

Northwest Ethnobotany Field Guide

Over fifty plants native to the Pacific Northwest including detailed information about historical and contemporary human-plant relationships

Compiled by Devon Bonady



Vaccinium ovatum evergreen huckleberry

This project is based on the research and creative work of twenty students at the University of Oregon who enrolled in Environmental Studies 411: Northwest Ethnobotany during fall term 2011. They each created three profiles and accompanying creative work, much of which is included in this field guide.

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I. Introduction

In the Fall of 2011, Devon Bonady, a University of Oregon graduate student, and Dr. Kathryn Lynch, University of Oregon Environmental Leadership Program Co-Director, developed and taught an Environmental Studies course titled Northwest Ethnobotany. This course examined people/plant relationships in the Pacific Northwest. We explored how biodiversity of forest and other ecosystems is being tapped to promote both conservation and rural economic development. We investigated the complex economics, multi-faceted politics, and diverse cultural traditions associated with nontimber forest products and other plants. We looked at the ancient gathering practices of Native Americans, the introduced plants and traditions of immigrants, and the emerging practices of people seeking to reconnect with the natural world. This course combined Devon's knowledge and experience of local plant/human interactions with Katie's background and research in the nontimber forest product industry including social, political, economic, and livelihood issues.

The course was the first in a series of three courses in the Environmental Leadership Program (ELP). The fall course was intended to assist students in learning about native plants and human relationships with plants past and present. The project terminates with students developing lessons and leading field trips for elementary and middle school students in which they facilitate learning about local plants and the ways in which humans are connected with them today.

Twenty students in the class created three plant profiles each, gave presentations to the class on those plants, and worked together to teach each other about plant and human relationships, particularly with final creative project presentations. This field guide is a compilation of their work, including 60 plant profiles, photographs, drawings, paintings, and poems.

This guide is organized into sections by type, including perennial plants, shrubs, trees, and a few other species. In each section, the profiles are included in alphabetical order by scientific name. Each profile includes at least one photo. Some profiles are two pages long, with the second page including photos or creative work.

May this field guide bring you as much joy in the process of exploring the world of plants as this project of learning and discovery has brought me.

Enjoy! Devon Bonady

II. Perennial Plants



Brian Basor

Urtica dioica
stinging nettle

Common name: yarrow

Scientific name: *Achillea millefolium*

Native American names: Chipmunk Tail (Kootenai) or Squirrel tail because of leaf appearance.

Plant family: Asteraceae (Sunflower family)



Description: Yarrow is a perennial herb, often rhizomatous, 1-3' tall. The **leaves** are 3-4" long, fern/feather-like (see sketch on page 2). The **flowers** are ray flowers of white to pale pink, usually 5 petals, disc flowers 10-30, and bloom in a flat-topped inflorescence. There is a series of bracts below each flower. The **fruit** is a one-seeded dry fruit, called an achene, that does not open.¹

Habitat and Range: *Achillea millefolium* grows in dry to moist, well-drained sites. It commonly grows in open areas, from roadsides to meadows and forests. It is widespread across many habitats, and occurs not only across North America, but many species occur around the world.¹

Historical and Contemporary Uses: Because of yarrow's widespread distribution and perennial nature, it has been used over millennia, not just by Native Americans but by many people around the world. It may be used fresh or dried, so it

may be used year-round. Yarrow is noted to have many bioactive compounds; according to Yaniv and Bachrach, yarrow is "richly endowed with chemicals", which accounts for its ability to treat many different ailments and for its main use as a medicinal product.² The chemical achilleine, present in yarrow, will stop bleeding. On the other hand, it also contains coumarin, which will facilitate bleeding, so yarrow may be used to stop bleeding or encourage it.² One of the most common uses noted is for treating wounds, having healing and pain relieving properties. Many references cite the use as a poultice of chewed leaves, or fresh leaves mashed with water, applied directly to an open wounds, cuts, bruises, burns or boils.³ Another frequent treatment is composed of a decoction made from the roots to treat colds, or the young leaves may be chewed and the juice swallowed for colds and sore throats. An infusion of the roots, flowers or whole plant may also treat colds. The Nuu-chah-nulth (Vancouver Island) and Klallam (coastal Washington) use it for cold medicines. Yarrow has also been used to treat digestive system complaints.¹ Everything from nausea and vomiting, diarrhea, and gastrointestinal upset are treated with many different preparations of yarrow. It may also be used as a laxative. Pojar notes that the Squaxin use it as a "stomach tonic."¹

Contemporary uses of yarrow include the use of the flowers for fragrance and in floral design.

¹ Pojar, Jim, Andrew MacKinnon, and Paul B. Alaback. *Plants of the Pacific Northwest Coast, Washington, Oregon, British Columbia and Alaska*. Lone Pine Pub, 1994.

² Yaniv, A., and Bachrach, U., "*Handbook of Medicinal Plants*", Haworth Press, 2005.

³ Hart, J., and Moore, J., "*Montana-Native Plants and Early Peoples*", Sheridan Books, 1996

Photo on following page by permission of Kurt Steuber, <http://www.biolib.de/>



This detailed drawing shows every aspect of this plant. This fine detail is difficult to show in a photo. Once you can identify these leaves and flowers, it is easy to find it almost anywhere, including cultivated gardens in towns and cities. The white flowers are very aromatic and have a wonderful scent in a bouquet.

The **Doctrine of Signatures** is shown in the yarrow plant. The fine leaves resemble a weaving together, or perhaps the teeth of a saw; so this would suggest the use of yarrow to treat a wound.

~*Achillea millefolium* is commonly said to be named after Achilles, who is said to have used yarrow leaves to stanch the bleeding from battle wounds of his military men.²



Common name: showy milkweed

Scientific name: *Asclepias speciosa*

Plant family: Asclepiadaceae



Description: *Asclepias speciosa* is a perennial forb with hairy stems, growing to about 2-5' tall. The **leaves** are velvety, large (up to 6" long), green and opposite. The **flowers** are spherical clusters of rose-colored, star-shaped fragrant flowers in a fuzzy umbel. The **fruits** are horn-shaped buds, filled with silky, hairy seeds. The stems contain a sticky sap.^{1,2}

Habitat and Range: Showy milkweed prefers moist soil but it grows in a wide variety of habitats, in prairies, meadows, along roadsides, streams and ditches and

is drought tolerant. It is widely distributed across the entire western half of the U.S. and Canada.²

Historical and Contemporary Uses:

The most well known historical use of *Asclepias speciosa* is as a fiber source. These tall plants yield long fibers used for twining, and they can be woven into coarse fabrics, cords, and ropes for various purposes. The stems are gathered in the fall after they dry, the woody material is removed, and then the fibers are twisted into twine. Sometimes fine fibers from the seed pods were gathered and woven into fabric.³ One foot of cordage requires five stalks of milkweed; a Sierra Miwok (California Sierra tribe) skirt or cape required cordage made from about five hundred plant stalks. This Indian tribe would burn the areas where milkweed grows; it stimulates new growth that would be taller and have straighter stems the next year.³

Showy milkweed continues to be used as a fiber in contemporary times. The Tewa people in the Rio Grande area use these fibers to make string and rope. The Zuni people use seed fibers to weave into a fabric, especially for use in dancer's clothing. Modern Euro-Americans have employed the seed fibers to stuff pillows and live vests, particularly during WWII; the fibers are buoyant. The floss has also been used to soak up oil spills at sea.⁴

¹ Pojar, Jim, Andrew MacKinnon, and Paul B. Alaback. *Plants of the Pacific Northwest Coast, Washington, Oregon, British Columbia and Alaska*. Lone Pine Pub, 1994.

² USDA, Forest Service for Western U.S., from website: <http://www.fs.fed.us/database/feis/plants/forb/ascspe/all.html>.

³ USDA Natural Resources Conservation Service database from website: <http://plants.usda.gov/java/profile?symbol=RUSP>.

⁴ Plants for a Future from website: <http://www.pfaf.org/user/default.aspx>.

^{7.5} University of Michigan Dearborn Native American Ethnobotany database from website: <http://herb.umd.umich.edu/>



This photo shows the dried buds of the showy milkweed splitting open, to disperse the silky seeds. These fibers were used as well as the long fibers from the stalks. Here is a personal account from Pete Bunting, a forester and member of the Sierra Native American Tribal Council, about how he gathers the stems.²

~ ~ ~

"In the fall when the milkweed has dried I check to see if they will break off at the ground line. The plants are usually a yellow tan to gray depending on how long they have dried. I like the gray for softer string, but the fibers are shorter. The tan stalks have longer fibers but are also stiff and hard to work but very long. I break off as many of the plants as I can gather as they are going to re-sprout in the spring. I try and let them dry some more. Then I process them. I have used plants that have over-wintered under snow and they were fine but had soft, short fiber. After 2 winters they are usually no good but you have another year's stalks to pick by then."

~ ~ ~

Both photos on this page: University of Texas at Austin, Lady Bird Johnson Wildflower Center, from website: http://www.wildflower.org/plants/result.php?id_plant=ASSP



~The fragrance of these flowers attracts many beneficial insects, and is an important attracter for pollinators. The showy milkweed is the host plant for the monarch butterfly. It is the only type of plant where Monarch eggs are laid. The bitterness of the milkweed also makes the Monarch unpalatable to its potential predators.⁶

~ The genus name, *Asclepias*, comes from Greek mythology. It is named after Asklepios, the Greek god of medicine. Even though this plant is not as well known for its medicinal properties, there are some. Some tribes use the sap medically: the Cheyenne of Eastern Montana use the sap as an antiseptic for cuts, as well as for treating ringworm, corns, and calluses. The Paiute use a decoction of the seeds for snakebite. Many miscellaneous decoctions are noted, made from various parts of the plant for venereal disease, general malaise (not feeling well), headaches, coughs and tuberculosis.^{7.5}

Common name: harvest brodiaea

Scientific name: *Brodiaea coronaria*

Native American names: Topoderos (Wiyot), Walla (Miwok)

Plant family: *Liliaceae*



Description: This small perennial herb grows up to 30cm tall and produces a bluish purple flower. Its thin 2-3mm wide, grass-like leaves disappear before the flower six pedaled flower blooms. At the base of the stem a scaly corm sticks out of the ground which stores nutrients and serves reproductive purposes.

Range: *Brodiaea coronaria* thrives from British Columbia, to the Sierra Nevada Mountains, along the Cascade Range, and throughout northwestern California.¹

Habitat: It is found in gravelly prairies, grassy slopes, rocky buffs, valley grassland, foothill woodlands, mixed conifer forests, and volcanic mesas from sea level to 1600 meters.

Historical and Contemporary Uses

The corm of this plant was regularly gathered by Native Americans such as the Wiyot, Atsugewi, Miwok, Yana and other tribes all along the west coast. Natives used wooden digging sticks to unearth the bulb and ate it raw, boiled, or cooked it in pits.

Native Americans would work the land that this plant grew on by 1) consciously breaking off cormlets from the harvested parent corms and replanting them; 2) sparing whole plants; 3) harvesting the corms after plants have gone to seed and dumping the seeds in the hole; 4) burning areas; and 5) irrigation.¹ They would also dig around and thin the corms as well as break off cormlets and replant them. The digging was a form of tilling which stimulated growth and prevented weeds.

¹ http://plants.usda.gov/plantguide/pdf/cs_brco3.pdf

S. A. Barrett and E. W. Gifford in 1933 describe the uses of *B. coronaria* as well as the details of the traditional pit roasting methods:

Walla (*B. coronaria*)... is dug about the first of May when its shoots are just appearing above ground. The bulb lies deeper in the ground than that of the Mariposa lily. It was dug by both men and women, the occasion being a four-day excursion and picnic. The time for the digging was set by the chief. Four days were spent in digging the bulbs, during which time none was eaten. The bulbs were transported in burden baskets to the cooking place, where they were cooked in the earth oven on the fourth day.

The earth oven for the bulbs consisted of a hole about a foot or foot and a half deep and three feet in diameter, excavated with the digging stick. Stones were heated in a fire built beside the pit. When the fire had burnt down the coals were raked into the pit and the hot stones put on top of them. Over the stones were put the broad leaves of the *Wyethia helenioides* Nutt. When the stones were completely covered by the leaves, the bulbs were poured into the pit to a depth of about six inches. These bulbs were covered with leaves, on which hot stones were placed. The whole was covered with earth. Then water was poured around the edges of the pit, so that it worked down to the hot stones and coals, thus producing steam for the cooking which lasted about one hour. After cooking, the bulbs were removed by hand and placed in an openwork basket tray (tcamayū, C). Then a second and a third lot were cooked if the quantity gathered was large. Both walla and Mariposa lily bulbs were eaten without salt.⁹

The first European record of this plant was by the Scottish Botanist James Brodie of whom the genus *Brodiaea* is named. He wrote:

On the Point near the ship where... a few families of Indians live in very mean Huts of Sheds formed of slender Rafters and covered with Mats. Several of the women were digging on the Point [Puget Sound] which excited my curiosity to know what they were digging for and found it to be a little bulbous root of a liliaceous plant which on searching about for the flower of it I discovered to be a new *Genus* of the *Triandia monogina* [i.e. *Brodiaea*]. This root with the young shoots of Rasperry and a species of Barnacle formed the chief part of their wretched subsistence.¹

Plants of the Pacific Northwest Coast speculates that the name “harvest brodiaea” comes from its close relationship to *B. Hyacinthina*, which was more difficult to harvest. Also the flower blooms later in the summer than most lilies.

¹ S. A. Barrett and E. W. Gifford *Miwok Material Culture: Indian Life of the Yosemite Region*
http://www.yosemite.ca.us/library/miwok_material_culture/bulbs_corms.html

Common name: camas or large camas

Scientific name: *Camassia leichlinii*

Plant family: Liliaceae



Description: Perennial herb from a 2 cm bulb. **Leaves** are basal with a linear-lanceolate shape. **Flowers** are dark purplish-blue or sometimes white or cream-colored arranged in a simple raceme. Each flower is 3-5 cm. in diameter suspended by a slender bract having 6 sepals and petals; stamens 6 and shorter than the sepals and petals. Sepals and petals twist together above capsule upon withering. Stigma is 3-cleft. **Fruits** are egg-shaped capsules up to 2.5 cm long. **Roots** are white bulbs that look like small onions and can be as big as 2.5 inches long.^{1,2}

Habitat and Range: *Camassia leichlinii* grows in meadows, prairies and hillsides that are moist, at least in early spring. They are also found along road sides. It can be found in low and middle elevations growing in semi-shade such as in light woodland. It spreads from British Columbia down to Washington, Oregon, California and extends inward into Nevada.

Historical and Contemporary Uses

Camassia leichlinii has been one of the most important plants harvested of Indians in the Western Interior Valleys. This is because the bulbs are rich in carbohydrates and provided the Indians with a balanced diet.³ The bulbs are first harvested in March or April when they are most tender⁴ and persist throughout the summer after they have flowered and the leaves have died down.² Harvesting the bulbs was and continues to be a seasonal event and often involved setting up temporary living shelters in which entire families participated. Camas bulbs were historically gathered in large quantities so that they could be of supply throughout the winter and also because they served as a cash crop. The Salish, Straits, and Halkomelem people traded the bulbs to the Nootka and Nitinaht tribes.⁴ According to a Sannich source, a family would gather ~10,000 bulbs a year.⁵

The bulbs were traditionally slow cooked in earth ovens for 10-12 hours in order to make them more digestible to the body. This is because the bulbs are made up of inulin, a long chain sugar that gets broken down into its component fructose molecules when cooked for long periods.⁴ The collected bulbs were cooked in a variety of ways. Some tribes would make them into molasses during festival occasions where up to 50 kg of bulbs would be cooked at a time and the remaining would be sun-dried for trade or storage. They were often consumed as 'cakes' which were formed by cutting the roots and compressing them into small sacs and heating them on warm stones. These were covered with leaves and mosses or grass and left to bake for a night. These 'cakes' were stored for winter use and when warmed are said to taste like baked pears.^{3,5}

¹ Gilkey, Helen M. and Dennis La.Rea. 2001. *Handbook of Northwestern Plants*. Corvallis, OR: Oregon State University Press.

² Plants for a Future Database. <http://www.pfaf.org/>

³ Turner, Nancy J., John Thomas, Barry F. Carlson and Robert T. Ogilvie 1983. *Ethnobotany of the Nitinaht Indians of Vancouver Island*. Victoria. British Columbia Provincial Museum

⁴ Pojar, Jim and Andy MacKinnon. 2004. *Plants of the Pacific Northwest Coast*. Canada: Lone Pine.

⁵ Turner, Nancy. 2005. *Keeping it Living*. University of Washington Press, Seattle.

Camas Nettle Soup

Cook time: 30 minutes

Serves: 4-6

1 grocery bag full of fresh spring nettles
3 tablespoons olive oil
1 large onion, chopped
2-3 cloves garlic, minced
1 32oz. box chicken broth or water
3 cups fresh or frozen camas bulbs or 2 cups dried camas bulbs
Salt and pepper to taste

Wash nettles in colander and chop them finely being careful not to sting oneself. In a soup pot on medium heat cook the onions and garlic in olive oil until they become translucent, about 5 minutes. Add chicken broth or water and bring to a boil. Add camas and nettles. Cook for 20 minutes or until camas becomes tender. Season with salt, pepper and other seasoning of your choice.

Note: Camas must already have gone through process of slow-cooking before.

*This recipe was obtained from “Feeding the People Feeding the Spirit” by Elise Krohn & Valerie Segrest.

Making an Earth Oven

1. First dig a hole in the ground. It must be 2.5 ft deep in the center and 10 feet in diameter.
2. On the bottom you first place dry wood, about a foot thick.
3. Then 4-6 pounds of stones are placed on top of the dry wood.
4. The dry wood is then set of fire, heating the stones.
5. When the fire has subsided and the stones are heated to nearly red a small amount of dirt is placed over the stones, then a layer of grass about an inch thick.
6. The bulbs, with outer coat removed, are laid on top of the grass in a cone fashion and then covered with 2-3 inch layers of grass.
7. Water is poured on the peak, allowing it to pass through to the bottom to the stones, the quantity of steam helps identify at what time to cover the pile with more dirt.
8. A fire of dry wood is then built on top of the mound and allowed to burn for 10-12 hours and cooled for an additional 2-3.



*Main idea extracted from Natural History Museum on campus and picture taken of their display earth oven as well.

Common name: Dewey sedge

Scientific name: *Carex deweyana*

Plant family: Cyperaceae



Description: *Carex deweyana* is a perennial or semi-evergreen sedge. The leaves are very soft and flat and no more than 5mm wide. There are female flowers at the top of the terminal spike. They are pale green and very thin. The base is round and has a soft sponge texture. The stems can grow from 20-120cm tall. The blades are pale-green and have very thin papery walls.

Habitat and Range:

Carex deweyana prefers wet meadows, swamps, and swales. It ranges from the West Coast to central United States and central Canada.¹

Historical and Contemporary Uses:

Carex deweyana is commonly used in landscaping, particularly in low, wet areas such as constructed wetlands, rain gardens, and swales that collect urban runoff. They are used to filter water in swales that are along streets so that water coming through the drains are slowed down which allows for the impurities that are in the water to percolate into the soil so that it doesn't flow back into the water system.^{2,3}

¹ Pojar, Jim, Andrew MacKinnon, and Paul B. Alaback. *Plants of the Pacific Northwest Coast, Washington, Oregon, British Columbia and Alaska*. Lone Pine Pub, 1994.

² <http://green.kingcounty.gov/gonative/Plant.aspx?Act=view&PlantID=114>

³ <http://luirig.altervista.org/cpm/thumbnails2.php?search=Carex+deweyana>

Common Name: slough sedge

Scientific Name: *Carex obnupta*

Plant family: Cyperaceae

Description: *C. obnupta* is a green, grass-like perennial that grows in thick and often single-species patches.¹ It spreads by rhizome, growing quickly, although seasonally. Its roots are fibrous, growing in thin bunches.² In the fall and winter, little growth occurs, though *C. obnupta* is a rapidly growing plant during the spring and summer seasons.^{1,3} The leaves are simple and alternate. They are long and thin, forming a typical “grassy” appearance.² Leaf veins are parallel. *C. obnupta* flowers in mid-summer, forming several large inflorescence-type flowers along its stem.² These flowers have neither petals nor sepals, and are a dark brown in color.^{2,3} Flowers are unisexual, although each plant features both male and female flowers.² Flowers bloom typically in July and August. The fruit of these flowers are small seeds, which are eaten often by wildlife and help support a variety of birds. Additionally, *C. obnupta* acts as an excellent cover for nesting birds, and provides protection for aquatic mammals such as beavers and otters.²



Habitat and Range: *Carex obnupta* is an obligate wetland species of plant, meaning it occurs naturally exclusively in wetlands.^{1,3} However, it grows in a variety of marshy ecosystems. It grows along river and pond banks, in ditches, coastal swamps, marshy woodlands and other inundated areas. *C. obnupta* tolerates saline water well, and as is such grows well in estuary-type environments.^{1,3} *C. obnupta* grows from California to British Columbia, although not as far inland as Idaho.² *C. obnupta* grows at elevations of less than 900 meters.⁴

Historical and Contemporary Uses

Nuu-chah-nulth, Makah and others use the leaves of *C. obnupta* as a basket-making twine.^{3,5} *C. obnupta* is used extensively because it allows for a fine and regular weave, which yields an aesthetically pleasing and tightly sealed basket.⁵ *C. obnupta*, as used by these peoples, forms the weave, the material that was twined horizontally along to make the “wall” of the basket.³ Preparation of *C. obnupta* leaves is extensive and involved. Leaves must be dried, have a layer of skin separated, be bleached, and then rehydrated when ready to be worked with.⁵ *C. obnupta* is extensively managed by native communities because of this utility. Below are some examples of Nuu-chah-nulth baskets which are made with *C. obnupta*, amongst other plants.

¹ USDA and NRCS Plant Guide Database: Slough Sedge. Accessed via: http://plants.usda.gov/plantguide/pdf/cs_caob3.pdf

² University of Texas at Austin Larry Bird Johnson Wildflower Center. Accessed via: http://www.wildflower.org/plants/result.php?id_plant=CAOB3

³ USDA and NRCS Plant Profile Database. Accessed via: <http://plants.usda.gov/java/nameSearch> search query: Carex obnupta

⁴ Flora of North America Database, search query: Carex obnupta. Accessed via: http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=242357366

⁵ Whiting, Faith. What a Basket Holds. Langley Centennial Museum. First Nations Baskets Research Program, p. 4. Accessed via: <http://www.langleymuseum.org/baskets/pdfs/what-a-basket-holds11.pdf>

Photo credit: University of California at Berkeley, Cal Photos Database. Accessed via: http://calphotos.berkeley.edu/cgi/img_query?query_src=photos_index&where-taxon=Carex+obnupta

Who Sedge?

Bear grass has a long lost cousin!
Imagine my delight,
my good friend Zeke and I
like two weaving materials:
me sharp and growing high up
Zeke won't cut your fingers really,
and he's from up North.
What will we be woven into?
Who will lay us out to bleach
in the sun? Can I really be
a beautiful inlay, making
geometric perfection,
twisting patterns.
My friend and I.

-Carson Viles

Common name: Siberian miner's lettuce

Scientific name: *Claytonia sibirica*

Native American names: anipaswa'kul (Cowlitz), pepe'tcitsep (Quileute), skokx'tca'd (Skagit), tsak'a'xwulqed (Skykomish), sto'tlu xked (Snohomish)¹

Plant family: Portulacaceae



Description: Siberian miner's lettuce is a semi succulent annual or short lived perennial. It is a small leafy plant, 10 – 40 cm tall with small white to pink flowers blooming from April to July.^{2,3} It first grows several to numerous basal leaves which are lance to egg shaped, then sends up stems with opposite leaves which are egg to lance shaped as well. The flowers are stalked with 2 sepals, and 5 petals. Each plant produces 1-3 many flowered clusters.²

Habitat and Range: *Claytonia sibirica* can be found along the western coast of North America from Alaska to California. It is also native to eastern Siberia and has been naturalized to Britain.^{2,3} It commonly grows in moist shady sites such as forests, stream banks, and meadows at low to mid elevations.² It especially likes sandy acid soils.³

Historical and Contemporary Uses

Claytonia sibirica is edible. The leaves can be eaten raw or cooked and can be used in salads or as a steamed green. They are mild in flavor with an earthy aftertaste reminiscent of beet root and are high in vitamin C.³ *Claytonia sibirica* is often called miner's lettuce or Indian lettuce. Both of these names are used for several closely related species, the most commonly known being *Claytonia perfoliata*. As the name indicates, these plants were generally reported to have been used by miners during the California gold rush in the mid 1800's to prevent scurvy.

Claytonia sibirica was also used for a variety of medicinal and personal hygiene functions by many Native American tribes. One of the most common uses is as a hairwash which was prepared as a cold infusion of the stems. The Cowlitz, Quileute, Skokomish, and Snohomish all used the plant in this manner. The Quileute also used the juice from the stems as an eyewash, and an infusion of the plant as a urinary aid. The Hesquiat used it as an eyewash as well as a poultice for cuts and sores. The Skagit used an infusion of the plant for sore throats, and the Songish soaked the leaves and applied them to the head to cure headaches.²

Today Siberian miner's lettuce is most commonly known as an edible green.

¹ Gunther, E. (1945). *Ethnobotany of Western Washington; The Knowledge and Use of Indigenous Plants by Native Americans*. Seattle: University of Washington Press.

² Pojar, J., & MacKinnon, A. (2004). *Plants of the Pacific Northwest Coast; Washington, Oregon, British Columbia & Alaska*. Vancouver: Lone Pine Publishing.

³ Plants For a Future. *Claytonia sibirica* – L. Retrieved October 2, 2011, from <http://www.pfaf.org/user/plant.aspx?latinname=Claytonia+sibirica>

Claytonia sibirica



I knew that this plant was edible as a leafy green, that it was nutritious, and could recognize its first growth as it re-sprouted in the mild, wet falls around here, before beginning to study it. I don't remember anyone teaching me about this plant, though someone must have told me about it. I have told my children about its edibility as we walk through the forests. I like to think that some plants are with us like a memory that only needs a gentle nudging to come back to life. Somewhere in our ancestry we have all walked closely with certain plants, and that memory is preserved somehow - in our cells, as an energetic imprint- who knows. There is great pleasure in awakening to a knowing that is deeper than one life time. Thank you plants. Thank you Claytonia sibirica.

-Zan Akerson

Common name: woods strawberry, woodland strawberry, or wild strawberry¹

Scientific name: *Fragaria vesca*

Native American names: Micmac, Huron, Potawatomi, Creek, Blackfoot, Iroquois, Coast Yuki, Karok, Halkomelem, Sechelt, and Cowlitz²

Plant family: *Rosaceae* (Rose family)³

Description: *Fragaria vesca* is a perennial⁴ forb/herb⁵, which grows close to the ground and has white 5-petal flowers that turn into strawberries. The green, toothed leaves are trifoliate and ovate with pinnate veins. They are water-resistant on the top and slightly fuzzy and lighter in color on the bottom. The berries are white at first and then they ripen to be bright red.



Habitat and Range: *Fragaria vesca* grows below 2000 meters in partly shady areas of forests and shrubby areas.⁶ Its range includes most of the U.S. and Canada. However, it is not found in the southeastern U.S. nor the very northern parts of Canada and Alaska.^{7 8}

Historical and Contemporary Uses

Fragaria vesca is eaten raw as an edible fruit by both Yuki and Karok natives and many other peoples to this day. Fresh from the plant, the berries are very sweet and delicious. The berries can also be used in many different dishes including a variety of desserts, salads, and entrees. Today many people pick strawberries (especially domesticated species) to make jam. Halkomelem, Sechelt, Cowlitz, and Micmac natives have historically and may still use the leaves to make tea.⁹ The leaves can be mixed with other berries to make mixed-fruit teas. Wood strawberry leaves are also well-known among natives for their anti-diarrhea properties.¹⁰



¹ Lindsey Koepke @ USDA-NRCS PLANTS Database. USDA, NRCS. 2011. The PLANTS Database (<http://plants.usda.gov>, 2 October 2011). National Plant Data Team, Greensboro, NC 27401-4901 USA.

² Anderson, Kat M., and Wayne Roderick. Natural Resources Conservation Service, 5 December 2000. Web. 2 Oct 2011. <http://plants.usda.gov/plantguide/pdf/pg_frve.pdf>.

³ United States. *PLANTS Profile*. USDA, 2011. Web. <<http://plants.usda.gov/java/profile?symbol=FRVE>>.

⁴ Anderson, Kat M., and Wayne Roderick. Natural Resources Conservation Service, 5 December 2000. Web. 2 Oct 2011. <http://plants.usda.gov/plantguide/pdf/pg_frve.pdf>.

