

ULKATCHO

FOOD AND MEDICINE PLANTS



Richard J. Hebda, Nancy J. Turner, Sage Birchwater, Michèle Kay
and the Elders of Ulkatcho:

Andrew Cahoose, Andy Cahoose, Annie Cahoose, Lashaway Cahoose, Mary Joe Cahoose,
Peter Cahoose, Wilfred Cassam, Eddie Elkins, Henry Jack, Maddie Jack, Mary Jack, Eliza Leon, Kelly Moffat,
Marvin Paul, Frank Sill, Monica Sill, Andrew Squinas, Helen Squinas, Mack Squinas, Eustine Squinas,
Thomas Squinas, Lucy Sulin, Willie Sulin and Pierre West.

Illustrations provided by: Ronald Cahoose, Christine MacDonald
and the Royal British Columbia Museum

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Photo by Nancy Turner

Some of the Ulkatcho Elders who participated in this project. From left to right: Henry Jack, Andy Cahoose, Frank Sill, Vincent Toney, Maddie Jack, Peter Cahoose, Wilfred Cassam, Mack Squinas, Pierre West, Marvin Paul.

Ethnobotany student Michèle Kay collected the bulk of the information in this study, under the direction of Richard Hebda of the Royal British Columbia Museum (RBCM) and Nancy Turner of the Environmental Studies Program of the University of Victoria. She was assisted in the translation of Carrier terms by linguists Leslie Saxon of the University of Victoria.

Ulkatcho Carrier translation of plant names was conducted by Janie Jack, Leona Toney, Bella Leon, Jennifer West and Ulkatcho elders.

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We especially want to thank the Ulkatcho Band administration, the Ulkatcho Learning Centre, and all the people of Ulkatcho community for welcoming us into their community and having the patience and understanding to let us carry out the work.

FORWARD

I enjoyed the time I spent in Ulkatcho country. It was full of new experiences and meeting new people. I visited desert-like alpine tundra, moist western hemlock forests and everything in-between. I ate freshly picked *mai dunulk'un* (red huckleberries), and *chundoo dzeh* (lodgepole pine pitch). I had never been on horseback before, but I found it was great way to cover a lot of ground, and the horse (instead of me) carried all of the plants that were collected.

Growing up in suburban Ontario I found out quickly that I had to re-align my thinking about plants in order to

understand what the Ulkatcho elders were telling me. On one occasion Maddie Jack talked about "wounding the sticks". I was puzzled and then I realized she was talking about cutting down trees. There isn't a word in Ulkatcho that translates as

"tree" and the Ulkatcho elders rarely use the word "tree" in English. Instead they would use the specific name of each tree that was being discussed. I think this represents their view that each tree represents a wealth of knowledge and deserves a name.

This book includes only a small proportion of Ulkatcho plant knowledge. It does not discuss all of the plants used for food and medicine, plants used in technology (for making material goods such as canoes), nor all of the knowledge of the different

elders. The people's knowledge of the land is enormous and we can only touch on a small part of it. We spent many hours learning from the elders and recording as much as we could of what they told us. However, we can never put on paper all of the knowledge and experience of these remarkable people. The best way of learning about Ulkatcho plants is from the elders themselves. I sincerely thank the Ulkatcho elders for their willingness to share their knowledge and experience with us.

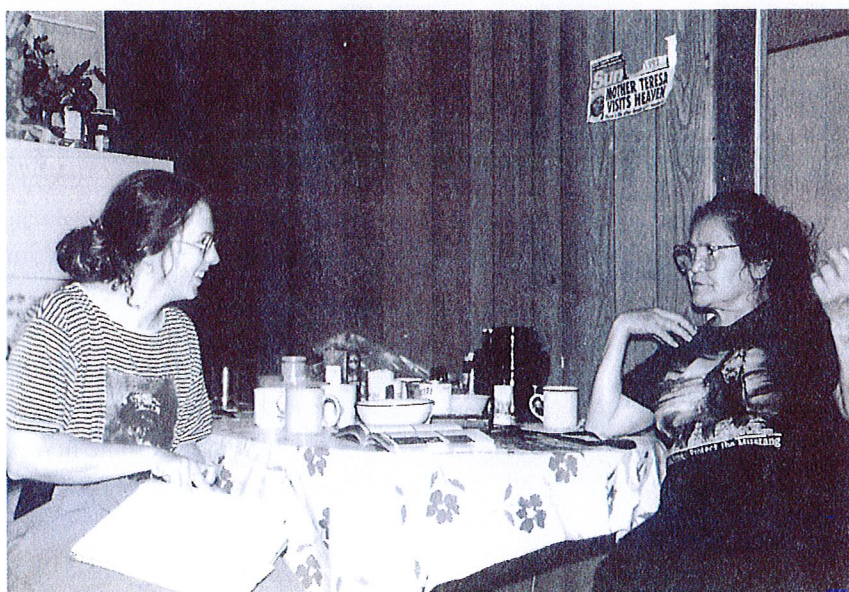
Traditional knowledge and uses for each plant, as well as the physical description of the plant and where

the plant can be found, are described in this book. The plants are identified by Ulkatcho name, common English name and scientific name.

The Ulkatcho plant names are spelled according to the Ulkatcho spelling system. Literal translations of the Ulkatcho

names are provided when appropriate. For example *tsadzo* is the name for wintergreen plants (*Pyrola* spp.) but also means "beaver ear".

Scientific names are provided so that the plants can be technically identified, because not everybody uses the same common English name for each plant. Scientific species names have two parts: the first is a general or "genus" name, and the second is a specific name. For example, in the species name for lodgepole pine (*Pinus contorta*), *Pinus* is the general name for



Michèle Kay and Maddie Jack

Photo by Sage Birchwater

pinus, whereas *contorta* is the specific part of the name which identifies the kind of pine. Scientific species names are like your first name and last name, but in reverse order. Both parts of a scientific name have to be used, unlike people calling you only by your first name. If the specific part of the name is not known, then the general name is followed by “sp.” or by “spp”, if more than one species is involved. Scientific species are grouped together according to their general physical appearance and other characteristics, and thus belong to a scientific plant family.

Although, over the years much information has been lost through the passing of elders and the discontinuation of plant use, there remains a great deal of botanical knowledge. With the production of this book we hope that Ulkatcho plant knowledge, a small component of the rich Ulkatcho cultural heritage, will be embraced.

by Michèle Kay

A WORD ABOUT THE TRANSLATION OF THE ULKATCHO CARRIER LANGUAGE

The Ulkatcho Carrier language was originally an oral tradition. Words were spoken according to the particular dialect of the speaker, but traditionally the language was not written down.

The membership of the Ulkatcho First Nation draws its heritage from several distinct cultural groups: Central Carrier (Chezlatta, Burns Lake, Naudli), Southern Carrier (Ulkatcho, Kluskus, Nazko), Tsilhqot'in (Fish Trap, Towdystan, Redstone) and Nuxalk (Bella Coola). Each of these cultural groups has their own linguistic pattern and unique dialect. The language spoken by individual Ulkatcho members is directly affected by their personal background and family heritage.

In fact there is much debate about the subtleties of the "true" Ulkatcho Carrier language. For example, the word for the thimbleberry is pronounced **dulhlaninkat** by some people and **lhudaninkat** by others. Some call the yarrow plant **gagistl'ah che** (which translates literally as "mouse tail"), while others insist it should be called **dagistl'ah che** or **agistl'ah che**. Some say soopolallie should be **nuwus**, while most feel it should be **nawus**.

In the early 1980's, under the direction of the former chief Vivian Cahoose, Janie Jack and Clark Davis began the process of writing down the Ulkatcho Carrier language. Janie and members of the Ulkatcho Carrier Language Committee continue that work today. One of their fondest dreams is to produce an official Ulkatcho Carrier dictionary.



Photo by Sage Birchwater

Ulkatcho Elders: The late Thomas Squinas, the late Joe Sill, Frank Sill, and Peter Alexis at Ulkatcho Gathering 1991

THE ULKATCHO PEOPLE AND THEIR LAND

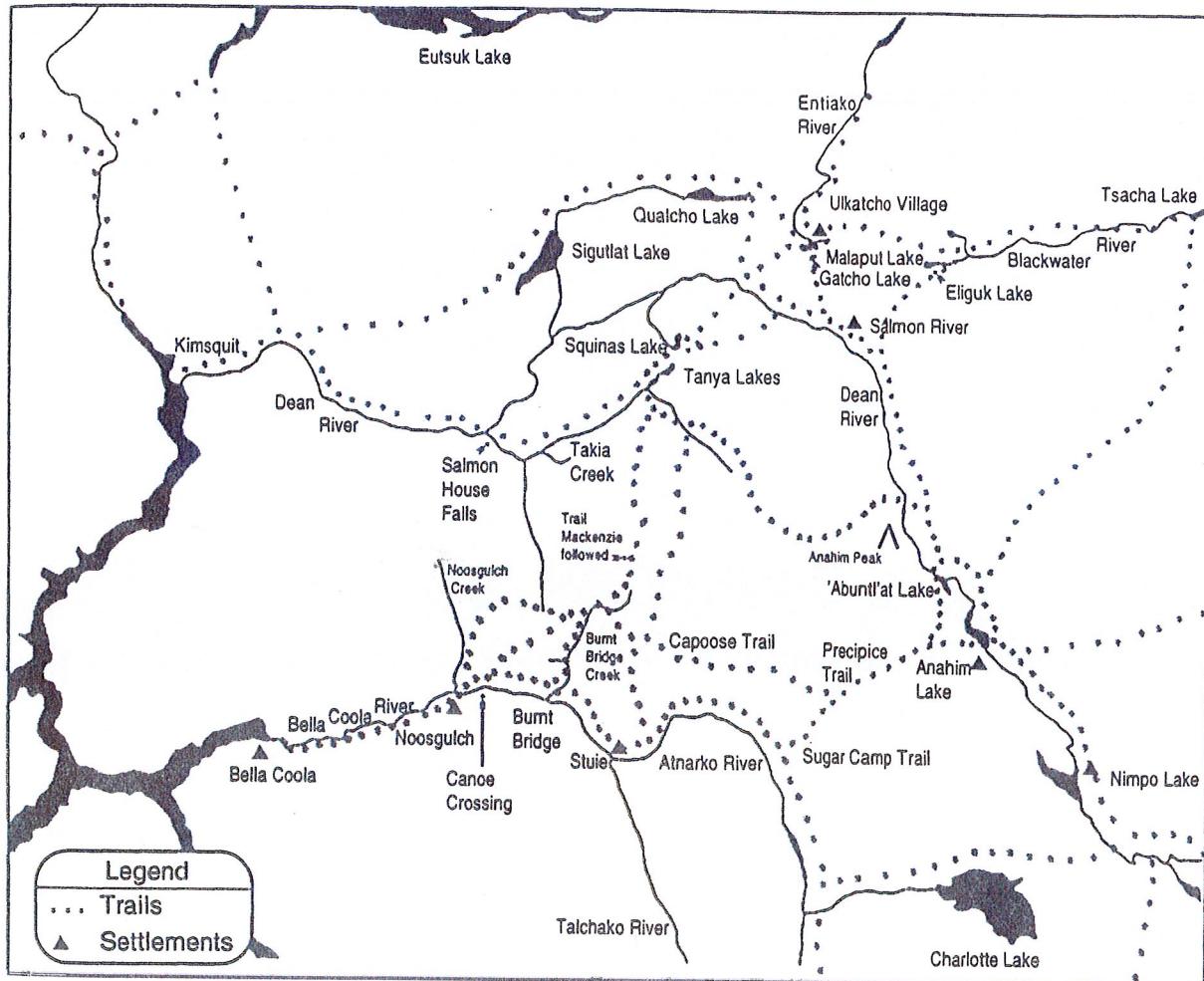
WAYS OF THE OLDEN DAYS

For countless generations Ulkatcho people have inhabited the rolling plateau and adjacent mountains of west central British Columbia. Long ago the people of Ulkatcho got everything they needed from the land around them. They got their food, shelter, clothing, medicines and tools from the plants, animals and natural environment in which they lived. The forest was their supermarket and drug store.

For thousands of years this ability to live off the land was handed down from one generation to the next. Adults, especially elders, showed young people

where to find food, how to prepare it, and how to use the materials at hand to make what they needed.

With each passing generation this knowledge of the land increased. The people's accumulated understanding was held in trust by the elders. By the time young people were old enough to live on their own, they were familiar with the bounty of every season. They knew what plants and animals to rely on for survival, when to harvest them, where they could be found, and how to prepare them. They knew that every plant and animal had its own purpose and usefulness. This ancestral understanding served to tie the people to the land.



Traditional Ulkatcho Territory

THE PEOPLE

The major territory of the Ulkatcho people is the western edge of the interior plateau. Here they moved about with the seasons to harvest the resources from a vast expanse of land. Each family had its own use area for hunting, trapping, and gathering plants and materials for food, medicine and shelter.

Each family's use area overlapped that of its neighbours. This shared use of the land and resources was understood and accepted by all. Throughout Ulkatcho territory there were several gathering sites such as Tanya Lakes north of the Rainbow Mountains, Stuie in the Bella Coola Valley, old Ulkatcho Village and Anahim Lake on the plateau. Here members of the community came together at special times of the year.

Gatherings were centred around activities such as hunting, fishing and berry picking, but they were valued as social occasions as much as for economic reasons. For people who spent much of the year travelling about in isolated family groups over a vast landscape, the chance to socialize was a major highlight of the year.

Ulkatcho people traditionally spent much time in the lush coastal valleys occupied by the Nuxalk and Kimsquit peoples. These wet, temperate regions provide abundant foods and medicines that cannot be found in the cooler, higher regions of their territory.

The Ulkatcho people have always had a strong friendship with their Nuxalk and Kimsquit neighbours. They share a broad stretch of land and resources that lie between their communities.

The key to this peaceful co-existence is the respect both groups have for each other. In the words of the late Chief Jimmy Stillas: "Once you hit the big timber, you respected the Bella Coola people. When you were in the jackpine country up top, you

respected the Ulkatcho, Kluskus and Nazko people." This mutual respect allowed the members of both communities to hunt, fish, gather berries and harvest resources in a common territory. This tradition continues today where Ulkatcho families travel to the Bella Coola valley to pick berries and catch fish. Nuxalk people meanwhile come to the plateau to hunt and gather berries that don't grow in their region.

Ulkatcho people traditionally ventured into the high mountain country to hunt, trap and harvest the plants that grow there. They hunted the mountain goat, caribou and groundhog (marmot), and collected the nuts of the whitebark pine and various berries and roots. The mountains are particularly important for the medicinal plants that grow there.

THE LAND: PLATEAUS, MOUNTAINS AND VALLEYS

The Ulkatcho traditional homeland is one of the most diverse in North America. Stretching from the salt water and steep sided ocean inlets, the land rises up to towering Coast Mountains. Lush lowland valleys of the central coast have a moist and temperate climate and relatively long growing season.

Eastward the mountains give way to a gentle rolling plateau whose edge is cut by steep-sided valleys like that of the Dean River. From the plateau rise rounded, ancient volcanic summits of the Rainbow, Ilgachuz and Itchas mountains. The area is known for its extreme temperatures and severe climate.

Most of Ulkatcho territory is found in the rolling highlands of the Chilcotin Plateau. This region lies in the rain shadow of the Coast Mountain Range and has an elevation of 1,000 to 1,200 metres (about 3300 - 4000 ft).

The headwaters of six major river systems are found in traditional Ulkatcho use area. The Klinaklini flows to the south. The Chilcotin and Blackwater rivers flow east. The Bella Coola/Atnarko River drains west, the Dean River northwest, while the Entiako River empties north into the Nechako watershed. There are many lakes and large wetland meadows in this relatively flat highland country. Winters are severe but sunshine is plentiful.

The Ulkatcho use area is made up of a great number of distinctly different natural environments. Each of these ecosystems supports its own unique grouping of plants and animals. Scientists say that there are more plant species within Ulkatcho traditional territory than in most other regions of British Columbia. The Ulkatcho people have enjoyed a rich heritage of plant knowledge for many generations.



Photo by Sage Birchwater

Horse packing in the Rainbow Mountains

BIOGEOCLIMATIC ZONES OF ULKATCHO TERRITORY

Upon these remarkable lands occur a great variety of communities of plants. Scientists who study such plant communities recognize eight of British Columbia's **biogeoclimatic zones** within Ulkatcho territory.

Biogeoclimatic zones are places where the climate, soils and plants combine and form vegetation of a similar kind (see map). The zones are usually named after the most common trees.

