns.html

Would you prefer to receive this newsletter electronically, by e-mail? Contact Ginny Moore: tgmoore@gci.net

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