⁵ United States. *PLANTS Profile*. USDA, 2011. Web. <<http://plants.usda.gov/java/profile?symbol=FRVE>>.

⁶ Anderson, Kat M., and Wayne Roderick. Natural Resources Conservation Service, 5 December 2000. Web. 2 Oct 2011. <http://plants.usda.gov/plantguide/pdf/pg_frve.pdf>.

⁷ United States. *PLANTS Profile*. USDA, 2011. Web. <<http://plants.usda.gov/java/profile?symbol=FRVE>>.

⁸ Margaret Williams @ USDA-NRCS PLANTS Database. USDA, NRCS. 2011. The PLANTS Database (<http://plants.usda.gov>, 2 October 2011). National Plant Data Team, Greensboro, NC 27401-4901 USA.

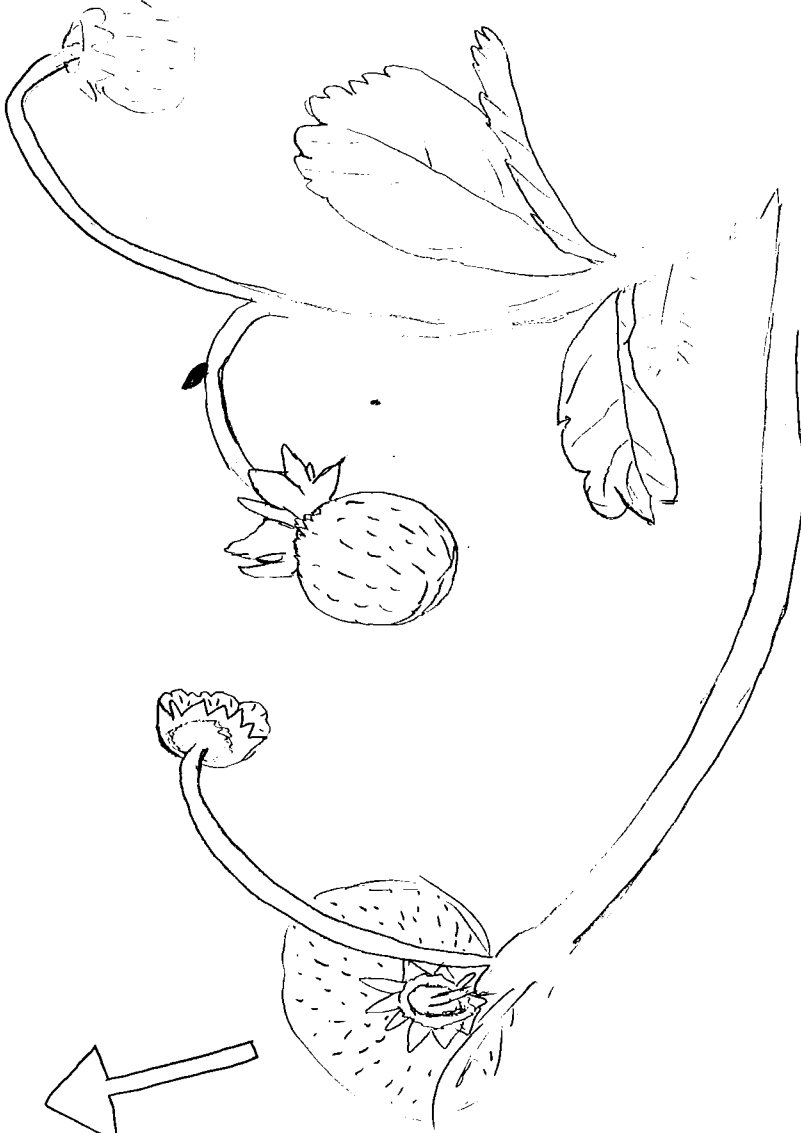
⁹ Anderson, Kat M., and Wayne Roderick. Natural Resources Conservation Service, 5 December 2000. Web. 2 Oct 2011. <http://plants.usda.gov/plantguide/pdf/pg_frve.pdf>.

¹⁰ Pojar, Jim, and Andy MacKinnon. *Plants of the Pacific Northwest Coast*. Vancouver, B.C.: Lone Pine Publishing, 1994. 183. Print. Drawing on following page by Emma Newman

Berries can
be eaten raw



Berries seed
can be for



LEAVES can be used
fresh, or to
make dried tea



Fuzzy
stem

wood strawberry

Fragaria vesca

Common name: bedstraw, cleavers,¹ stickywilly, catchweed bedstraw, cleaverwort, scarthgrass, white hedge,² goosegrass.³ **NOTE: This plant is not native to the Willamette Valley**

Scientific name: *Galium aparine*¹

Plant family: Rubiaceae (Madder family)²

Description: Cleavers are a weak, taprooted annual with sprawling leafy stems that grows to 20-100 cm tall or long and tends to entangle with other vegetation. Their linear to oblong leaves are round-tipped with a sharp point and are clustered in whorls of 6-8. They are 1-7cm long and have one vein running down the center that has bristles pointing backwards. The hermaphroditic⁵ flowers rise from the axils of leaf whorls in clusters of 3-5. They are 1-2 mm wide and whitish or greenish and bloom between April and June.³ Petals fused at the base form a short tube that splits into 4 lobes. The fruits of bedstraw are dry 2-lobed burs covered with hooked bristles.¹



Habitat: Bedstraw grows from sea level to mid-elevations of the mountains.

It is commonly found on beaches, in moist clearings and ditches, and in rich, moist open forests.^{1,4} It tolerates dry soil but scorches quickly in full sun.⁶

Range: *Galium aparine* and its close relatives are widespread throughout the United States.³ It does not thrive in hot climates.⁶

Uses for *Galium aparine*

Red dye can be made from a decoction of the root. When this is ingested, it can dye bones red. It can be rubbed on the hands to remove pitch. The stems can be used as tinder or stacked as bedding or to filter liquids.⁵

Recipe for Medicinal Tea: Add 3 heaping tablespoons of dried or fresh herb to pint of boiling water, steep for 10 min. Take in mouthful doses throughout the day. This tea has been used to help alleviate allergy symptoms in the spring.⁶



¹ Pojar, Jim, Andrew MacKinnon, and Paul B. Alaback. *Plants of the Pacific Northwest Coast.* Lone Pine Pub, 1994.

² USDA Natural Resource Conservation Service <http://plants.usda.gov/java/profile?symbol=GAAP2>

³ http://en.wikipedia.org/wiki/Galium_aparine

⁴ Burke Museum of Natural History and Culture <http://biology.burke.washington.edu/herbarium/imagecollection.php?Genus=Galium&Species=aparine>

⁵ Plants For a Future <http://www.pfaf.org/user/Plant.aspx?LatinName=Galium+aparine>

⁶ Alternative Nature Online Herbal <http://www.altnature.com/gallery/cleavers.htm>

Photo credits: Burke Museum of Natural History and Culture

<http://biology.burke.washington.edu/herbarium/imagecollection.php?Genus=Galium&Species=aparine> and http://en.wikipedia.org/wiki/Galium_aparine

Common name: gumweed

Scientific name: *Grindelia integrifolia*

Plant family: Asteraceae (Sunflower)



Description: *Grindelia integrifolia* is an herbaceous perennial. Leaves can get up to 40cm in length and are resin-dotted. They are lance-shaped, alternate and they clasp at the base. The flowers are yellow disks with normally 10-35 pedals. There is a sticky glandular on them and the heads are hemispheric. The fruits on the plant have 2 to several firm but deciduous awns. It's a perennial herb that has a stout branched stem-base. The leaves are often hairy. *Grindelia integrifolia* can grow from 15-80cm tall.

Habitat and Range:

G. integrifolia grows in rocky beach areas and salty marshes. It is common in marine habitats but also grows in moist open meadows like those of the Willamette Valley. It grows in the entire United States and Southern Canada.¹

Historical and Contemporary Uses:

Grindelia integrifolia is used by Native Americans all over the Northwest but it is most prominently used by the Pomo as a form of glue. The leaves, fresh or dried, can be steeped in water and used as a bitter tea. Indigenous people of North America use it as a treatment for bronchial problems and any skin irritations like a reaction from poison ivy and poison oak. It is believed to decentralize the nerve endings on the bronchial tree and slow the heart rate, which makes for easier breathing. It was a simple remedy for asthma and can help with kidney and heart irritations.

The dried leaves and flowers of *Grindelia integrifolia* are anti-inflammatory and a sedative and can treat even severe cases of whooping cough. The plant must be harvested while it is in full bloom for it to be used medicinally. A liquid extract is prepared when the fresh leaves and flowers are put in a certain amount of simmering water for 15 minutes. This allows the extract to be spread on irritations as a paste form. Historically, Spanish New Mexicans would drink an extract that was derived of boiling 3 flower buds 3 times in 3 pints of water, this was done until there was one pint left. They would drink one full glass 3 times a day to help with any kidney problems. When all the usable parts were gone they would use the stems as brooms.²

Sketch credit: Robert W. Freckmann Herbarium

http://wisplants.uwsp.edu/scripts/bigphoto.asp?bigphoto=GALAPA_MS.jpg&taxon=Galium%20aparine%20L.&phog=Marion%20Sheehan&spcode=GALAPh

¹ Pojar, Jim, Andrew MacKinnon, and Paul B. Alaback. 1994. *Plants of the Pacific Northwest Coast*. Lone Pine Publishing.

² http://montana.plant-life.org/species/grindelia_squarro.html

Common name: cow parsnip, pushki, indian celery

Scientific name: *Heracleum lanatum* (also known as *H. sphondylium* and *H. maximum*)

Plant family: Apiaceae



Description: Cow parsnip is a very large, hairy perennial, growing 1-3 meters tall. It has a singular hollow stem, covered in hairs, from a stout taproot or cluster of fleshy fibrous roots. Cow parsnip has strong pungent odor once the plant matures. **Leaves** are large (up to 40 cm across), and compound. Each leaf is divided into three large, coarsely toothed and palmately lobed segments. Cow Parsnip has numerous small white **flowers** in large, flat-topped, terminal umbrella-like clusters (compound umbels). The **fruit** is egg or heart shaped with one aromatic sunflower-like seed. Fruit is 7-12 mm long with broadly winged lateral ribs.¹

Habitat and Range: *Heracleum lanatum* grows on stream banks, moist slopes and clearings, marshes, meadows, thickets, and roadsides. It is found in most American states except Hawaii and Gulf Coast states (Texas, Oklahoma, Louisiana, Mississippi, Alabama, Florida, South Carolina). It is found in all Canadian provinces except Nunavut. It thrives in elevations from sea level up to subalpine levels.²

Historical and Contemporary Uses: Virtually every group along the Pacific Northwest Coast ate this plant as a green vegetable. Before the flowers matured, young stalks and leaf stems were peeled and eaten raw or sometimes boiled. Native coastal populations called this plant ‘celery’ because the peeled young stems are mild and sweet, just like celery, despite the strong odor of the leaves and outer skin. Due to the furanocoumarins found in cow parsnip, several native groups considered this plant poisonous.¹



Cow Parsnip is also used medicinally. The plant is ground into a poultice and applied to bruises and cuts to aid in the healing process. Also, an infusion of the flowers is applied to the body to help repel insects and mosquitos. The stalks are harvested and dried to make drinking straws for the elderly and flutes for young children. The roots can be used to make a yellow dye.³

Please note that furanocoumarins have a phytotoxic effect, causing a rash when affected skin is exposed to UV light, especially in light sensitive individuals. They also have antibacterial and anti-inflammatory properties.

¹ Pojar, Mackinnon. *Plants of the Pacific Northwest Coast*. Lone Pine Publishing, 2004, Vancouver, B.C.

² USDA Natural Resources Conservation Service; PLANTS Profile for *Heracleum lanatum* (Cow Parsnip). <http://plants.usda.gov/java/profile?symbol=HERAC>

³ Oregon State University; “Weed Management in Nursery Crops”; Profile for Cow Parsnip. http://oregonstate.edu/dept/nursery-weeds/weedspeciespage/cow_parsnip/Cow_parsnip_Heracleum_lanatum_page.html

Photos from: <http://whatdoino-steve.blogspot.com/2007/07/cow-parsnip-heracleum.html>

Heracleum lanatum is the only member of the *Heracleum* genus native to North America!⁴⁶

Some cow parsnip photography to fully illustrate its range and diversity of habitats:



Cow Parsnip *Heracleum lanatum* --Susan Whitney
What cows?
asked the elk

Contemplating the tender green
the fat ribbed pod

It swelled
day after day

And cracked open
an umbrella against the sun

White bouquet
prairie nosegay

Then came the bees

(<http://ofthisplace-wallowacountry.blogspot.com/2011/01/cow-parsnip-poison-oak.html>)

Common name: Oregon iris, tough-leaf iris, flag iris

Scientific name: *Iris tenax*

Plant family: Iridaceae



Description: Oregon iris is a showy perennial herb found in clumped distributions growing to about 40 cm tall.¹ This flower arises with many basal leaves from a fibrous-covered rhizome. The **leaves** are grass-like with parallel veins generally 4 and they are 1-5 dm. long. As all members in the Iridaceae the **flower** has a bilateral symmetry and 6-petal like segments in two series all fused at the base. In the Oregon iris, the sepal is purple, but often lavender with yellow at the center. The whole sepal is conspicuously veined with darker purple, each of them reaches 7.5 cm in length and

is broad at summit. The petals are narrower than the sepals, erect, and uniformly purple or lavender.²

Habitat and Range: Oregon iris is found in open areas such as grassy meadows, fields, pastures, roadsides, logged areas. It is also found in open woodlands either deciduous or coniferous.¹ It thrives in low and medium elevations. This herb does well in full sun exposure or partial shade but can succeed in dry shade and can be drought tolerant once it is established.³ This plant can be found in Western North America from Washington to Oregon and California⁴

Historical and Contemporary Uses:

The main use of the Oregon iris is for fiber. A fiber from the leaves is used in weaving and making ropes.^{3,4} The Nehalem- Tillamook Indians made strings, cords, and net fibers from the iris by pulling the strong central fibers from the center of the leaf and then winding these strings together to make long threads of fiber.⁵ This fiber is buoyant, strong and durable and would be wound together to produce fish nets or serve as the lines that attached the fish harpoon points to the harpoon shaft.⁵ David Douglas, the 19th century botanist said “...in point of strength it will hold the strongest bullock and is not thicker than the little finger”¹

A tincture of the whole plant, or the bulbous stems, is given in the treatment of bilious vomiting and is recommended for treating depression. Today it is an ingredient in modern pharmaceuticals to prevent vomiting and sleeplessness. The entire plant, especially the root is thought to be poisonous if ingested³, however there is some documentation that expresses the use of the root as a beauty treatment. The boiled root is said to clear the complexion as well as treats bruises and sores.

¹ Pojar, Jim and Andy MacKinnon. 2004. *Plants of the Pacific Northwest Coast*. Canada: Lone Pine.

² Gilkey, Helen M. and Dennis La.Rea. 2001. *Handbook of Northwestern Plants*. Corvallis, OR: Oregon State University Press.

³ Plants for a Future Database: <http://www.pfaf.org/>

⁴ United States Department of Agriculture: Natural Resources Conservation Service. <http://plants.usda.gov/characteristics.html>>.

⁵ Deur, Douglas. An Ethnobotanical Guide to the habitats of lower Nehalem. Washington.

Drawing on the following page by Stephanie Loredó

Oregon iris



Common name: celery-leaved lovage, celery-leaved licorice-root

Scientific name: *Ligusticum apiifolium*

Plant family: Apiaceae

Description: *Ligusticum apiifolium* is an herbaceous perennial. Stems are 3 to 4 ft. or taller, very slender with few leaves. The whole plant is glabrous except for inflorescence and leaf-margins. The rays of umbels are many and usually compound. The fruit is 3-5mm long, each rib prominent but not without a thin wing-like edge.¹ The flowers are usually white, pink, or light purple with compound umbels.²



Habitat: *Ligusticum apiifolium* prefers moist areas; ditches, creek banks, etc.

Range: The flowers tend to bloom in early to mid-June and grow from sea level to about 6000 feet of elevation. *Ligusticum apiifolium* can be found all on the West Coast mostly on the side of roads, near fences, in coastal prairies, redwood forests, mixed evergreen forests, northern oak woodlands, and lowland areas.³

Historical and Contemporary Uses: The leaves are edible and can be eaten in small quantities to stimulate digestion.⁴ The Pomo Indians used this plant to help with tuberculosis.²

¹ Kozloff, Eugene. *Plants of Western Oregon, Washington, and B.C.*. Portland: Timber Press, 2005. 96,97. Print.

² Gilkey, Helen. *Handbook of NW Flowering Plants*. Corvallis: Oregon State College, 1946. 234. Print.

³ CNPLX, . "California Native Plant Link Exchange." *CNPLX*. CNPLX, 2/20/2010. Web. 4 Oct 2011. <<http://www.cnplx.info/>>.

⁴ Bonady, Devon. "Ligusticum apiifolium." Personal Interview by Mike Strauhal. 10/3/2011.

Photos: Rod Gilbert: <http://www.pbase.com/image/61590945> and <http://www.heritageseedlings.com/native.htm>

Common name: fernleaf biscuitroot

Scientific name: *Lomatium dissectum*

Native American names: Toza by the Numic speaking tribes

Plant family: Apiaceae



Description: This herb is a taprooted perennial extending approx. 30 cm long and 5cm thick¹; thick stem finely ribbed and hollow.² Its **leaves** are finely dissected and fern-like with sheathing petioles that can be minutely pubescent to glabrous or glaucous². **Flowers** bright yellow or purple in a compound umbel with 10-30 rays¹ and with bracts of umbellets being very narrow.³ **Fruit** is woody or corky about 1-1.5 cm long with thick corky lateral wings.^{5,7} Overall, it has a rapid growth rate growing up to 1.3 m. making it the largest member of the *Lomatium* genus.¹ It is resistant to fire with a fast after harvest re-growth rate. It blooms in early summer but begins growth in early spring shortly after snow melt.

Habitat and Range: Dry, open, rocky slopes, grassy bluffs, and vernal meadows at low and middle elevations.³ It cannot grow in the shade. It naturally occurs from British Columbia and Saskatchewan south to Carolina and New Mexico and extends inward into Wyoming and Colorado.¹

Historical and Contemporary Uses

This plant is one of the most widely used plants in native North American culture used for food, medicine, and ceremonial purposes. The roots were very important food, used in several ways by many tribes. When boiled, they would make a refreshing nutritious drink.⁴ Roots would be split, strung, and dried for storage and cooked whenever needed by the Thompson and Okanagon people.⁴ The Shuswap, Nlaka'pamux & Lilloet people dug them in May, peeled, steamed and ate fresh or strung them partially dried and stored them for winter use. In the winter, these dried roots would be soaked for two nights, and then steamed cooked often with yellow avalanche lily bulbs. They were also made into flour which would be mixed with water and flattened into cakes which would be sun-dried or baked.⁴ To the Sanpoil tribe, young shoots were a special food eaten mixed with balsamroot and featured in the "first roots" ceremony.⁵

Biscuitroot is used for a wide variety of ailments. Infusions of dried roots are used for stomach disorders as well as to treat tuberculosis and arthritis.¹ The poultice of roots is used to treat wounds, cuts, bruises, and for rheumatism. Thompson people make it into powder mixed with grease for wounds.⁵ In ceremonies, the root is smashed and burned to use as incense. The Navajo Indians make an infusion of dried and ground biscuitroot mixed with other plants to give to patients as a part of their Mountain Top Chant ceremony.¹

Additionally, the more mature roots contain compounds from the furanocoumarin group which are toxic and so would be used to aid the catchment of fish by soaking and pounding them which would poison the fish.

¹ United States Department of Agriculture: Natural Resources Conservation Service. <http://plants.usda.gov/characteristics.html>>

² Gilkey, Helen M. and Dennis LaRea. 2001. *Handbook of Northwestern Plants*. Corvallis, OR: Oregon State University Press.

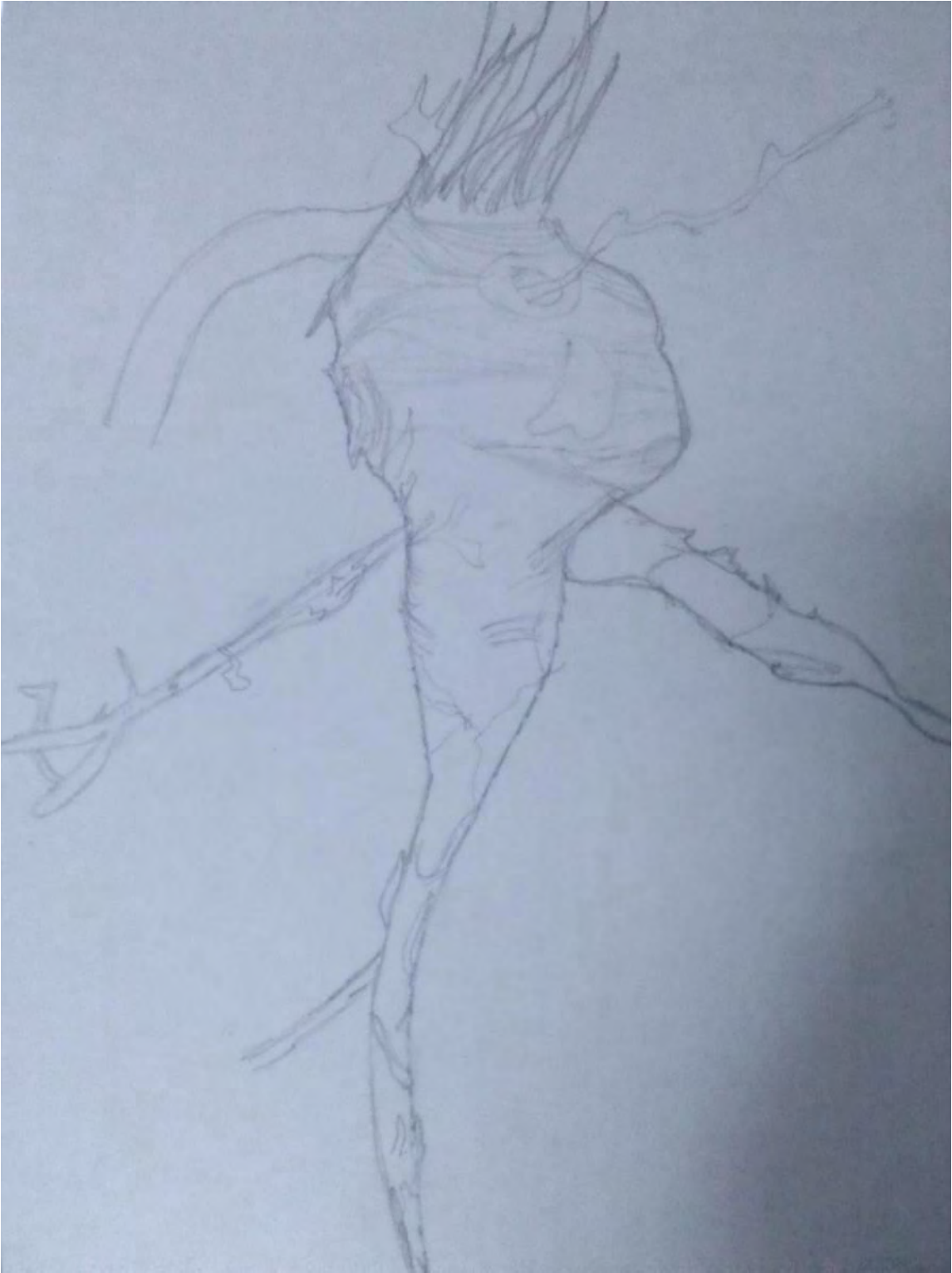
³ Pojar, Jim and Andy MacKinnon. 2004. *Plants of the Pacific Northwest Coast*. Canada: Lone Pine

⁴ Kuhnlein, Harriet and Turner, Nancy. 1991. *Traditional Plant Foods of Canadian Indian People*. Gordon & Breach Science publishers.

⁵ Turner, Nancy J., R. Bouchard and Dorothy I.D. Kennedy. 1980. *Ethnobotany of the Okanagan-Colville Indians of British Columbia and Washington*. Victoria. British Columbia Provincial Museum.

Drawing on the following page by Kimberly Berry

Lomatium dissectum root





Common name: biscuit root

Scientific name: *Lomatium nudicaule*

Native American names: Cous (Salish), Gathmin (Coastal)

Plant family: Apiaceae

Description: *Lomatium nudicaule* is a perennial dicot but is usually more robust than *L. utriculatum*, as it ranges from 20-90cm. The leaves are mostly basal and can be either lobed or divided. The flowers are yellow but occasionally purple and are grouped into small compact heads, and the fruits, like those of *L. utriculatum*, are oblong to elliptic with broad wings and distinct ribs and range from 7-15mm long.

Habitat and range: *L. nudicaule* lives in open sunny meadows with well-drained clay soil at low elevations, and it may be found along the coast ranges of California to British Columbia and west of the Sierra-Cascade crest and extends into Nevada, Idaho, and Utah.

Contemporary and historical uses:

Young leaves and stalks of *L. nudicaule* were an important springtime vegetable of the Nlaka'pamux, Lillooet, Shuswap, and possibly Okanagan who were all native to southern British Columbia.¹ These tribes gathered the leaves and shoots before the plants flowered (usually in April and May) and then ate these greens raw or cooked as a potherb. The stems were particularly valuable for their high vitamin C content. Leaves and shoots continue to be used and are sometimes frozen, jarred, or dried for storage. Leaves were, and still are, used as flavoring for tea, soups, stews, fish, meat, and smoking tobacco.¹

Lomatium nudicaule plants are valued for their medicinal properties found in the seeds, roots, and leaves. Among the Salish, a poultice was made from the roots, bark, fruit, or leaves of *L. nudicaule* to treat bruises, cuts, and boils. Much like the roots, the seed of both plants has historically been used to treat colds, headaches, and stomach problems. Tribes such as the Saanich, Songish, and Cowichan (all native to southwestern British Columbia or Vancouver Island) soak and boil the seeds to make tea that may help soothe sore throats and colds.²

¹ Kuhnlein, Harriet V., Nancy Turner. 1991. *Traditional Plant Foods of Canadian Indigenous Peoples: Nutrition, Botany, and Use*. Amsterdam, Netherlands: Overseas Publishers Association.

² Turner, Nancy, Marcus A. M. Bell. 1971. The Ethnobotany of the Coast Salish Indians of Vancouver Island. *Economic Botany*. 25(1): 63-104.



Clockwise from upper left: *Lomatium* spp. fruits, *Lomatium* spp. whole plant, *Lomatium* spp. flower and leaves, *Lomatium* spp. shoots (© 2008 Thayne Tuason), *Lomatium* spp. flowers, *Lomatium* spp. flowers, leaves, and stem (© Derrick Ditchburn).

Common name: showy tarweed

Scientific name *Madia elegans*

Plant family *Asteraceae* Sunflower family



Description: This hairy annual has stalked glands on many parts of the plant and a tar-scent. The herb has alternate, narrow/oblong, and slightly toothed leaves. The yellow flower is a composite inflorescence with ray flowers up 10-17mm long. It has the showiest flower of its close relatives hence its name.¹

Habitat: *Madia elegans* grows in well drained, dry soil with lots of sun often on grassy slopes below 1000m.

Range: *Madia elegans* ranges from California to Oregon. Varieties of tarweed were used by Native Americans all along the pacific coast.¹

Historical and Contemporary Uses

The showiness of this species of tarweed lends for its use as an ornamental flower by westerners.¹ However, native tribes in Oregon and California relied on this plant as a source of food. Tribes of California used seeds to make pinole, a coarse flour often combined with water to make a dough. Pinole made from tarweeds was so oily that it did not need water to form dough.¹ Native Americans in the Pacific Northwest and California collect seeds from a variety of tarweeds and keep them for winter use. The process of making pinole is described by the USDA, “Common madia seeds were harvested by women in late summer during a period of a fortnight. A seed beater and a basket were used to gather the seeds. Then, the seeds were winnowed and ground very fine in a bedrock mortar with a stone pestle.”² The Kalapuya tribe of the Pacific Northwest burned areas where tarweed grew. After burns, seeds would not need to be roasted before ground. Other land management techniques were employed by tribes such as planting seeds and ownership of certain areas with a high population of *Madia elegans*. Esther Stutzman in “Two Ways of Seeing”² describes ceremonies of the Kalapuya tribe in which they rubbed sunflower oil on their bodies. Thus they were given their name which means “rubbed on”. She may have been referring to any of the numerous plants in the sunflower family of which the oily tarweeds are a part. However *M. elegans* was an important plant to the Kalapuya and so they likely used the oil obtained from these seeds.