The eight zones of Ulkatcho territory are:

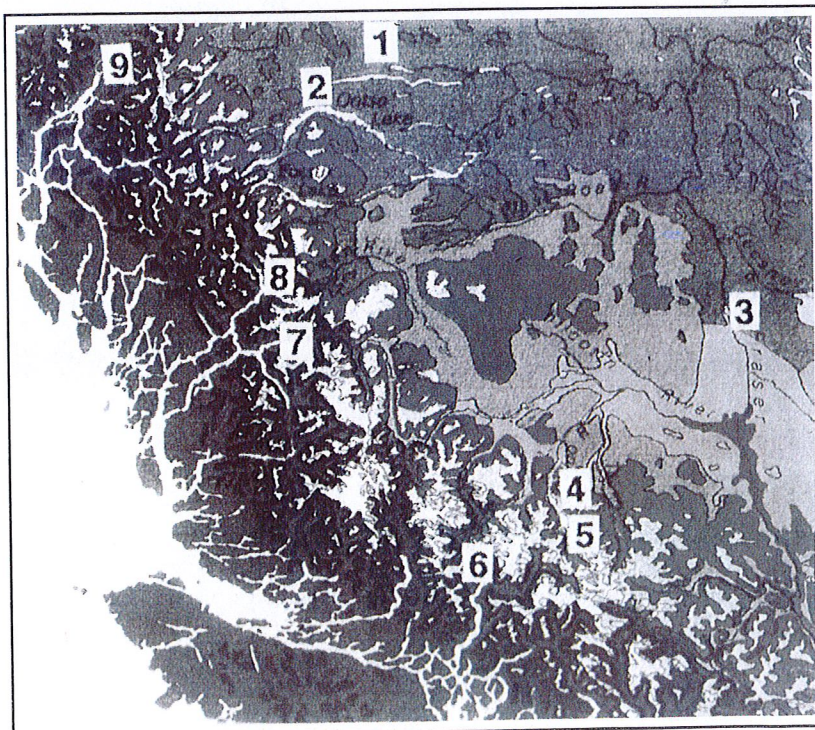
1. Sub-Boreal Pine - Spruce
2. Sub-Boreal Spruce
3. Montane Spruce
4. Engelmann Spruce - Subalpine Fir
5. Alpine Tundra
6. Interior Douglas-fir
7. Coastal Western Hemlock
8. Mountain Hemlock

In addition to the wide-ranging biogeoclimatic zones, Ulkatcho territory supports numerous thriving wetland and other special communities.

SUB-BOREAL PINE - SPRUCE FOREST

On the flat to rolling land of the plateau, in the rain shadow of the Coast Mountains, open lodgepole pine (called jackpine in the Chilcotin) (*Pinus contorta*) forests stretch nearly as far as the eye can see. Fires have burned these forests many times, yet in many areas the thin growth rings tell us that the pine trees are 200 - 300 years old: an old-growth forest by any standard.

Patches of white spruce (*Picea glauca*) survive throughout these forests where fires have burned less often and the soil is a little moister. The forest is very open under the trees. Here mainly grow lichens and mosses. But there are also patches of kinnikinnick (*Arctostaphylos uva-ursi*), pinegrass (*Calamagrostis rubescens*), wild roses (*Rosa* sp.) and scattered wildflowers.



**Ulkatcho Traditional Territory
Showing Biogeoclimatic Zones**

1. Burns Lake
2. Ootsa Lake
3. Fraser River
4. Nehmiah Valley
5. Chilco Lake
6. Bute Inlet
7. Bella Coola
8. Kimsquit
9. Kitimat

Adapted from Meidinger and Pojar, 1991

SUB-BOREAL SPRUCE FOREST

On the plateau of the northern part of Ulkatcho territory, the climate is a little moister and cooler than to the south. Here Engelmann (*Picea engelmannii*) - white spruce hybrids grow with subalpine fir (*Abies lasiocarpa*) in the forests. Lodgepole pines grow in dry places and where fires burned not long ago. Many wetlands occur on the land. The mossy forest floor has blueberries (*Vaccinium* spp.), bunchberries (*Cornus canadensis*) and many herbs such as palmate coltsfoot (*Petasites palmatus*).

MONTANE SPRUCE FOREST

Middle elevations of the east-facing slopes of the Coast Mountains and a large area around the Ilgachuz and Itchas are covered in spruce forests of Engelmann spruce and its hybrid with white spruce, mixed with subalpine fir. Lodgepole pine stands occur widely in burned places. Trembling aspen (*Populus tremuloides*) is also important.

Shrubs are not always abundant but include common juniper (*Juniperus communis*), the low growing crowberry (*Empetrum nigrum*) and grouseberry (*Vaccinium scoparium*). A variety of herbs and mosses cover the ground, especially twinflower (*Linnaea borealis*). Lichens are abundant too. Ulkatcho territory includes part of the largest area of Montane Spruce Zone in British Columbia.

ENGELMANN SPRUCE - SUBALPINE FIR FOREST

High in the mountains above the plateau are found closed forests of Engelmann spruce, subalpine fir and lodgepole pine. Higher still the forest opens into patches of meadow, heath and grassland. Shrubs grow very well in these forests. Among the most

common shrubs are white-flowered rhododendron (*Rhododendron albiflorum*) and false azalea (*Menziesia ferruginea*).

ALPINE TUNDRA

On the high ridges and peaks of the Coast Mountains and inland volcanic ranges there are no trees. Dwarf shrubs, herbs, mosses and lichens predominate in this zone. Willow (*Salix* spp.) thickets and dwarf willow mats grow here, where there is protection from the cold winter wind. Tufts of Altai fescue (*Festuca altaica*) and patches of mountain sagewort (*Artemisia norvegica*) sprout on dry sites and slopes. Deep moist soils support a profusion of wildflowers including species of Indian paintbrush (*Castilleja* spp.), lupine (*Lupinus* spp.), lousewort (*Pedicularis* spp.), and groundsel (*Senecio* spp.).

INTERIOR DOUGLAS-FIR FOREST

Dark green forests of Douglas-fir (*Pseudotsuga menziesii*) clothe the valley of the Atnarko River below Heckmann Pass. Lodgepole pine grows where fires have burned recently. Common shrubs include soapberry (*Shepherdia canadensis*) and kinnikinnick. Paper birch (*Betula papyrifera*) and western redcedar (*Thuja plicata*) are common in the forest.

COASTAL WESTERN HEMLOCK FOREST

The floor and lower slopes of the Bella Coola Valley support dense, wet conifer forests. Here western hemlock (*Tsuga heterophylla*) and amabilis fir (*Abies amabilis*) are abundant. Western redcedar and Sitka spruce (*Picea sitchensis*) grow especially well on floodplains such as that of the Bella Coola River.

Important forest floor plants include devil's club (*Oplopanax horridus*), queen's cup (*Clintonia uniflora*), foam flower (*Tiarella trifoliata*), twisted stalk (*Streptopus amplexifolius*) and several fern species.

MOUNTAIN HEMLOCK FOREST

High slopes of the Coast Mountains of the western part of Ulkatcho territory support forest and parkland. The most common trees are mountain hemlock (*Tsuga mertensiana*), yellow-cedar (*Chamaecyparis nootkatensis*) and amabilis fir, but in the colder climates of the zone in the land of the Ulkatcho, subalpine fir grows more abundantly than amabilis fir. As with the Engelmann Spruce - Subalpine Fir Zone, the cold high parts of the zone support parkland with trees huddled in clumps.

WETLANDS

The climate of Ulkatcho country may seem very dry, especially on the plateau, but the cold winters keep the ground frozen for a long time. This allows

water to collect and support rich and widespread wetlands. These wetlands are an important source of plants, very different from those in the forest. Wetlands also provide habitat for animals, such as the moose, important to the Ulkatcho.

Ulkatcho country has many different kinds of wetlands. On the warm dry plateau, near Kleena Kleene for example, wide bands of bulrushes (*Scirpus* sp.) surround shallow lakes. Dwarf or scrub birch (*Betula glandulosa*) and scattered willows surround meadows (technically called fens) dominated by sedges, especially beaked sedge (*Carex rostrata*) in many wet sites on the plateau. Along rivers, especially the Dean River, thickets of willows and red-osier dogwood (*Cornus stolonifera*) crowd the shore. At high elevations, such as in Heckmann Pass and to the west and north, fens and swamps are replaced by bogs with shallow pools choked by buckbean (*Menyanthes trifoliata*) and mats and hummocks of sphagnum moss covering the ground. On wet slopes high in the Rainbow and Ilgachuz mountains rich wet meadows full of grasses, sedges and numerous species of perennial herbs occur.

THE IMPORTANCE OF PLANTS

Plants are the primary lifeforms to emerge from the soil. They make it possible for other living creatures to survive. Plants provide food, shelter and medicines for both humans and animals. Certain plants, like those that inhabit bogs, even change the environment and landscape so that other plant species can thrive.

The Ulkatcho people were very much aware of this web of life. They understood how all lifeforms in an ecosystem relate to one another. Ulkatcho elders view plants not simply as resources to be used or consumed, but as living parts of the landscape with relationships and properties not only connected to their usefulness to people.

Ulkatcho plant knowledge ties the people to the land. Their way of identifying the plants, how the plants look to them and where they grow, shows how the Ulkatcho people know the land in many different ways.

PLANT USES

Plants are used for many purposes in traditional Ulkatcho culture. Beyond these direct utilitarian values, the Ulkatcho people also have a deep appreciation of the plants that grow in their territory.

A smudge of pine, spruce, cedar and juniper needles used to bless the opening of a new education centre in the Ulkatcho community, demonstrates that plant use is still a part of the living culture - a real event going on, within a living framework.

This example of traditional use may not be seen as "scientific" by some people, but this dimension of plant use sends a most important message to people outside the culture. Ulkatcho people continue to be connected to the land in a unique way. Their use and understanding of plants demonstrates this connectedness.

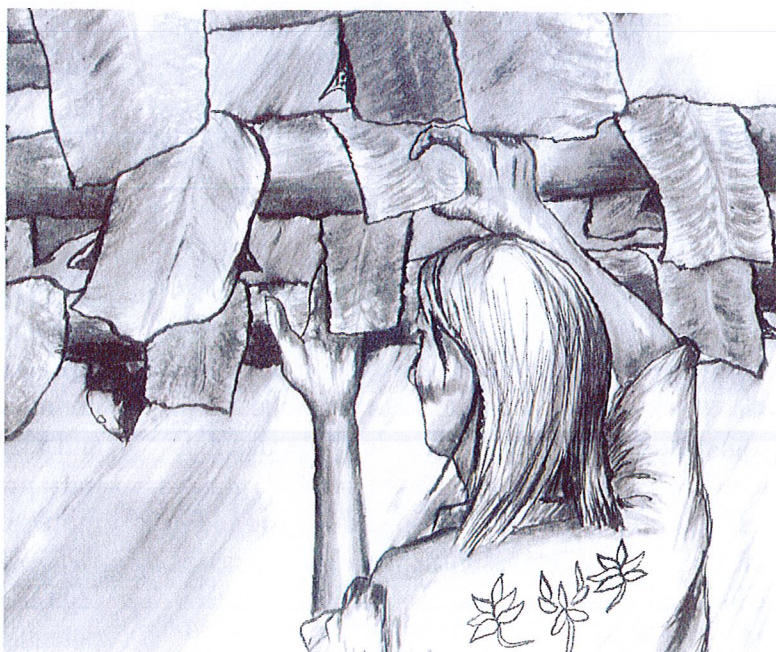


Illustration by Ronald Cahoose

Use of plants (pine or spruce poles) for constructing a drying rack to hang fish and meat on

Traditionally plants were used in every aspect of daily life. Bark and wood were used for warmth, cooking, and smoking meat and fish. Willow stems and roots were collected for making baskets. Pitch from all species of coniferous trees made important medicine, and powdered pitch helped start fires. Heavy logs and poles were fashioned into shelters, deadfall traps, fences, rafts, bridges and a variety of useful constructions. Roots and thinner saplings were shaped into snares. The leaves of thimbleberry plants, laid on racks of branches tied together with strips of bark, served as a mat for drying berries. Moss was used for baby diapers and together with evergreen boughs made excellent bedding material.

Medicines and foods were derived from different kinds of roots, leaves, and stems. Barks, pitch and resins were also used for medicine. Flowers, seeds, berries and inner bark provided food. The knowledge of how to properly gather these plants and prepare them was passed down from generation to generation.

Smoke from burning rotted logs and wood provided a welcome relief from mosquitoes, a use appreciated by both humans and animals. In fact the use of plants by animals was widely understood by members of the Ulkatcho community. Of the 304 plant species whose use was recorded, 63 species were noted by elders as being used by animals.

The use of plants by animals is important to the Ulkatcho understanding of the world around them. The elders recognize that all animals depend on plants in some way or another. They note that certain grasses in the alpine zone are important to the groundhog or marmot for food and nesting materials. Bears eat a wide variety of berries, roots and grasses, and moose, caribou, deer and domestic cattle and horses also eat a wide assortment of shrubs, grasses, herbs, lichens and even mushrooms.

Knowledge of the way animals use plants has a practical side to it as well. It is understood that each

animal has its own habitat and can usually be found where particular plants grow. Elders say that by looking for willows which have been freshly eaten, you can tell if a moose is in the area. Freshly chewed poplar branches are a sign that a beaver is nearby. This knowledge is helpful for hunters looking for their prey.

Ulkatcho people traditionally knew every plant that grew in their territory. Some plants like the jackpine (lodgepole pine) can be found everywhere throughout the region. These coniferous trees were traditionally very important sources of food, medicine and technology. Because they were so common, most people knew of their uses. Other plants have more specialized uses. Indian hellebore (*Veratrum viride*), for instance, only grows in the mountain regions. Knowledge of how to use this important, but potentially very dangerous medicine was limited to only a few people who knew the art of healing.



Illustration by Ronald Cahoose

Animal use of plants

MUCH TRADITIONAL KNOWLEDGE HAS BEEN LOST

The Ulkatcho knowledge of plants is considerable, but the uses of many species, once considered important for survival, have been discontinued. There are many reasons for this.

New customs were adopted by the Ulkatcho people with the arrival of Europeans. New foods, medicines and technologies were introduced, taking the place of those used for centuries by the Ulkatcho. As the younger generations learned to enjoy these new foods, they often never acquired a taste for the traditional foods.

As people stopped using traditional plants, the knowledge of where to find them and how to prepare them became lost as well. For example, many elders still remember from their youth eating rice-root (*Fritillaria camschatcensis*), cow-parsnip (*Heracleum lanatum*) shoots and water-parsnip (*Sium suave*) roots. Though they rarely eat them today, the elders still know where these plants grow and how to harvest them and they recall them fondly. The knowledge of how to use these plants, however, is not being passed on to many young people today.



Andy Cahoose and Mack Squinas assist in ethnobotany research with Richard Hebda, Leslie Saxon and Michèle Kay at Tanya Lakes.



Photo by Sage Birchwater

Richard Hebda, Michèle Kay and Leslie Saxon discuss plant collection with Henry Jack at Tanya Lakes

GATHERING INFORMATION

The elders named in the acknowledgements were shown plants gathered from several locations within Ulkatcho traditional territory, and were asked to comment on their uses. In most cases elders were on location where the plants were gathered, but when this was not possible, specimens were brought to them. In all, 304 different plant species were collected from 12 different sites throughout Ulkatcho traditional territory.

Plants were gathered at Tanya Lakes, Rainbow Valley, Rainbow Mountains, Anahim Lake, Nimpo Lake, Upper Dean River Valley, Kleena Kleene, Ulkatcho Village, Qualcho Lake, Detna Lake, Euchiniko Lake, Noosgulch Valley, Atnarko River and Stuie. The greatest number of plant specimens were gathered from two places: the area surrounding Anahim Lake and the area around Tanya Lakes.

Information was also included from unpublished notes of Clark Davis and Janie Jack completed and recorded in the early 1980's.

Though this study is in no way comprehensive, it lends some insight into the traditional relationship the Ulkatcho people have always had with the land in which they live. This traditional knowledge of plants was very extensive and reflects an intimate understanding of the land -- a unique relationship to the natural world.

Photo by Sage Birchwater

FOOD PLANTS

Lodgepole Pine or Jackpine (*Pinus contorta* Dougl.)

Pine Family (Pinaceae)

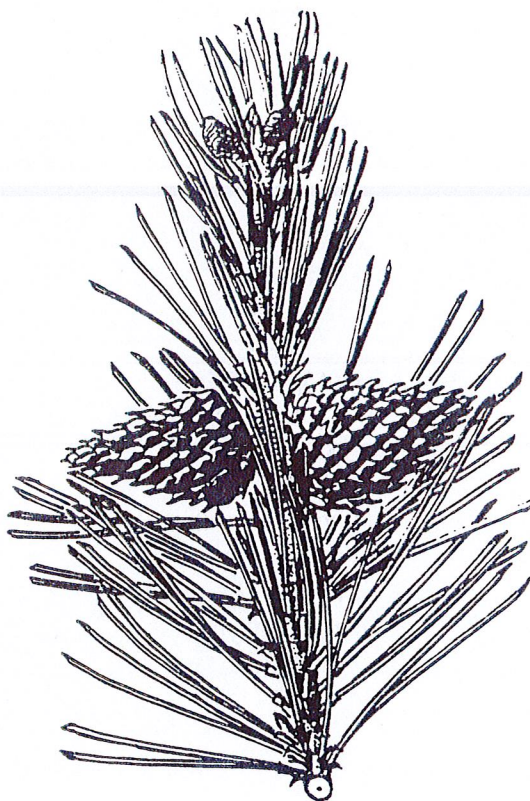
Ulkatcho Names: *chundoo*
inner bark *k'unih*

Description: *Chundoo* (jackpine) grows as a medium tall tree with needle-covered branches sticking out from the vertical trunk. The tree can reach 15 m (50 ft) to 30 m (100 ft) tall, with a trunk up to 60 cm (2 ft) across. The scaly bark is about one to two centimetres (1/2-1 in.) thick and coloured brown to grey. The needles occur in clusters of two, are dark to yellowish green and 2.5 - 7.5 cm (1 - 3 in.) long. *Chundoo* has small hard cones which often remain on the tree for many years. Cones open to release winged seeds only after fire or strong heat. Small soft cones release fine yellow pollen usually in early summer in Ulkatcho country. All parts of *chundoo* have a strong pine smell.

Where to Find: *Chundoo* grows everywhere in Ulkatcho territory where it is the most common tree in the forests. Only on the highest mountains will you not see it. This pine occurs from southern Alaska and Yukon to northern Mexico and scattered eastward to South Dakota.

Traditional Knowledge and Uses: In the old days *chundoo* was an important source of food in the spring, just as the leaves of deciduous trees were coming out. The *k'unih* or white innermost bark and growing tissues, inside the scaly outer bark, was scraped off and eaten. According to the late Mary Joe Cahoose, *k'unih* was: "Good to eat, good tasting. Get in springtime." She ate this food when she was young.

Andrew Squinas said that long ago people used tools made from sharpened caribou horn to cut the outer bark of the *chundoo* and scraped off the



k'unih in long strips. He said it was collected by the bucketful and brought home, where it was eaten either fresh or dried. "Hang it up just like dry meat. Just little while he dry."

The dried, hardened pitch, which sometimes forms on the outside of the bark or at a cut, can be broken off and chewed like gum. It takes quite a bit of time to chew the hard pitch until it is soft, but eventually it chews almost like store gum. The pitch has a strong piney taste. *Chundoo* has many medicinal uses too (see page 42).

Notes: Many aboriginal peoples of the British Columbia interior have used the inner bark as a springtime food. Within this century, a scraper

made from a section of the curved part of a tin can was used as a tool to harvest this delicious tissue, called “pine noodles” by some people.

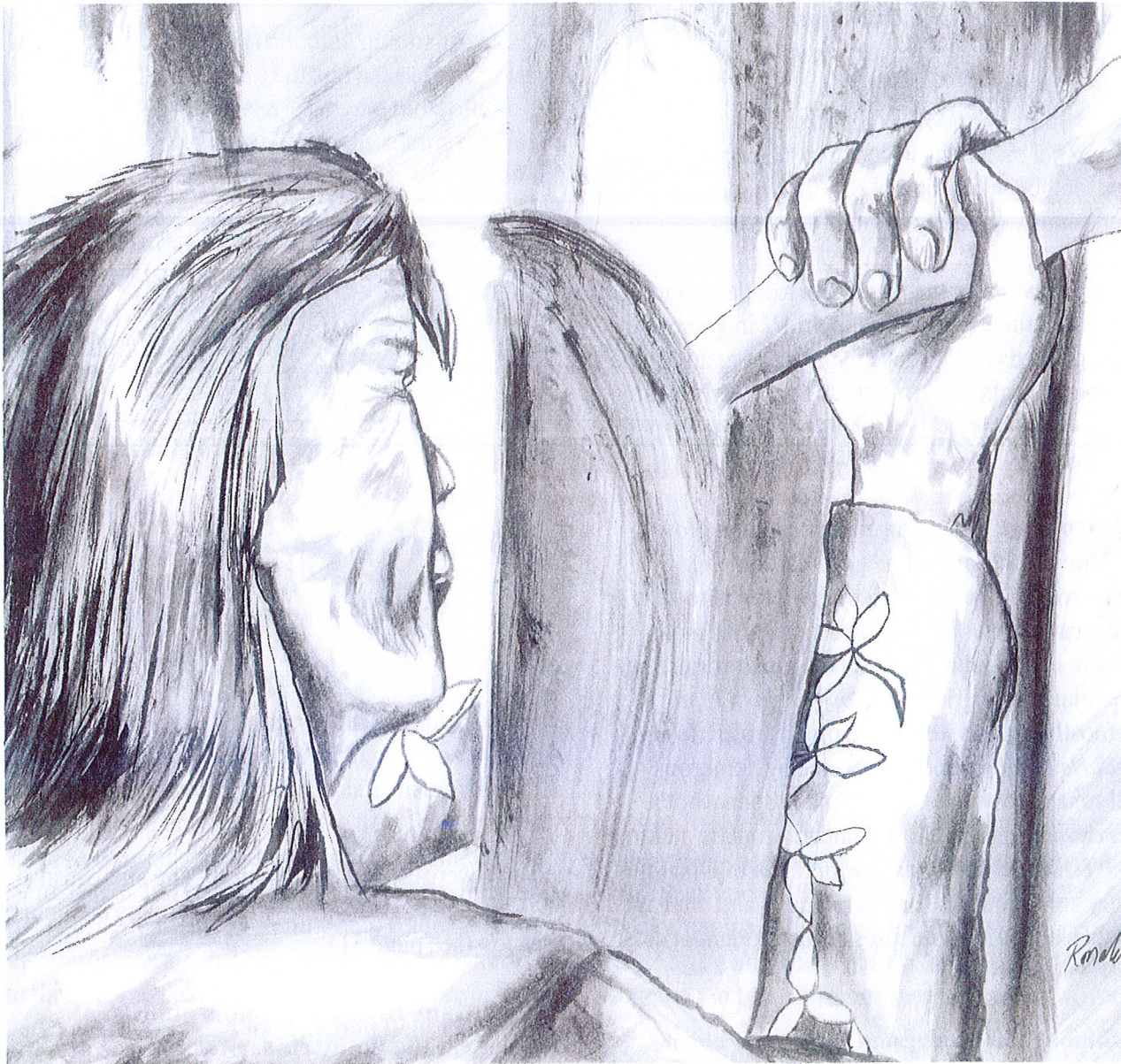


Illustration by Ronald Cahoose

Ulkatcho man cutting and scraping chundoo bark

Wild Roses (*Rosa* spp.)

Rose Family (Rosaceae)

Ulkatcho Names:	<i>whus</i>
leaf	<i>whus t'an</i>
bush	<i>whus chun</i>
rose hip	<i>whus 'injooh</i>

Description: *Whus chun* (roses) are low (0.5 m) to medium (2.5 m) shrubs which drop their compound leaves for the winter. The mostly thin branches can be very thorny to nearly smooth. Roses bear beautiful pale to dark pink scented flowers in June and July. Later the flowers mature into bright red, fleshy hips (fruits) a centimetre or more (about 1/2 in.) across, with large seeds inside. Late in the summer and in the fall, especially after frost, the flesh turns nearly clear and somewhat juicy. These fruits are sphere-shaped to elongated.

Where to Find: Three kinds of *whus chun* grow abundantly in the land of the Ulkatcho people. Nootka rose (*Rosa nutkana* Crépín) tends to be a tall plant and grows in moist open sites. It is most abundant in the Bella Coola valley. On the drier and cooler plateau, prairie rose (*Rosa woodsii* Lindl.) with mostly smooth stems, and prickly rose (*Rosa acicularis* Lindl.), which is covered by numerous small spines, grow in openings and in open woods. *Whus chun* are particularly abundant around Anahim Lake. The different kinds of *whus chun* of Ulkatcho country are very interesting to botanists and often are difficult to identify. Wild roses occur throughout most of North America.

Traditional Knowledge and Use: Many elders know about *whus 'injooh* (rose hips). The fleshy outer tissue was eaten mainly fresh from the bush in the woods. Do not eat the hairy seeds though! Big



red hips were especially favoured. The hips can also be used to make tea. *Whus chun* has many medicinal uses too (see page 51).

Notes: Many British Columbia aboriginal peoples eat the fleshy rinds of wild rose hips. The flesh contains lots of vitamin C. Rose hips are often available during the winter when few other plant foods can be found.

Nodding Onion (*Allium cernuum* Roth)

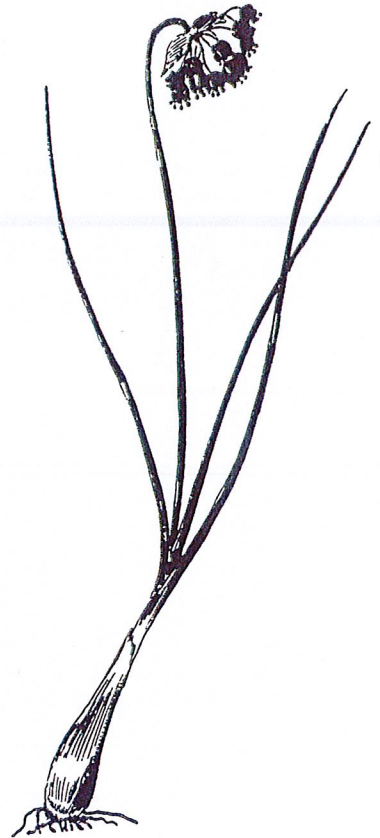
Lily Family (Liliaceae)

Ulkatcho Name: *tl'otsun* ("smelly grass")

Description: *Tl'otsun* (nodding onion) grows as a herb up to 50 cm (20 in.) tall and has narrow grassy leaves. The greyish green leaves are most often shorter than the flower stalk. In the summer there is a stem with a cluster of small, pale to dark pink flowers which hang like bells from the end. Under the ground you find one to several narrow fleshy bulbs about the diameter of a little finger. The bulbs have a long neck and are covered in pinkish, net-like papery skin. All parts of the plant have a strong onion smell.

Where to Find: *Tl'otsun* is a plant of open to lightly wooded places with dry soils. It can be found generally in grassy places mainly on warmer parts of the plateau. According to Mary Joe Cahoose you could "see a lot of *tl'otsun* growing at Salmon River along the meadow." Nodding onion grows from British Columbia eastward to western Ontario and south to Mexico.

Traditional Knowledge and Use: Many people ate *tl'otsun*, both fresh and dried. Ulkatcho people would eat the leaves fresh, especially in the past. Most often the onion was used to help flavour meat. Eliza Leon used "all of the parts of the plant, flower, stem, leaves and roots in a pan with moose meat and fish too." Mack Squinas and Andy Cahoose said that the onions are just boiled with meat. According to them, some people ate a mixture of *tl'otsun*, sugar and oolichan grease, imported from Bella Coola.



Note: Many British Columbia interior peoples have enjoyed wild onions as a vegetable and flavouring. The Secwepemc (Shuswap), Stl'atl'imx (Lillooet), Nlaka'pamux (Thompson), and Okanagan peoples dug large quantities of onions, braided their leaves together and cooked them overnight in earth ovens before drying them for winter use. The onions became very sweet when cooked this way.

Labrador Tea or Indian Tea or Hudson Bay Tea (*Ledum groenlandicum* Oeder) Heather Family (Ericaceae)

Ulkatcho Names: *yak'unulh'a* ("it grows in a swamp")

Description: *Yak'unulh'a* (Labrador tea) grows knee- to waist-high. The woody plants have straggly stems with narrow evergreen leaves arranged mostly near the tips. The edges of the leathery leaves are rolled under somewhat, and the underside is covered with lots of hairs. The hairs are woolly white in young leaves, but later turn rusty orange. In the early summer, *yak'unulh'a* produces small rounded heads about 5 cm (2 in.) across. Many star-shaped white flowers, each with 5 petals, form the heads. The flower heads feel slightly sticky because they have glands --especially on the flower stalklets, that secrete a scented mixture of compounds. Crush or brush against the leaves and you will smell a sweet spicy fragrance.

10 cm.



Where to Find: *Yak'unulh'a* grows in acid moist places throughout Ulkatcho country. You can find it almost everywhere in muskegs, swamps and bogs. It is very common in moist, mossy conifer forests and even in wet peaty meadows high in the mountains. Labrador tea can be found across Canada and in parts of the northern United States.

Traditional Knowledge and Use: To the Ulkatcho people, *yak'unulh'a* was "old-timers' tea". They would collect and dry the leaves and drink it just like tea, or use the leaves fresh. The leaves were thrown into hot water and steeped or boiled for a long time, until the water turned dark. Tea from this plant smells very fragrant. This tea was used especially when the

people went into, or lived in the mountains. People still enjoy the tea today. *Yak'unulh'a* has medicinal uses too (see page 48).

You must be very careful if you want to make tea from this plant. Learn to identify it properly because there are other shrubs such as swamp laurel (*Kalmia* spp.) that resemble it and grow with it. Swamp laurels are poisonous. They have shiny smooth leaves, that are not woolly underneath, and produce pink flowers. Even real "Indian tea" should not be made too strong because it contains compounds that may be harmful in high concentrations.

Rice-root, Mission Bells, Indian Rice (*Fritillaria camschatcensis* (L.) Ker Gawl.
Lily Family (Liliaceae)

Ulkatcho Name: *ilhkal*

Description: *Ilhkal* (rice-root) grows as a herb from a white bulb. Above ground a 25 to 30 cm (10 - 20 in.) unbranched stem has about 3 rings of lance-like leaves. At the top of the stem hang dark greenish brown to purple-brown bell-shaped flowers. Sometimes the flowers are spotted with patches of brown and green. Each flower has 6 “petals”. Flowers appear in the early summer in Ulkatcho territory. Prominently ribbed papery seed capsules form later. Underneath the ground hides the whitish bulb with several large garlic-like scales. The scales are surrounded by numerous little bulbs which look like grains of rice; hence the common name rice-root.

Where to Find: In British Columbia *ilhkal* lives mainly along the coast in saline marshes. But in Ulkatcho country you can find it mostly in moist meadows of the high mountains. This plant ranges from south coastal Alaska and southern Yukon to Washington State. It also grows in Siberia and Japan.

Traditional Knowledge and Use: The rice-like bulb clusters were a favourite food for Ulkatcho and other peoples of coastal and northern British Columbia. Mack Squinas said, “We eat them, cook with grease like rice.” He noted that sugar was put with the bulbs. He said there are lots at Fish Lake. Andy Cahoose added, “Take the bottom [bulbs] off and fry them. Old timers dig it up.” According to Henry Jack: “We used to eat it, cook it and boil it. We used to get it around August.”

This root vegetable is sometimes confused with the “wild potato” or spring beauty (*Claytonia lanceolata* Pursh), a white-flowered plant from Nemiah Valley/Tatlayoko area.



Notes: The Nuxalk, Haisla, Gitksan, Tsimshian, Haida and other peoples all enjoyed this food, although few people eat it today. It is said to have a slightly bitter taste. Another related species is chocolate lily (*Fritillaria lanceolata* Pursh). Its flowers are slightly larger and are chocolate-brown spotted with yellow. Its bulbs were also eaten, and may have been known to the Ulkatcho too.

Kinnikinnick or Bear Berry (*Arctostaphylos uva-ursi* (L.) Spreng.)

Heather Family (Ericaceae)

Ulkatcho Names:

berries	<i>dunih</i>
leaves	<i>dunih t'an</i>

Description: *Dunih* (kinnikinnick) is a trailing, mat-forming evergreen shrub with flexible, rooting branches and brownish-red bark. The leaves are dark green, leathery, paddle-shaped and smooth-edged. The flowers, white to pinkish, urn-shaped and drooping, are borne in small clusters at the branch tips. The fruits are bright red berries about 1 centimetre (0.4 in.) across. They are white inside and contain large seeds. The berries are edible. Maturing in late summer, they can be found throughout the winter on the plant.

Where to Find: The range of this low-growing, evergreen shrub extends across Canada, south to New Mexico and Virginia, and into Greenland and northern Eurasia. *Dunih* prefers well-drained or sandy soils, and is often found on exposed sites, in dry forest clearings, and on rocky slopes. It is common throughout the Ulkatcho area.

Traditional Knowledge and Use: The berries were eaten by the Ulkatcho and many other Aboriginal groups. Because the fruits are somewhat bland and mealy, they were generally prepared by cooking in a soup, with animal fat.

Maddie Jack recalled the way people used to eat them:

"Grandma boil berries in water and add oolichan grease and flour. My husband's mother used to cut bear fat into little pieces and then boil them. Then she would add the berries. This [mixture] would then be frozen. In wintertime we would cut [a piece] off and



eat. Tasted like raisincake. In the fall time we pick lots. Wintertime take [berries] little by little out. Just put away, don't do anything, put away fresh. Once in a while Grandma would take the brown ones out. Now we just freeze them."

Dr. Margaret Siwallace of Bella Coola recalled preparing them as "dumplings", mixed with flour, animal fat and water, then dropping the dumplings into soup (Turner 1973). Few people eat these berries today, but they remain an important potential food in case of emergency. If you are lost in the woods, you can find the berries even under the snow and eat them to prevent starvation. Bear, grouse and other wildlife rely on these berries for food. *Dunih* is also used medicinally (see page 59).

Notes: *Dunih* (kinnikinnick) is used increasingly for landscaping and decorative planting as a ground cover. The University of British Columbia Botanical

Garden has developed a particularly luxuriant form called "Vancouver Jade", which is available in many nurseries.



Illustration by Ronald Cahoose

Cooking Kinnikinnick

Thimbleberry (*Rubus parviflorus* Nutt.)