¹ <http://plants.usda.gov/java/factSheet>

² Ester Stutzman, Kalapuya elder. Storytelling about TEK and fire in the Willamette Valley: “Two Ways of Seeing.” TEK Conference 2010. Oregon State University. <http://oregonstate.edu/media/rxljk>

Common name: bigroot wild cucumber, manroot

Scientific name: *Marah oreganus*

Plant family: Cucurbitaceae



Description: *Marah oreganus* is a climbing perennial from swollen woody roots. The stems are leafy and herbaceous and bear tendrils. The leaves of *Marah oreganus* are alternately oriented, quite large (15-20 cm across), irregularly palmately lobed, and are rough and hairy on top, while sparsely hairy or hairless on the bottom. Its flowers are whitish, bell-shaped and about 1 cm across. The male and female flowers of *Marah oreganus* appear on the same plant, otherwise known as

monoecious. The male flowers appear in narrow stalked clusters, while the female flowers appear solitary and are short stalked. The fruits of *Marah oreganus* are football-shaped bladders that are inflated and somewhat fleshy. Eventually, these fruits dry and burst irregularly. Inside, the fruits are fibrous and netted with 2-4 chambers. There are 1 to 2 large (2 cm long), smooth seeds per chamber.¹

Habitat and Range: *Marah oreganus* is commonly found at low elevations in moist fields, clearings, thickets, bottomlands, and open hillsides.¹ It ranges from west of the Cascades from California to British Columbia.²

Historical and Contemporary Uses: The Squaxin people of the Southern Puget Sound mashed the upper stalk in water and bathed aching hands in the mixture to alleviate the ache.³ The Chinook of the lower Columbia River mashed the fruit in order to create a poultice to heal cuts.¹

Outside of these historical uses, little information exists about the contemporary uses of *Marah oreganus*.

¹ Pojar, Jim and Andy MacKinnon eds. 1994. *Plants of the Pacific Northwest Coast*. Vancouver, BC: Lone Pine.

² Plants Profile Marah Oreganus." *Plants Database*. USDA, n.d. Web. 6 Nov 2011.

<http://plants.usda.gov/java/profile?symbol=MAOR3>

³ "Manroot Medicinal Uses." *Global Oneness*. N.p., n.d. Web. 6 Nov 2011. http://www.experiencefestival.com/a/Manroot_-_Medicinal_uses/id/17445856

Photo: <http://www.markrshepard.net/WeedsOfOregon/Plant/Western%20wild%20cucumber--Marah%20oreganus--m.jpg>

This summer, while I was working as a camp counselor at Mt. Pisgah summer camp, the children I was supervising were well aware of the places *Marah oreganus* grew and the fact that it was a “wild cucumber”. While I supervised the campers by the river, some would find the spots where it grew. For better or for worse, this interest and knowledge came from a well founded enjoyment in the resounding splatter that occurred when they threw the fruits of *Marah oreganus* against trees and other solid objects. Perhaps this enjoyable splatter is an evolutionary adaptation by *Marah oreganus* used to entice seed dispersal by rambunctious middle-schoolers.

The fruits are extremely peculiar and irregular looking. They are spiny, yet soft and hollow. The vine is elegant, bearing tendrils and small white flowers. The roots can grow quite large. Devon Bonady recalls digging out a *Marah oreganus* rootwad that was 5 x 5 x 5 feet wide that took 4 people to pull out of the ground. This is why in addition to bigroot wild cucumber, *Marah oreganus* is also known as “manroot”. Such a large rootwad is pictured below.

-Azul Dahlstrom-Eckman



<http://www.markrshepard.net/WeedsOfOregon/Other/Western%20wild%20cucumber--Marah%20oreganus--r.jpg>



Common name: yellow pond lily

Scientific name: *Nuphar polysepalum*

Native American names: west wind

Plant family: Nymphaeaceae

Description: *Nuphar polysepalum* grows from 15 to 60 cm and can spread up to one meter on the water surface. Instead of true roots, **rhizomes** buried in muddy pond bottoms anchor *N. polysepalum*. A thick stem rises directly from the rhizome to the **flower**, which is bright yellow with large sepals concealing smaller petals. The stigma is prominent and resembles a doorknob. The heart-shaped **leaves**, which are on a separate stem from the flower, range from 10-45cm and usually float on the surface of the water but can sometimes be submerged or emergent. *N. polysepalum* propagates both by **seeds** and rhizomes; seeds are dispersed on the water surface, and rhizomes reproduce vegetatively.

Habitat and range: *Nuphar polysepalum* can be found throughout North America, particularly from Alaska to California and in the Rocky Mountains, and it thrives in shallow lakes or ponds (generally 3-9 feet deep) as well as calm, slow moving streams.

Traditional and contemporary uses: *Nuphar polysepalum* is primarily harvested for culinary and medicinal uses; while the seeds are eaten, the rhizome is used for medicine and healing. The rhizomes are typically harvested in the spring, and can be boiled, dried, soaked and mashed, or steamed. The Thompson Indians, for example, dried and ground the leaves, and then mixed the powder with grease and used the ointment for bites, swellings, and infections.¹ The Haida use the rhizome for treating “colds, tuberculosis, internal pains, ulcers, rheumatism, chest pains, heart conditions, and cancer”.²

The seeds, harvested in late summer or early fall, can be prepared several different ways including drying, grinding, frying, roasting, and soaking. The Klamath and Mendocino tribes make the seeds into porridge via grinding and roasting the seeds. The seeds are an important food source for the Klamath and other coastal indigenous groups of the California and Oregon coast.

¹ Fairfax County Public Schools. 1996. Yellow Pond Lily http://www.fcps.edu/islandcreekes/ecology/yellow_pond_lily.htm Accessed September 2011.

² Pojar, J. and MacKinnon, A. 1994. *Plants of the Pacific Northwest Coast*. Auburn, WA: Lone Pine Publishing.
Drawing on the following page by Casey Mangnall

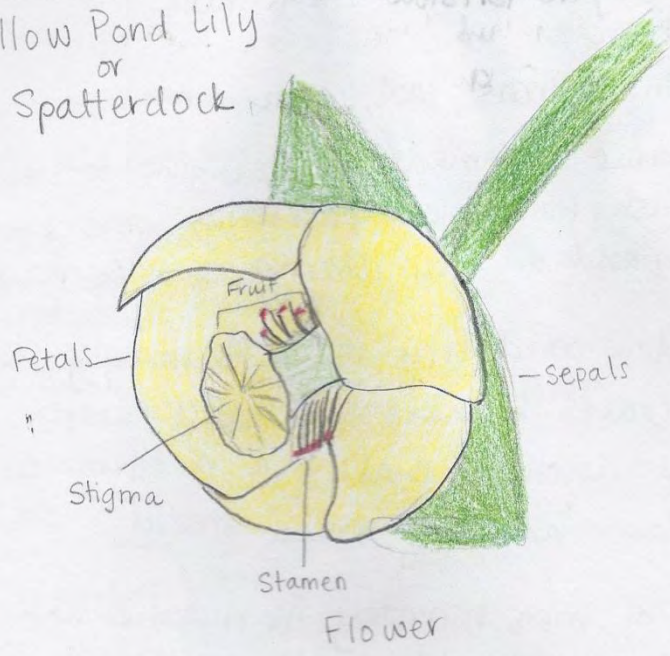
al entry #1

Nuphar polysepalum

Yellow Pond Lily
or
Spatterdock



Leaf



Flower

Fragaria latifolia



Nuphar polysepalum

Common name: yampah

Scientific name: *Perideridia gairdneri*

Native American Names: ayepaws (Klamath-Modoc, present usage), gaash (Klamath-Modoc historical usage), nits-ik-opa (Blackfoot)

Plant family: Apiaceae, (Carrot-Parsley)

Description: Yampah is a slender, hairless perennial, 1 to 3 feet tall, with a tuberous-thickened root and leafy stems. **Leaves** are well distributed along the stem, are linear, 1- to 6-inches long, and pinnately divided into three to seven grass-like segments. Yampah produces umbels of white flowers which bloom in May-July. **Fruits** are nearly spherical, 2-3mm long and wide, slightly flattened, hairless and prominently ribbed. **Roots** of yampah are thumb-sized and light brown, resembling an almond.

Habitat and Range: Yampah is widely distributed across Western North America and Northern Mexico.¹ It grows on the moist edges of open hillsides, in moist open forest, in meadows, and on mossy or grassy slopes. It is found at low to middle elevations, up to about 7,500 feet. In southern Oregon, it grows in high desert meadows and in scab rock flats.



Historical and Contemporary Uses:

Yampah is a traditional food of several Native American tribes. The roots were eaten and/or used as medicine by the Straits Salish², the Klamath and Modoc¹, and the Blackfoot, Paiute and the Cheyenne Nations.³ Yampah root can be eaten boiled, raw, steamed, roasted and dried, made into a mush or pinole, and used as a flour or a flavoring.

Yampah, which they call *ayepaws* or *gaash*, was very important to the diet of both the Klamath and Modoc people. The roots, which are crunchy, sweet and nutty, were traditionally harvested during a short period of time in the late spring and early summer, while the ground was still soft and they were easier to dig.⁴ They traditionally cleaned the roots at the place they were harvested. This ensured that the rootlets would be returned to the ground, rather than be discarded off-site. The ayepaws gatherers also cultivated the plant by intentionally leaving behind seeds, knocking seeds to the ground as they pulled up the roots and by weeding competing species out of the ayepaws plots. "You're really cultivating the seed when you're digging them up."⁴ Additionally, yampah was scattered over the ground in ceremonial offerings. It is likely that this practice also served to replant desirable roots over the freshly turned earth for later cultivation.

¹ USDA Natural Resources Conservation Services. Plants Database. <http://plants.usda.gov/>

² Pojar, Jim, Andrew MacKinnon, and Paul B. Alaback. *Plants Of The Pacific Northwest Coast, Washington, Oregon, British Columbia & Alaska*. Lone Pine Pub, 1994.

³ Tilford, Gregory L. *Edible and Medicinal Plants of the West*. Missoula, Mont: Mountain Press Pub, 1997. Print.

⁴ Deur, D. "A Caretaker Responsibility: Revisiting Klamath and Modoc Traditions of Plant Community Management." *Journal of Ethnobiology*, 29.2 (2009): 296-322.

Photo: Deur, D. "A Caretaker Responsibility: Revisiting Klamath and Modoc Traditions of Plant Community Management." *Journal of Ethnobiology*, 29.2 (2009): 296-322.

Drawing on the following page by Kimberly Berry

Perideridia
gairdneri



← ROOTS
ARE ROASTED
AND EATEN

Common name: sword fern, giant holly fern

Scientific name: *Polystichum munitum*

Plant family: Dryopteridaceae

Polystichum munitum is an evergreen fern. It grows with fronds or stalks that have multiple leaves coming out of the sides in pairs. The fronds are flat and very sturdy, with a bright green top and spores on the bottom. The leaves are serrated and have mini points along the edge of the leaf. It grows in patches from 2 to 15 fronds.¹



Habitat: This species grows very well in well moist areas, usually in coniferous forests under *Psuedotsuga menziesii* trees. They tend to grow at the base of the trees and can be found with *Gaultheria shallon* growing nearby. It likes the sun light, and can grow with relatively low soil levels.²

Range: *Polystichum munitum* ranges from B.C. to California, and the Guadalupe Islands, and from the West coast to the Montana and South Dakota.

Historical and Contemporary Uses

Native Americans such as the Quiteute, Makah, Klallam, Squamish, Sechelt, and Haida, would roast or peel the rhizomes to eat during Spring time when little or no other provisions were sufficient. These tribes are coastal and most reside in Northwest Washington.²

Traditional uses of the plant consist of using the spores to relieve the sting of stinging nettles, and florists use it for ornamental purposes. The fronds can be used to line baskets, boxes, or fruit drying racks or as stuffing material. A decoction of the rhizomes can treat dandruff. An infusion of the fronds can treat boils and sores as a wash or poultice. Young shoots can be eaten to help treat cancer in the womb and sore throats. Leaves can help childbirth when chewed. The Sporangia can be crushed into a poultice and help sores.³ The roots can be boiled or roasted, then peeled and baked like a potato, and Native Americans used the plant as a famine food, when little else was available.

Polystichum munitum helps the growth of *Psuedotsuga menziesii*, and a study has shown that trees with only *Polystichum munitum* growing underneath grow about 40ft taller on average, than if *Gaultheria shallon* is present.²

¹ Hitchcock, Leo. *Flora of the Pacific Northwest*. Seattle: University of Washington Press, 1974. 53. Print.

² Franklin, Jerry. *Flora of the Pacific Northwest*. Corvallis: Oregon State University Press, 1988. 73. Print.

³ Polystichum Munitum." *Wikipedia*. Wikipedia, n.d. Web. 6 Nov 2011. <http://en.wikipedia.org/wiki/Polystichum_munitum>.)"Polystichum Munitum." *Natural Medicinal Herbs*. Natural Medicinal Herbs, n.d. Web. 6 Nov 2011. <<http://www.naturalmedicinalherbs.net/herbs/p/polystichum-munitum=giant-holly-fern.php>>.

Common name: silverweed

Scientific name: *Potentilla anserina*

Native American Names: xit ts'aalaay (Haida), uk'al (Bella Coola), ki'chapi (Makah), k'lik'li'cit (Quileute), xilxel (Salish), kita-kop-sim (Blackfoot)¹

Plant family: Rosaceae



Description: Silverweed is a low growing perennial with spreading runners and long thick roots. **Leaves** are compound, 10-20 cm long, with 13-15 oval, sharply-serrated leaflets, which are green on the upper surface and silvery-white on the underside. **Flowers** are yellow, with 5 oval petals, which grow on stalks that are up to 10 cm long. They bloom from May to August⁴. Fruits are 2 mm reddish-brown, flattened ovals. **Roots** are light to dark brown in color and typically grow in clusters of 2-6 per plant. Some roots are short and curly, while others are long and straight.¹

Habitat/ Range: *Potentilla anserina* grows on coastal dunes, beaches, estuarine flats, marsh edges and stream banks along the Pacific coast west of the Cascade Range, from Alaska to southern California. It also occurs in meadowlands, along stream banks, pond margins and mud flats from Alaska to California, as well as in northeastern U.S. and eastern Canada.³ It is common at low to middle elevations.⁴

Historical and Contemporary Uses:

Potentilla anserina roots have been eaten by almost all Pacific Northwest coast indigenous groups, including the Haida, Bella Coola, Nootka, Makah, Salish, Chinook, Quileute, Athapaskan, Blackfoot,⁷⁴ Klamath and Modoc tribes.⁴ At one time the roots were dug in large quantities, cooked, and often dried for winter use and/or as a trade item.³ Along the Oregon coast, the roots of *Potentilla anserina* are normally harvested after the leaves turn color or even fall off, during the autumn. The roots can be dug from this time until around March but it is much easier to find them while they still have their leaves.¹ Pacific crabapple or oceanspray was used most often for prying up silverweed roots.⁵

The roots are usually steamed or roasted to remove their bitterness. When cooked, they taste similar to sweet potatoes, but retain a slightly bitter flavor. Silverweed roots were often eaten as an accompaniment to other foods such as salmon. The Bella Coola frequently cooked them into a stew that also included: clover roots fermented dog-salmon eggs, oolachen grease or seal oil, and kinnikinnick berries. Sometimes the roots are served whole, cold and dipped in oil (fish, whale or seal) and sprinkled with sugar.⁶ The roots are rarely eaten by any indigenous groups in the present day,^{1,7} although there has been a resurgence of interest in native foods among many tribes in recent years.¹

¹ Turner, Nancy J, and Harriet V. Kuhnlein. "Two Important "root" Foods of the Northwest Coast Indians: Springbank Clover (*trifolium Wormskioldii*) and Pacific Silverweed (*potentilla Anserina* Ssp. *Pacifica*)." *Economic Botany*. 36.4 (1982): 411-432. Print.

² <http://www.flickr.com/photos/selago/4613790220/sizes/m/in/photostream/>

³ USDA Natural Resources Conservation Services. Plants Database. <http://plants.usda.gov/>

⁴ Pojar, Jim, Andrew MacKinnon, and Paul B. Alaback. *Plants Of The Pacific Northwest Coast, Washington, Oregon, British Columbia & Alaska*. Lone Pine Pub, 1994.

⁵ Deur, Douglas, and Nancy J. Turner. *Keeping It Living: Traditions of Plant Use and Cultivation on the Northwest Coast of North America*. Seattle: University of Washington Press, 2005. Print.

⁶ Washington Native Plant Society. <http://www.wnps.org/landscaping/herbarium/pages/potentilla-anserina-ssp-pacifica.html>

⁷ Deur, Douglas. *In the Footprints of Gmukamps*. D.C.: U.S. Department of the Interior, 2008.

Common name: trailing blackberry, dewberry, California/Pacific/wild blackberry.

Scientific name: *Rubus ursinus*

Plant family: Rosaceae



Description: *Rubus ursinus* is a deciduous, trailing shrub with thin, curved thorns on the canes. The dark green leaves grow in leaflets of three, long, toothed and pointed leaves, three to seven centimeters long. The terminal leaf in the leaflet has three lobes, each pointed and toothed.¹ The leaves have a slightly prickly texture and are lighter green on the underside.² The large, flat-topped flowers (about four centimeters across) are white or pink and grow in clusters at the ends of the fruiting canes from April to August.³ The fruits are conical or oblong blackberries, hard, green then red when unripe and soft and black when ripe, about a centimeter long.⁴

Habitat and Range: *Rubus ursinus* is found in forested and disturbed areas, in sun or shade⁵ from Southern California to British Columbia, Idaho, and Montana.⁶

Historical and Contemporary Uses:

Rubus ursinus was and continues to be a common food source for many of the tribes living within its range. The berries are eaten fresh by members of almost every tribe within its range who processes various parts of the plant.

Other common food preparations other than simply eating the berries raw include drying, baking, and teas. The Diegueño (Southern California), Quileute (Northern Olympic Peninsula), Cowlitz (Eastern Washington) and the Thompson (British Columbia) all dried the berries whole and stored them for a winter food, after eating them fresh. The Salish people on Vancouver Island and the Saanich (Vancouver, San Juans, British Columbia area) both mashed the berries before drying them into cakes that they saved for the winter. The Vancouver Island Salish rehydrated the cakes in hot water before eating in the winter months.⁷

Some Native Americans (Kashaya Pomo, Thompson, and Makah),⁸ as well as non-indigenous people in America, now use the berries to make pies, jams, preserves, and sauces. Though *Rubus ursinus* is now less common than the Himalayan blackberry, the native berries are equally good for baking and cooking.⁹ The berries are not the only edible part of the plant. The Saanich dry the leaves of the plant to make a tea, while the Quileute use both the dried leaves and stems of the plant to make a tea. This is not a medicinal tea but simply tasty!^{8,9}

¹ Jim Pojar and Andy MacKinnon. *Revised Plants of the Pacific Northwest Coast* (Vancouver, BC: Lone Pine Publishing, 2004), 78.

² "Species: *Rubus ursinus*" in the US Forest Service's Fire Effects Information System, accessed November 6, 2011, <http://www.fs.fed.us/database/feis/plants/shrub/ruburs/all.html>.

³ "Rubus ursinus Trailing Blackberry," Washington Native Plant Society, accessed November 6, 2011, last modified November 8, 2007, <http://www.wnps.org/landscaping/herbarium/pages/rubus-ursinus.html>.

⁴ *Rubus ursinus* Cham. & Schltdl. California blackberry," USDA Plants Profile, accessed November 6, 2011, <http://plants.usda.gov/java/profile?symbol=RUR>.

⁵ Photo credit to California Polytechnic University, <http://polyland.calpoly.edu/overview/archives/derome/woodlands.html>

⁶ Netarts Bay Today, http://www.netartsbaytoday.org/html/white_flowers.html

⁷ Western Wildflower, <http://www.westernwildflower.com/plant%20index.htm>

⁸ Search: *Rubus ursinus*," Native American Ethnobotany Database from University of Michigan -- Dearborn, accessed November 6, 2011, <http://herb.umd.umich.edu/herb/search.pl>

⁹ Plants For A Future, accessed November 6, 2011

Journal page on the following page by Elise Downing

Week 5 - Friday 12:30 pm, blue skies, some clouds.
Cool. 48°F, no wind

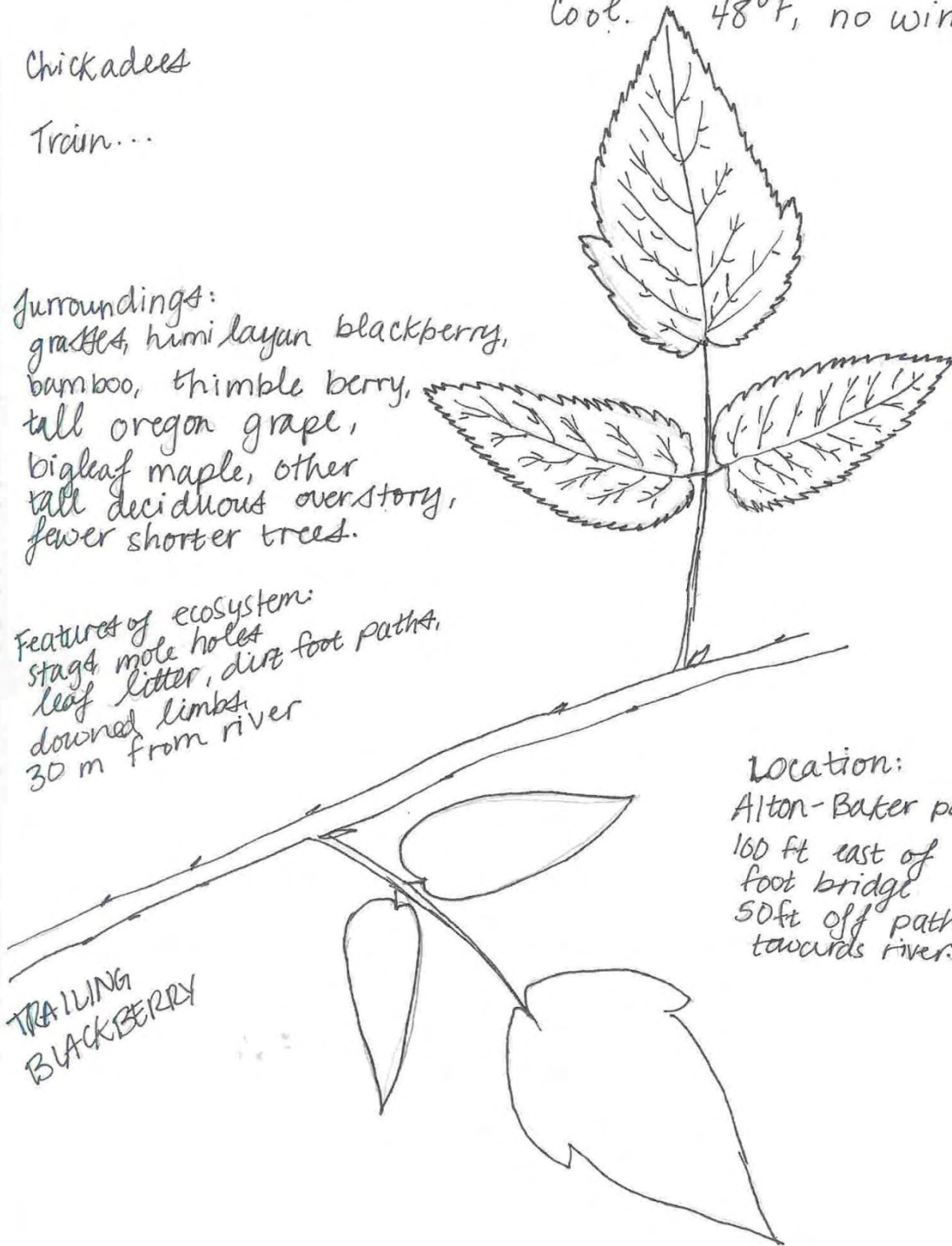
Chickadees

Train...

Surroundings:
grasses, himalayan blackberry,
bamboo, thimble berry,
tall oregon grape,
bigleaf maple, other
tall deciduous overstory,
fewer shorter trees.

Features of ecosystem:
stags, mole holes
leaf litter, dirt foot paths,
downed limbs
30 m from river

TRAILING
BLACKBERRY



Location:
Alton-Baker park,
160 ft east of
foot bridge
50 ft off path,
towards river.

Common name: duck potato

Scientific name: *Sagittaria latifolia*

Native American name: wapato

Plant family: Alismataceae



Description: *Sagittaria latifolia* is an herbaceous perennial. The leaves are all basal. Laves growing above water have arrowhead-shaped features. The flowers have separate male and female parts. There is green on the leaves and white on the petals. Fruits of *Sagittaria latifolia* have a flat sharp beak appearance. They are grouped in clusters. Wapato grows from 20-90cm tall and the leaves have a waxy feel to them. Water runs off them really well off them, like a rain jacket.¹

Habitat and Range:

Wapato grows in ponds, wetlands, and marches, with the bulbs submerged under soil and water and the leaves growing above the water surface. *Sagittaria latifolia* grows in lower elevations and is most prominent around coastal regions. *Sagittaria latifolia* has a large range. It stretches across the entire North American continent except for the most northern part.

Historical and Contemporary Uses:

S. latifolia has a variety of uses, most commonly as a food. The tuber can be eaten raw or cooked but tastes the best when it is roasted. The texture is similar to a potato. The tubers can be ground up and used as flour for baking. Some North American Indians would thinly slice the roots and hang them to dry further. This gave them an end product that was similar to dried apples. *S. latifolia* was also used medicinally. The leaves have been used by some North American Indians to stop milk production in females once breast-feeding is no longer required. There is a tea that is made from the roots that that helps clear digestive track issues and a poultice in the root can be used for the healing of cuts and infections.²

¹ Pojar, Jim & MacKinnon, Andy (2004) *Plant of the Pacific Northwest Coast*. 337

² Spurgeon, Terry (2006) *Sagittaria Latifolia-Wild* <http://www.pfaf.org/user/Plant.aspx?LatinName=Sagittaria+latifolia>

Common name: pacific snakeroot

Scientific name: *Sanicula crassicaulis*

Plant family: Apiaceae



Description: *Sanicula crassicaulis* is a taprooted perennial which grows to be 25-120 cm tall. It has alternate **leaves** which are palmate with 3-5 lobes. The lobes are sharply toothed. It produces small compact clusters of 8-13 small yellow **flowers** at the end of long stems, and blooms April through June.¹ The **stems** of this plant are thick, and in fact its species name, *crassicaulis*, means “thick-stemmed”.² Though it is a perennial, the entire above ground portion of the plant dies back every year and it is only the taproot which survives. It produces rosettes of oval shaped, bur-like, **seeds** about 2-5 mm long.¹

Habitat and Range: Pacific snakeroot is generally found west of the Cascades from British Columbia to Baja California.^{3,2,4} It also grows in South America.⁴ It is commonly found in open woods and meadows from the coast to low elevations in the mountains, and also along shoreline bluffs.^{3,1} It is not a picky plant, as it grows in moist to dry conditions in a wide range of habitats.¹

Historical and Contemporary Uses

As far as is known, *Sanicula crassicaulis* had few historical applications. The Miwok Indians of Northern California used a poultice of the leaves for rattlesnake bites and other wounds.^{4,5} The Mendocino Indians chewed the roots and rubbed it on their body for good luck in gambling.^{4,5} Apparently the plant was never eaten as it was believed to be poisonous.⁴

Our research indicates no modern uses of this plant. Sanicles in general are unpopular in pastures for dairy cattle because they can impart an unpleasant flavor to the milk if eaten by the cows.²

¹ Burke Museum of Natural History and Culture. *Sanicula crassicaulis*. Retrieved on October 16, 2011 from <http://biology.burke.washington.edu/herbarium/imagecollection.php?Genus=Sanicula&Species=crassicaulis>

² Pojar, J., & MacKinnon, A. (2004). *Plants of the Pacific Northwest Coast; Washington, Oregon, British Columbia & Alaska*. Vancouver: Lone Pine Publishing.

³ Calflora. Taxon Report 7333. *Sanicula crassicaulis*. Retrieved on October 16, 2011 from http://www.calflora.org/cgi-bin/species_query.cgi?where-calrecnum=7333

⁴ Foster, S. & Hobbs, C. (2002). *A Field Guide to Western Medicinal Plants and Herbs*. New York: Houghton Mifflin Company.

⁵ University of Michigan. *Native American Ethnobotany database*. Retrieved on October 16, 2011 from <http://herb.umd.umich.edu>
Journal page on the following page by Zan Akerson

Oct. 16, 2011
Fern Ridge Botanical Sanctuary
4:00 PM

The weather is completely overcast and a little foggy

Sanicula crassicaulis
Pacific snake-root Pacific Sanicula Gamble Weed

This plant is completely dormant this time of year. All that can be seen is the dried stalk, which still retains some of its seeds



Seed (actual size)

Umbel seed cluster (actual size)

The entire stalk is about 3 ft. tall

Brian knew how to identify this plant at this stage. He explained two keys to ID'ing this plant. The first is the seed. Apparently members of the carrot family vary greatly in seed shape so that is often an identifying characteristic of this family

Secondly, it is a particular umbel growth pattern which means that it sends up first one central shoot and then two secondary shoots later therefore making it not a true umbel which would branch from the same point all at the same time. Looking closely you can tell that one of the branches is thicker than the other two. This apparently is not very common, so it is a good way to know this plant as well.