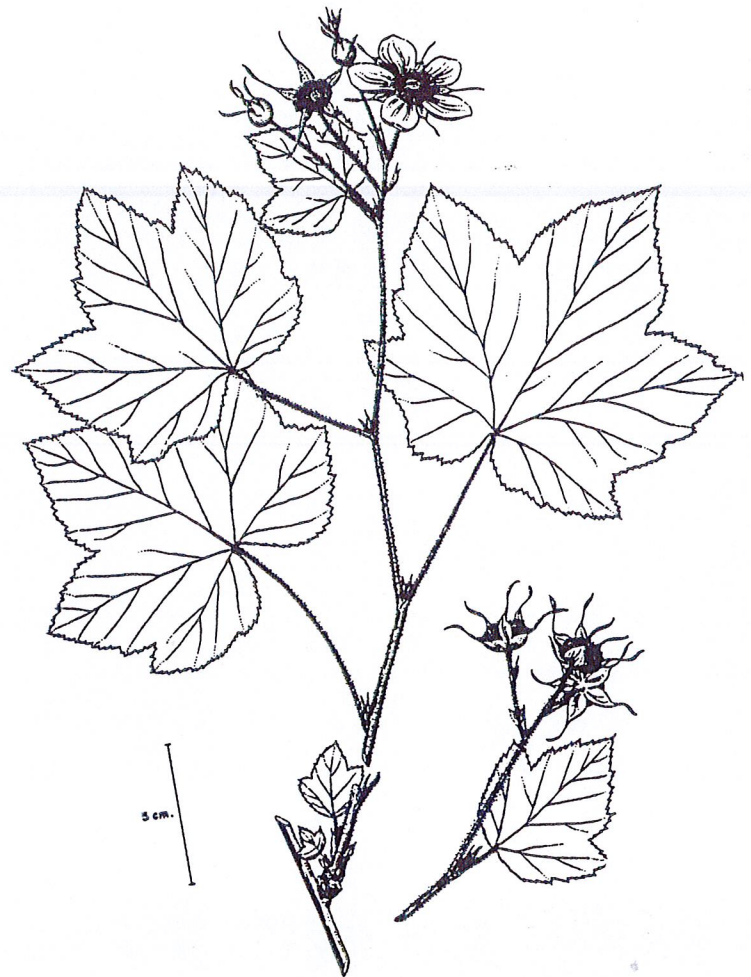
Rose Family (Rosaceae)

Ulkatcho Names: *lhudaninkat* or *dulhlaninkat*
leaves *lhudaninkat t'an* or *dulhlaninkat t'an*

Description: *Lhudaninkat* (thimbleberry) is a deciduous shrub, 0.5 - 1.5 m (1.5 - 5 ft) tall, and often grows in extensive patches. The bark is thin and shredding and there are no prickles or spines on the stems. The large, maple-like leaves are 5-lobed, long-stalked, and soft, with a finely velvety surface. The flowers, which usually bloom during May and June, are large, white and 5-petalled, and borne in few-flowered clusters. The fruits are raspberry-like, red, soft and juicy, and fall easily from their receptacles when ripe, usually from July to August. They taste bland to sweet, depending on the conditions of ripening.

Where to Find: This is a common shrub of open woods and clearings, often occurring in patches along roadsides and forest edges. It grows throughout British Columbia although Ulkatcho people note that it is not common in their region. It is far more common in the Bella Coola Valley, where the Ulkatcho sometimes went to get it. Its range extends north to southern Alaska, south to California and northern Mexico, and east to Alberta and Southern Ontario.

Traditional Knowledge and Use: The berries are sweet and juicy, and are enjoyed by Aboriginal people throughout British Columbia. Henry Jack noted that they taste similar to strawberries. "When the berries started to turn red, we would make a rack out of willow bush and put the thimbleberry leaves on top...." The rack was about 60 cm (2 ft) wide and 2 m (6 ft) long and it had sticks tied across it with string



or with willow bark so the leaves wouldn't fall off. Pine or spruce sticks, each about 1.5 cm (0.6 in.) thick, were used to construct the rack. The rack was left in the sun or positioned about 1.3 m (4 ft) above the fire." We pick(ed) lots of berries and boiled them up in a big pot. Then we would put the cooked-up berries on top of the thimbleberry leaves...so they could dry." He said it takes five or six days to dry the fruit in sunny weather. The dried berry cakes are then stored for winter.

Wilfred Cassam and Maddie Jack also recalled the drying of thimbleberries. In the old days the berries were boiled to a mush in a large pot for up to three hours, using red-hot rocks, and the cakes were made about 1.3 cm (0.5 in.) thick [they become thinner when they dry]. Maddie Jack recalled that juice from the cooking berries was saved and, as the berry cakes dried, was poured over them a little at a time. The dried cakes were rolled up and stored in a box, and when desired, they were soaked overnight. The reconstituted berries tasted “really good.” They were eaten plain, or cooked in blueberry pie. The leaves were also used as an underlay for other types of berries being dried, such as *nawus* (soapberries).

Notes: In spring, the young, succulent shoots of thimbleberry can be peeled and eaten as a green vegetable; many coastal people were, and still are, fond of this food. Ulkatcho people knew that the Nuxalk people at Bella Coola ate them, but they themselves did not. The large, soft leaves are ideal for making makeshift berry containers, and can also be used for towelling and toilet tissue. Ulkatcho people used to travel to Bella Coola or ride up into the mountains on horseback to get this plant. Maddie Jack recalled tying up bundles of the leaves to take home to her grandma.



Illustration by Ronald Cahoose

Thimbleberry leaves used for drying rack

Whitebark Pine (*Pinus albicaulis* Engelm.)

Pine Family (Pinaceae)

Ulkatcho Names:

seeds or nuts	<i>k'usts'iz 'angwul</i>
tree	<i>k'usts'iz chun</i>

Description: This small to medium-sized timberline tree often grows in a gnarled and irregular form. It seldom exceeds 9 m (30 ft) in height, but the slow-growing trunk may reach 60 cm (2 ft) across. The bark is thin and smooth, and light gray on young trees, becoming slightly thicker, darker and broken into scaly plates when mature. The needles, borne in clusters of five, are stiff, slightly curved, and up to 8 cm (3 in.) long. The seed cones are relatively small, egg-shaped and about the same length as the needles. They are coloured deep red or purplish to grey, and are carried singly or in small clusters near the ends of the branches. The cones are permanently closed; they fall to the ground when mature and eventually break apart to release the seeds. Intact cones rarely occur on the ground because birds, such as Clark's nutcracker, and rodents break them apart to get at the seeds. The seeds are large (8 - 12 mm or 0.3 - 0.4 in. long), smooth, brown and ovoid. Unlike those of most coniferous species, the seeds lack wings and are not spread by the wind.

Where to Find: *K'usts'iz chun* (whitebark pine) is found near the treeline in subalpine areas, on exposed slopes and rocky ridges, rarely below 1,200 m (4,000 ft). It occurs in west-central and east-central British Columbia, southwestern Alberta, and as far south as California and Nevada. In Ulkatcho territory, it is found in the surrounding mountain ranges.

Traditional Knowledge and Use: The large seeds of this pine were roasted and eaten by the Ulkatcho, as by other peoples of British Columbia's Interior. Maddie Jack and Henry Jack remember them with fondness, likening them to peanuts.



Henry Jack recalled, "When we're camping in the mountains, we're always looking for it." The *k'usts'iz 'angwul* (cones) were gathered in September, usually by climbing the trees. The cones vary in size; those from trees in moister areas are larger than those from high, drier areas, according to Henry Jack. Maddie Jack added that one can sometimes get the cones from holes or caches where the squirrels hide them.

To prepare the seeds, a pit is made in the coals of a fire, and the cones are placed in it and allowed to roast until the scales start to open and the seeds get soft. Then they are taken out, and the seeds cracked and eaten. One must be careful not to eat too many, Bella Leon noted, because they can cause constipation.

Notes: The seeds of this pine are similar in size and shape to those of the pinyon pines used by the Hopi, Navajo and other peoples of the American Southwest.

Soapberry, Soopolallie or Buffalo-berry (*Shepherdia canadensis* (L.) Nutt.) Oleaster Family (Elaeagnaceae)

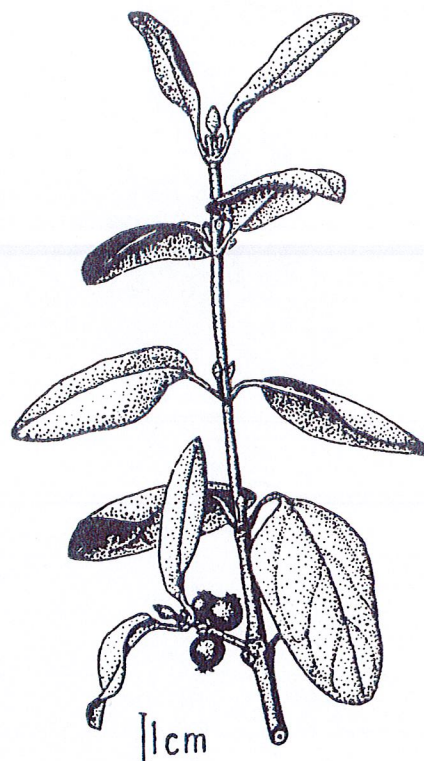
Ulkatcho Name:

berries	<i>nawus</i>
bush	<i>nawus t'an chun</i>
leaves	<i>nawus t'an</i>

Description: This medium-sized deciduous shrub usually reaches about 1 m (3.3 ft) tall in Ulkatcho territory, but can sometimes grow to 2 metres (6.6 ft) high. The young twigs and the undersides of the leaves are covered with a rusty "scurf" (tiny scales). The leaves are arranged across from each other on the stem, oval, smooth-edged and dark green. The flowers are either male or female and are produced on separate plants. Both kinds are small and yellowish-green. Flowers come out in early spring, often before the leaves expand. The bright red, oval berries occur singly and in clusters where the leaves attach to the stem. They are translucent, with tiny dots over the surface. Berries ripen from July to September, depending on the location, and are juicy and edible, but very bitter.

Where to Find: *Nawus* grows on a wide variety of sites, including open woods and thickets, rocky bluffs and shores of lakes. It tolerates soils with low nutrient levels, and often grows over limestone. The range extends across Canada from British Columbia to Newfoundland, north to Alaska and the Northwest Territories and south to New Mexico, Minnesota and New England. It is common in Ulkatcho territory.

Traditional Knowledge and Use: *Nawus* berries get their name "soapberries" and the Chinook jargon equivalent "soopolallie", because they foam up. When berries are mixed with water, as long as there is no oil or grease present, they can be whipped into a frothy mixture called "Indian ice cream" which is eaten as a special treat by the Ulkatcho and many other Aboriginal people of British Columbia. The berries are bitter tasting and the whip is usually



sweetened with sugar, or, in the olden days, with sweeter tasting berries.

Ulkatcho people generally dried these berries on a berry-drying rack made from jackpine or spruce sticks (see thimbleberry on page 22 for details of rack). The sticks were lashed together into a rectangular structure and thimbleberry leaves were placed on top of the rack. The berries were boiled for about an hour and a half until they were the consistency of thick jam, then cooled and spread on the leaves. In good weather the berry cakes dried within five or six days. Once dry on one side, they were turned over to dry on the other. If necessary the racks could be set over a fire. These days the berries are boiled for about 20 minutes, then put into sterilized jars; they are

said to keep this way for as long as five years. They can also be made into jam. The green, unripe berries can also be used to make Indian ice cream; they make white foam instead of pink.

Leona Toney noted that the Heiltsuk (Bella Bella) people really like *nawus*, but have none growing in their territory. They trade for *nawus* with the Ulkatcho, in exchange for edible red laver seaweed (*Porphyra* sp.) and herring eggs. Formerly they bought the berries in dried cakes; but today they buy them canned in jars. The Nuxalk people from Bella Coola sometimes come to Anahim Lake to pick *nawus* berries as well, although, as the following story relates, they do have them growing at the upper part of the Bella Coola valley.

The Origin of Soapberries in the Bella Coola Valley (McIlwraith, 1948):

Long, long ago, there was a mountain in Carrier [Ulkatcho] country above Burnt Bridge, who was a chief. Soapberries [called *nuxski* in the Nuxalk

language] flourished on his slopes, and he wanted to keep these for food for his guests. On one occasion he invited all the animals and birds, including Raven, to a feast and dance. His house was the interior of the mountain. When all had assembled, he carefully closed every opening so that none of the berries could escape. Raven determined to obtain some of the soapberry whip that was served for the Bella Coola people. He used his power to force one of the guests to go outside. As soon as the door was opened to let him out, Raven seized some of the "whip" and flew away scattering drops of it in his flight. Berries grew everywhere where the drops fell and since that time, everybody has been able to make this luxury. The Chief was very angry, but he could do nothing about it.

Notes: As well as providing food, soapberry bushes were an important medicine for many people (see page 64), and the whip itself was regarded as a health food. Birds, black bears and grizzlies are said to eat soapberries.



Illustration by Ronald Cahoose

Whipping Nawus

Black Huckleberry, Red Huckleberry, Wild Blueberries and Bog Cranberry (*Vaccinium* spp.) Heather Family (Ericaceae)

Ulkatcho Names:

Black Huckleberry (*Vaccinium membranaceum* Dougl. ex Hook.)
berries *mai cho* ("big huckleberry")

Red Huckleberry (*Vaccinium parvifolium* Smith in Rees)
mai dunulk'un

Alaska Blueberry (*Vaccinium alaskaense* Howell)
'ilhtsul cho ("big blueberry")

Oval-leaved Blueberry (*Vaccinium ovalifolium* Smith)
'ilhtsul

Dwarf Blueberry, Bog Bilberry (*Vaccinium caespitosum* Michx., *Vaccinium uliginosum* L.)
'ilhtsul
plant *'ilhtsul chun*
leaf *'ilhtsul t'an*

Bog Cranberry (*Vaccinium oxycoccus* L.)
'ayak'ut mai

Description: These deciduous shrubs range in size from bog cranberry and dwarf blueberry, growing low to the ground to 30 cm (12 in.) tall, to oval-leaved blueberry, reaching up to 1.5 m (5 ft) high. Leaves are roughly oval or elliptical. Oval-leaved blueberry and red huckleberry leaves are smooth-edged, whereas black huckleberry and dwarf blueberry leaves are finely toothed. Bog cranberry leaves are very tiny and evergreen. The flowers are pinkish and urn-shaped, and are borne singly or in small clusters where the leaves meet the stems. The fruits are sweet and juicy to somewhat tart (bog cranberry), ranging in colour from dark blue with a pale waxy coating (dwarf blueberry, oval-leaved blueberry) to black and shiny (black huckleberry), to red (red huckleberry, bog cranberry). The berries of oval-leaved blueberry are among the first fruits to ripen, as early as the first part of July, whereas those of dwarf blueberry mature

from August through September. Bog cranberries ripen in the fall. Ripening time varies with elevation and latitude for all of these species.

Where to Find: Dwarf blueberry is common in dry to moist coniferous forests, meadows, rocky ridges and tundra, occurring across Canada at a wide range of elevations. Oval-leaved blueberry is found at mid-mountain and subalpine elevations in moist coniferous forests and clearings. It is common in British Columbia and is also scattered around the Great Lakes area and eastward. Black huckleberry is common in coniferous forests and on mountain slopes from British Columbia to Alberta and Ontario, north to the Northwest Territories, and south to California and Wyoming. Red huckleberry is similarly common in woods and on slopes, often perched on rotting stumps and logs. Its range extends from the Alaskan

panhandle south through coastal British Columbia to central California. It is also scattered in the interior of British Columbia. Bog cranberry grows with sphagnum moss wherever acid peat bogs occur.

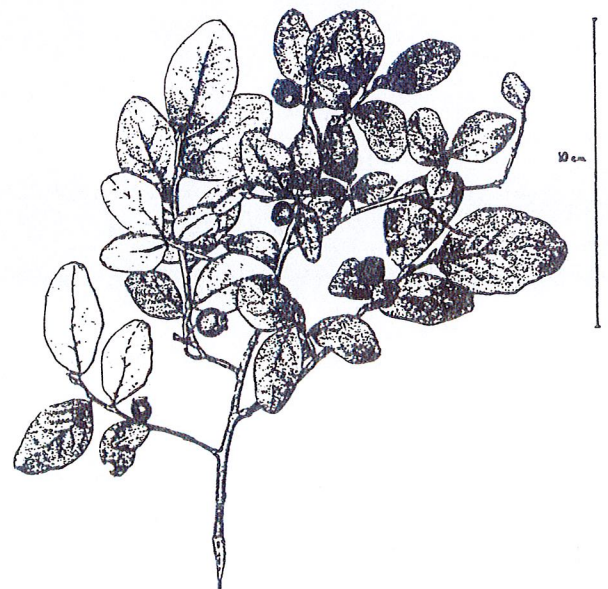
Traditional Knowledge and Use: All of these berries were, and still are eaten by Ulkatcho people. They are picked whenever available. Some types start to ripen at the end of July, and some can be found as late as October up in the mountains. *Mai cho* (black huckleberries) are found commonly in pine woodlands and in moist mountain woods. They ripen around the middle of August. There is a place called *maik'ut* ("berry place"), a hill where there is a lot of *whuscho* (devil's club) and lots of *mai dunulk'un* (red huckleberries) and *'ilhtsul* (blueberries). It is a big open place about 6 or 7 km from Tanya Lakes, near the end of Tanya Mountain. There is brush growing up there now. Henry Jack's mother and father used to go there and camp. They had a cabin there. They picked blueberries and black huckleberries at the blueberry patch. Henry Jack said there were a lot of grizzly bears there. The grizzlies like to eat the berries and dig for roots there. There is a big clearing in the spruce there.