It is growing in a thick bed of a bottle brush shaped moss. There is also a clump of tall grass growing around its base which is falling over and starting to die.

I am sitting in a mossy gully in the midst of tall Douglas firs. There are a few madroves in the vicinity as well as some Oregon hazelnut. Right next to me is what appears to be a young native rose. If I am not mistaken this is a south facing slope.



Common name: hard-stem bulrush or tule

Scientific name: *Scirpus acutus* or *Schoenoplectus acutus*

Plant family: Cyperaceae

Description: *Scirpus acutus* is a perennial monocot whose thick and stiff culms (or stalks) can grow up to 15 feet high. The inflorescence of *S. acutus* is composed of clusters of red-brown spikelets. These **flowers** are very small, lack petals, and are concealed by overlapping scales that are spirally arranged, thus forming the spikelets. The plant produces **fruits** in the form of nutlets, which are about 1.5-2.5mm in length. *S. acutus* has **rhizomes** from which roots and stems arise.

Habitat and range: *S. acutus* is most commonly found in places that have shallow standing water such as marshes, ponds, lakes, and seeps, though it may also be found on stream banks or in wet grasslands. In some cases, it can be found in mountain meadows, plains grasslands, or prairies. *S. acutus* generally lives at low to mid elevations; in Oregon, it typically lives below 4,000ft. *S. acutus* is prolific throughout North America, and can be found in almost all 50 of the United States, including Oregon, Washington, and California.

Historical and contemporary uses:

Among the Salish peoples of interior British Columbia, tule stems were used to make mats that could then be traded for other goods.¹ Because of the sturdy and buoyant nature of tule stems, the Chumash Indians of southern California used these stems to build plank canoes by bundling the stems together and then binding the bundles. The Chumash also used the stems to make mats and skirts as well as thatch roofs.² Some unidentified tribes of the Pacific Northwest would gather stems in November after they had turned brown. They would lay these stems out and sew them into large mats using hemp twine.³ These mats could then be used for temporary shelters, doors and window flaps as well as mats for drying meat and berries. Mats could also be woven into bags for storing food. It is unclear whether these practices continue currently.

The tule stem is the most commonly used part of the plant for food, but the rhizome, roots, and pollen have also been eaten historically. The stems may be eaten raw or cooked, although stems have been primarily eaten raw. The Northern Paiute tribes of California and Oregon, for example, ate the shoots of *S. acutus* raw.

¹ Turner, Nancy J. and Dawn C. Loewen. 1998. The Original "Free Trade": Exchange of Botanical Products and Associated Plant Knowledge in Northwestern North America. *Anthropologica* 40(1): 49-70.

² Timbrook, Jan. 1990. Ethnobotany of Chumash Indians, California, Based on Collections by John P. Harrington. *Economic Botany* 44(2): 236-253.

³ <http://www.wsdot.wa.gov/Environment/CulRes/herbs.htm#Scirpus>

Common name: tule

Scientific name: *Scirpus tabernaemontanii* (*Scirpus lacustris* ssp. *Validus*)

Native American names: Tekwtan (Okanagan-Colville)

Plant family: Cyperaceae



Description: *Scirpus tabernaemontanii* is a nonleafy, round-stemmed, perennial bulrush that usually grows in large colonies. **Stems** are round, olive-gray-green, up to 3 meters², larger toward the lower end and gradually tapering to the top. Pithy, yet tough, the stems are easily crushed between the fingers.³ **Leaves** are few, mostly at the base of the stem. **Flower** spikelets are compact, shiny, greyish-brown, less than 1 cm long, in a branched, terminal cluster⁴. They bloom in June through August.² **Fruits** are achenes, egg-shaped, nut-like, pointy tipped, 2 mm long, and concealed by spirally arranged scales⁴.

Habitat and Range: *Scirpus tabernaemontanii* is widespread throughout North America. It is found in emergent marshes and on the muddy shores of lakes and streams, especially in coastal areas, because it is tolerant of both alkali and salt.²

Historical and Contemporary Uses

Tule is an important plant to many indigenous Pacific Northwest tribes including the Coast and Interior Salish, the Nuu-chahnulth, the Kwakwaka'wakw, the Carrier, the Ktunaxa⁴, the Klamath and the Modoc.⁵ Tule has been used to make multiple and varied items such as mats, baskets, sandals, mattresses, cutting boards, boats and duck decoys.

The tule stems, normally harvested in late summer and early fall, were traditionally gathered by dugout canoe, or by foot along the shoreline, depending on the depth of the water⁵. When used for making mats, the tule stems are dried in the sun, cut into equal lengths, laid on the ground alternating tops and bottoms, then sewn into large mats with a strong fiber such as Indian hemp or stinging nettle twine.⁶

Among Pacific Northwest tribes, the largest mats were typically used for the roofs and walls of temporary shelters, summer dwellings and teepees, and as insulation for the walls of winter houses. Medium sized mats were used as door covers, rugs, mattresses, wind breaks and for drying berries and for cutting and drying meat and fish.⁶ Smaller mats were used for covering windows, for seats at home or in canoes, and as placemats for eating on. Sometimes they were stacked for additional cushion and comfort.⁶ When used for teepees, the mats are woven very tightly. Air spaces can be seen through them in dry weather, but when it rains, the tule expands, and forms a waterproof barrier against the rain.⁷ Tule mats are light, have exceptional insulating qualities, and are easy to roll up and carry.⁶

¹ <http://biology.burke.washington.edu/herbarium/imagecollection.php?Genus=Schoenoplectus&Species=tabernaemontanii> (Image © 1983, Fred Weinmann) Photographer credit must appear with each usage. No other restrictions.

² Cooke, Sarah S. *A Field Guide to the Common Wetland Plants of Western Washington & Northwestern Oregon*. Seattle, Wash: Seattle Audubon Society, 1997. Print.

³ Pojar, Jim, Andrew MacKinnon, and Paul B. Alaback. *Plants Of The Pacific Northwest Coast, Washington, Oregon, British Columbia & Alaska*. Lone Pine Pub, 1994.

⁴ Turner, Nancy J, and Nancy J. Turner. *Plant Technology of First Peoples in British Columbia*. Vancouver: UBC Press, 1998. Print.

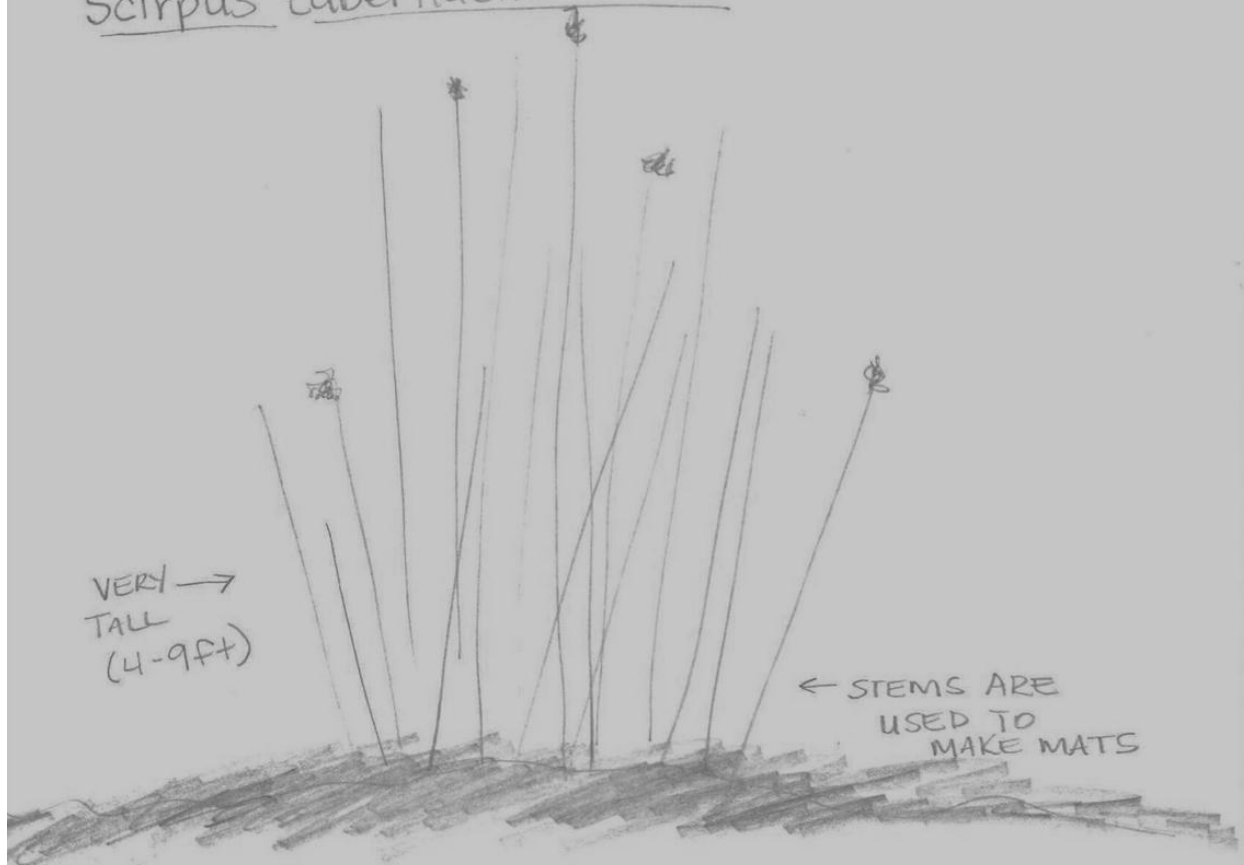
⁵ Deur, Douglas. *In the Footprints of Gmukamps*. D.C.: U.S. Department of the Interior, 2008.

⁶ Turner, Nancy J. *Plants in British Columbia Indian Technology*. Victoria, B.C., Canada: Royal British Columbia Museum, 1979. Print.

⁷ Turner, Nancy J, Randy Bouchard, and Dorothy I. D. Kennedy. *Ethnobotany of the Okanagan-Colville Indians of British Columbia and Washington*. Victoria: British Columbia Provincial Museum, 1980. Print.

Drawing on the following page by Kimberly Berry

Scirpus tabernaemontanii



VERY →
TALL
(4-9ft)

← STEMS ARE
USED TO
MAKE MATS

GROWS
DIRECTLY IN THE WATER



by Kimberly Berry

Common name: false Solomon's seal

Scientific name: *Smilacina racemosa*

Plant family: *Liliaceae*

<http://upload.wikimedia.org/wikipedia/commons/3/39/Smilacina-racemosa-raceme.JPG>



Description: False Solomon's seal is a perennial, herbaceous plant with fleshy rhizomes. Its stems have an erect or usually arched form reaching 0.3-1 m. tall. The leaves are broad, have an elliptical shape, grow to be between 7-20 cm. long, alternate along the stem in 2 rows, and have visible parallel veins. The flowers are creamy white, extremely fragrant, small, numerous, and appear on very short stalks in egg or pyramid shaped clusters. The fruits are red, sometimes dotted with purple, fleshy, round and are between 5-7 mm across.¹

Habitat and Range: False Solomon's Seal is found in moist forests, stream banks, meadows, clearings, and is widespread at low to sub alpine elevations.² False Solomon's Seal ranges from British Columbia to Nova Scotia, is found in the Midwest, and south to Georgia and Missouri.³

Historical and Contemporary Uses

False Solomon's Seal is considered a good ornamental foliage plant in shady gardens, and is easy to transplant.⁴ It mixes well with other moderately drought-tolerant, shade-loving natives like rhododendron (*Rhododendron macrophyllum*), sword fern (*Polystichum munitum*), Cascade Oregon grape (*Mahonia nervosa*), twisted stalk (*Streptopus amplexifolius*), and false lily-of-the-valley (*Maianthemum dilatatum*).⁵

On herb-roots.com, one can buy False Solomon's seal root for \$4.00 November through February.

Traditionally, the Gitksan boiled the roots into a tea as a strong medicine for rheumatism, sore backs, kidney trouble, and as a purgative. The Coast Salish mashed the roots into a poultice and bound them on cuts. The Kwakwaka'wakw would pick the berries and eat them.¹

¹ Pojar, Jim and Andy MacKinnon eds. 1994. Plants of the Pacific Northwest Coast. Vancouver, BC: Lone Pine 2. Pojar and Mackinnon 1994

² Pojar, Jim and Andy MacKinnon eds. 1994. Plants of the Pacific Northwest Coast. Vancouver, BC: Lone Pine 2. Pojar and Mackinnon 1994

³ "Smilacina racemosa." *Plants For A Future*. Plants for a Future, n.d. Web. 16 Oct 2011.

<http://www.pfaf.org/user/Plant.aspx?LatinName=Smilacina+racemosa>

⁴ Pojar, Jim and Andy MacKinnon eds. 1994. Plants of the Pacific Northwest Coast. Vancouver, BC: Lone Pine 2. Pojar and Mackinnon 1994

⁵ "A Fantastic and Often Overlooked Native Perennial." *Portland Monthly*, 13 05 2011. Web. 16 Oct 2011.

<<http://www.portlandmonthlymag.com/blogs/plantwise/smilacina-racemosa-may-2011/>>

Smilacina racemosa- How your leaves do inspire awe.
Growing in the Cascades so high.
Giving food, medicine, and beauty
You provide life through an act where you die.
Some may cry but my eyes stay dry.
I listen, with one ear to the forest and the other to my heart.
Probing both your conscience and mine.
Will you allow me to harvest your roots?
Or please my family with your edible shoots?
The tea I create will not be dilute
Its powerful properties will give my problems the boot.
Be it kidney trouble, a sore back, or a cure for rheumatism
You're better than surgery-no need for incision.
So next time I go into the forest
I'll carry with me a vision
Many creamy white flowers,
And elliptical leaves that envelop me like a shower,
Though they call you false Solomon's seal
You're no imposter, you carry such zeal.
And like the king of old who bears your name
You're old and wise, I see that quite plain.

-Azul Dahlstrom-Eckman

Common names: broad-leaved cattail, reedmace, cat o' nine tails, bulrush

Scientific name: *Typha latifolia*

Plant family: Typhaceae



Description: Broad-leaved cattail is a semiaquatic or marsh perennial. **Leaves** are alternate, sheathing at the base, and 1-2 cm wide. They are long, flat, and narrow and have a grayish-green color. **Flowers** are tiny and numerous in a terminal cylindrical spike. The cylindrical spike is 15-20 cm long, 1-3 cm thick, and dark brown. The lower portion of the spike is comprised of female flowers while the upper portion is all male. **Fruit** is a tiny ellipsoidal nutlet about 1mm long with long slender hairs at the base. It is designed to float in water. The overall plant is 1-3 meters tall. Cattail reproduces through seed production and rhizome activity.¹

Habitat and Range: *Typha latifolia* grows in marshes and semi-aquatic environments such as ponds, lakeshores, and wet ditches. It thrives in slow-flowing or quiet water.¹ Broad-leaved cattail is found in all 50 U.S. states and all Canadian provinces except Nunavut. It is commonly found from low to middle elevations.²

Historical and Contemporary Uses: All parts of this plant are edible if they are gathered at the appropriate stage of development. Young shoots are cut from the plant in the spring when they are 4-16 inches long. While they are raw, these shoots have a delicate cucumber flavor, and a crispy asparagus-like texture. When the shoots are steamed, they taste like cabbage. The base of the stem can be cut and boiled or roasted like potatoes. Young flower stalks, once removed from their sheath, can be boiled or steamed just like corn.² Cattail pollen is used as a substitute for flours and when added to a dish it turns it a bright yellow color. The rhizomes have a sweet flavor and can be eaten raw or cooked. They contain a high amount of starch (30-40%).²

The Klamath and Modoc of Northern California and Southern Oregon use the leaves of this plant to weave flexible baskets as well as mats of varying sizes (used for sleeping, sitting, working, covering doorways, and for shade, among many other uses). The Cahilla of Southern California use cattail stalks for matting, bedding material, and ceremonial bundles. Some tribes use the leaves and sheath as caulking materials to seal up minor joints. The Apache of the Southwestern U.S. use cattail pollen in female puberty ceremonies. The fluff or down (from the flowers) can be used as tinder, bedding, insulation, and for lining baby cradleboards. Cattails have also been used to construct boats. Stems are bound together using a plied cattail rope and since there is an air pocket inside the stem, they provide buoyancy.²

Medicinally, cattails have been used to treat wounds of all sorts and to soothe pain. Between young leaves, towards the base of the plant, there is a jelly of sorts. This jelly is either applied directly to wounds or mixed into a poultice. The rhizomes can be ground up and used for the same purpose.²

Note: Broad-leaved cattail can often be confused with members of the iris family (such as the Western Blue Flag iris). Once the plants have reached maturity, they are easily distinguishable.³

¹ Pojar, Mackinnon. Plants of the Pacific Northwest Coast. Lone Pine Publishing, 2004, Vancouver, B.C.

² USDA- Natural Resources Conservation Service; Plant Guide to Broad-Leaved Cattail (*Typha latifolia*) http://plants.usda.gov/plantguide/pdf/pg_tyfa.pdf

³ USDA- Natural Resources Conservation Service; PLANTS Profile to *Typha latifolia* L. (broad-leaved cattail) <http://plants.usda.gov/java/profile?symbol=TYLA>
Photo from: <http://www.rook.org/earl/bwca/nature/aquatics/typhalat.html>

OLD MAN CATTAIL



Photo from: <http://www.flickr.com/photos/charleslegresley/5447054110/>



CATTAIL

What a strange and silly cat
to make yourself at home like that
with no concern for rain or flood -
your tender paws in sticky mud.

What fussy pussy cat would dare
to stroll the marsh and settle there
and never hiss or spit or stir
while on your tail a blackbird sits
and nips and nibbles at your fur?

--Eric Ode (http://www.ericode.com/cattail_poem.htm)

Common name stinging nettle

Scientific name *Urtica dioica*

The stinging nettle is also known as Indian Spinach by both coastal and interior tribes of the Pacific Northwest.

Plant family

Urticaceae



Habitat and Range

The stinging nettle is found in many floodplains, wetlands, along river and stream banks as well as moist and shaded woodlands. The stinging nettle is common throughout the United States and can be located in 49 of the 50 states, Hawaii being the exception. It will thrive in most ecosystems as long as the soil conditions are adequate.¹



Historical and Contemporary Uses

Medicinally, the stinging nettle uses range from treating colds, flus, allergies, and asthma as well as relieving mild muscle and joint pains associated with arthritis. It is also used as a poultice to stop bleeding from wounds or menstruation bleeding, an antiseptic for wounds, a diuretic and laxative. As for a dietary intake, the nettles can be a great source of nutrients and minerals. Blanching or steaming the leaves removes the chemical that causes the stinging sensation that many people have when they come into contact with the leaves and becomes edible. Once boiled or steamed, the nettles can be eaten in the same manner as many other types of greens such as spinach. Since the nettle is high in iron, vitamin C, magnesium, it is an important source of nutrients. The nettle was and continues to be a very important for many tribes in the Pacific Northwest as a source of fiber. Some tribes such as the Salish and the Sitka, use the fibrous tissue from the nettles to make nets for fishing as well as for fibers to make clothing and many other textile materials.²

¹ MacKinnon, Andy and Jim Pojar. *Plants of the Pacific Northwest Coast*. Vancouver: Lone Pine Publishing, 1994

² Legacy, Dr. Christophers Herbal. *History of the Stinging Nettle*. 30 October 2008. 2 October 2011
<http://www.herballegacy.com/Vance_History.html>.

Photo:http://plants.usda.gov/java/profile?symbol=URDI&photoID=urdi_1v.jpg

Drawing by Beth Sanner

III. Shrubs



Brian Basor

Mahonia aquifolium
tall Oregon grape

Common name: serviceberry or saskatoon berry

Scientific name: *Amelanchier alnifolia*

Native American name: Chcháya¹ (Yakama Ichishkíin)

Plant family: Rosaceae

Description: *A. alnifolia* is a large shrub that varies between 1-5 meters in height. It features a smooth, dark colored stem. Its branches are thin, and display small leaves, which are deciduous. These leaves are round to oval shaped, and are toothed along the top two thirds. This plant has perfect white flowers which are 1-3 cm across and feature 5 petals.² Cross pollination does occur occasionally by insect or wind. However, self-pollination is the main method of reproduction.⁴ Flowers appear during springtime, before the onset of leaves. Fruit develop in early to mid-summer and are considered especially delicious.³ Berries are small and darken from red to almost black. *A. alnifolia* spreads by rhizome and by branches capable of developing rooting ends. Shoots are also able to grow into new plants.⁴



Habitat and Range: *A. alnifolia* grows along the edges of forests as well as in open forests. It also grows in meadows and clearings, as well as along rocky shores.² *A. alnifolia* also grows along the banks of streams, and prefers well-drained and moist soil and does not grow well in deep shade⁴. It is common to sprout after disturbances in woodland habitat, such as fire, beetle destruction etc.⁵ *A. alnifolia* grows in areas of low to moderate elevation; from close to sea level to subalpine range.⁶ *Amelanchier alnifolia* is widely distributed across the United States, although several varieties, including var.

humtulpensis and var. *semiintegrifolia*, are found only in the Pacific Northwest.⁷

Historical and Contemporary Uses

A. alnifolia has a long history of use by native peoples throughout the Pacific Northwest. Its berries are gathered extensively by indigenous groups. They are eaten both fresh and preserved. Berries are preserved by being dried either whole, or dried and cooked into cakes. When dried whole, berries become raisin-like. When dried and cooked into cakes, the berries are able to be stored through the winter, which historically allowed native people to sustain themselves in the winter season, and during scarce times. These dried cakes were traded extensively throughout the Pacific Northwest, prior to European contact.⁴ Berries are also mixed with meats, to make a nutritious, well-preserved cake.

¹ Beavert, Virginia and Sharon Hargus. *Ichishkíin Sínwit Yakama/Yakima Sahaptin Dictionary*. Seattle, WA: University of Washington Press, 2009.

² Pojar, Jim and Andy MacKinnon. *Plants of the Pacific Northwest Coast*. Vancouver, B.C.: Lone Pine Publishing, 1994. P. 73.

³ Plants for a Future database. Plant Profile *Amelanchier alnifolia* - (Nutt.)Nutt. ex M.Roem.

Accessed via: <http://www.pfaf.org/user/Plant.aspx?LatinName=Amelanchier+alnifolia>.

⁴ USDA Natural Resource Conservation Service. *Plant Profile AMALS*. Accessed via:

http://plants.usda.gov/plantguide/pdf/pg_amals.pdf

⁵ Royal Roads University. Non Timber Quality Codes. Accessed via: http://cle.royalroads.ca/files-cntr/Saskatoon_Berry_Amelanchier_alnifolia.pdf

⁶ USDA Natural Resource Conservation Service. *Plant Profile AMAL2*. Accessed via:

<http://plants.usda.gov/java/profile?symbol=AMAL2>

⁷ USDA NRCS Plant Profile AMALA. Accessed via: <http://plants.usda.gov/java/profile?symbol=AMELA>

Berried Past

My great-grandpa's name was Service,
it could have been mine too.

What is this berry? How have I never
heard of it? Indian nations gather great
amounts.

I didn't know that.

Embarrassing.

Don't forget your family name,
and don't where you came from.

Stilted thoughts and awkward phrases.

I won't let this knowledge slip away:
my great-grandpa's name was Service
a berry beaten, dried and eaten.

-Carson Viles

Common name: tall Oregon grape

Scientific name: (*Mahonia*) *Berberis aquifolium*

Plant family: *Berberidaceae*-Barberry Family

Description: This upright shrub grows anywhere from 2-10ft tall. Its shiny, pinnately compound leaves resemble holly because they are prickly and leathery. They are usually green but vary in color from red to copper to yellow-green. The hermaphrodite yellow flower is the Oregon State flower. The blue berries form bunches and are pleasantly sour.



Habitat: Oregon grape is shade tolerant and thrives in mixed coniferous woods. It is common in urban landscaping because it is a hardy evergreen.

Range: Oregon grape grows west along the North American coast from British Columbia to northern California and east to Idaho. It has been naturalized in other states and in countries around the world.¹

Historical and Contemporary Uses

Oregon grape is an important food source for Native American tribes throughout the Pacific Northwest coastal region. Berries are eaten raw or dried into cakes for storage or trade. Often Oregon grape is mixed with salal to dilute the berry's sour taste. Many non-native people collect Oregon grape to make preserves² or other foods.³ The fruit has a small amount of flesh for all the seeds. The flowers and young copper colored leaves are also eaten raw.

The medicinal qualities of Oregon grape are highly valued. Mountain Rose Herbs, a national retail and wholesale distributor of medicinal plant material, sells more Oregon grape root than any other herb. Tinctures made from the root or tea made from the leaves or stem can be used as bitter tonics which stimulate digestion. *Berberis aquifolium* is also said to be an anti-bacterial as well as a decongestant. Native tribes used the root and leaves for loss of appetite and debility.⁴ The berries are a mild laxative.⁴ The root can be used to make a yellow dye and the berries to make a purple-blue dye.

¹ <http://www.fs.fed.us/global/iitf/pdf/shrubs/Mahonia%20aquifolium.pdf>

² <http://fat-of-the-land.blogspot.com/2010/07/oregon-grape-preserves.html>

³ Benoiel, D. (1974). *Northwest foraging: A guide to edible plants of the Pacific Northwest*. Lynnwood, Wash.: Signpost. <http://www.fs.fed.us/global/iitf/pdf/shrubs/Mahonia%20aquifolium.pdf>

⁴ <http://www.fs.fed.us/global/iitf/pdf/shrubs/Mahonia%20aquifolium.pdf>

Photo: <http://www.plantcare.com/encyclopedia/grape-holly-2342.aspx>

Common name: Oregon grape, mountain Oregon grape, low Oregon grape, and long-leaved Oregon grape^{1,2,3,4}

Scientific name: *Berberis nervosa*

Plant family: Berberidaceae, Barberry Family
Another family name is *Mahonia*⁴

Habitat: *Berberis nervosa* is a low growing evergreen shrub with stems ¼ to 2 ft tall, showing scars of proceeding year's growth. The leaves are long, slender and have yellow flowers sometimes tinged with rose or purplish. The fruit is a berry like blueberries and has a similar blue ranging from dark blue to purple and has a white waxy coating.¹ The name of the plant *nervosa* means veined or sinewy which explains the given name after looking at the shape and style of the leaves. Has a sporadic blooming cycle of about 6 months. The plant is easy to tell by the flowers because they all have 6 petals, sepals, and stamens, and start to bloom around early spring and on from there.⁵ The leaves are oval looking with rounded halves and pointed tips edging the leaf.



Range: *Berberis nervosa* can be found throughout the Pacific Northwest, usually in areas with a high rate of precipitation. Common on the Coast range and in the Cascades, it prefers shady areas. It grows in coniferous woods at all elevations in the Columbia Gorge, usually in a mixture of moist coastal and dry interior forests.³ The plant often occurs in the light of such low intensity that the plants do not bloom, or produce only a few bleached and pallid flowers. Regardless of whether or not the plant has flowers, the leaves are very distinct.⁵

Historical and Contemporary Uses

Berberis nervosa has a very distinct and bitter taste due to its presence of alkaloids, including berberine which is used for various purposes such as digestive track issues, skin conditions, tuberculosis, hepatitis, kidney disease, and urinary track disorder. Berberine may kill many types of bacteria, including *E. coli*, and prevent bacteria from adhering to bladder lining. Oregon grape contains tannins that cross link proteins in the linings of the nose and throat, or in digestive track, to seal them against infection.^{6,7,8,9} Due to its activity as a cholagogue (increases the flow of bile), *Berberis nervosa* has been used by native Indians for years for digestive issues and is still used today. Oregon grape also contains a natural antibiotic.⁶

¹ Gilkey, Helen. *Handbook of NW Flowering Plants*. Corvallis: Oregon State College, 1946. 111. Print.

² Hankins, Leslie. *Wild Flowers of the Pacific Coast*. 3rd. USA: Binforde and Mort Publishers, 1973. 119. Print

³ Jolley, Russ, and . *Wildflowers of the Columbia Gorge*. Portland: Oregon Historical Society Press, 1988. 154. Print.

⁴ Kozloff, Eugene. *Plants of Western Oregon, Washington, and B.C.*. Portland: Timber Press, 2005. 148. Print.

⁵ Clark, Lewis. *Wild Flowers of the Pacific Northwest*. 3rd. British Columbia: Harbour Publishing, 73,76,98. 173, 183, 191. Print

⁶ Christensen, Stephen. "Oregon Grape as a Medicine." *Natural Medicine*. Discovery Communications, LLC, n.d. Web. 9 Oct 2011. <<http://stephen-a-christensen.suite101.com/oregon-grape-as-a-medicine-a118500>>.

⁷ Discovery Health. . "Medical Uses for Oregon Grape." *Discovery Health*. Discovery Communications, LLC, n.d. Web. 9 Oct 2011. <<http://health.howstuffworks.com/wellness/natural-medicine/herbal-remedies/medical-uses-for-oregon-grape-ga.htm>>.

⁸ Annie's Remedy, . "Oregon Grape Mahonia aquifolium ." *Annie's Remedy*. Annie's Remedy, n.d. Web. 9 Oct 2011. <http://www.anniesremedy.com/herb_detail245.php>.

⁹ Wikipedia. . "Oregon-grape." *Wikipedia*. Wikipedia, n.d. Web. 9 Oct 2011. <<http://en.wikipedia.org/wiki/Oregon-grape>>.

Photo credit: *Berberis nervosa*. DWARF OREGON GRAPEwww2.ups.edu

Common name: salal

Scientific name: *Gaultheria shallon*

Native American names: sallal (Chinook)¹

Plant family: Ericaceae

Description: Salal is one of the most common understory shrubs that spread along the forest floor. Stems are thick and hairy and are variable in height.² **Leaves** are evergreen, alternate, thick and leathery, dark green and finely toothed.² **Flowers** are small whitish/pinkish inflorescences at the branch tips. **Fruits** are dark purple/blue berries with ripe seeds in Sept-October.³



Habitat and Range: *Gaultheria shallon* grows in low to medium elevations, from coniferous Douglas-fir forests to rocky bluffs and the coast. It is found in Western North America from California to British Columbia.³

Historical and Contemporary Uses

Gaultheria shallon has been used historically and presently by different Native American tribes in the Pacific Northwest and Western United States. The Kwakwaka'wakw tribe has used these berries as part of a meal during large feasts. The Haida have used the berries from salal for thickening salmon eggs, and the Ditidaht have used young leaves as a hunger suppressant.² *Gaultheria shallon* has been used for trading and selling with Native American tribes when mixed with other berries. The fruits are eaten both fresh and dried, used as sweeteners and in jams and preservatives.²

Gaultheria shallon is used medicinally as an astringent, a poultice, and a stomach tonic. The poultice consists of a mixture of the toasted, pulverized leaves that can be used to help heal cuts, burns, and sores. The stomach tonic is made from an infusion of the leaves, and helps to treat diarrhea, coughs and tuberculosis.³ Salal is also known to be used to create different colored dyes; a dark purple from the berries and a greenish-yellow from the leaves.³ Wild harvested salal is used as a floral green in various floral arrangements.⁴

¹ Denes, Andrew H. *On the Duration of Salal*. *American Speech* Vol. 53 (1978): 210-214.

² Pojar, Jim and Andy MacKinnon. *Plants of the Pacific Northwest Coast*. B.C. Ministry of Forests and Lone Pine Publishing, 1994.

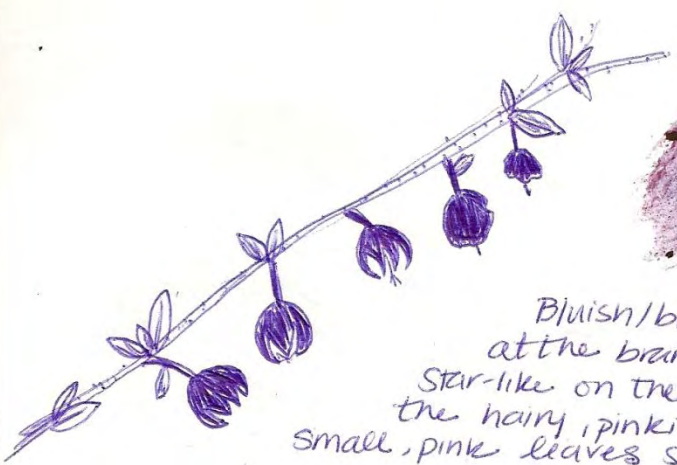
³ Plants For a Future Database. 1996-2010. <http://www.pfaf.org/>.

⁴ Ballard, Heidi and Lynn Huntsinger. *Salal Harvester Local Ecological Knowledge, Harvest Practices and Understory Management on the Olympic Peninsula, Washington*. *Human Ecology*, 34 (2006): 529-547.
Journal page on the following page by Sierra Predovich

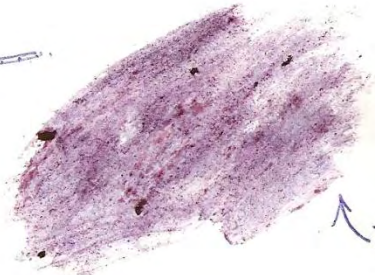
Journal Assignment #5

11/26/11 Fairmount Neighborhood

Salal, ~~Clay~~ Gaultheria
Shallon



Bluish/black berries
at the branch tips open
star-like on the underside of
the hairy, pinkish stem.
Small, pink leaves surround the
berries.



Dark purple
juice from
the inside
of the
salal
berries



Leaves are
alternate, thick,
leathery, dark
green & have
finely serrated
margins.



Flowers are
small, white
& urn shape
Alternate
arrange
along
stem

Common name: ocean spray, cream bush, California spiraea, meadow sweet, ironwood

Scientific name: *Holodiscus discolor*

Native American Names: Sqa'tl (Chehalis), k!atsi'tc (Klallam), k'aitsatcl (Lummi), tsik'wip (Makah), katsa'qwats (Skagit), qatsa'gwats (Snohomish, Squaxin, Swinomish)

Plant family: Rosaceae



Description: Ocean spray is a deciduous shrub that can grow up to 15 feet in height. The leaves are grayish green in color with shallow toothed edges and are alternately arranged on its pithy whitish stems. They are typically up to 4" long. The plant has tiny white flowers that grow in clusters and have a sweet fragrance.¹ The large, white to cream, lilac-like flower plumes are dazzling in late spring to early summer gardens. The flowers then turn a tan to brown color and last on the plant through winter.¹ Ocean spray provides a favorite source of nectar for many kinds of adult butterflies, but is also a favored larval host plant for specific butterfly species including: Spring azures, Pale swallowtails, Lorquin's admirals, Gray hairstreaks.²

Habitat and Range: Ocean spray thrives in shaded as well as sunny habitats. It adapts well to most soil conditions, from course soils to fine textured soils. It mostly grows in the forest shrub layer but is also found near stream banks, moist woodlands, and rocky and talus slopes. It does exceedingly well on dry slopes and at the edge of deciduous forests of alder and cascara. Due to its high tolerance of sun, it can survive on the edges of freeways without any extra watering.³ Ocean spray is commonly found west of the Cascades towards the coast. It can grow in habitat that is at sea level to 7000 ft. It is found among the high peaks of the Great Basin mountain ranges. It is native to western North America from British Columbia to southern California including areas of Montana, Colorado and Arizona.

Historical and Contemporary Uses

Historically, ocean spray was very important to the indigenous peoples of the Great Basin area and along the West coast of the United States. They made good use of its hard, fire resistant wood. The branches were used as tongs to assist with eating and in the making of weaponry such as arrows for hunting, and fishing hooks. It was also used to make digging sticks, toys for children, teepee post holders, bows for children and drum hoops.¹

The plant has a wide variety of medicinal properties that were very important to the indigenous people and continue to be used today. The Makah and Lummi tribes of Washington would make a decoction from the bark to use as an eyewash. The Lummi tribe would also use the blossoms in tea as a treatment for diarrhea. The Chehalis of Oregon would make an infusion out of the seeds as a blood purifier and for the treatment of smallpox, black measles and chicken pox. A poultice of leaves was made to cure sore lips or feet and as a blood purifier by the Squaxin. Today, ocean spray is commonly used in place of yarrow flowers in bouquets. They are also used in erosion control due to their shallow root system and the fact that they can grow in just about any climate.¹

¹ "Ocean Spray's Uses." *The Herbalist's Path*. Web. 13 Nov. 2011. <<http://herbalistpath.blogspot.com/2007/06/ocean-sprays-uses.html>>.

² "Plant List - Native Plant Guide." *Department of Natural Resources and Parks, King County, Washington*. Web. 13 Nov. 2011. <<http://green.kingcounty.gov/gonative/Plant.aspx?Act=view>>.

³ Pojar, Jim, A. MacKinnon, and Paul B. Alaback. *Plants of the Pacific Northwest Coast: Washington, Oregon, British Columbia & Alaska*. Redmond, WA: Lone Pine Pub., 1994. Print.

Picture taken from <http://www.bentler.us/eastern-washington/plants/shrubs/ocean-spray.aspx>

Common name: osoberry

Scientific name: *Oemleria cerasiformis*

Plant family: Rosaceae



Description: Osoberry is a deciduous shrub reaching up to 15 feet in height. **Leaves** are oblong-elliptical, 1-1.5" long, light green, alternate, simple, and have smooth margins. In the spring, fresh leaves have the taste of cucumber. **Flowers** are white with 5 petals, 15 stamens, and are about 1 cm in length. These appear very early in the year and have a smell compared to cat-urine. **Fruit** starts off peach-colored, then ripens to a bluish-black. The berries can be up to ½" long, drooping, and have a large pit.

Habitat and Range: Osoberry prefers moist conditions, in either sun or shade. It ranges from British Columbia to California, on the west side of the Cascade Mountains.

Historical and Contemporary Uses

Oemleria cerasiformis is seen as an indicator of spring, because it is the first deciduous native shrub to flower. For this reason, hummingbirds, bees, and butterflies rely on its nectar in late winter. First Nation communities used and continue to use the Osoberry shrub for numerous medicinal reasons. The bark of the Osoberry were used to treat tuberculosis and as a mild laxative. It was chewed and mixed with oil and applied to sores. It is said that the consumption of the Osoberry was surrounded by a First Nations custom in which water was not allowed while eating them, and they dedicated a winter feast to it.

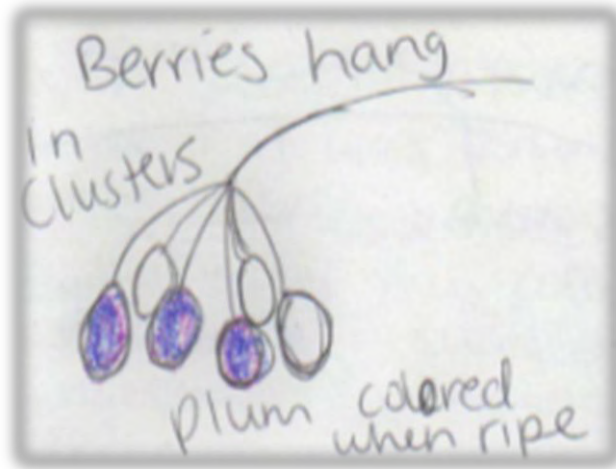
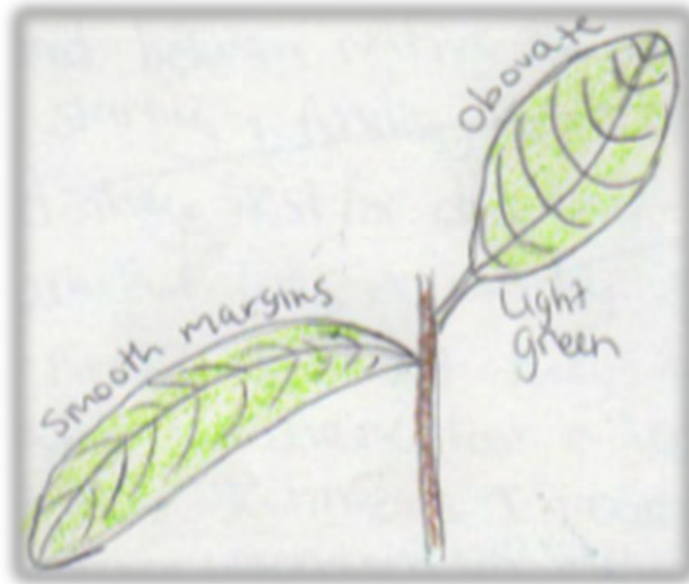
Oemleria cerasiformis can be cooked or dried. Strips of bark were also used to bind harpoon tips. Tea can be made from the bark, and was believed to cleanse the body.¹ It is fast growing and easily propagated nature paired with fibrous roots makes it ideal for resisting erosion and bring back native plants to a restored area. Some projects decide to make clones that may root more readily.² Nectar in the flowers is also very attractive to native bee species such as the Orchard Mason Bees.³

¹ Pojar, Jim, A. MacKinnon, and Paul B. Alaback. *Plants of the Pacific Northwest Coast: Washington, Oregon, British Columbia & Alaska*. Redmond, WA: Lone Pine Pub., 1994. Print.

² Gonzalves, Pete. "Indian Plum." USDA NRCS, May 2009. Web. <<http://www.plant-materials.nrcs.usda.gov/pubs/orpmcfs9127.pdf>>.

³ "Oemleria: Indian Plum." *Portland Nursery*. Web. <http://www.portlandnursery.com/plants/natives/oemleria.shtml>
Drawings on following page by Chandler Wherry

Osoberry
Oemelaria cerasiformis



Common name: Pacific ninebark

Scientific name: *Physocarpus capitatus*

Plant family: Rosaceae

Description: The Ninebark is a deciduous shrub reaching up to 13 feet. **Leaves** are alternate, 3-10 cm long, 3-5 lobed, have fine hairs on the bottom and serrated margins⁴. **Flowers** have 5 petals, white, small, have pink stamens, grow in clusters, and appear in late April and last until July. The **Bark** is reddish, papery, and can be peeled away in layers.^{1,2}



Habitat and Range: *Physocarpus capitatus* prefers moist soil and partial shade. It ranges from Alaska down to southern California, west of the Cascades³.

Historical and Contemporary Uses:

Pacific ninebark has been used medicinally as a laxative, and to treat gonorrhea and sores. The Nuxalk and Coast Salish Native Americans use it this way by making a tea from the outer bark¹. The bark is toxic so is also used to induce vomiting by many tribes including the Hesquiat. The Kwakiutl and Saanich people use the root extract as a laxative.³ This shrub has numerous material uses as well. The Karok and Hesquiat people of British Columbia use the branches to make arrows while the bark was also soaked with Cedar bark to make a dark brown dye.³ The Cowichan have made knitting needles from the wood.¹ Today, the Pacific Ninebark is used in restoration projects. It provides good shelter and nesting sites for birds and mammals. It isn't palatable for most animals, which makes it immune to browsing habits. It is fast growing and easily propagated. Its fibrous roots make it a great stabilizer for riverbanks and wetland habitats.⁴

¹ Pojar, Jim, A. MacKinnon, and Paul B. Alaback. *Plants of the Pacific Northwest Coast: Washington, Oregon, British Columbia & Alaska*. Redmond, WA: Lone Pine Pub., 1994. Print.

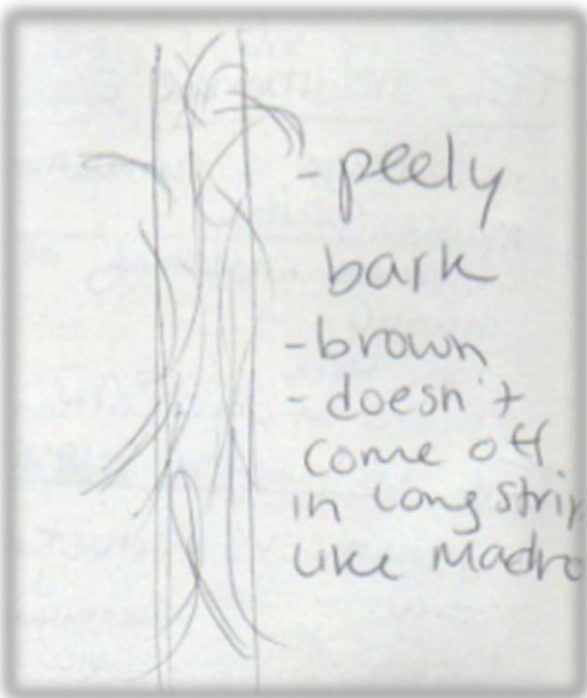
² "Pacific Ninebark." *Washington Native Plant Society*. 08 Nov. 2007. Web. <<http://www.wnps.org/>>.

³ "Physocarpus Capitatus." *Native American Ethnobotany*. University of Michigan- Dearborn. Web. <<http://herb.umd.umich.edu/>>.

⁴ "Plant Fact Sheet; Pacific Ninebark." *USDA Plants Database*. USDA NRCS, 28 June 2007. Web. <<http://plants.usda.gov>>. Drawings on the following page by Chandler Wherry

Pacific ninebark

Physocarpus capitatus



Common name: coastal black gooseberry, wild gooseberry, spreading gooseberry

Scientific name: *Ribes divaricatum*

Plant family: Grossulariaceae



Description: Coastal black gooseberry is a deciduous shrub that grows from 3 to 7 feet tall with dark green, glossy leaves. They are 2-5 centimeters across with deeply indented lobes that are roughly maple leaf shaped. Where the leaf attaches to the stem, there are one to three spines. The flowers are green or purple with white to reddish petals, with four or fewer flowers in an inflorescence. The fruits are round, dark purple or black and smooth, approximately 1 centimeter long.¹

Habitat and Range: The shrub grows at low elevations in west-side forests, coastal, meadows,² wet areas, moist open woods, canyons, and coastal bluffs from British Columbia to California.³ It likes full sun to partial shade or dappled sunlight.³

Historical and Contemporary Uses

The primary use of *Ribes divaricatum* is as a food. Various Native American groups eat the fruit of this species in its fresh, dried, cooked, or preserved state. The majority of these groups simply eat the berries ripe, raw, and fresh, but others like the Cowlitz (Central Washington) eat them while they are still green. Another variation is the Hesquiat (Vancouver Island and surrounding continental coast) eating the ripe berries with oil, rather than plain. Although less common, some groups cooked the berries, the Bella Coola (British Columbia) reduced the berries into a sauce eaten with other foods. Usually when groups cooked the berries, they were also storing them as a winter food. The Cowlitz and Gosiute both dried berries, but again the Cowlitz used green berries, not ripe berries. The Coast Salish (Northern Vancouver Island and northern coast of continent) did not eat the berry raw but only cooked it into a dense cake that could be saved for the winter months. The Thompson (British Columbia) crushed the berries into a drink and also cooked them in a sort of pie.⁴ Often these groups view *Ribes divaricatum* similarly to how modern society views a dessert.⁵ In fact, like the Thompson group, modern Americans gather the wild gooseberry and bake it into pies and other dishes. Though European varieties of gooseberry are more common or traditionally used berries for this purpose, *Ribes divaicatum* is cultivated by some Northwest nurseries for their sweet and juicy fruits.⁶

Various Native American groups also used *Ribes divaricatum* as cordage, netting, pipstems, and sharp tools. The Saanich and Cowichan boiled the root with cedar and wild rose, before pounding it and weaving it into rope, which they used to make reef nets for fishing. The Bella Coola hallowed out the stalks of the plant and used them as pipe stems for smoking. The Coast Salish used the thorns, which grow where the leaf meets the stem, as sharp tools for boils, removing splinters, and for tattooing.⁷

¹ Jim Pojar and Andy MacKinnon. *Revised Plants of the Pacific Northwest Coast* (Vancouver, BC: Lone Pine Publishing, 2004), 85.

² Mark Turner. "*Ribes divaricatum*," Turner Photographics, accessed October 1, 2011. <http://www.pnwflowers.com/flower/ribes-divaricatum>

³ Seven Oaks Native Nursery. "*Ribes divaricatum coastal black gooseberry*," accessed October 2, 2011. <http://www.sevenoaksnativenursery.com/native-plants/shrubs/ribes-divaricatum/>

⁴ Daniel E. Moerman. *Native American Ethnobotany* (Portland, OR: Timber Press, 1998):477.

⁵ David H. French. "Ethnobotany of the Pacific Northwest Indians," *Economic Botany* 19, No. 4 (Oct. - Dec., 1965): pp. 379-80.

⁶ Elizabeth S. O'Neill. "Wild Gooseberries and Currants," *Mother Earth News*, September/October 1982. Accessed October 2, 2011, <http://www.motherearthnews.com/Organic-Gardening/1982-09-01/Wild-Gooseberries-and-Currants.aspx>

⁷ Moerman, 477.



Collected above the mouth of the Sandy River, Multnomah County, Oregon, or Skamania County, Washington, April 8, 1806

SPREADING GOOSEBERRY, *RIBES DIVARICATUM* DOUGLAS

The spreading gooseberry is a relatively localized species found from southern British Columbia south to California. Its berries are purple-black and edible. Because of its variability, three varieties are recognized today; the one that Lewis found in 1806 is var. *divaricatum*. While the plants are usually unarmed, bristly examples are sometimes found, suggesting that the spreading gooseberry represents a bridge between wild currants and gooseberries. This is one reason why all of the plants formerly in the genus *Grossularia* are now included in the genus *Ribes*.

The species name, *divaricatum*, means "diverging" or "spreading." Although Meriwether Lewis collected the plant,

Frederick Pursh did not recognize it as a new species. David Douglas later found the spreading (or coastal black) gooseberry growing on the "bank of streams near Indian villages, on the North West Coast of America" and gave it the species name *divaricatum* for its spreading, straggly branches.⁷

There is not much left of the specimen that Lewis collected—only one branch with emerging leaves. Frederick Pursh's note (copied from Lewis's description) on the herbarium sheet reads only "Deep purple Gooseberry—Columbia R. April. 8th 1806." Given the paucity of material, Pursh was unable to assign the specimen to a species, so it remained for Douglas to rediscover the plant two decades later.

From *Lewis and Clark's Green World: the expedition and its plants* by A. Scott Earle, James L. Reveal. New York: Farcountry Press, 2003, page 145.

Scientific name: *Rubus leucodermis*

Native American name: Comox (east coast of Vancouver Island) called them “little stickers”¹

Plant family: Rosaceae



Description: Deciduous shrub. Erect, arching up to 2m high of thorny shoot. Crown perennial, canes biennial. Stems covered with a whitish film. Leaves are pinnate with five leaflets in the first year and three in the second. White-pinkish small flowers (2-3cm) in clusters at terminal or leaf axis. Hairy, aggregate fruits of clusters of tiny drupes initially red and becoming purple to black. Ripening July-August.²

Habitat and Range: Disturbed sites, clear cuts, or burn sites. Thickets and open forests in low to mid-elevations.

USA (AK, AZ, CA, ID, MT, NM, NV, OR, UT, WA),
CAN (BC)

Historical and Contemporary Uses³

Drug Pomo, Kashaya Antidiarrheal Infusion of the leaves of root taken for diarrhea.

Gastrointestinal aid Infusion of the leaves or root taken for upset stomach. **Other** Infusion of leaves or root taken for weak bowels. **Shoshoni Dermatological Aid** Poultice of powdered stems applied to wounds and cuts **Thompson Misc. Disease Remedy** Mild infusion of washed roots taken for influenza

Food Many tribes eat the ripe berries in a variety of forms: fresh off the plant, dried into cakes or bread, soaked in water for a beverage, sun-dried and stored for later use, pies, or jams. They often accompanied fish, dried meat, or for dessert. For some tribes such as the **Okanagon**, the fruit was a staple in their diet. Young shoots were sometimes peeled and eaten raw or cooked in the spring (**Comox**)

Dye Thompson Juice used as a stain. **Coast Salish** combined it with fruits of salal, black twinberry, and wild raspberry for a purple stain.

¹ Gunther, E. (1945). *Ethnobotany of Western Washington; The Knowledge and Use of Indigenous Plants by Native Americans*. Seattle: University of Washington Press.

² Pojar, Jim and Andy MacKinnon eds. 1994. *Plants of the Pacific Northwest Coast*. Vancouver, BC: Lone Pine.

³ Goodrich, Jennie, and Claudia Lawson. 1980. *Kashaya Pomo Plants*. Los Angeles: American Indian Studies Center, University of California, Los Angeles.

Other references follow:

Moerman, Daniel E. 1998. *Native American Ethnobotany*. Portland, Oregon: Timber Press.

Turner, Nancy J., Laurence C. Thompson, M. Terry Thompson, and Annie Z. York. 1990. *Thompson Ethnobotany: Knowledge and Usage of Plants by the Thompson Indians of British Columbia*. Victoria: Royal British Columbia Museum.

NRCS: USDA: PLANTS Profile *Rubus leucodermis* Accessed September 2011.

Turner, Nancy J. 1995. *Food Plants of Coastal First Peoples*. Vancouver: UBC Press. Royal British Columbia Museum Handbook series.

Original artwork on the following page by Alese Colehour



Eat my
berries or young
shoots in spring!
Yum!

↑
Unlike
my brother,
Himalayan
blackberry,
I only have
three
leaflets.

Rubus leucodermis
blackcap raspberry

-AMC-

Common name: salmonberry

Scientific name: *Rubus spectabilis*

Native American names: Many reported, for example; Makah used ka'k'we'abupt for the plant and ka'k'we for the berry. Cowlitz used e'twanac for the plant and e'twan for the berries. The Lower Chinook named it "yunts".¹

Plant family: Rosaceae



Description: *Rubus spectabilis* is a deciduous shrub from 1-4 meters in height. It may grow as an individual, but usually occurs in a thicket. **Leaves** are alternate with 3 leaflets, sharply serrated, dark green color. **Flowers** are pink to magenta. **Fruit** is yellow to pink to red, raspberry-like.

Habitat and Range: *Rubus spectabilis* prefers moist woodland, and grows along streams or wetlands. It sometimes grows without shade. It grows from the Pacific coast to the Cascade Mountains, from Northern California to British Columbia and Alaska.

Historical and Contemporary uses: *Rubus spectabilis* has historically been used as a food by all the tribes where these plants grow. Fresh sprouts of the plant were gathered in the spring and eaten fresh or fried, boiled or steamed. These sprouts were traded locally by the Nuu-Chah-Nulth.² The berries were eaten fresh, and sometimes mixed with oolichan (oil extracted from small fish) or dried salmon roe. The berries are also known to have been traded between tribes.² Salmonberry patches frequently "belonged" to a certain family; the owner was the exclusive gatherer until there were enough accumulated for a feast. Then the whole tribe could gather from the patch.³ Salmonberry plants were included in tended gardens. Less important uses of the salmonberry plant included some medicinal uses, as well as implements made from the branches of the plant. Modern Native Americans and non-Native people harvest salmonberries today. The berries are eaten fresh, made into jams or pies, and canned.

¹ Gunther, Erna, *Ethnobotany of Western Washington: The Knowledge and Use of Indigenous Plants by Native Americans* (University of Washington Publications, 1973), 35.

² Turner, Nancy J. Loewen, Dawn C. "The Original "Free Trade": Exchange of Botanical Products and Associated Plant Knowledge in Northwestern North America". *Anthropologica*, XL, 1998.

³ Pojar, Jim, Andrew MacKinnon, and Paul B. Alaback. *Plants of the Pacific Northwest Coast, Washington, Oregon, British Columbia and Alaska*. Lone Pine Pub, 1994.

Sketch below: A sketch by Monica Welch of *Rubus spectabilis* from the garden at the Museum of Natural and Cultural History, University of Oregon. In this sketch the three leaflets are shown, as well as the multiple cane trunk pattern. The bark on the oldest canes typically shreds and peels off.



Chinook legend: There was a Chinook legend that says coyote was to place these berries into the mouth of each salmon that he caught in order to assure continued good fishing (blog by “Echohawk”, a contemporary Native American).

Interesting anecdote: The time that salmonberries ripen (May or June) is associated with the song of the Swainson’s thrush, and is sometimes called the salmonberry bird by northwest coastal Native Americans and others. The bird’s call is heard then because it arrives in its migration from Central America. Here is a link to a YouTube video in a Pacific Northwest forest with the salmonberry bird singing his song.