'Ilhtsul (dwarf blueberries) are found "down on the hill", and on the narrow road called "East Branch", where there is an old burnt area. Bella Leon noted that there are small berries that grow around Ulkatcho, especially where it is burnt and rocky. They ripen around the first week in August. Formerly they were picked in very large quantities, using combs made from spruce wood, as recalled by Wilfred Cassam. People used to mash and dry them in cakes and put them away for winter. Henry Jack used to help his mother pick them. There are actually two types: one is smaller, the other larger, but both grow on short bushes and have blue berries, according to Maddie Jack and Wilfred Cassam. These two kinds of *'ilhtsul* may be dwarf blueberry (*Vaccinium caespitosum*) and bog bilberry (*V. uliginosum*). They are still a favourite for many Ulkatcho people. Today they are picked and eaten fresh or frozen, canned in jars and made into jam. The late Minnie Alexis was sometimes called by the nickname, *Mai t'i* (she's got berries).

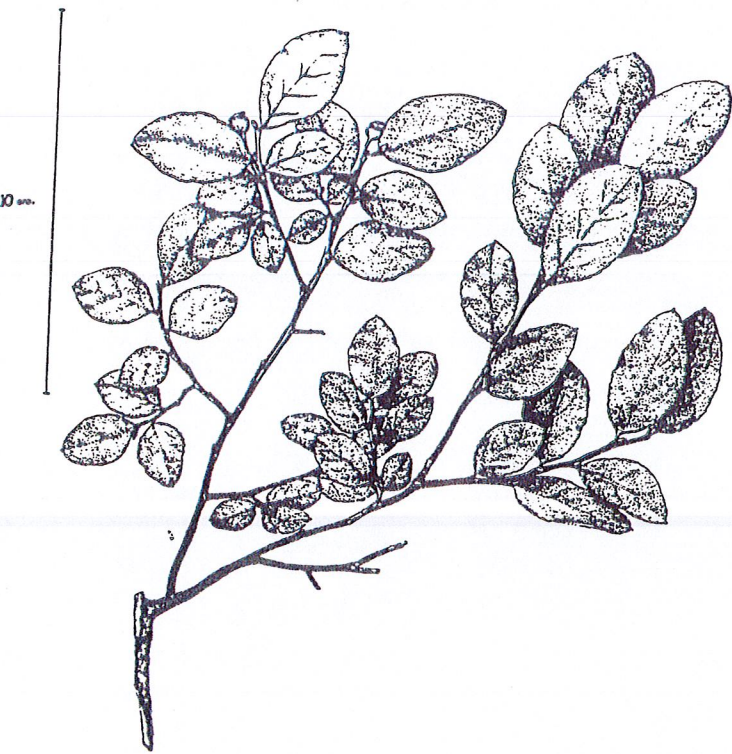
Notes: Blueberry and huckleberry pickers always have to be on the lookout for bears, who also seek these delicious fruits. Few berries are better for making pies or just for eating fresh.



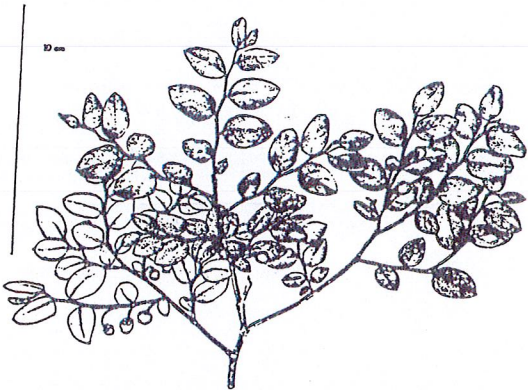
Black Huckleberry



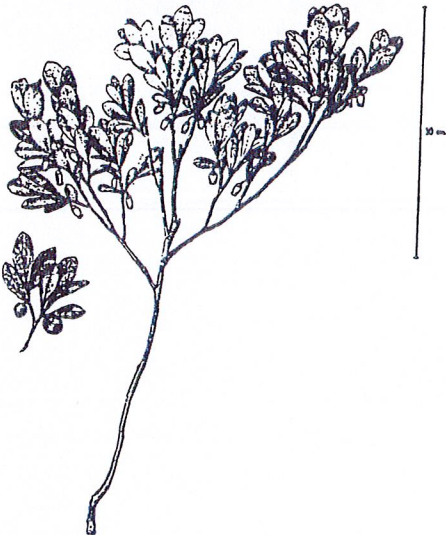
Oval-leaved Blueberry



Alaska Blueberry



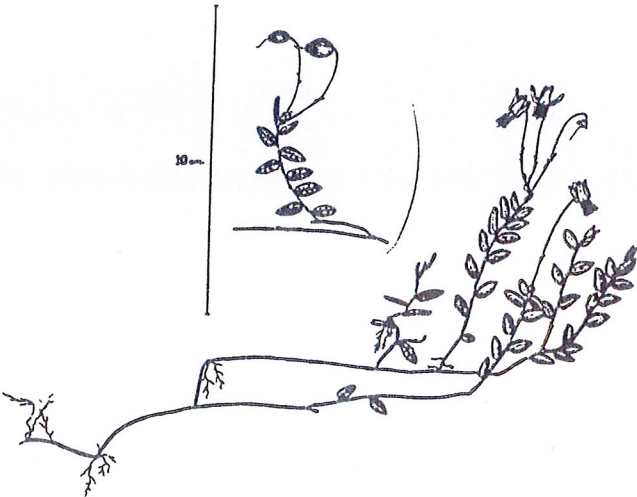
Red Huckleberry



Dwarf Blueberry



Bog Bilberry



Bog Cranberry



Illustration by Ronald Cahoon

Picking Huckleberries

**Spiny Wood-fern (*Dryopteris expansa* (K.B. Presl)
Fraser-Jenkins and Jermy, and related species)
Fern Family (Polypodiaceae)**

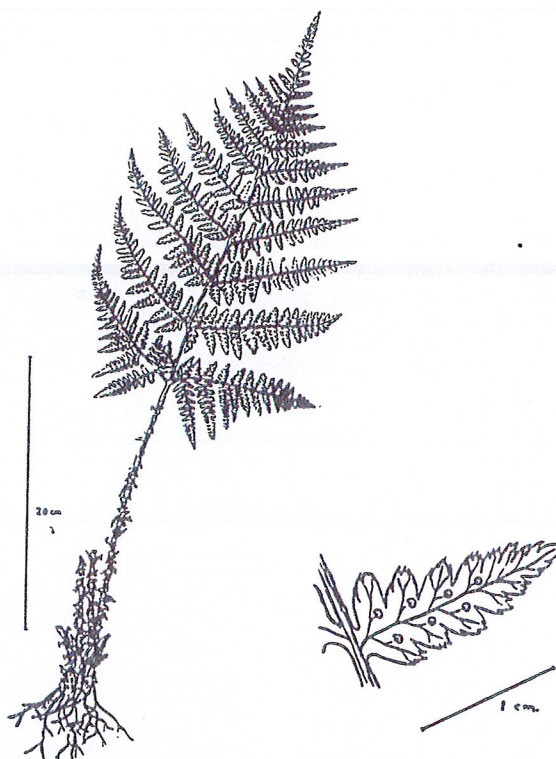
Ulkatcho Name: 'ah

Description: This large, bright green fern has many upright fronds growing in a cluster from a thick, fleshy brown rootstock. The rootstock, which is the edible part, is described as "pineapple-like", "like a bunch of bananas" or like two hands clasped together with fingers. The leaves are more or less triangular in outline, and finely divided into small toothed segments, with the longest portions at the bottom of the blade. The lower half of the stalk is bare, with small brownish scales. The spores are borne in small light coloured structures or spots on the back of the upper parts of the fronds.

Where to Find: 'Ah (wood-fern) grows in moist, shaded habitats, often on rotten wood, on mountain-sides, and in avalanche chutes. It is found throughout British Columbia, and in moist montane habitats throughout Ulkatcho territory.

Traditional Knowledge and Use: The large rootstocks were formerly pit-cooked and eaten by the Ulkatcho, as well as by the Nuxalk and other neighbouring peoples. Maddie Jack noted that there are two similar kinds: one has lots of "hair" coming out of its roots and going all the way up the stem; the other is smoother. The one with lots of hair is not good to eat; the other one is. The inedible kind, apparently lady fern (*Athyrium filix-femina* (L.) Roth.), is called *datsan* 'ah ("crow fern"). The edible type has protrusions about the size of baby fingers growing out from the central core. These are frond-bases from previous years' growth. The edible ferns are found only up in the mountains, such as at a place called *Saikelh* 'at or in the Bella Coola valley.

To prepare the rootstocks, as recalled by Maddie Jack, Wilfred Cassam, Mack Squinas and Andy Cahoose, a big hole was dug in soft ground, as long



as a grave. Branches were piled in the bottom: leafy alder branches (*Alnus incana* (L.) Moench), *A. sinuata* (Regel) Rydb.) and sometimes, hemlock (*Tsuga heterophylla* (Raf.) Sarg.) branches. About 18-22 kg (40-48 lb.) of 'ah roots were put on top, followed by more alder branches and large rocks. Jackpine or spruce bark could be placed on top of the rocks. A fire was lit over top and allowed to burn overnight. No water was added. (Moose meat was cooked similarly.) The rootstocks were then taken out, and the "fingers" broken off, peeled and eaten. The old timers used to eat them with oolichan or bear grease. The alder makes the roots turn red and gives them a good flavour.

Notes: Horses sometimes eat the edible fern. Wilfred Cassam said that the boiled leaves can be used to poultice a cut.

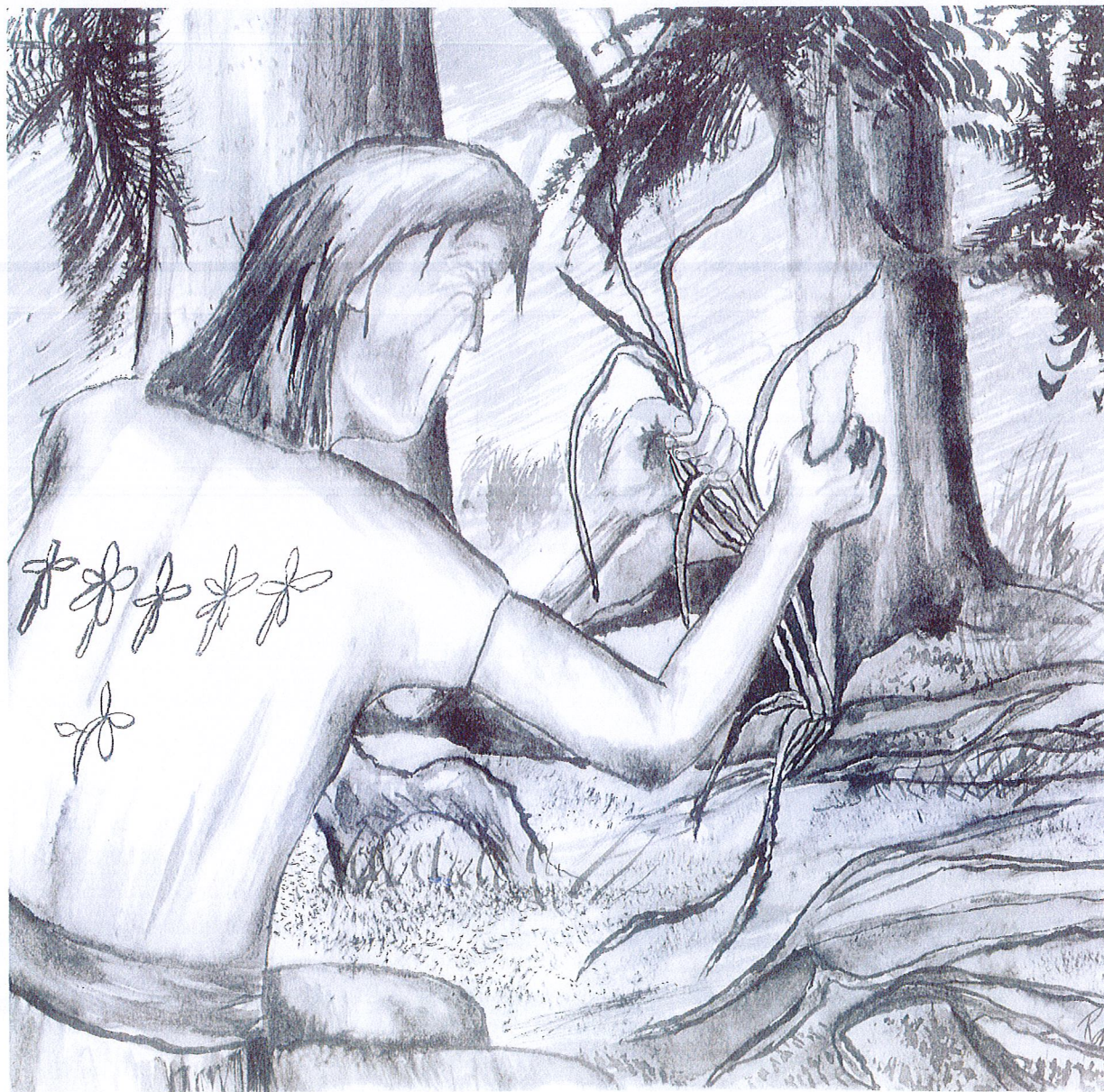


Illustration by Ronald Cahoose

Digging Fern Roots

Wild Strawberry (*Fragaria virginiana* Duch.)

Rose Family (Rosaceae)

Ulkatcho Name:

berries	<i>'indzi</i>
leaves	<i>'indzi t'an</i>
runners	<i>'indzi tl'ool</i>

Description: *'Indzi* (wild strawberries) are known to almost everyone. They closely resemble cultivated strawberries but the leaves and fruit are generally smaller. Plants grow as low perennial herbs from thick rootstocks, and spread over the ground by means of long, creeping rooting stems called runners (*'indzi tl'ool*). The long-stalked leaves are divided into three coarsely toothed leaflets. The leaves of this species are bluish green. The flowers, borne in loose clusters of 2 to 15, have five white petals and yellow centres. Blooming time is usually April to May, with the berries ripening in early summer. The berries are soft, sweet, juicy and bright-red with seeds embedded in their surface. In this species, the fruits are shaped like little globes, and the berry-bearing stalks are shorter than the leaves, with the berries sometimes resting right on the ground. Most people agree that wild strawberries are more flavourful than cultivated ones.

Where to Find: There are three species of wild strawberries in British Columbia, of which this one is the most widespread. It grows in moist openings in woods, meadows, stream sides and clearings at low to subalpine elevations. Today *'indzi* is especially common along cleared roadsides.

Traditional Knowledge and Use: The *'indzi* are a favourite, especially with children. They are seldom dried for storing, but usually just popped into the mouth as they are picked. Sometime they are made into jam. The sweet scent of sun-ripened *'indzi* is



one of the most delectable fragrances anywhere. Eliza Leon noted that the berries are really big at Quesnel.

Notes: *'Indzi t'an* (wild strawberry leaves) are widely used in folk medicine to treat diarrhoea, especially for children. They and the *'indzi tl'ool* (runners) have also been used as an important medicine for pain in the heart, according to Eliza Leon.

Spring Beauty or Mountain Potato (*Claytonia lanceolata* Pursh) Purslane Family (Portulacaceae)

Ulkatcho Name: *soont'ih*

Description: *Soont'ih* (spring beauty) is a perennial herb up to 15 cm (6 in.) tall, growing from a round, fleshy underground structure called a corm. The corms range from pea-sized to walnut-sized with brown skin and white flesh. They grow fairly close to the surface, usually 5-8 cm (2-3 in.) deep. Each corm is associated with one to several lance-shaped leaves that grow at the base of the plant. These generally die before the flowering period, which is May to June, depending on elevation. Below the flowers, about midway up the flowering stalk, there is a pair of oval, pointed stalkless leaves. The flowers are white to pinkish, 5-petalled and borne in loose clusters of 3-20. The fruits are small capsules, each containing several black, shiny seeds.

Where to Find: *Soont'ih* thrives in moist woods, subalpine slopes and meadows, and is often abundant at timberline. Different varieties of the species range across Canada and much of the United States, but the variety known to the Ulkatcho grows only from British Columbia to southwestern Saskatchewan.

Traditional Knowledge and Use: This "wild potato" is often associated with *ilhkal* (rice-root) (*Fritillaria camschatcensis*); sometimes people confuse the two, since both were used traditionally as root vegetables. However, the flowers of *soont'ih* are white and those of *ilhkal* (rice-root) are deep brownish purple. *Soont'ih* does not inhabit Ulkatcho territory. Rather it was known from Nemiah Valley-Eagle Lake country.