<http://www.youtube.com/watch?v=lpLnRUoJNQ>

Common name: Scouler's willow

Scientific name: *Salix scouleriana*

Native American name: Kai – Navajo name for willow tree

Plant family

Salicaceae



Description

Scouler's willow can be classified as a tall, spindly shrub or a small tree. The leaves are alternate, broad and wide at the middle, but taper to a pointed/rounded tip. The young leaves and sticks are very velvety. The flowers can be identified easily as male or female, and the ovaries of the flowers are silky.¹

http://www.flora.dempstercountry.org/0.Site.Folder/Species.Program/Species2.php?species_id=Salix.scouler

Habitat and Range

Scouler's willow is found along stream and river banks, upland tickets, clearings, open deciduous or coniferous forests as well as wetlands and the edges of forests in low to mid elevations.¹ Scouler's willow is common in the western portion of the United States. It can be found from Alaska to California and as far east as South Dakota.²

Historical and Contemporary Uses

Historically, the willow bark has been used for pain, fever reduction, and many other ailments by chewing the bark. It has aspirin-like properties that has used by indigenous people in the Pacific Northwest for centuries. A poultice can also be made from the bark and sap for the treatment of wounds or serious cuts. Decoction from the roots has also been used historically to treat dysentery. Also a decoction can be made from the branches for women to take after giving birth to increase blood flow.³ The stems and branches are also used as weaving material for baskets since they are notoriously flexible. The bark can be stripped from the shrub and used for weaving clothing, bags or as fiber for ropes. Since the stems are lightweight and shock absorbing, the material has been and still is ideal for the use in manufacturing prosthetics.⁴ The Secwepemc tribe of B.C. uses the wood for smoking fish, drying meat, as well as for fishing nets, lashing, sewing, ropes and decoration. They use the branches and twigs to make decoctions to treat, body odor as well as for diaper rashes.⁵

¹ MacKinnon, Andy and Jim Pojar. *Plants of the Pacific Northwest Coast*. Vancouver: Lone Pine Publishing, 1994.

² USDA. *Plants Profile*. n.d. 6 November 2011 <<http://plants.usda.gov/java/profile?symbol=SASC>>

³ Herbs, Natural Medicinal. *Scouler's Willow*. n.d. 6 Nov. 2011 <http://www.naturalmedicinalherbs.net/herbs/s/salix-scouleriana=scouler's-willow.php>>.

⁴ University, Oregon State. "Scouler's Willow." April 2005. 5 November 2011 http://oregonstate.edu/dept/range/sites/default/files/Scouler_27s_20Willow.pdf

⁵ Wikipedia. *Willow*. 3 November 2011. 6 November 2011. <<http://en.wikipedia.org/wiki/Willow>>.

Drawing by Beth Sanner

Common name: poison oak

Scientific name: *Toxicodendron diversilobum*

Native American name: K'wan'-tee-tr'vt (Tolowa Dee-ni')¹

Plant family: Anacardiaceae

Description

T. diversilobum can grow as either a shrub or climbing vine. As a shrub it can grow from 1 ft to 9 or more feet in height.² Vines vary between 10-30 feet in length.³ *T. diversilobum* features leaflets; each leaf features three pinnate leaflets, each between 3-7 cm and oval in shape. *T. diversilobum* leaves can resemble oak leaves, and as they share habitat with oaks, it is important to note this similarity.³ Leaves are deciduous, and change color from green and greenish-red in the spring and summer to dark red in the fall. Male and female *T. diversilobum* flowers occur separately. Furthermore, each individual has one sex of flower present.² Therefore, *T. diversilobum* cannot self-fertilize.² Flowers are inflorescent, white and grow from leaf axils,⁴ and range from shades of white, green and yellow in color. They bloom in the spring.⁵ *T. diversilobum* fruit are small white drupes, which are inedible to humans but are consumed by some birds and rodents.⁶ These fruit bear in the summer and fall.³ *T. diversilobum* vines spread themselves via roots and by working their stems into gaps.³ Shrubs spread by rhizome activity. Seeds are dispersed by birds. Shoots can be used to propagate.²

T. diversilobum features a compound urushiol. Urushiol is an oily toxin, which can cause a range of allergic reactions upon skin contact.^{2,3} Contact with any part of the plant can result in a reaction, as all parts contain the toxin.^{3,5} Burning of the plant poses a special threat, as inhalation of urushiol can be deadly.^{3,5}

Habitat and Range: *T. diversilobum* grows in a wide variety of climates and soil types. It grows in elevations less than 5,500 ft. It is moderately shade tolerant. *T. diversilobum* can be found flourishing in a variety of woodland and riparian habitats, as well as in mountainous habitat.³ It also grows well on stream banks and in thicket.⁵ Its adaptability and tolerance for varied habitat is evidenced by its status as the most abundant shrub in California.³ However, *T. diversilobum* does require moist soil to thrive.² *T. diversilobum* is found throughout the Northwest, from British Columbia to Southern California.^{6,7}



Historical and Contemporary Uses:

T. diversilobum had a variety of uses in the pre-European contact Pacific Northwest. Its branches were used, and still may be used as a basket-making material throughout central and southern California by a variety of tribes.⁸

¹ Bommelyn, Loren Me'-lash-ne. *Taa-laa-wa Dee-ni' Wee-ya'*; Formerly published as *Now You're Speaking-Tolowa The Deeni people, their language*. 2nd Edition, 2006

² Plants For a Future Database. Plant Profile *Rhus diversiloba* - Torr.&A.Gray. Accessed via <http://www.pfaf.org/user/Plant.aspx?LatinName=Rhus+diversiloba>

³ Forest Service Plant Database. Accessed via <http://www.fs.fed.us/database/feis/plants/vine/toxdiv/all.html>

⁴ University of Washington's Burke Museum of Natural History and Culture. Herbarium Database. Accessed via <http://biology.burke.washington.edu/herbarium/imagecollection.php?Genus=Toxicodendron&Species=diversilobum>

⁵ University of Texas at Austin Larry Bird Johnson Wildflower Center. Accessed via http://www.wildflower.org/plants/result.php?id_plant=TODI (

⁶ United States Department of Agriculture Natural Resources Conservation Service Database. Plant Profile for *Toxicodendron diversilobum*. Accessed via <http://plants.usda.gov/java/profile?symbol=TODI>

⁷ UC Berkeley, Cal Photo Database. Accessed via http://calphotos.berkeley.edu/cgi/img_query?query_src=photos_index&where-taxon=Toxicodendron+diversilobum

⁸ University of Michigan-Dearborn Native American Ethnobotany Database. Accessed via <http://herb.umd.umich.edu/herb/search.pl> query: *Toxicodendron diversilobum*.

Poison Oak

When I was seventeen, I worked at a pizza parlor. I would weed gardens on weekends to make extra cash. My brother set me up with his wife's parents; they needed their back and front yard done! "Family always pays great," I thought. Of course I accepted. They lived about three miles from where I did. In high school, I was a runner; I decided to run to their house for a good workout. It was a hot August day, probably about 97 degrees Fahrenheit. I got a good workout in, that's for sure!

Weeding with gloves is such a drag in the summer. I always ended up taking them off. Weeding around rose bushes is a drag, too. While weeding in their backyard, I got caught by a rose bush, so I thought. When I looked at my hand a few minutes later, there was a raised line going from knuckle to wrist. I had heard that rose-thorn cuts cause an extra irritation of the skin, so I wasn't worried.

I've always been horribly allergic to poison oak. What kind of person would weed without gloves, if they were really allergic to poison oak? Well, I was under the impression that poison oak didn't grow on the valley floor! What a big mistake...

I ran home after weeding, with my little cut on my hand stinging. I wiped my face like I always do, rubbing the sweat off my brow with either hand; it was scorching outside. By the time I got home, I was beat! The first thing I do after a run is take a nice, lukewarm shower. That day was no different. I hopped in; I had a bar of my own soap so I lathered up! The next morning, I had the worst poison oak rash I have ever had. My face was so swollen that I was unrecognizable. My hand had split open into a terrible sore, and my arms and legs were covered in sores.

I learned two valuable lessons that day. The first one: always assume poison oak grows everywhere. The second one: never weed without gloves. I encourage anyone who reads this to take these lessons to heart!

-Carson Viles

III. Trees



Brian Basor

Pseudotsuga menziesii
Douglas fir

Common name: vine maple

Scientific name: *Acer circinatum*

Native American name: Nehalem

Plant family: Aceraceae^{1,2,3}



Description: The vine maple is a deciduous tree or shrub that grows between 3-10 meters high. The leaves are opposite and almost circular with 7-9 triangular lobes, which have single or double teeth. The leaves are green on top and paler green and fuzzy on the bottom. Small clusters of flowers emerge with leaves and turn into red fruit.⁴

Habitat and Range: The vine maple's habitat includes both riparian areas as well as Douglas fir forests since it prefers moist soil and shade.⁵ The vine maple grows on the west coast, west of the Cascade Mountains from northern California up to southern British Columbia.⁶

Historical and Contemporary Uses

Natives on the west coast have used and may still use the stems of the vine maple to weave baskets. The baskets are used to store food as well as for baby carriers.⁷ The sap of the vine maple can be used as a syrup by boiling off the water since it contains sugar.⁸ Native Americans on the Pacific Northwest coast use the vine maple's wood to make tools, such as eating utensils, ax handles, and frames for fishing nets.⁹



¹ J.S. Peterson @ USDA-NRCS PLANTS Database. USDA, NRCS. 2011. The PLANTS Database (<http://plants.usda.gov>, 4 November 2011). National Plant Data Team, Greensboro, NC 27401-4901 USA.

² J.S. Peterson @ USDA-NRCS PLANTS Database. USDA, NRCS. 2011. The PLANTS Database (<http://plants.usda.gov>, 4 November 2011). National Plant Data Team, Greensboro, NC 27401-4901 USA.

³ Teashon, Debbie. "Acer circinatum." *Rainy Side Gardeners*. Rainy Side Gardeners, 2011. Web. 4 Nov 2011. <http://www.rainyside.com/plant_gallery/natives/Acer_circinatum.html>.

⁴ Clay-Poole, Scott. "Washington State Department of Transportation." *Ethnobotany - Shrubs/Trees: Acer Circinatum - Vine Maple*. WSDOT, 2011. Web. 7 Nov 2011. <<http://www.wsdot.wa.gov/environment/culres/ShrubsTrees.htm>>.

⁵ Favorite, Jammie. "Vine Maple Acer circinatum Pursh." *USDA: NRCS*. USDA, 24 May 2006. Web. 7 Nov 2011. <http://plants.usda.gov/plantguide/pdf/pg_acci.pdf>.

⁶ Favorite, Jammie. "Vine Maple Acer circinatum Pursh." *USDA: NRCS*. USDA, 24 May 2006. Web. 7 Nov 2011. <http://plants.usda.gov/plantguide/pdf/pg_acci.pdf>.

⁷ Favorite, Jammie. "Vine Maple Acer circinatum Pursh." *USDA: NRCS*. USDA, 24 May 2006. Web. 7 Nov 2011. <http://plants.usda.gov/plantguide/pdf/pg_acci.pdf>.

⁸ Facciola, S. 1990. *Cornucopia-a source book of edible plants*. Kampong Publications.

⁹ Favorite, Jammie. "Vine Maple Acer circinatum Pursh." *USDA: NRCS*. USDA, 24 May 2006. Web. 7 Nov 2011. <http://plants.usda.gov/plantguide/pdf/pg_acci.pdf>.

Vine Maple

As I rush from one workshop to another at a conference, my stress rises and I get more and more tired. Finally, I realize that I need to take some time for myself and go home to cook food. I walk outside and the cold, wet Oregon rain hits my face. After all, it is fall. What should I expect? Regardless, the rain does not help my mood.

I have a bike with me, but I decide to walk instead of biking because of the rain. I stride down the sidewalk, trying to get home before I'm soaked. Bright colors catch my eye. After all, it is fall. But this isn't just any fall. This fall the deciduous trees are even brighter and more vibrant than usual. Even though it is wet, I no longer mind and crouch down to pick up a particularly beautiful leaf. The leaf once grew from the vine maple tree next to me, but in fall it joins many others in falling to the ground to decompose and provide nutritious soil for the coming years.

I thank the tree for giving me some of the leaves with so many gorgeous colors to look at. I collect a few more, and go on my way. The rain still falls heavily, but I don't mind. The vine maple has taught me to slow down and appreciate and enjoy life. It has shared with me the gift of leaves, which I will go home and press before making them into Christmas presents to share with my family.

-Emma Newman

Common name: bigleaf maple, Oregon maple

Scientific name: *Acer macrophyllum*

Native American names: paddle tree (Lakwungen of Vancouver Island)¹

Plant family: Aceraceae



Description: Bigleaf maple is a large perennial tree, often multi-stemmed, and up to 35m tall. Young **bark** is green and smooth while older bark is gray-brown, ridged, and often covered with mosses, lichens, and ferns. Older trees provide an ideal environment for mosses because the bark is rich in calcium and moisture. The **leaves** are 5 lobed maple leaves 15-30 cm across. They are opposite, deciduous, and they excrete a milky sap when cut. The leaves turn yellow and fall off the tree in autumn. The **flowers** are greenish-yellow cylindrical clusters with flowers 3mm across. The **fruit** are golden-brown, paired winged seeds (samaras) about 3-6cm long, with wings spread in a v-shape.²



Habitat and Range: Bigleaf maple is found in dry to moist sites, often surrounded by Douglas fir. Also often found on sites disturbed by fire, clearing, or logging.² It is found in California, Oregon, Washington, and British Columbia from low to middle elevations.³

Historical and Contemporary Uses: In the Interior of British Columbia, indigenous people ate the young shoots raw in the spring. They also made a type of maple syrup, but because the sap has a low sugar content, it takes a large quantity of sap to make a small amount of syrup. The flowers are quite sweet and edible, and can be used in salads.¹ The Saanich of British Columbia used preparations from this tree to internally treat sore throats. Also, the leaves were rubbed on a young man's face at puberty to ensure he would not grow thick whiskers.³

Coastal peoples of British Columbia used bigleaf maple wood to make dishes and pipes, among other tools. Many groups along the Western Seaboard made paddles out of the wood, thus the name: paddle tree. The inner bark is used to make baskets, rope and whisks. The leaves are great for making temporary containers.¹

Because of its close grain and moderate hardness, today, maple wood is used commercially for furniture, interior finishing, and musical instruments.¹

¹ Government of British Columbia- Ministry of Forests: Tree Book; Bigleaf Maple
<http://www.for.gov.bc.ca/hfd/library/documents/treebook/bigleafmaple.htm>

² Pojar, Mackinnon. *Plants of the Pacific Northwest Coast*. Lone Pine Publishing, 2004, Vancouver, B.C.

³ USDA Natural Resources Conservation Service; PLANTS Profile for *Acer macrophyllum* (Bigleaf Maple)
<http://plants.usda.gov/java/profile?symbol=ACMA3>

Photos from: http://www.cushmanacabin.com/images/398_Big_Leaf_Maple.jpg and http://3.bp.blogspot.com/_oH7YVmrWh-s/SPV8tpUxOJI/AAAAAAAAB_I/t09U2PDJY78/s400/Acer+macrophyllum+leaf.JPG



I feel the photo on the left really shows how covered with mosses the older trees can get. I really enjoy being able to see the age through all the years of moss and ferns (I see some licorice fern [*Polypodium glycyrrhiza*] in there!). The photo below does a great job defining the shape of the tree and trunk (or how you would see the tree in fall and winter).



I am including the picture to the right to show the beautiful, and as I'm told, delicious flowers of the bigleaf maple. This picture gives me something to look forwards to during these cold dark November nights. I've been told that these flowers make a great addition to salads, and now I can't wait to try them! After a little research, I've also found that today, they are commonly battered and deep-fried. I'd be interested to try deep-fried flowers! I only hope that I can find some come spring! –Aidan Balbona



Photos from: <http://www.wildpnw.com/wp-content/uploads/2011/01/Bigleaf-maple-Tree-Year-1b.jpg> and http://www.gfawesome.org/mad_science/tree_guide/BROADLEAVES/MAPLE/BIGLEAFM.GIF and <http://1.bp.blogspot.com/-0BA5q3-sC A/Tz1E8ezRr/AAAAAAAAGJs/FoWaukqEBBQ/s1600/Bigleaf%2BMaple%2BFlower.jpg>

Common name: red alder

Scientific name: *Alnus rubra*

Native American names: Klallam (s'ko'niltc); Quinault (malp); Swinomish (suk'uba'ts) ¹

Plant family: Betulaceae

Description: Deciduous tree with thin, grey, smooth bark with white patches of lichen. Inner bark rusty red when cut. **Leaves** are alternate, broadly elliptic and sharp pointed at base. Margins are wavy, slightly rolled under with coarse blunt teeth. Leaves remain green until they drop in late fall. The **Flowers** are male and female catkins appearing before the leaves. Female (2 cm), male (5-12 cm). The **fruit** is a brown cone (2 cm) in clusters containing oval, winged, nutlets. ²



Habitat and Range: Moist woods, streambanks, floodplains, recently cleared land, often in pure stands. Low-elevations. ² USA ([AK](#), [CA](#), [ID](#), MT, [OR](#), [WA](#)), CAN (BC) ³

Historical and Contemporary Uses

Medicine Many tribes used/use a decoction of the inner bark as a purgative when ingested internally and as a remedy for sores, wounds, and other skin conditions externally. ⁴ Others used/use the decoction for respiratory illness such as tuberculosis. ²

Food The Straits Salish also ate/eat the inner bark in the spring. ²

Dye The inner bark is used as a red-orange-brown dye to color baskets, canoes, and fibers. Many such as the Coast Salish and Snohomish dyed their fishnets with alder to make them invisible to the fish. ⁴ The dye will hold fast when treated with urine.

Other The wood made an ideal fuel for smoking fish. ² Alder is used as a bioindicator species in areas prone to ozone pollution. In the presence of high ozone levels, alder leaves will show purple discoloration. ⁵

¹ Gunther, Erma. 1973. *Ethnobotany of Western Washington: The Knowledge and Use of Indigenous Plants by Native Americans*. University of Washington Press, Seattle.

² Pojar, Jim and Andy MacKinnon eds. 1994. *Plants of the Pacific Northwest Coast*. Vancouver, BC: Lone Pine.

³ NRCS: USDA: PLANTS Profile *Taxus brevifolia* Accessed October 2011.

⁴ Moerman, Daniel. 1998. *Native American Ethnobotany*. Timber Press, pages 61-63.

⁵ Allen, Jeannie. 2003. "[Watching Our Ozone Weather](http://earthobservatory.nasa.gov/Library/OzoneWx/)". NASA Earth Observatory.. <http://earthobservatory.nasa.gov/Library/OzoneWx/>. Retrieved 2008-10-11.

Gardner, Alexander. (1896). *Scandinavian folk-lore: illustrations of the traditional beliefs of the Northern People*. Social Sciences. Original artwork on the following page by Alese Colehour

Alnus rubra

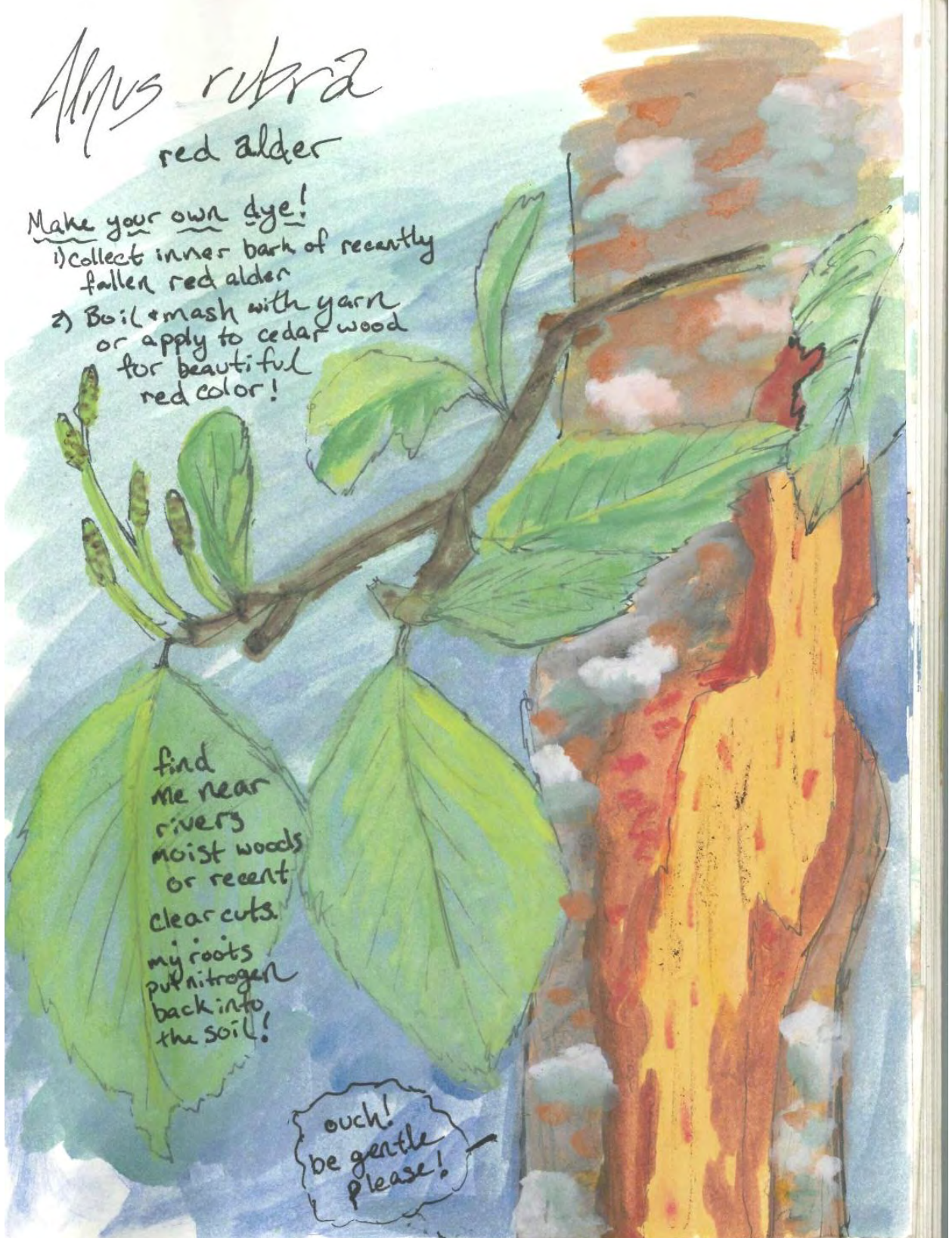
red alder

Make your own dye!

- 1) collect inner bark of recently fallen red alder
- 2) Boil & mash with yarn or apply to cedar wood for beautiful red color!

find me near rivers moist woods or recent clear cuts. my roots put nitrogen back into the soil!

ouch! be gentle please!



Common name: Pacific madrone (or madroño, madroña, strawberry tree¹)

Scientific name: *Arbutus menziesii***

Native American names: Salinan, Miwok, Pomo (Californian coast)²

Plant family: Ericaceae^{3,4,5}



Description: Pacific madrone trees are evergreens with peeling reddish bark that can grow to 30 meters, but usually grow to shorter heights depending on their environment. The alternate and oval leaves are about 15 cm long and are dark and waxy green on top and lighter green below. The trees have hanging clusters of white flowers that turn into bright small red berries. Pacific madrone trees are habitats for many birds.⁶

Habitat and Range: *Arbutus menziesii* grows at low to middle elevations in dry soils that have low-nitrogen levels. It is often found near Douglas firs and Garry oaks up and down the Pacific coast of the United States of America and Canada.^{7,8}

Historical and Contemporary Uses⁹

Native Americans use the berries to make cider, use the bark to make tea that helps cure colds and sore throats, and the leaves can also be chewed to reduce stomachache and cramp pain. The bark is very easy to obtain for making tea because it peels off, however reaching it can be difficult.

***Arbutus menziesii receives the "menziesii" part of its name from a European explorer named Menzies.*



¹ Immel, Diana L. "Plant Guide: Pacific Madrone." *USDA: NRCS*. USDA, 30 May 2006. Web. 16 Oct 2011. <http://plants.usda.gov/plantguide/pdf/cs_arne.pdf>.

² Immel, Diana L. "Plant Guide: Pacific Madrone." *USDA: NRCS*. USDA, 30 May 2006. Web. 16 Oct 2011. <http://plants.usda.gov/plantguide/pdf/cs_arne.pdf>.

³ "PLANTS Profile: *Arbutus menziesii*." *United States Department of Agriculture - Natural Resources Conservation Service*. USDA, October 2011. Web. 15 Oct 2011. <<http://plants.usda.gov/java/profile?symbol=ARME>>.

⁴ "Pictures - Pacific Madrone." *Best Pictures of Pacific Madrone*. Google Image Search, 2011. Web. 16 Oct 2011. <http://lh3.ggpht.com/_q2JM5SwT8Y/SvYE16hhmeI/AAAAAAAAANqk/QVR3v-fQ0Yk/Madrone_Pacific_4.jpg>.

⁵ Mark W. Skinner @ USDA-NRCS PLANTS Database. USDA, NRCS. 2011. The PLANTS Database (<http://plants.usda.gov>, 16 October 2011). National Plant Data Team, Greensboro, NC 27401-4901 USA.

⁶ Pojar, Jim, and Andy Mackinnon. *Plants of the Pacific Northwest Coast*. Vancouver, B.C.: Lone Pine Publishing, 1994. 49. Print.

⁷ Immel, Diana L. "Plant Guide: Pacific Madrone." *USDA: NRCS*. USDA, 30 May 2006. Web. 16 Oct 2011. <http://plants.usda.gov/plantguide/pdf/cs_arne.pdf>.

⁸ "PLANTS Profile: *Arbutus menziesii*." *United States Department of Agriculture - Natural Resources Conservation Service*. USDA, October 2011. Web. 15 Oct 2011.

⁹ Immel, Diana L. "Plant Guide: Pacific Madrone." *USDA: NRCS*. USDA, 30 May 2006. Web. 16 Oct 2011. <http://plants.usda.gov/plantguide/pdf/cs_arne.pdf>.

Madrone

Pacific madrone, what a beautiful tree

Your branches are toned
with vibrant red bark, that is clearly madrone
My, how you've grown up to the sky
You make a nice home, for birds that fly high

You prefer hill slopes with soil that is rough,
It lets you show off that you really are tough!

Your bark can be used in so many ways,
Even as toys for the children who play,
Your wood is made into many a tool
That is one of the reasons why you're so cool

But that is not the only thing you can do,
You surely can provide us with medicine too!
It does seem to me, your bark is calling with a plea,
"take me, take me, I'll make you a tea.
I help coat your throat or cure a cold
I can do anything you ask, when I am told"

The leaves that you grow
can be chewed to mellow
they help heal your stomach if it's in pain
and make you feel healthy, once again.

Thank you for your tools, your cures, and your beauty
You make the Pacific Northwest the best place for me

-Emma Newman

Common name: incense-cedar

Scientific name: *Calocedrus decurrens* (Calo-false, cedar-cedar)

Plant family: Cupressaceae¹



Description: This evergreen tree is tall and large with a twisted “rumpled” appearance from the mature branches.² The bark is reddish-brown, furrowed and flaky.² **Leaves** of this tree are scale-like needles that lay flat against the twigs and are said to look like a long stemmed wine glass.² **Seed cones** are about 1 inch long and when open, resemble a fleur-de-lis or duck bill. **Pollen cones** are at the branch tips and are a yellowish color that comes out in mid-winter.²



Habitat and Range: *Calocedrus decurrens* likes dry regions with well drained soils. It is often found from California to Oregon, south of Santiam pass in OR and in drought forests in CA.²

Historical and Contemporary Uses

Calocedrus decurrens has been and is still used by aboriginal peoples in the Pacific Northwest and coastal regions.³ There are two common medicinal uses of incense cedar; one is making a decoction (an extraction from boiling) of the leaves to help heal stomach problems.³ Another medicinal use is to inhale the steam from the infused leaves to help treat a cold.³ The Incense-cedar tree has also been used to make baskets from the bark and brooms from the boughs and twigs.³

The wood of *Calocedrus decurrens* is very aromatic, and resists decay and insects. Unfortunately, it is prone to being infected by a white fungus called “pencil rot”.² This prevents the wood from being a desirable timber species. The wood is, however, very soft and used to make pencils.² The branches with the yellow pollen cones in winter are often used to make wreaths.²

¹ Plants For a Future Database. 1996-2010. <http://www.pfaf.org/>.

² Jensen, Edward C. *Trees to know in Oregon*. Oregon State University. Corvallis, OR: 2005

³ Pojar, Jim and Andy MacKinnon. *Plants of the Pacific Northwest Coast*. B.C. Ministry of Forests and Lone Pine Publishing: Aburn, 1994. Photos:) http://www.cwsd.org/watershed/Habitat_detail.asp?ID=125. And <http://www.backyardnature.net/n/w/inc-cedr.htm>.
Journal page on the following page by Sierra Predovich

Journal Assignment #6

Incense-cedar
Calocedrus decurrens



Leaflets with
yellow pollen
cones at tips.



Seed cones
(when open)
look like small
blossoms / duck
bills / fleur-de-lis



Seed cones
are about 1 in,
dark brown +
woody.

Tree is ~70m tall
and has reddish,
furrowed, flaky bark.
branches are droopy but
curve upwards. Leaflet
clusters give the tree a
"knumpy" look. Pollen cones are beginning
to emerge on the branch tips and are
a light yellow color.

Common name: Western dogwood

Scientific name: *Cornus nuttallii*

Native American names: In the southern Pomo language of Northern California, Western dogwood is known as “mo’o zit”¹

Plant family: *Cornaceae*



Description: Leaves are opposite, deciduous, oval, sharp-pointed at the tip and tapering towards the base, to 10 cm long, veins curve parallel. Berries are red and tightly clustered in a spherical shape. The berries are about 1 cm long.² The flowers are greenish-white with small purple tips (about 5cm across). The 4-6 large white bracts of *Cornus nuttallii* are often confused for petals. Flowers in the spring and often repeats in fall.

Habitat and Range: Usually found in low regions, on moist, well-drained sites, along streams or gullies, and in open to dense mixed forest.² Found in Alaska, British Columbia, Washington, Oregon, California, Idaho.

Historical and Contemporary Uses The bark was boiled by Nlaka’pamux to make dye², and the bark was an ingredient in Saanich ‘10 barks’ medicine.² Historically, *C. nuttallii* was a very important plant for the Native American tribes of the west coast of North America. The bark had several medicinal uses including use as a laxative, tonic, anti-septic and for the relief of stomach pain. The peeled twigs were used as toothbrushes, and the branches were sometimes used in basketweaving.³

Prized for its hard, strong wood and tight grain, *Cornus nuttallii* is currently in high demand for tool handles and cabinet making. The large white showy bracts also make it popular as an ornamental tree.⁴

¹ *Federated Indians of Graton Rancheria*. Environmental Protection DepartmentNativePlant Species, n.d. Web. 2 Oct 2011. <<http://www.figrepd.com/dogwood.html>>.

² Pojar, Jim and Andy MacKinnon eds. 1994. *Plants of the Pacific Northwest Coast*. Vancouver, BC: Lone Pine

³ *Federated Indians of Graton Rancheria*. Environmental Protection DepartmentNativePlant Species, n.d. Web. 2 Oct 2011. <http://www.figrepd.com/dogwood.html>

⁴ ,“*Cornus Nuttallii*.” *Plants For A Future*. Plants for a Future, n.d. Web. 2 Oct 2011. <<http://www.pfaf.org/user/Plant.aspx?LatinName=Cornus+nuttallii>>.

Photo: http://upload.wikimedia.org/wikipedia/commons/c/c5/Cornus_nuttallii_08546.JPG

Thoughts of a Contemporary Harvester

Six white bracts unfurling in the sub-canopy of a Douglas-fir forest.

Used in so many ways by native peoples.

How shocking it must feel to have forgotten the touch of human hands.

Entire generations of dogwoods growing up-

not knowing what it feels like to be a toothbrush, or a basket.

Or a strong medicine used to cure intestinal disorders.

Waiting patiently along the riverbank, for a time when it can once again become well known by a people,

and be harvested with respect.

But what comes here?

A boy on a bike.

What is his intention with the *nuttallii*?

Surely he already has a toothbrush at home, and he has no need for a basket.

So I snap off a branch in the cold winter dogwood morning, and bring it here, to class.

A link to the past, to teach about a long overlooked, deeper connection to this plant that existed long ago.

And still exists today.

Small steps back to a different time.

-Azul Dahlstrom-Eckman

Common name: black hawthorn

Scientific name: *Crataegus douglasii*

Plant family: Rosaceae

Physical description: The black hawthorn is a deciduous shrub. Most notably, the shrub has reddish twigs armed with 1-inch long **thorns**. It can reach a height of up to 30 feet. The black hawthorn has dark green, ovate **leaves**. These 1-3 inch leaves are sometimes lobed but always have serrated margins. In the fall, its clustered **fruit** ripens from red to a shiny, dark purple color. These berries are edible. In the spring, small white **flowers** appear in clusters. The flowers emit an odor often described as fishy.¹



Range and Habitat: The black hawthorn grows between southern Alaska and central California and as far east as Michigan. It prefers moist soils.

Historical and Contemporary Uses:

The berries can be eaten right off the tree and are used in jellies and pies. Native Americans in Montana mixed the fruit with choke cherries, pressed them into cakes, and dried them for winter use². The Thompson and Okanagan peoples of British Columbia used the thorns for piercing ears and to pop skin ulcers.¹ The Kwakiutl people of British Columbia chewed the leaves into a poultice, which they applied to swellings. The Okanagan-Colville people infused the shoots and gave it to children to treat diarrhea. They also used those infusions to wash a baby's mouth for sores.² The word *Crataegus* comes from the Greek word *kratos*, meaning strength. The black hawthorn bears this name because of its strong wood. The Lillooet and Gitksan people of British Columbia made fishhooks from the thorns. The Cowichan people, also of British Columbia, burned the leaves and bark and mixed the ashes with grease to make black face paint used in winter dances.¹

¹ "Black Hawthorn." *Tree Book*. Government of British Columbia. Web. <for.gov.bc.ca>

² "Crataegus Douglasii." *Native American Ethnobotany*. University of Michigan- Dearborn. Web. <http://herb.umd.umich.edu/>.

Common name: Western crabapple, Oregon crabapple, Pacific crabapple

Scientific name: *Malus fusca* (also known as *Pyrus fusca*)¹

Plant family: Rosaceae



Description: *Malus fusca* is a small, slow growing, deciduous tree (up to 12 meters) with bark that becomes deeply fissured with age.¹ The branches have sharp spurs on which the flowers and fruit develop.² The leaves are alternate and light green with pinnate veining.¹ The leaves are lance to oval shaped with edges ranging from vary lightly to deeply lobed, but pointed at the end with a curl.³ The flowers, growing in clumps of 9 to 12, range from white to pink and bloom in April and May.¹ The fruits grow in clumps and are egg shaped, about 1 to 1.5 centimeters long.³ They start out green and become yellow or reddish in color.¹ They are crisp and juicy but tart.⁴

Habitat and Range: West of the Cascades from Alaska to California,⁵ *M. fusca* grows successfully in almost any fertile soils, ranging from sandy to clayey as long as they are moist with good drainage.¹ It is generally found in low to middle elevations in moist woods, riparian areas, upper beaches, or next to estuaries.¹

Historical and Contemporary Uses

The primary use of *Malus fusca* by Native American tribes is as a food source. They pick the crabapples in the late summer and fall. The fruits are eaten fresh, cooked, or preserved as a winter food. The Lower Chinook, Clallam, Cowlitz, Makah, Quinault, Upper Skagit, Thompson tribes harvest the fruit and then put it in baskets to ripen or sweeten and eat it later in the fall and winter. Halsla and Hanaksiala (British Columbia), Kitasoo (Islands off of British Columbia), and Oweekeno (BC coast, just north of Vancouver Island) tribes cooked their crabapples before storing them under water or underwater with fat to eat in the winter months.¹ Because of the high acid content of the fruit, it requires almost no effort to preserve or store for months.⁶ For this reason it was and continues to be an important winter food for so many peoples. The Kitasoo and Southern Kwakiutl (Vancouver Island region) tribes both marked the importance of this plant with feasts and ceremonies. Numerous other tribes simply ate the fruit when it is ripe in the fall.⁵ The fruit also has high pectin content. This quality makes it an easy jelling fruit and a good additive to low pectin foods for preservation. Groups in Alaska and the Makah of the Olympic peninsula in Washington both use the fruit in this way, as well as for other purposes.⁶

NOTE: The raw bark, seeds, and possibly leaves of this plant contain cyanide producing compounds which can be deadly.

¹ Jim Pojar and Andy MacKinnon. *Revised Plants of the Pacific Northwest Coast* (Vancouver, BC: Lone Pine Publishing, 2004), 48.

² "Malus fusca Pacific Crabapple." Washington Native Plant Society, accessed October 16, 2011, last modified November 8, 2009. <http://www.wnps.org/landscaping/herbarium/pages/malus-fusca.html>

³ Washington Native Plant Society

⁴ "Malus fusca – (Raf.) Schneid." Plants for a Future, accessed October 16, 2011. <http://www.pfaf.org/user/Plant.aspx?LatinName=Malus+fusca>.

⁵ Plants for a future database. www.pfaf.org

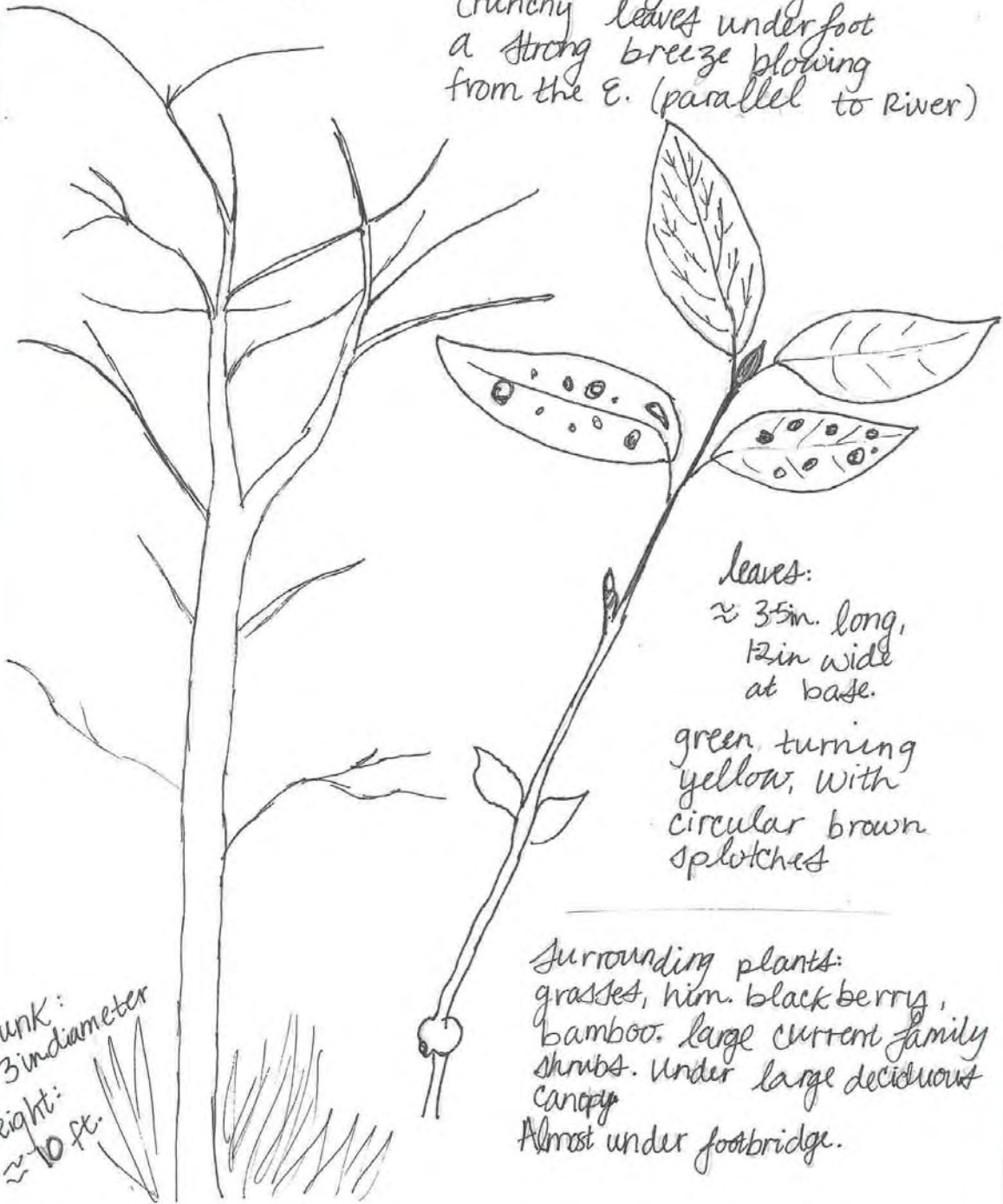
⁶ "Malus fusca," Portland Nursery, accessed October 16, 2011. http://www.portlandnursery.com/plants/natives/malus_fusca.shtml

¹⁷ Photo credit: <http://store.plantoregon.com/catalog/MalusFuscaBranch.jpg>

Journal Week 4 - Friday 4 pm 57°F

Western Crabapple

Sunny, crisp fall day
Crunchy leaves under foot
a strong breeze blowing
from the E. (parallel to river)



Leaves:

≈ 35in. long,
12in wide
at base.

green, turning
yellow, with
circular brown
spots

Surrounding plants:
grasses, him. blackberry,
bamboo. large current family
shrubs. Under large deciduous
canopy
Almost under footbridge.

Trunk:
3in diameter

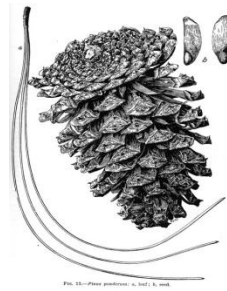
Height:
≈ 10 ft.

Common name: ponderosa pine

Scientific name: *Pinus ponderosa*

Native American names: hwa:l (Hualapai tribe)¹

Plant family: Pinaceae



Description: The ponderosa pine is an evergreen tree with a long trunk and high short crown, averaging 106 cm in diameter and 50 m in height in maturity. The male cones are yellow small clusters and the golden brown female cones are on average 4 inches in length and contain short, sharp, outwardly curved prickles at the tips of the cone scales.² The tree needles are 10-20 cm long in bundles of 3 and the bark is scaly, cinnamon colored and smells of vanilla in the hot sun.³

Habitat and Range: *Pinus ponderosa* is found inland in the Pacific Northwest Coast Range, as well as in the dry, open sites west of the Cascades.³ Throughout the U.S. the ponderosa is currently present in the western half of the country in mountain and plateau regions at elevations between 5,700 and 8,900 ft.²

Historical and Contemporary Uses

The ponderosa pine lumber is valued for products today such as poles, building lumber, fuel and furniture and traditionally to create dugout canoes, boats, lodge poles, snowshoes, and roof timber.⁴ The trunk bark was peeled off by the Haida tribe and used as splints for injured limbs.³ The bark was also used to make shelters as well as a building material for more-permanent structures.⁵ The ponderosa pine pitch was used by the Sechelt tribe for waterproofing, often for canoes and baskets, by the Saanich tribe as an adhesive to fasten arrowheads to shafts, and by the Lower Stl'atl'imx as a glue and waterproofing coating for their Indian-hemp fishing nets. The pitch was also used medicinally by many tribes including the Coast Salish, Nuu-chah-nulth, Kwakwaka'wakw, Nuxalk, Haida, Tsimshian and Tlingit, by treating cuts and small wounds with the pitch as a salve or ointment, creating a poultice from the pitch to treat heart pain and rheumatism, or preparing a tea with the pitch to treat tuberculosis.³ The long ponderosa pine needles had a variety of uses including, insulation for underground storage pits, a ceremonial emetic to induce vomiting, and a decoction or tea of needles consumed to treat coughs and fever.² The root extract of the ponderosa is used to create a blue dye and the root fibers were used for basketry.⁶ Finally, the seeds from the ponderosa pine are consumed like nuts and stored for winter consumption, often dried, powdered and made into small cakes.⁷

¹ The Hualapai Tribe Website. <http://hualapai-nsn.gov/about-2/>

² Mindy Pratt, Jim Browns, Roger Banner, and Allen Rasmussen. *Range Plants of Utah*. College of Natural Resources, Utah State University. 2002.

³ Jim Pojar and Andy MacKinnon. *Plants of the Pacific Northwest Coast*. Lone Pine Publishing, 2004.

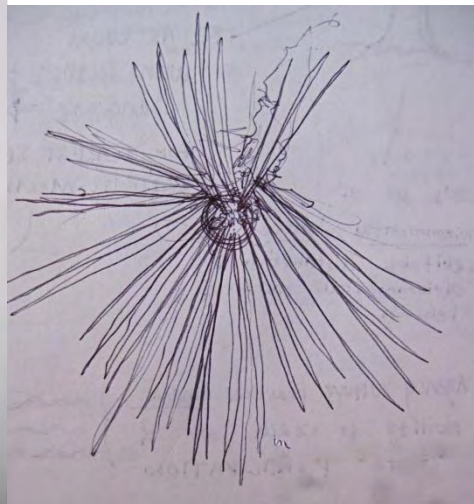
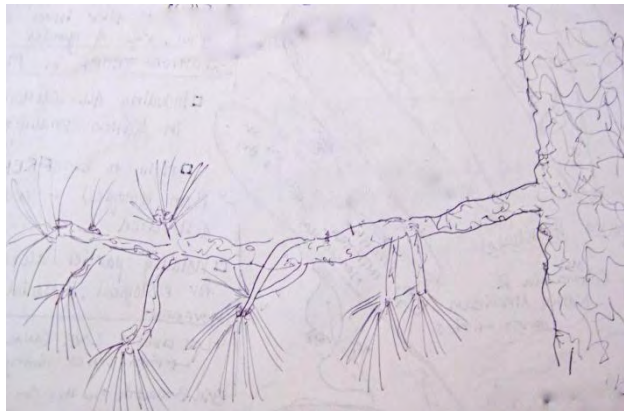
⁴ Coville, Frederick V. 1904 Wokas, a Primitive Food of the Klamath Indians. Smithsonian Institution.

⁵ Hedges, Ken 1986 Santa Ysabel Ethnobotany. San Diego Museum of Man Ethnic Technology

⁶ Baker, Marc A. 1981 The Ethnobotany of the Yurok, Tolowa and Karok Indians of Northwest California. Humboldt State University, M.A. Thesis.

⁷ Turner, Nancy J., R. Bouchard and Dorothy I.D. Kennedy 1980 Ethnobotany of the Okanagan-Colville Indians of British Columbia and Washington. Victoria. British Columbia Provincial Museum. (Photos: <http://trees.stanford.edu/ENCYC/PINpond.htm>)

Oil pastel and ink illustrations & rough field sketches of *Pinus ponderosa*
by Carrie Frickman



Common name: chokecherry, wild black cherry bark, cherry bark

Scientific name: *Prunus virginiana*

Native American names: Lakota called them *Canpa'hu* meaning bitterwood stem¹
Paiute name for the chokecherry "Daw-asha-boi"

Plant family: *Rosaceae* (Rose family)



Description: The chokecherry is a deciduous tree and ranges from 10 to 25 feet in height. It has green leaves that are wide, egg-shaped, and sharp-toothed. The midrib of the leaf is hairless. The flowers are white, in the thicker raceme. The fruits are small berries that are a reddish purple color. They appear darker the riper they are. The bark is non-aromatic and is a smooth, reddish brown color on the young branches and blackish and rugged on the mature trees. The plant is deciduous.

Habitat and Range: The chokecherry is found in rich, rather moist soils, in thickets or on the border of woods and on shores. It tolerates wet or dry conditions and thrives upon disturbance. Although

it can tolerate moderate shade, it requires a generous dose of sunlight to thrive and bear copious amounts of fruit. The chokecherry is also locally abundant in some dry, open woodlands, pine barrens, cutovers, and swamps. It is native to North America, and is often thought of as one of the most widespread trees in North America. It is found from Newfoundland to British Columbia, through all but the most northern of our boreal forests. It ranges across the northern half of the United States, being found in the Appalachians south to Georgia and in the Rockies through southern Arizona and New Mexico.

Historical and Contemporary Uses

Historically, chokecherry was a staple food item for many tribes in North America, and was often the most important food in their diet. The fruit was collected by the Pawnee, Omaha, Osage, Kiowa, Assiniboin, Dakota, Lakota, Arikara, Utes, Mandan, Crow, Cheyenne, Hidatsa, and Blackfoot tribes; it was most often pounded with the seeds included, then dried in the sun.³ The berries were also used to make jam, jelly, wine, and syrup. The wood was traditionally used by the natives for furniture making; specifically in making handles and the shredded bark for decorating basket rims, while the berries were especially good for making dyes. Chokecherry has multiple medicinal properties. Traditionally, the Native Americans used it as a sedative to assist in relieving the pains of labor and childbirth. The berries in a dried powder form could be used as a remedy for weakness of the stomach with irritation, such as ulcers, gastritis, colitis, dyspepsia, diarrhea, and dysentery. The bark, collected in the fall, is one of the best herbs for respiratory complaints. It soothes the respiratory nerves and relieves coughs, bronchitis, scrofula, fever and asthma.^{2,3}

In modern times, this wild cherry makes fine preserves, juice, jelly, and syrup. Chokecherry leather is still a unique, convenient, healthy, and tasty snack just as it was long ago. We know chokecherry best as an ingredient in cough medicine; wild cherry cough drops and wild cherry syrup are still wintertime best sellers everywhere.^{4,5}

¹ <<http://medicinalherbinfo.org/herbs/Chokecherry.html>>.

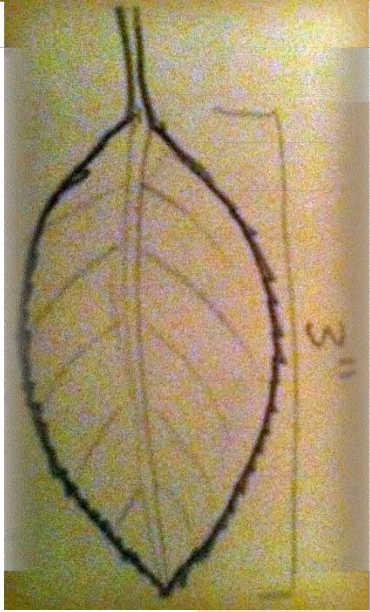
² "Chokecherry - Medicinal Herb Info." *Medicinal Herb Info Home*. Web. 30 Nov. 2011.23.

³ "Chokecherry." *Kinnikinnick Native Plant Society*. Web. 30 Nov. 2011.<http://www.nativeplantsociety.org/chokecherry.htm>

⁴ "Chokecherry." *Wild Foods*. Web. 30 Nov. 2011. <http://www.wildfoods.info/wildfoods/chokecherry.html>

⁵ "Hiker's Notebook: Chokecherry." *SCPRO: Sierra Club Potomac Region Outings Program*. Web. 30 Nov. 2011. http://www.sierrapotomac.org/W_Needham/ChokeCherry_050905.htm

Chokecherry
Prunus virginiana



Common name: Douglas-fir

Scientific name: *Pseudotsuga menziesii* (pseudo-false, tsuga-hemlock)¹

Plant family: Pinaceae

Description: This evergreen tree is large and upright at about 70 meters tall, sometimes more. They have a pyramidal shaped crown with one erect leader. Douglas-fir branches are spreading and slightly droopy and the bark is dark brownish in color, very



furrowed, thick and mostly fire resistant.¹ **Leaves** are flat, spirally arranged, evergreen blunt needles. They are dark green, 1-2 inches, leathery on top and whitish on the underside. **Pollen cones** are small, pointy and reddish; found at the branch tips. **Seed cones** are about 5 inches in size and oval shaped. They have dark brown and flaky scales with three-pronged bracts sticking out. The bracts are light brown and papery, and resemble tiny mouse feet/tails.

Habitat and Range: *Pseudotsuga menziesii* is found in moist montane environments and extremely dry low elevation sites from Western North America from California to Canada.^{1,2} Seeds often propagate in areas after a disturbance (such as fire).¹

Historical and Contemporary Uses

Pseudotsuga menziesii has been used by PNW Native Americans in the coastal regions as a good fuel source, as well as a material for spear handles, harpoon shafts and barbs, dip-net poles, spoons, hooks, caskets, and fire tongs¹. The sticky resin (pitch) has been used as a sort of glue to help seal joints in harpoon heads and fishhooks and for patching canoes and other water vessels¹. Young shoot tips/needles have a refreshing lemony flavor, and can be used for a food flavoring or for making tea that is rich in vitamin C and used as a coffee substitute.² The resin from the bark is extracted and used like a poultice to treat skin wounds and ailments, or taken as a form of cough medicine/sore throat soother.² A mouthwash can be made from soaking the shoots in water, and the young needles can also be used to help prevent odor/athletes foot when placed in shoes.²

Other uses of Douglas-fir include making of dye from the tannins in the bark, basket weaving from the small, young roots, trunk resin used as a caulking agent, and in glues, perfumes and candles. The wood is a good fuel source and used as timber for heavy construction.²

¹ Pojar, Jim and Andy MacKinnon. *Plants of the Pacific Northwest Coast*. B.C. Ministry of Forests and Lone Pine Publishing: Aburn, 1994.

² Plants For a Future Database. 1996-2010. <http://www.pfaf.org/>.

Photos: Predovich, Sierra. Oct. 14, 2011. Pioneer Memorial Cemetery. Eugene, OR.
Journal page on the following page by Sierra Predovich

Journal Assignment #7

Fairmount Neighborhood 11/27/11

Douglas-fir

Pseudotsuga menziesii



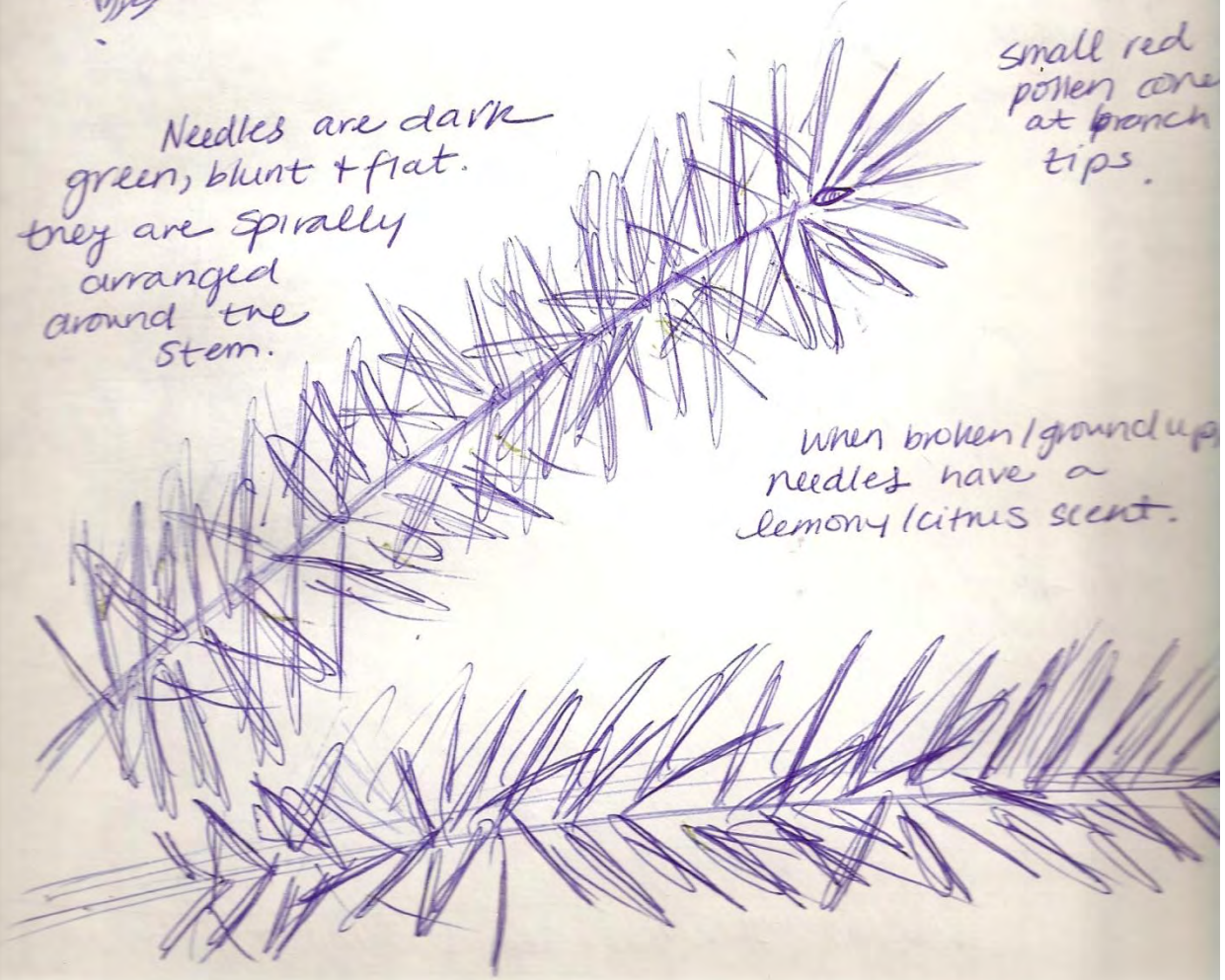
Seed cones are scaly and dark brown, layered with light brown, three-pronged bracts.

sticky sap is whitish-clear & has a minty-citrus smell

Needles are dark green, blunt & flat. they are spirally arranged around the stem.

small red pollen cone at branch tips.

when broken / ground up needles have a lemony / citrus scent.



The Douglas-fir

A common sight, the Oregon tree
Pseudotsuga menziesii.

Tall and rumpled, furrowed bark
New seeds open once fire sparks.