The Chilcotin people of Nemiah Valley traditionally ate a lot of these roots; they boiled them like potatoes and ate them with sugar. Some people there still eat

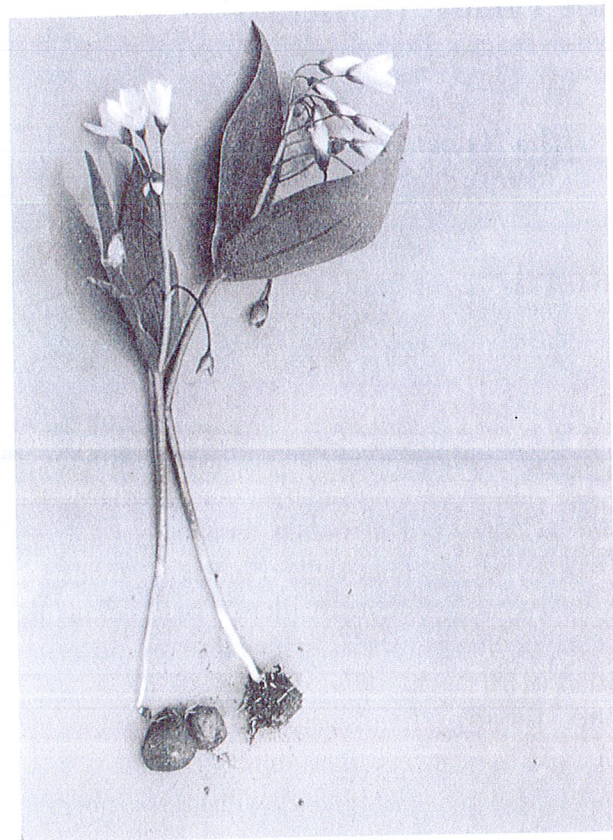


Photo by Nancy Turner

them. Mack Squinas recalled, "Oh, it tastes nice." The roots were formerly traded from Nemiah and Redstone to other communities such as Ulkatcho where the plants did not grow. Maddie Jack said, "Grandma got it in Chilcotin; that's the only place it grows." Her grandmother, from the Lulua family, was from the Eagle Lake (Choelquoit Lake) country, and used to occasionally travel to the Potato Mountains to dig the potatoes with her family. She would bring the dried roots back to Ulkatcho. Maddie noted, "They would take up a bit of the plant and plant it so it would grow again."

Notes: The Potato Mountain range between Chilko Lake and Tatlayoko Valley is named after these wild potatoes. They are also an important food for the Stl'atl'imx (Lillooet), Nlaka'pamux (Thompson), Secwepemc (Shuswap) and other Interior Salish peoples.

Water-Parsnip (*Sium suave* Walt.) Celery Family (Apiaceae or Umbelliferae)

Ulkatcho Name: *skenken*

Description: *Skenken* (water-parsnip) is a herbaceous perennial of swamps and marshes, usually 0.5-1 m (1.5-3 ft) tall, with stout, hollow stems often branched toward the top. The swollen stem base is not chambered inside when cut open, and is associated with a cluster of long, fibrous, irregularly thickened roots. The leaves are once-divided in a feather-like fashion, into 7-13 narrow, finely toothed leaflets; the bases of the leaf stalks are sheathing (wrap around the stem). The flowers are small and white, borne in numerous small, dense clusters on short stalks forming an umbrella-like head. The fruits are small, oval and ribbed. Do not confuse this plant with its highly poisonous relative, water-hemlock (see WARNING below).

Where to Find: *Skenken* grows in swampy or marshy areas and in shallow water around lakes and ponds. It ranges across Canada in suitable, usually low-elevation habitats, from British Columbia across the northern parts of the prairie provinces to the Maritimes. It is common in swamps in Ulkatcho territory.

Traditional Knowledge and Use: The fleshy, whitish finger-like roots of this swamp plant, "like little carrots," were formerly eaten. Maddie Jack recalled, "Dig up the roots, fry with grease or sometimes boiled. Usually harvest in October when top is dry looking. Grandma harvest 50 years ago...." She compared the roots to carrots and said sometimes they were eaten with a little sugar. All of the elders who knew about this plant also warned that it must not be confused with the deadly poisonous *wanicho* (water-hemlock) (*Cicuta* spp.), which resembles this edible plant. Several people were known to have died



from accidental poisoning by *wanicho*. Maddie Jack echoed the thoughts of many people in saying, "Grandma used to cook it [*skenken*], but I wouldn't eat [it] because some of them are poison. I wouldn't know which one is poison."

WARNING: As noted by the Ulkatcho elders, *skenken* grows in places that are also frequented by the violently poisonous *wanicho* (water-hemlock) (*Cicuta douglasii* (DC.) C. & R.). Two other related poisonous species *Cicuta mackenziana* and *Cicuta bulbifera* also occur in the region. Water-hemlock and water-parsley are in the same plant family, and they produce similar white flowers in umbrella-like clusters. Whereas the leaves of *skenken* are once compound, the leaves of *wanicho* (water-hemlock)

are three times compound. Also the leaf veins of *wanicho* run to the notches between the teeth rather than to the tips of the teeth. *Wanicho* (water-hemlock) has a small to moderately large turnip-like swelling at the base of the stem, which when cut open vertically reveals horizontal chambers. A yellowish liquid, which should not be touched, oozes from the cut. In spite of these differences, the

two plants have been confused and humans have been frequently poisoned by *wanicho* (water-hemlock).

If there is ANY doubt when identifying a skenken-like (water-parsnip) plant, the plant should be left alone!

Cow-Parsnip or Wild Rhubarb (*Heracleum lanatum* Michx.)
Celery Family (Apiaceae or Umbelliferae)

Ulkatcho Name: *dugoos*

Description: This large perennial herb grows up to 2 m (6.5 ft) high. Its hollow upright stems grow from a stout taproot or cluster of fibrous roots. The entire plant has a strong smell, particularly when mature, and the leaves and stems are covered with stiff hairs. The large lower leaves are divided into three broad, stalked leaflets which are multi-lobed and coarsely toothed; the middle leaflet can be up to 30 cm (12 in.) long. The leaf-stalks are broadly winged and sheathing at the base. The small white flowers are arranged in large, dense umbrella-like clusters measuring 20 cm (8 in.) or more across. The flowers bloom from June to August, depending on the elevation. The fruits are dry, one-seeded, sunflower seed-like capsules; they are brownish, papery and flattened, with thin wings.



Where to Find: *Dugoos* inhabits stream edges, wet roadsides and other moist, open areas from low to subalpine elevations. It ranges across Canada with the exception of the Arctic tundra, and occurs south to California, Arizona and Georgia. It is common in Ulkatcho country in moist meadows and along streams.

Traditional Knowledge and Use: The young leaf stalks and flower bud stalks of this plant, when peeled, were an important food for the Ulkatcho and other Aboriginal peoples of British Columbia. The stem, eaten when young after peeling, tastes like

celery. It is gathered before the flower shows, usually around May and June, then peeled and eaten raw. Many of the elders remember eating it when they were young, but few people still use it.

Andy Cahoose noted that it grows around Bella Coola and around Ulkatcho territory in the mountains, in moist meadow areas.

WARNING: *Dugoos* is a relative of *wanicho* (water-hemlock) (*Cicuta* spp.), a deadly poisonous plant with smaller, but similar, white umbrella-like flower heads. *Wanicho* (water-hemlock) has more finely divided leaves, and grows in standing water, but can be mistaken for *dugoos* by the inexperienced gatherer. Those wishing to try *dugoos* must be positive that they have the right plant. *Dugoos* is only edible in its young stage, before flowering. The stalks must be peeled before being eaten. The plant,

especially its skin, contains a chemical that irritates, blisters and discolours human skin in the presence of sunlight. For this reason you must always peel the skin of *dugoos*.

Notes: *Dugoos* is known to be a favourite food of grizzly bears; they eat it in early summer, according to Mack Squinas. Henry Jack recalled that Ulkatcho children used to make blowguns from the dried,

hollow stems of *dugoos*, shooting out spit balls placed in the end: "Kids fooling around, supposed to be asleep... [or] Shoot at teacher in school." The stems can be found right through the winter. In **Hanuyeh Ghun 'Utni-i** (Carrier Linguistic Committee 1973: 82) it is noted, "Whenever someone is sick, they take the [*dugoos*] roots, wash and grind them and put them on the place where it hurts. This gives fast relief for rheumatism."

Pine Mushroom (*Tricholoma magnivelare* (Peck) Redhead Tricholoma Family (Tricholomataceae)

Ulkatcho Name: *benidzo* (any mushroom) (*dzo* “ear”; *az* “outside”)

Description: This large mushroom grows up to 20 cm (8 in.) across. The cap is rounded when young, but flattens and broadens with age. The young mushrooms are whitish, becoming brownish, smooth or covered with delicate brown scales at maturity. The tops are slightly sticky when wet. The gills, whitish and ageing to pinkish, are crowded and partially attached to the stem. They turn brownish when bruised. The firm white flesh has a mild taste and distinct aroma. The stem is up to 15 cm (6 in.) long, thick at the top and tapering to a pointed base, with a thick, soft ring around it. This *benidzo* produces a white spore print when the cap is cut off and placed downwards for a few hours on dark paper.

Where to Find: Pine mushroom grows alone or in small groups on the ground, under coniferous trees such as lodgepole pine (jackpine) and Douglas-fir. It occurs in forests throughout much of British Columbia, and is common in Ulkatcho territory.

Traditional Knowledge and Use: Mushrooms were not generally eaten in the olden days by the Ulkatcho people. Wilfred Cassam said, “We never ate mushroom, I don’t know why. Grandma said they were poison. So we never eat mushroom, never heard about it, so I don’t want to try it. Even pine mushroom, I wouldn’t eat.” Today pine mushrooms are very important because the Ulkatcho people pick them for the export market. Many people go mushroom gathering now. Usually they sell them to a mushroom buyer who comes up from Vancouver. Pine mushrooms are shipped to Japan, where they are regarded as a delicacy, and known as



“matsutake.” Some Ulkatcho people eat them. Mack Squinas said they make a good soup: “Cut in little pieces, boil in water a bit, add cream. Like mushroom soup in a can.”

Pine mushroom season usually begins in August. Lots of mushroom buyers come around in late summer. The mushrooms can bring anywhere from \$10 - \$150 per pound if they are in prime condition. Pine mushrooms only started to be picked for sale in the early 1980’s. Since Ulkatcho people began picking these mushrooms commercially, they have expanded their traditional “use area”, travelling north to the Nass River, east to the Kootenays, west to Vancouver Island and south as far as northern California, following the seasonal harvest.

Notes: Black bears and squirrels are known to eat some kinds of mushrooms, and a horse was observed to eat pine mushrooms. Horses and cows also eat bolete (*Boletus* spp.) mushrooms. These have pores underneath instead of gills. One man was nicknamed *benidzo* in Ulkatcho because he used to wear a

cowboy hat turned down at the brim, low over his head, like a mushroom.

WARNING: Some mushrooms are deadly poisonous; others will cause sickness if eaten. Anyone wishing to eat mushrooms should be absolutely certain of their identification.

MEDICINE PLANTS

NOTE:

Do not use the medicines described in this book without the advice of an Ulkatcho elder or herbal specialist, or a qualified medical practitioner.

These medicine plants are known from generations of observation, experience and use by Ulkatcho people. Some of these plants could be harmful, or even deadly, if taken without full knowledge and understanding of their effects



Photo by Sage Birchwater

This section of Ulkatcho PlantUse is dedicated to Stoney Creek Elder Sophie Thomas. Sophie is considered the foremost expert on the healing properties of plants used by the Carrier People.



Photo by Sage Birchwater



Photo by Sage Birchwater

Above: Sophie Thomas explains the healing properties of plants she has collected to a gathering at Ulkatcho Village, July 1991

Lodgepole Pine, Jackpine (*Pinus contorta* Dougl.)

Pine Family (Pinaceae)

Ulkatcho Names:

tree	<i>chundoo</i>
needles	<i>chundoo 'ul</i>
pitch	<i>chundoo dzeh</i>

For Description and Where to Find: see page 14

Traditional Knowledge and Uses: *Chundoo*, like many plants with a strong scent, was traditionally a valuable medicine. It was particularly useful to make medicine for colds. Andy Cahoose described boiling the branch ends in early spring, “like balsam (subalpine fir) bark” to drink for colds.

Chundoo dzeh (pitch) made medicines for several problems. Chewing the pitch helped sore teeth and colds. The pitch healed sores and infections too. Maddie Jack described how you boil the pine pitch with lard and put it on sores and cuts. Helen Squinas said: “Use the *dzeh* anywhere you are sore. You cut your hand or break your leg, just put it on. Heal up right away. Put the *dzeh* in a pot and put it on the stove. Heat up. Put a little lard in there. Stir it and

make it soft. Put a rag in there and put it on your leg anywhere.”

According to Henry Jack, medicine made from the pitch could be used to treat diaper rash. Helen Squinas explained that the pitch was still being used today for this purpose. “Add a little more grease to the *dzeh* for diaper rash.”

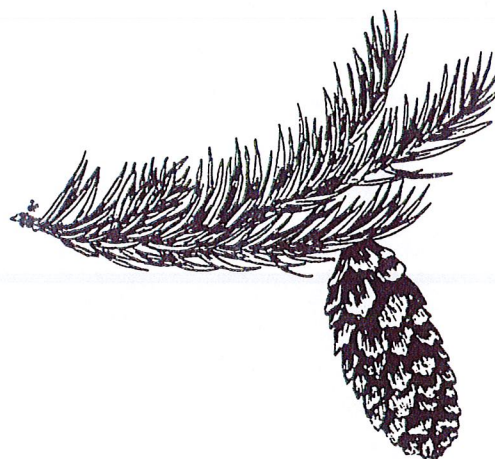
Notes: When the Jimmy Stillas Learning Centre was built in the Ulkatcho community in Anahim Lake, the band had a special blessing ceremony. Juniper, spruce, cedar and *chundoo 'ul* (needles) were placed in a large cast iron pot and ignited. The pot was then carried around the building and the smoke spread with an eagle feather while Mack Squinas blessed the Centre.

Spruce, Engelmann and hybrids with white spruce (*Picea engelmannii* Parry and hybrids with *Picea glauca* (Moench) Voss)
Pine Family (Pinaceae)

Ulkatcho Name:	<i>ts'oo</i>
cone	<i>ts'oo 'angwul</i>
branches	<i>ts'oo tel</i>

Description: *Ts'oo* (Engelmann spruce) normally grows tall, nearly 35 m (115 ft), and has narrow branches nearly to the bottom of the trunk. In old trees the trunk may reach one metre (40 in.) across and sometimes more. The thin bark breaks into large brownish scales. The four-sided, stiff needles are usually about 2 cm (3/4 in.) long. They may have sharp or blunt ends and are often slightly curved. Yellowish brown Engelmann spruce cones have a cylindrical to oval shape and are about 5 cm (2 in.) long. The loose fitting scales release light winged seeds from fall to spring. Young twigs of Engelmann spruce are usually hairy whereas those of white spruce are hairless and its cones smaller. Hybrid spruces have twigs and cones with characteristics between the two parent species.

Where to Find: *Ts'oo* grows throughout Ulkatcho country, especially in old and moist forests. Though much of the plateau supports *chundoo* (jackpine) forests, almost every moist spot will have *ts'oo*. *Ts'oo* forests occur particularly in the Ilgachuz, Itchas

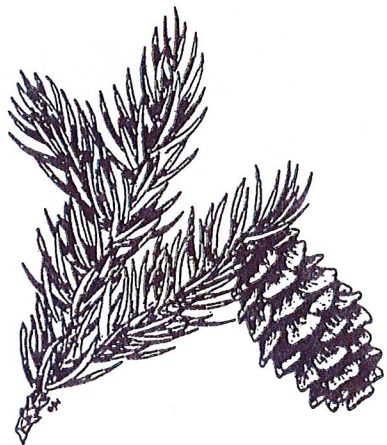


Engelmann Spruce

and Rainbow mountains and in the moister climate of northern Ulkatcho territory. *Ts'oo* often grows with *ts'oochun* (subalpine fir) at the limit of trees high in the mountains. Engelmann spruce ranges from B.C. and Alberta south to California and New Mexico. White spruce grows throughout northern North America.

Traditional Knowledge and Uses: *Ts'oo* was used for medicines much as *chundoo* (jackpine) was. A medicinal tea was made from the tips of the *ts'oo tel* (branches) and drunk by people who were suffering from "cold sick". According to Maddie Jack, the pitch could be used for many things. "Warm up with some grease and use like ointment. Use on wounds. Wrap stuff around the wound."

As mentioned in the description of *chundoo*, *ts'oo 'ul* (needles) are used in combination with other plants in the making of a smudge to bless occasions such as the opening of the Jimmy Stillas Learning Centre and the new Ulkatcho Band Office.



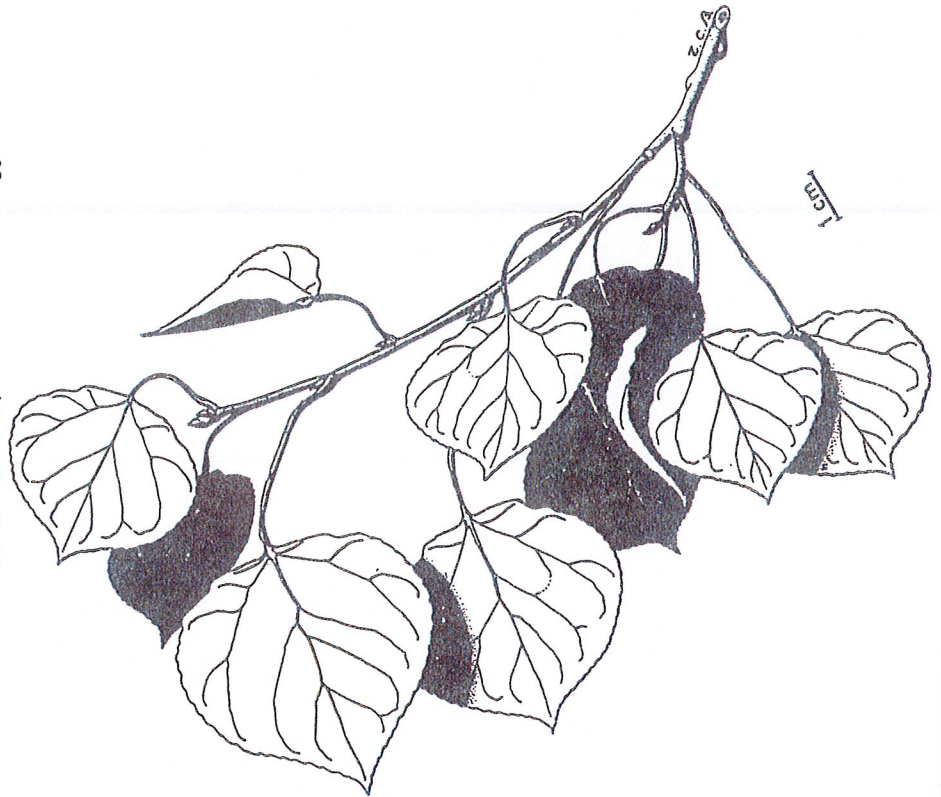
White Spruce

Trembling Aspen, Poplar (*Populus tremuloides* Michx.)
Willow Family (Salicaceae)

Ulkatcho Name: *t'ughus*
 leaf *t'ughus t'an*
 bark *t'ughus lat'ooz*

Description: This deciduous tree stands out with its light coloured bark and airy leafy branches. Big trees, from 12 - 18 m (20 - 40 ft), usually stand tall, with most branches on the upper part of the trunk. But *t'ughus* (aspen trees) in the land of the Ulkatcho do not often grow so tall and the branches extend lower down the trunk. The base of the trunk may reach 60 cm (24 in.) or more across. The pale bark has a waxy to slightly powdery feel, and is mostly smooth. Old bark at the base of the tree becomes grey and furrowed. The nearly circular leaves have small teeth all around with a sharp point at the tip. The flattened leaf stalks allow the leaves to dance and rustle in even the slightest breeze. *T'ughus* produce very simple flowers in long soft catkins. Fertilized female flowers turn into small cone-shaped pods which split to release a mass of fluffy seeds. These drift great distances upon the wind.

Where to Find: *T'ughus* trees mostly inhabit the plateau zone of Ulkatcho country, extending only part way up the slopes of the region's mountain ranges. For example, along the road up to Heckmann Pass, *t'ughus* disappears just a few kilometres west of Anahim Lake. *T'ughus* clusters in small stands



among pine trees and at the edges of openings, sometimes forming parkland vegetation. Trembling aspen grows in much of Canada and the northern United States except the extreme north. It also ranges southward along the Rocky Mountains.

Traditional Knowledge and Use: *T'ughus lat'ooz* (bark) was recognized as "strong medicine". The bitter tasting bark could be boiled or chewed. According to Eliza Leon, if you drank one cup of the medicine, it would make you sleep. The bark can be collected at any time of the year to make medicine.

Common Juniper (*Juniperus communis* L.)

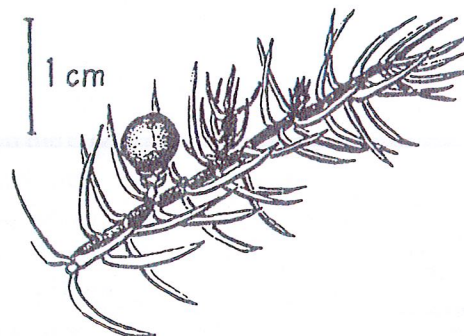
Cypress Family (Cupressaceae)

Ulkatcho Name:	<i>datsan 'angut</i>
berries	<i>datsan 'angut mai</i>
branches	<i>datsan 'angut tel</i>
needles	<i>datsan 'angut 'ul</i>

Description: *Datsan 'angut* (common juniper) sticks close to the ground with its spreading branches. The branches rarely rise more than a metre (40 in.) above the ground and form patches up to 3 m (10 ft) across. *Datsan 'angut* shrubs in the high mountains of Ulkatcho country are often much smaller than this. Short evergreen needle-like leaves cover the branches. The bark is thin, reddish and scaly. *Datsan 'angut* is a coniferous shrub so it has no flowers. Instead there are soft, small yellowish male cones which produce dusty yellow pollen in the early summer. The greyish green "berries" (*datsan 'angut mai*) are actually fleshy female cones similar in structure to the dry cones of *chundoo* (jackpine). All parts of the plant have a strong piney smell.

Where to Find: Common juniper grows throughout Ulkatcho territory especially in dry places. It occurs commonly in the openings of dry pine forest, but also grows in the meadows and rocky places of the high mountains where there are no trees. Sometimes it even grows in acid bogs, especially near the coast. *Datsan 'angut* can be found anywhere in British Columbia and throughout most of North America, except in the south.

Traditional Knowledge and Use: Many elders noted that *datsan 'angut* is very important medicine, useful for many problems. All parts of the plant could be used in one preparation or another. Mack Squinas noted that you could just eat the berries (*datsan 'angut mai*) raw and they would be good for the kidney and heart or for treating diarrhoea. The berries could be boiled and the boughs used for



making medicine too. Eliza Leon recommended boiled berries for babies with a stomach ache, "when a kid would cry and never stop." Tea from boiled branches worked on headaches and flu and helped the user go to the toilet. It could also help fight infections.

The smoke (smudge) from burning *datsan 'angut 'ul* was used for several purposes. Many elders used the smoke to get mosquitoes out of the house. People used the smoke in a sweat house. It was important for spiritual cleansing or for "blessing yourself" according to Eliza Leon.

Wilfred Cassam recalled the use of *datsan 'angut* in the old days. "When we were out in the bush for a month and got sick, we would burn *datsan 'angut 'ul* and smell the smoke. This would keep the disease out of the village if we were going back to the village. For cold sick, use hot rocks and use whole (plant). Cover your head with a towel, then pour water over the hot rocks and have juniper on top of them. Breathe in the steam. It's also good for headaches."

and these plants need to be collected with an elder who knows them well. The plants were collected fresh for use and were also gathered, dried and stored in pillow cases for the winter.

Eliza Leon considered *tsadzo* (pink wintergreen) to be a good medicine for a sore stomach and possibly for chest pain. The fresh or dried leaves were boiled to make a medicinal drink. According to Mack Squinas, parts of this plant were mixed with other plants such as yarrow and juniper and placed on hot rocks. Breathing in the smoke helped treat flu.

Dih'ya'uyi (One-sided wintergreen) made the "best medicine in the world" according to Eliza Leon. Long ago her mom was very sick; there was no hospital or nurse. They made a bag and went "looking and looking for pick up and make dry".... "Sometimes on the road but hard to find, find just a little". The leaves and whole plant were boiled in water so the medicine was made very strong "black like tea". Generally the medicine was used for major sicknesses such as venereal diseases and getting "sick inside". The tea was drunk for part of the day then water was drunk. Other medicinal uses of *tsadzo* included boiling it to make a wash for the skin, if there is a sore or infection.

Labrador Tea, Indian Tea, Hudson Bay Tea (*Ledum groenlandicum* Oeder)
Heather Family (Ericaceae)

Ulkatcho Name: *yak'unulh'a* "it grows in a swamp"

Description and Where to Find: see page 18

Traditional Knowledge and Uses: Leaves and tea made from the leaves provided a medicine for several ailments. Several elders recalled that a cold or warm drink made from the leaves helped relieve a "cold sick" throat. According to Maddie Jack, you could

also chew the leaves for the same purpose. Wilfred Cassam recalled that the tea was good for cough, pneumonia and lung problems.

Note: see warning on page 18



Labrador Tea

Illustration by Christine MacDonald

Bunchberry, Dwarf Dogwood (*Cornus canadensis* L.)

Dogwood Family (Cornaceae)

Ulkatcho Name: *chasli mai* “frog berry”

Description: This slightly woody herb grows from a creeping underground rootstock. A stem rises up to 20 cm (8 in.) high and carries a ring of leaves at the top and sometimes smaller leaves halfway along the stem. What looks like a beautiful white flower with several petals sits in the centre of the ring of leaves. The petals are really white coloured leaves. These surround a small compact head of tiny flowers in the centre. When the fruits (berries) ripen the petal-like leaves fall off and there remains a bunch of bright red berries in the heart of the ring of green leaves.



Where to Find: *Chasli mai* (bunchberries) are mostly forest and forest-edge plants. In the land of the Ulkatcho people, the berry grows almost everywhere in the pine and spruce forests, especially coming up from the moss or litter carpet. *Chasli mai* favours moist but not wet places. It grows up into the alpine especially nearer the coast where you can find plants under shrubs. Bunchberries grow throughout northern North America and southward in the mountains to New Mexico.

Traditional Knowledge and Uses: Ulkatcho elders used *chasli mai* in several ways. Mary Joe Cahoose's grandpa told her about an eye medicine from this plant. To make the medicine, hot water was poured over the leaves and then the leaves were put over the eyes. Maddie Jack noted that eating a few berries of *chasli mai* was good for the eyes, “just as white people eat carrots for their eyes.” The leaves could also be chewed and put in a baby's sore mouth.

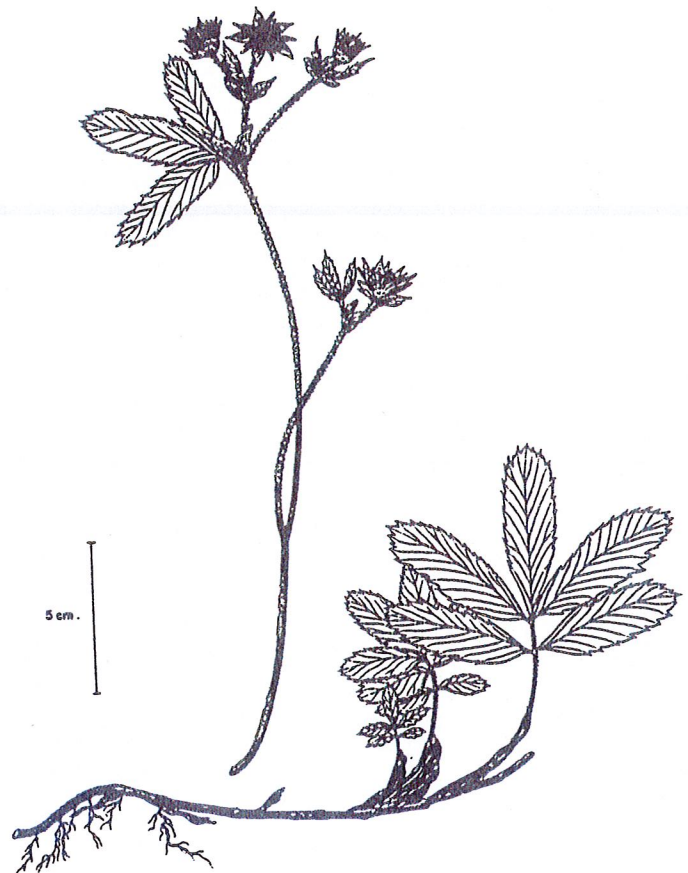
Marsh Cinquefoil (*Potentilla palustris* (L.) Scop.)
Rose Family (Rosaceae)

Ulkatcho Name: *ts'olh ghigha*

Description: *Ts'olh ghigha* are perennial herbs that grow in water or creep and hang among other plants in wet places. The long slightly woody rhizome (root-stem) produces reddish stems which may rise up to 1 metre (3 ft) tall. The leaves are compound and have 3-7 sharply toothed, long leaflets, and are sometimes widely spaced along the scrambling stem. A few deep purple flowers full of stamens sit at the end of the stems.

Where to Find: Just as the name says, "marsh cinquefoil" (*ts'olh ghigha*) lives in wet places including marshes, bogs and swamps and the quiet edges of ponds and lakes. In Ulkatcho territory *ts'olh ghigha* occurs in the shallow water at the edge of many ponds and lakes and in wet depressions in bogs and marshes. Marsh cinquefoil can be found across northern North America except in the far north. The range extends down the coast to California.

Traditional Knowledge and Uses: *Ts'olh ghigha* had one important medicinal use. According to the elders, the "old people" boiled the roots and drank the liquid to treat venereal diseases. *Ts'olh ghigha* was considered to be the best medicine for this problem.



Wild Roses (*Rosa* spp.)**Rose Family (Rosaceae)**

Ulkatcho Name:	<i>whus</i>
leaf	<i>whus t'an</i>
bush	<i>whus chun</i>
hip	<i>whus 'injooh</i>

Description and Where to Find: see page 16

Traditional Knowledge and Uses: Elder Ulkatcho women know that a tea made from *whus* roots helps after childbirth. Eliza Leon remembered that she was given a tea made from the boiled roots after her

babies were born. The tea made her feel much better and helped "clean out the inside". Maddie Jack recalled that Mrs. Ulkatcho Johnny prepared a similar tea to give to her daughter after she had a baby.

Western Water-Hemlock (*Cicuta douglasii* (DC.) C. & R.)

Celery Family (Apiaceae)

Ulkatcho Name: *wanicho*

Description: This highly poisonous plant grows up as a tall stem 50 - 200 cm (1.5 - 6 ft) high with several leaves each divided into leaflets and clusters of flattish white flower heads. The leaflets are 3-10 cm (1-4 in.) long, sharply pointed and toothed. A distinct feature is the veins



Leaves



Plant

of the leaflets which extend to the base of the teeth, not the tips. Each head of *wanicho* has many small white flowers clustered together, somewhat like cow-parsnip and water-parsnip. The swollen rootstocks are critical to the identification of this plant, but must be handled carefully. The top of the root where it meets the stem is thickened and hollow. Inside this chamber there are walls which divide it into little "rooms". The cut surface may leak out a clear yellowish oil which is extremely poisonous and should not be touched. More thickened, carrot-like roots extend down from the swollen top.

Where to Find: *Wanicho* grows throughout most of Ulkatcho territory mostly at low to mid elevations. It thrives in moist places such as ditches, marshes, edges of ponds and depressions that are wet most of the year. Water hemlock occurs throughout western North America.

WARNING: Ulkatcho people know that *wanicho* is very poisonous and there are even stories about people who were poisoned by it. Although *wanicho* is used by some native groups in British Columbia as a medicine, Ulkatcho

elders did not report any use of it.

The root of this plant resembles that of *skenken* (water-parsnip) which Ulkatcho people ate like carrots. Mack Squinas would not eat *skenken* because he was not sure how to recognize the difference between *wanicho* and *skenken*. Maddie Jack believed that if the roots of *wanicho* were cut and put in water they would bubble; this was a way of knowing it was poison. *Wanicho* may be the most poisonous native plant in North America. If you are not sure of the identification of a plant that looks like it, do not eat, cut or even crush the plant because the poison is so strong.

Another small species, equally poisonous, occurs in some parts of Ulkatcho country. This is *Cicuta bulbifera* L. which inhabits bogs and fens such as those at the edges of Tanya Lakes. A third species, *Cicuta mackenziana* Raup, grows on the tidal flats at Bella Coola.

See comments under *skenken* on page 35.

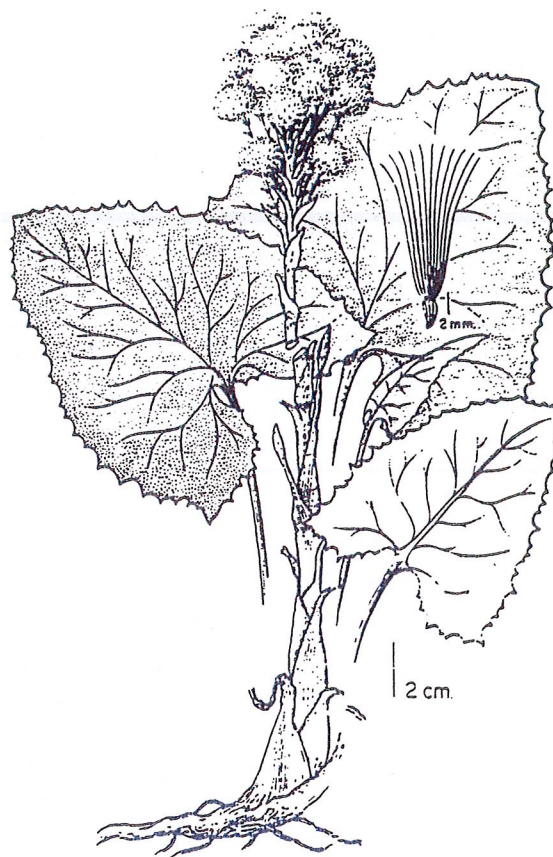
Arrow-leaved Coltsfoot (*Petasites sagittatus* (Banks) Gray)
Aster Family (Asteraceae)

Ulkatcho Name: 'ut'an

Description: This perennial herb grows from a wandering underground root stem into colonies sometimes metres across. Large leaves, shaped like arrowheads, arise from spring warmed soils. Each leaf consists of a thick, long hollow stalk which supports the flat leafy part (blade) which is usually toothed. Fleshy flower stalks rise above the level of the leaves often to 30 cm (10 in.) or more in height. Each hollow tubular stalk carries a somewhat fluffy whitish to purplish flower head made of many small flowers.