With pollen cones, red buds so small
And evergreen needles that last through fall.

Seed cones are scaly, oval and brown,
With three-pronged bracts like little crowns.

Young waxy needles, with citrus smell
Make tea to keep the body well.

Inside the bark, lies a resin coat
That heals skin wounds or soothes the throat.

Baskets woven from young roots, and resin used as glue,
And needles that cure athlete's foot when put inside your shoe!

Whether for timber and fuel or medicinal care,
The Douglas-fir has much to share.

-Sierra Predovich

Common name: Oregon white oak, Garry oak¹

Scientific name: *Quercus garryana*¹

Plant family: Fagaceae (Beech family)²



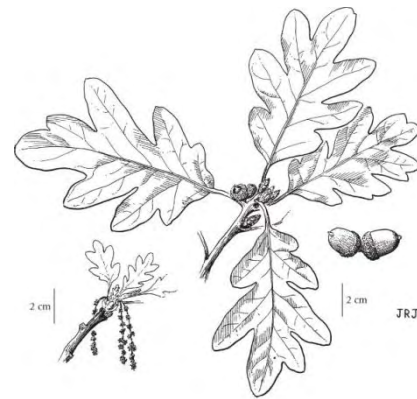
Description: *Quercus garryana* is a deciduous tree that can grow to about 65 feet high and 35 feet wide. In dry and rocky habitats they are shorter and more crooked. Its 12 cm deeply round-lobed leaves are a shiny dark green on top and greenish-yellow below. In fall they turn yellow-brown. It has light grey bark with thick furrows and ridges. Its 2-3 cm long acorn fruits are clustered in clumps of 2-3 shallow, rough surfaced cups.¹ The



acorns ripen in October. Its flowers are monoecious, meaning that each flower is either male or female but both can be found on the same tree.³ The male flowers appear in hanging catkins and the female flowers in small, single clusters.¹



Habitat: Oregon white oaks prefer wet soils that are loamy or have high clay content but can also grow in well-drained and dry soils, but will be stunted. They tolerate acidic, neutral, and basic soils and can grow semi-shade or full sun.³



Range: *Quercus garryana* is frost tolerant and hardy to zone 6. It generally grows in lower elevations and does not tolerate maritime conditions. It is found all along the west coast from British Columbia to Southern California.³

Historical and Contemporary Uses

Acorns, the seeds of *Quercus garryana* continue to be eaten all along the west coast. Traditionally, people buried the acorns in mud (Paiute) or put them in a bag to soak in a stream to leach out the tannins. After leaching, they have a sweet taste and can be ground to serve as a replacement for flour to make breads and porridges. Roasted acorns can be used to make a tasty coffee substitute.⁴ Wood from *Quercus garryana* has been used to make arrows, bowls, and combs. Oregon vintners continue to experiment with using it to make wine barrels.

¹ Pojar and Mackinnon. *Plants of the Pacific Northwest Coast*

² USDA Natural Resource Conservation Service <http://plants.usda.gov/java/profile?symbol=QUGA4>

³ Plants for a Future <http://www.pfaf.org/user/Plant.aspx?LatinName=Quercus+garryana>

⁴ University of Michigan <http://herb.umd.umich.edu/herb/search.pl?searchstring=Quercus+garryana>

Photos credits: Plants for a Future <http://www.pfaf.org/user/Plant.aspx?LatinName=Quercus+garryana> and UC Berkeley photo database

http://calphotos.berkeley.edu/cgi/img_query?query_src=photos_index&where-taxon=Quercus+garryana.

Sketch credit: E-Flora BC <http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Quercus%20garryana>

Story on the following page: Vloggerheads <http://www.vloggerheads.com/profiles/blogs/oregon-white-oak-or-more-than>

BENEATH THE GARRY OAK by D. R. Thysell

From the Fraser through the Puget Trough and down Columbia way,
up the Willamette, across the Rogue, around San Francisco Bay.
In seas of green were islands, of camas and crimson and gold.
This was the land of the Garry Oak, its story here is told.

Once, it wasn't long ago, a very few hundred years.
Yes, once, up and down the coast, before the hungry pioneers.
In seas of green were islands, where salmon and oak did abound,
and meadows and savannahs and the baffling Mima mounds.

We live our lives the best we can beneath the Garry Oak.
Day after swiftly changing day of questioning and hope.
The woodlands, once so plentiful, now fading into memory,
Living our lives the best we can beneath the Garry Oak.

From Victoria and the San Juan Isles to near Los Angeles.
Up an over the Cascade crest far from the ocean breeze.
In seas of green were islands, where kinsmen gathered, it seems.
Beneath and because of the Garry Oak, and salmon-filled emerald streams.

Not so very long ago the woodlands transformed.
Prairies to pasture, changes now faster than evolutionary norm.
In seas of green are islands invaded, engulfed, and ignored.
Beneath the oaks lies a challenging question: "Can they be restored?"

We'll live our lives the best we can beneath the Garry Oak.
Year after rapidly changing year of struggle and of hope.
The meadows hemmed with ancient oaks now vanishing beneath the sea
of green, yet what of the acorn cache beneath the Garry Oak?

When western shores were settled, about ten thousand years ago.
The Garry Oak abided, where, exactly, we'll probably never know.
In seas of green were islands that fire certainly spawned.
Flames on the prairies combating Doug-fir, oak's long indispensable bond.

The oaks have stood the test of time till not so long ago.
Canopies that for centuries held wonders we'll now never know.
If just one ancient oak could talk, what would it have to say?
Or should, instead, we question who would listen, here, today?
The oaks would surely ask us who would listen here, today.

But we're living our lives the best we can beneath the Garry Oak.
Centuries and centuries of agonizing hope.
Barely free from ice's grip, on gravelly plain and precipice.
Living its life the best it can: the stately Garry Oak.

From the Fraser through the Puget Trough and down Columbia Way.
And if just one ancient oak could talk, what would it have to say?
This is the land of the Garry Oak, its story now is told.

Common name: Cascara

Scientific name: *Rhamnus purshiana*

Native American name: Chinook Tribe of Southwest Washington called it Chittam or Chitticum¹



Plant family: Rhamnaceae

Description

Rhamnus purshiana is a deciduous tree.

Its leaves are alternate, egg shaped, fine toothed and strongly pinnate. Its flowers are small, green to yellow colored with five petals. The berries are dark blue to dark purple and are edible.²

Habitat and Range

Cascara is found in dry or moist shaded woodlands as well as along stream and river banks. It is also commonly found in wetlands, in mixed forests with conifers as well as red alder and the vine maple. Cascara is native to the western part of North America, southern British Columbia, but can be found all along the PNW from central California up to southern BC and as far east as Montana.³

Historical and Contemporary Uses

Rhamnus purshiana has been used for many centuries or many centuries by many Native American tribes of the Pacific Northwest, such as the Nuxalk, Coastal Salish, Quileute, Nuu-chah-nulth, Kwakwaka'wakw and many others as a healing plant.¹

The main documented use for cascara is as a laxative. The bark can be stripped from the shrub and then made into a tea or as syrup, by boiling it. The bark is said to be too strong to be used fresh, so it must be dried for a year before it can be used as a laxative. Otherwise, the effect is too strong and it can cause severe nausea or diarrhea.²

The Salish tribe would collect the bark in strips in the spring or summer and allow it to dry until the next summer. Once it was properly dried, they would then pound it into a pulp and afterwards, they would steep the pulp in cold water. Once it was steeped in the cold water, the water could then be boiled into a tea for drinking.²



¹ Wikipedia. *Rhamnus purshiana*. 4 October 2011. 14 October 2011 http://en.wikipedia.org/wiki/Rhamnus_purshiana

² MacKinnon, Andy and Jim Pojar. *Plants of the Pacific Northwest Coast*. Vancouver: Lone Pine Publishing, 1994.

³ BC, E-Flora. *Electronic Atlas of the Plants of British Columbia*. 2010. 16 October. 2011 <http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Rhamnus+purshiana>.

Drawings: <http://en.wikipedia.org/wiki/File:Koeh-121.jpg> and Elizabeth Sanner

Common name: blue elderberry

Scientific name: *Sambucus caerulea*

Native American names: ts'ak'wik wuni (Chehalis), tsikwI'q (Green River), tseqwek (Klallam), tsikwi'k (Lummi), k'we'lap (Quinault), tsikwik (Skagit), tsikwixEd (Skokomish), t'sikwi'kwats (Squaxin), t'sEqwi'uk (Swinomish)¹

Plant family: Caprifoliaceae- Honeysuckle Family

Description: Blue elderberry is a deciduous shrub with several pithy stems that ranges from 6 to 20 feet in height. The **leaves** of the blue elderberry are 2 to 5 inches long. They are alternate and lance shaped. It has tiny creamy-white **flowers** shaped in a flat-topped cluster that are about 10 inches in diameter. Its **fruit** are berries that are clustered and hang down. The berries appear in September through October are dark blue with a whitish, waxy coating. The plant is poisonous when ingested except for the berries and flowers.



Habitat and Range: *Sambucus caerulea* grows on moist, well-drained sunny sites, usually on openings in moist forest habitats such as stream banks slopes or canyons. It also occurs in moist areas within drier, more open habitats. It thrives in rich soils in valleys and open slopes at low to moderate elevations.² It is commonly found east of the Cascades, from southern British Columbia to western Montana and south to California and New Mexico.

Historical and Contemporary Uses

Many indigenous groups within the plants' range, including Straits, Halkomelem and Comox on the Coast and Nlaka' pamux and Lillooet collected the berries

with a hooked implement. They were sometimes eaten raw but more commonly cooked into a jam-like product. Sometimes the cooked berries were spread out to dry in cakes for winter and some people extracted the juice from the cooked berries. Nlaka' pamux people used the juice for marinating fish.^{3,4}

The bark from the elderberry branch was very important as well. It was most often used in the construction of arrow shafts. Flutes and whistles were also constructed by boring holes into the hollowed out stems. Clapper sticks were made by splitting the stem and clapping the two halves against each other. These sticks were an essential aspect in accompanying singing and dancing in various ceremonies that took place in the round house. Elderberry twigs and fruit are employed in creating dyes for basketry. These stems are dyed a very deep black by soaking them for a week or so in a wash made from the berry stems of the elderberry.⁵

Blue elderberry flowers are high in vitamins A, B and C as well as the minerals calcium, iron and potassium. It has antiviral properties and is used medicinally to help in the prevention of colds and flus as well as overall immune function. The flowers are steeped in hot water, are used to break dry fevers and stimulate perspiration, aid headache, indigestion, bladder or kidney infections, colds and flus. Used as a wash, the flowers or leaves are good for wounds, sprains, and bruises, as well as for sores on domestic animals.

¹ Gunther, Erna. Ethnobotany of Western Washington., Seattle: University of Washington, 1973. Print.

² Pojar, Jim, A. MacKinnon, and Paul B. Alaback. Plants of the Pacific Northwest Coast: Washington, Oregon, British Columbia & Alaska. Redmond, WA: Lone Pine Pub., 1994. Print.

³ Kallas, John. "What Is Edible?" Edible Wild Plants: Wild Foods from Dirt to Plate. Layton, UT: Gibbs Smith, 2010. Print.

⁴ Krohn, Elise, and Valerie Segrest. Feeding the People, Feeding the Spirit: Revitalizing Northwest Coastal Indian Food Culture. Washington (State): E. Krohn?, 2010. Print.

⁵ USDA NRCS National Plant Data Center & the Biota of North America Program. "Plant Guide: Blue Elderberry." USDA Natural Resources Conservation Service. Web.

<http://plants.usda.gov/plantguide/pdf/cs_sanica5.pdf>.

Drawing on the following page by Serena Rebers



Blue elderberry, *Sambucus caerulea*

Common name: Pacific yew

Scientific name: *Taxus brevifolia*

Native American names: ‘Bow plant’ (Haida and Halq’emeylem), ‘wedge plant’ (Sechelt, Squamish, and Nee-chah-nulth)^{1*}. **Other names** [Tribe (native word)]: Chehalis (k’la-‘mk’l), Cowlitz (wawani’nc), Klallam (klinka’ltc), Quinault (k’lam’ma’aq), Samish (tlinka’ltc), Swinomish (ts’xubi’dats).²

Plant family: Taxaceae



Description: Evergreen shrub or small tree, 2-15m high; branches droop; trunk twisted or fluted; bark reddish, papery, scaly to shreddy. **Leaves** flat, 2-3 cm long, dull green above, striped with stomata below, acuminate tips (ending in fine point). Two rows of flat splays. **Fruit** Dioecious (male and female cones on separate trees), single bony seed surrounded by a bright red fleshy cup. **Warning:** fruit is poisonous to humans.¹

Habitat and Range: Moist mature forest, commonly found with Douglas-fir and Western Hemlock in old growth forest as understory tree.¹ **USA** ([AK](#), [CA](#), [ID](#), [MT](#), [NV](#), [OR](#), WA), **CAN** (AB, BC)³

Historical and Contemporary Uses

Tools The hard, durable wood of the yew was used by many coastal groups for a variety of purposes and is often traded to the interior tribes. Tools that are made from yew: bows, wedges, clubs, paddles, digging sticks, adze handles, harpoon shafts, spears, mat-sewing needles, awls, dip-net frames, knives, dishes, spoons, boxes, combs, snowshoe frames, bark scrapers, fire tongs, weaving implements, and drum frames.¹ *Gitga’at*

use yew wood blocks in processing seaweed.⁴ **Medicine** The Saanish and Salish groups smoked a mixture of dried needles with kinnikinnick. New anti-cancer property was recently found in the bark¹ but a synthetic has recently been derived.⁵

*Native plant names often refer to specific uses of the plant whereas Latin names and western names tend to describe physical attributes of the plant.

¹ Pojar, Jim and Andy MacKinnon eds. 1994. *Plants of the Pacific Northwest Coast*. Vancouver, BC: Lone Pine.

² Gunther, Erma. 1973. *Ethnobotany of Western Washington: The Knowledge and Use of Indigenous Plants by Native Americans*. University of Washington Press, Seattle.

³ NRCS: USDA: PLANTS Profile *Taxus brevifolia* Accessed October 2011

⁴ Turner, N.J., and Helen Clifton. 2001. *Traditional Ecological Knowledge and Natural Resource Management*.

⁵ Board of Educ. v. American Bioscience, 333 F. 3d 1330 - Court of Appeals, Federal Circuit 2003.

Original artwork on the following page by Alese Colehour

I love
old-
growth
forests!

aril: fleshy cup-
like covering of
single stony seed

durable
strong
wood
for carving
tools

*the Saanich
(SE Vancouver
Island) used the
entire trunk to
launch spears
in warfare!

Hello, my name is

Taxus brevifolia
Pacific yew tree

-AME-



Common name: Western redcedar

Scientific name: *Thuja plicata*

Native American names: nunk (Cowlitz), t'ci.tum (Quinalt), xatca'tci (Klullam), xaxpai''ats (Skagit), t'sa'pis (Quileute), xepai'its (Snohomish)¹

Plant family: Cupressaceae



Description: *Thuja plicata* is a large evergreen tree growing up to 150- 200 ft. tall and 15 – 20 ft. in diameter, with a conical to irregular crown and many leaders. **Leaves** are scale like, opposite, in alternating pairs. They are glossy green above, and white striped on the lower surface.^{2,3} The **bark** is grey to reddish brown and is often deeply creased on the trunk.^{4,3} **Seed cones** grow in loose clusters, are egg shaped, about 1 cm long, with 8-12 scales, green when immature, becoming brown and woody when mature.³

Habitat and Range: *Thuja plicata* is found in two areas; the Coast-Cascade Range which reaches from southeastern Alaska to northwestern California, and the Rocky Mountain segment which stretches from British Columbia and Alberta to Montana and Idaho.²

Western redcedar likes to grow in moist mixed conifer forests, forested swamps, poorly-drained lowlands, and riparian areas, however it can also grow on dry or rocky slopes.³

Historical and Contemporary Uses

Western redcedar is one of the cornerstone plants of coastal Native American culture. The tree provided fiber and material for everything from houses, to clothes, to tools. Some of the names given to it by coastal tribes mean “tree of life”, or “life giver”.⁴

Native American coastal tribes use the fiber of the bark to make clothing, baskets, blankets, mats, padding for infant cradles, sanitary pads, and rope. The inner bark was used as a slow match to carry fire from camp to camp.⁵

The wood was also an important resource. It was used to make lodges in the form of lash-house timbers, planks, posts, and roof boards. Other uses include arrow and spear shafts, bowls, bent cedar boxes, and totem poles. Finally, trunks were used to make canoes, which were an important form of transportation for Pacific Northwest tribes.^{3,4,5}

Today *Thuja plicata* is an important timber species. The wood is light and very durable and is popular for shingling, fences, decks, and outdoor furniture.^{2,4}

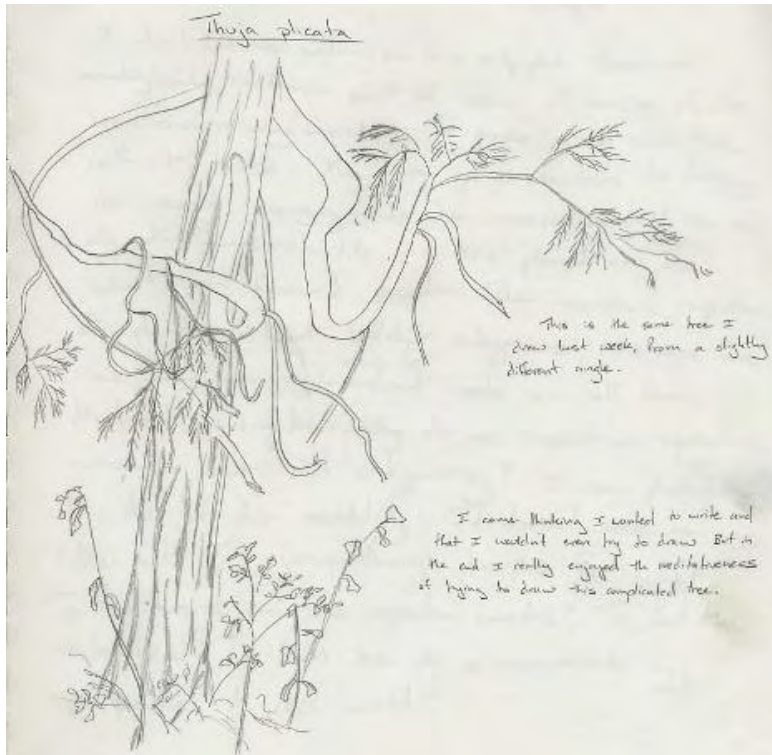
¹ Gunther, E. (1945). *Ethnobotany of Western Washington; The Knowledge and Use of Indigenous Plants by Native Americans*. Seattle: University of Washington Press.

² USDA NRCS National Plant Data Center & the Biota of North America Program (2002). *Western Red Cedar Plant Guide*. Retrieved on Nov. 6, 2011 from http://plants.usda.gov/plantguide/pdf/cs_thpl.pdf

³ Pojar, J., & MacKinnon, A. (2004). *Plants of the Pacific Northwest Coast; Washington, Oregon, British Columbia & Alaska*. Vancouver: Lone Pine Publishing.

⁴ Chase, J. (2008). *Western Redcedar, “Tree of Life”*. Oregon Department of Forestry. Retrieved on November 6, 2011 from http://www.oregon.gov/ODF/URBAN_FORESTS/docs/FeaturedTreeWesternRedcedar.pdf?ga=t

⁵ Plants for a Future. *Thuja plicata*. Retrieved on Nov. 6, 2011 from <http://www.pfaf.org/user/Plant.aspx?LatinName=Thuja+plicata>.



Cedar and I

I sit with cedar
 spine against spine
 sun on our backs

Spine against spine
 eyes closed
 a current courses through us
 heaven to earth
 antennae, transformers, anchors
 we sit

Mother's arms rising up from the
 earth
 I allow myself to melt
 Into the tenderness I AM

Story of Cedar

In the beginning when Creator made the plant people he bestowed the first peoples of this land with a special gift. That gift was redcedar; an elegant, tall tree, skirts held wide around her strong, creased trunk. Redcedar was happy in the wet forests of the coast, along the abundant flowing rivers, and in the forested swamp lands. She grew to great heights and was often as wide as five people standing together. Among her many strengths was the lightness and durability of her wood. It could be left in the moistness of this world and not rot for hundreds of years. This long livedness served the health of the forests as her fallen trunks became the nurse logs for new generations of trees.

The first humans of this land also found great solace in her gifts. Her wood was harvested to make their longhouses; hewn into boards and lashed together with rope made from cedar bark. Canoes were made from her trunks and served the people – allowing them to fish, and harvest seaweed, and the many wetland plants which fed them. The bark of redcedar was no less valuable. It could be stripped off in the spring when the sap flows to produce long strips of fiber which were used to make clothing, mats, blankets rope, and baskets. In this way redcedar provided for many of the needs of the first people, and they were grateful. They never forgot to ask permission for their harvests and sang great songs of appreciation and reverence to redcedar. They were careful to keep their use within balance so that the cedar people would remain healthy and continue to serve all who lived in the coastal forests.

Then a great change came upon the land as a new people came to settle along these coasts. They came fast and did not take the time to know the many peoples of this land. They had a blindness upon them. And in their blindness they scattered the first people and created great rifts in their knowing. Knowledge was lost, the ways of the first people were largely forgotten as they were absorbed into the newcomers' culture. But a few threads have remained down through the years, and a new wind blows as the newcomers wake up, one by one, to where they are, and the first people stand up to retrieve their rightful knowing. There is a revival of the knowing, of how to use redcedar in an intimate communion with this land, but mostly a remembering of the sacredness of this great tree – the great wisdom she harbors and the gift that she is to all peoples. And this pleases the Creator.

-Zan Akerson

IV. Other species



Carrie Frickman

Cantharellus
Chanterelle mushroom

Common name: chanterelle mushroom

Scientific name: *Cantharellus spp.*

Fungi family: Cantharellaceae



Description: Chanterelle mushrooms are golden yellow in color, have brittle, soft or leathery flesh with spore bearing ridges on the underside of the cap. The size of the cap for the chanterelle averages 2-14 cm and the stem size averages 4-8 cm.

Habitat and Range: *Cantharellus spp.* grows in well-drained forest soils with low nitrogen content and can specifically be found in Douglas-fir, hemlock, spruce, fir and pine forests in the Northwest and in oak, beech, birch, and conifer forests in southern California. Chanterelles grow near an ectomycorrhizal host tree and are the reproductive structure formed by the symbiotic relationship between this host tree's roots and soil fungus.¹

Historical and Contemporary Uses

There are over 40 species of *Cantharellus spp.* currently recognized in North America and over 70 species described worldwide. Seven species are present in the forests of the Pacific Northwest, the most commercially valuable and widely collected being the Pacific golden chanterelle, *C. formosus*.² Chanterelle mushrooms are highly prized mushrooms that are most commonly used for food consumption. This graceful golden mushroom is known for its earthy-sweetness and delicate texture and is exceptionally important in the food culture of the Pacific Northwest. Consuming the chanterelle is known to have health benefits. Compounds in fungi have been found to stimulate the immune system and inhibit tumor growth.³ The vibrant golden color of the chanterelle can also be useful as a dye, creating a muted yellow tint.¹

¹ David Pilz, Lorelei Norvell, Eric Danell and Randy Molina. *Ecology and Management of Commercially Harvested Chanterelle Mushrooms*. United States Department of Agriculture, Forest Service, and Pacific Northwest Research Station General Technical Report. PNW-GTR-576. March 2003.

² William H. Lee, R.Ph., Ph.D. *The Medicinal Benefits of Mushrooms*. 1995.

³ Fischer DH, Bessette A. *Edible Wild Mushrooms of North America: a Field-to-Kitchen Guide*. Austin, Texas: University of Texas Press. 1992. (Images: Wikimedia Commons)



Oil Pastel and Ink, Carrie Frickman

**“It is possible to live without gold and silver,
And one can resist the temptations of seductive women,
But to abstain from eating mushrooms is difficult.”**

Poem by Latin poet Martial (43-104 AD) ⁴

⁴ Greg A. Marley. *Chanterelle dreams, amanita nightmares: the love, lore, and mystique of mushrooms*. Chelsea Green Publishing. 2010.

Common name: old man's beard

Scientific name: *Usnea spp.*

Native American Names: Chan wiziye (meaning “on the north side of the tree” or “Spirit of the north wind”, Dakota tribe)¹

Fungi family: Parmeliaceae



Usnea wirthii



Usnea longissima

Description: *Usnea spp.* is a lichen, composed of algae and fungus functioning together in symbiosis, growing epiphytically on a host tree. *Usnea wirthii* and *Usnea longissima* are the two most common species in the Northwest. *Usnea wirthii* is pale yellowish-green in color, often with red spots, with a white central cord, branched and shrub-like shape, and 2-4 cm long. *Usnea longissima* is a 15-35 cm hanging lichen with a white central unbranched, or sparsely branched, strand.²

Habitat and Range: *Usnea spp.* is found worldwide, ranging from sea-level to sub-alpine. *Usnea wirthii* is found frequently on conifer trees in open lowland forests and can specifically be found on white oak trees in Eugene, as seen in the rough field sketches on the following page. *Usnea longissima* is best developed growing over trees and shrubs of old-growth forests.³

Historical and Contemporary Uses

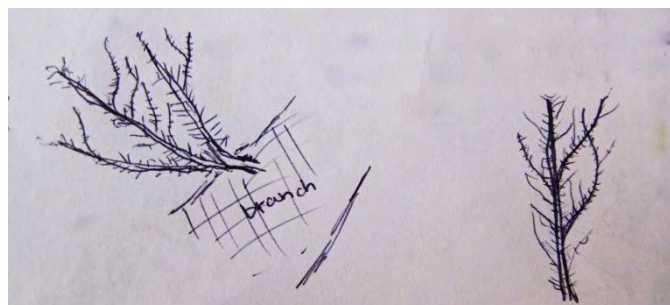
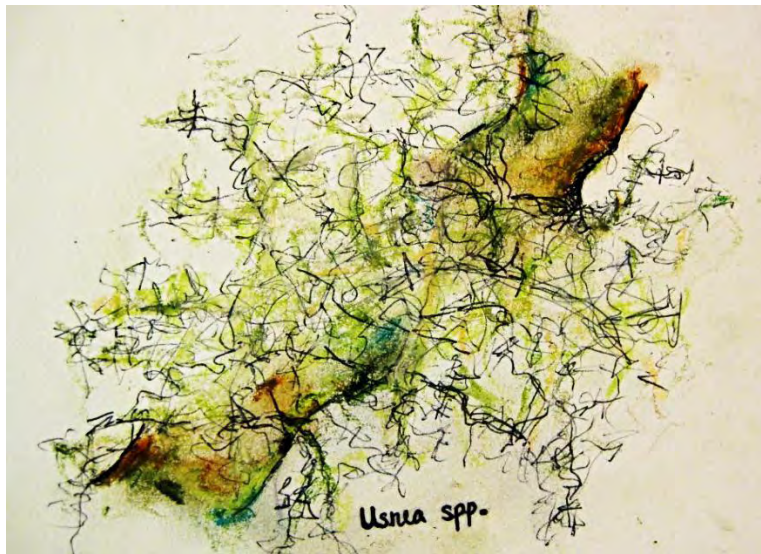
Usnea spp. is and was used medicinally worldwide by a variety of cultures. In the Pacific Northwest the fibers of *Usnea longissima* were used by the Haida, an indigenous nation of the Pacific Northwest Coast, to strain impurities from hot pitch before the pitch was used as medicine.² *Usnea spp.* is also used in the Canary Islands as a general wound healer, in Italy as a eupeptic, an antiseptic in Argentina, an antibacterial agent in Saudi Arabia, an antitumor agent in Chile and as an abscess and dye by North American tribes.¹ *Usnea spp.* can be used to create a topical medicine by smashing the whole lichen into a powder or applying the plant whole to treat fungal and bacterial skin infections and skin burns. *Usnea spp.* can also be used to treat internal health problems, commonly those associated with the respiratory system. The entire lichen is tinctured in alcohol, consumed whole, or infused as a tea to treat infections, colds, flu, bronchitis, pneumonia, and sinus infections.¹

¹ Stephen Harrod Buhner, Brook Medicine Eagle. *Sacred plant medicine: the wisdom in Native American herbalism*. Inner Traditions/ Bear & Co, 2006.

² Jim Pojar and Andy MacKinnon. *Plants of the Pacific Northwest Coast*. Lone Pine Publishing, 2004.

³ Chanchal Cabrera MSc, FNIMH, AHG. *A Review of Some Medicinal Plants of the Pacific Northwest*. 2006. (Images: U.S. Forest Service)

**Oil pastel and ink illustration & rough field sketches of *Usnea* spp.
Carrie Frickman**



VI. Acknowledgements

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