Where to Find: 'Ut'an likes wet places, even where there may be a bit of standing water. It can be found in shady to open sites throughout the land of the Ulkatcho people. Arrow-leaved coltsfoot grows from Alaska eastward across Canada, and in the northwestern United States east of the Cascade Mountains.

Traditional Knowledge and Uses: The leaves of 'ut'an were used to treat sores. Maddie Jack learned from Dr. Margaret Siwallace of Bella Coola, a renowned Nuxalk medicine woman, that the medicine was prepared by heating or boiling the leaf in water. The leaf was then put on sores and burns, and especially on sore knees.



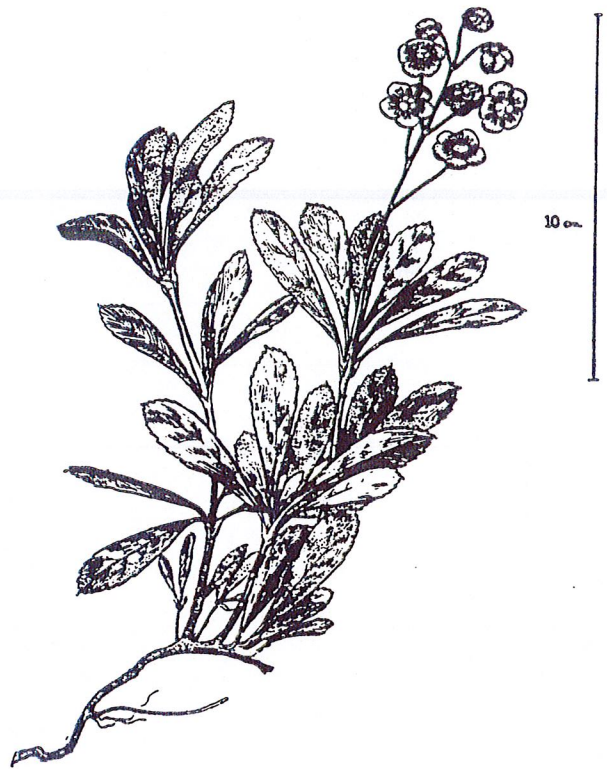
Pipsissewa or Western Prince's Pine (*Chimaphila umbellata* (L.) Bart.)
Heather Family (Ericaceae)

Ulkatcho Name: *dunihcho t'an*

Description: Like the wintergreens (*Pyrola* spp.), *dunihcho t'an* is a very low, evergreen, partly-woody perennial. Thick elongated leaves with fine teeth along the edges grow on a stem which may reach 35 cm (12 in.) high. The leaves are grouped in loose rings and are bright green and shiny above. Three to ten flowers open at the end of the stem from June to August. The pinkish to white flowers reach about a centimetre and a half (half an inch) across, each one attached to the end of a little stalklet. The fruit is a flattened dry brown capsule.

Where to Find: *Dunihcho t'an* occurs throughout Ulkatcho territory. Open to dense conifer forests are its home. It prefers moist places such as shaded banks and deep humus soil. Eliza Leon collected the plant around Bella Coola and Stuie. Pipsissewa grows from Alaska south to California, also eastward to the eastern United States and Canada. It is also known in Europe and Asia.

Traditional Knowledge and Uses: *Dunihcho t'an* seems to have been used in similar ways to winter-green (*tsadzo, dih'ya'uyi*). The leaves were oiled to make a strong black tea which has a strong taste. According to Eliza Leon, two cups would make you pass out. The tea was used to treat lower back kidney and chest pains. Mack Squinas thought the plant might have been used for eye medicine.



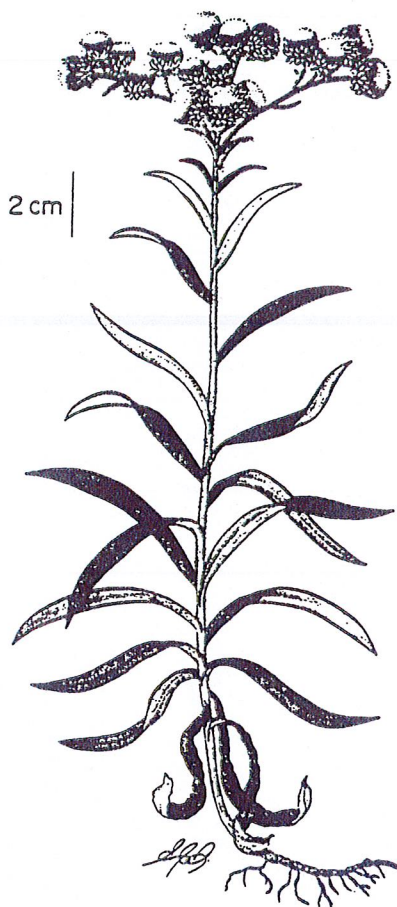
Pearly Everlasting (*Anaphalis margaritacea* (L.) B.& H.)
Aster Family (Asteraceae)

Ulkatcho Name: *tse 'ul*

Description: *Tse 'ul* (pearly everlasting) is a herbaceous plant which arises from a creeping rootstock. Medium tall, 20-90 cm (8-36 in.), leafy stems stand upright. The long narrow leaves are covered in white woolly hairs especially on the lower surface. The bottom-most leaves are often dry by the time the plant flowers. A head of pearly white blooms crowns the top of the flower stalk. Sometimes it faces upward or sometimes it may be slightly bent over.

Where to Find: *Tse 'ul* lives mostly in open places. Often it grows on the gravel of roadsides or where the stony soil has been turned up. It occurs throughout Ulkatcho territory.

Traditional Knowledge and Uses: A Montana medicine man made a "good medicine" from this plant to treat Mack Squinas after he had a stroke. A pinch of powder, probably made from its leaves, was boiled for 5 minutes in water. The medicine was taken three times a day.



Scouler's Willow (*Salix scouleriana* Barratt)

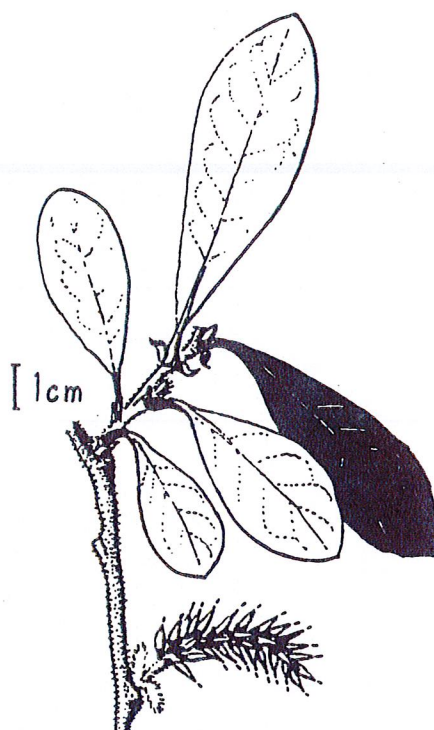
Willow Family (Salicaceae)

Ulkatcho Name: *k'idlih* (a name used for many small willow species)
willow gall *datsan kesgwut* "crow moccasin"

Description: Many willow species grow in Ulkatcho country and they were mostly used for making nets, snares, drying racks and basket frames. Scouler's willow, however, was used for medicine. This species of *k'idlih* grows into a large shrub or small tree up to 12 m (40 ft) high. It usually has several trunks which are covered by smooth grey bark. The leaves are rounded at the tip but taper to the base. There are often rust-coloured hairs on the underside. The leaves may be crowded into fan shaped patterns on short slow-growing branches. Willow flowers occur in catkins. Catkins appear before the leaves; the male ones are yellowish with pollen and the female ones greenish. When the female catkins mature they become fluffy with seeds, which are blown away by the wind.

Where to Find: *K'idlih* grows all over Ulkatcho territory but Scouler's willow is the only willow that reaches the size of a tree in the region. Unlike other willow species it inhabits upland sites in forests and forest openings. The range of Scouler's willow extends from Alaska and Yukon to California and Mexico.

Traditional Knowledge and Uses: According to Andy Cahoose, you could tear the bark of this *k'idlih* and "it was like a powder inside". This powder was applied to sore eyes. Willow galls (*datsan kesgwut*) are small fleshy swellings on the leaves and stems,



caused by insects. The galls were used to stop children from crying too much. You cut open the gall and have the child cry into it, then hang it back up again.

Note: Because of the shape of the galls, the name *datsan kesgwut* means "crow moccasin" in the Ulkatcho language.

Sitka alder (*Alnus sinuata* (Regel) Rydb.)
Mountain alder (*Alnus incana* (L.) Moench)
Birch Family (Betulaceae)

Ulkatcho Name:

Sitka alder *k'us*

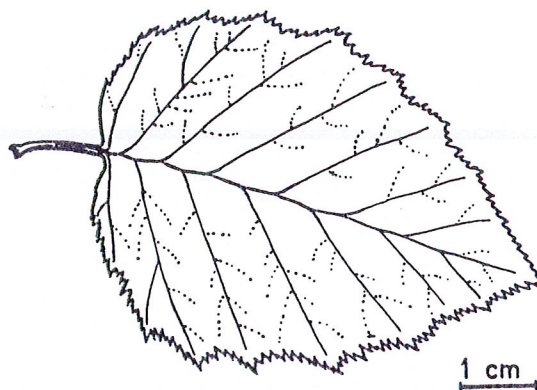
Mountain alder *k'us*

Description: Sitka alder grows into a shrub or a small tree reaching 8 m (about 25 ft) high. Trunks and stems are covered by yellowish-brown, scaly bark. The oval and toothed leaves are arranged in two ranks along the stems. This alder has distinctive leaves because, as well as being toothed, they have a wavy edge. The leaves are smooth to hairy beneath. In the spring, pollen-packed catkins hang loosely from the branches. The female flowers look like small hard green cones attached by small stalks. When these cones mature they become brown and woody, and release seeds with a central nutlet surrounded by a thin papery wing.

Mountain alder resembles Sitka alder in its general characteristics but can grow to 10 m (33 ft) tall. The bark is greyish brown and has obvious horizontal corky lines called lenticels. Club-shaped leaf buds are attached by distinct stalks. The leaves are hairy beneath. The nutlet has a narrow papery wing.



Twig of Mountain Alder



Leaf of Sitka Alder

Where to Find: Both mountain and Sitka alders grow in Ulkatcho country. Sitka alder can be found all over B.C. especially on better drained rocky soils. Sitka alder occurs on moist sites in western North America from Alaska to California in lowland to subalpine environments. Mountain alder is found across Canada and south into California too. It prefers moist sites especially along streams and areas prone to flooding.

Traditional Knowledge and Use: Both species of *k'us* were important for smoking and flavouring fish and other food. Mack Squinas described how to use *k'us*. "You can cook fish or smoke fish. Make a nice colour. You make 'ah (spiny wood fern roots), whole bunch. Use just bark. Put wood and everything on top of 'ah. Change colour (of the fern roots), purple. Also make everything taste good, good flavour."

Maddie Jack described digging a hole, adding rocks then wood and burning it all day. The branches of *k'us* were put on top of the food. The food was cooked overnight, and the alder made "it (food) red and smell". She recalled that this cooking process was "lots of work". The limbs were collected in the fall.

Andy Cahoose and Wilfred Cassam knew of using *k'us* for medicine. To use it collect the leaves and chew them, then put them on burns.

Notes: Elders were well aware that a much bigger alder, red alder (*Alnus rubra* Bong.), grew in the Bella Coola valley. Red alder was used as a fuel in the same way as its smaller relatives. Its bark is well known among coastal peoples as a source of red dye as well as for its medicinal qualities. It was used for treating skin sores and tuberculosis.

Kinnikinnick or Bear Berry (*Arctostaphylos uva-ursi* (L.) Spreng.)
Heather Family (Ericaceae)

Ulkatcho Name:

berries	<i>dunih</i>
plant	<i>dunih chun</i>
leaves	<i>dunih t'an</i>

Description and Where to Find: see page 20

Traditional Knowledge and Uses: *Dunih* is an important medicinal plant. A solution made by boiling the roots in water was drunk to treat diarrhoea. After childbirth, the mother would drink a tea made from the leafy branches to help "clean her out." This tea was also drunk for a sore mouth, and the leaves were chewed and the juice swallowed for a sore throat.

Dunih t'an was used with *chundoo dzeh* (jackpine pitch) in a tea. "Good for colds, flu, good for anything," noted Mack Squinas.

Notes: Kinnikinnick is well known for its use in herbal medicine for the treatment of kidney and bladder ailments, especially bladder infections. It is sold in health food stores under the name, "Uva Ursi". In Russia, a tea from the leaves is drunk as a beverage.

Devil's Club (*Oplopanax horridus* (Smith) Miq.)

Ginseng Family (Araliaceae)

Ulkatcho Names:

whuscho "prickle big"

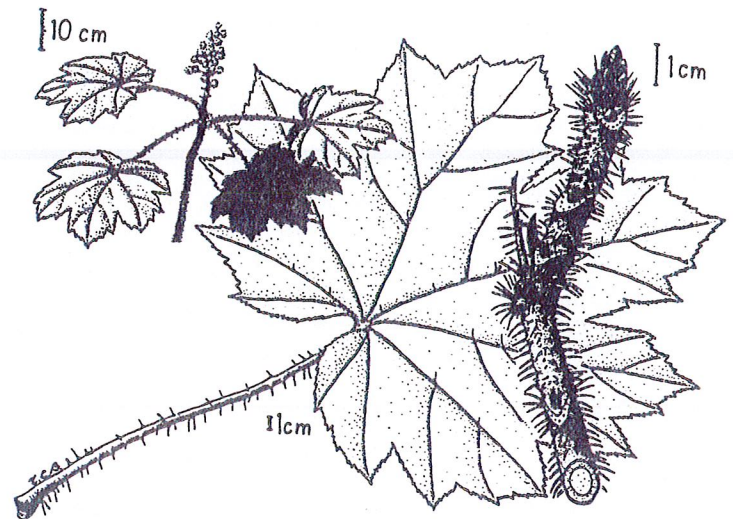
whuscho t'an

whuscho lhai "lots of needles on it"

Description: This big-leaved shrub is notorious for the numerous sharp and dangerous spines along its stems and undersides of the leaves. Its stems grow upright or sprawl along the ground. They are 1 - 3 m (3 - 10 ft) long, with greyish-brown bark and distinctively sweetish-smelling wood. The stems are thick and often tangled. The leaves are large and maple-leaf shaped, with 7 - 9 pointed and toothed lobes, and long stalks. The flowers appear from May to July; they are small, white and numerous, and borne in tight clusters at the ends of the stems. The flattened, bright red, berries are borne in large pyramid-like clusters. They have a strong smell and are not edible.

Where to Find: *Whuscho* occurs from sea level to subalpine elevations in moist, shady coniferous woods, often near streams. It is common in British Columbia on the coast, extending north to Alaska and south to Oregon and in the interior wet belt west of the Rocky Mountains. It is also found in scattered pockets in southern Ontario and northern Michigan. In Ulkatcho country it is found in moist places in the mountain forests between Anahim Lake and the Bella Coola Valley.

Traditional Knowledge and Use: This shrub is well known to Ulkatcho people travelling in the mountains or to Bella Coola. "If that thing pokes you," Mack Squinas noted, "your hand swells up." Some Ulkatcho elders learned about *whuscho*'s medicinal



use from Margaret Siwallace and other Nuxalk (Bella Coola) people. Margaret Siwallace taught Maddie Jack how to scrape the thorns off, boil the bark and use it as a poultice "for anything" (including swollen legs, sores and arthritis). Andy Cahoose and Mack Squinas said this is the "best medicine" of the Bella Coola people, who used the stems and roots to treat diabetes and other ailments. Wilfred Cassam said that the bark of the roots was boiled in water and the "tea" drunk as a blood tonic and for tuberculosis. A handful of bark in 4 litres of water gave the right concentration. Hanuyeh Ghun 'Utni-i (Carrier Linguistic Committee 1973: 82) also provides information on *whuscho* medicine: "When we use it to make medicine, we dry it and only then take off the outer part. Wherever the old-timers were sick, they made a pill with it and would swallow it. They would also scrape the bark and leave the scrapings on the place where it hurts. Right away they would get better."

Notes: *Whuscho* is one of the most important and widely known medicines for Northwest Coast First Nations people. It was used in many different treatments, particularly for arthritis and rheumatism, but also for colds, stomach and digestive tract ailments, and recently at least, for diabetes. It is also a

highly spiritual medicine, with strong protective qualities attributed to it (Turner 1982). Maddie Jack said, "Grizzly bear eat the red berries, so if lots of these plants around, don't go near because lots of bears." The Nuxalk name for the berries means "grizzly bear's highbush cranberries."



Illustration by Ronald Cahoose

Use of Devil's Club for medicine

Medicine Plants

Subalpine Fir or Balsam (*Abies lasiocarpa* (Hook.) Nutt.)

Pine Family (Pinaceae)

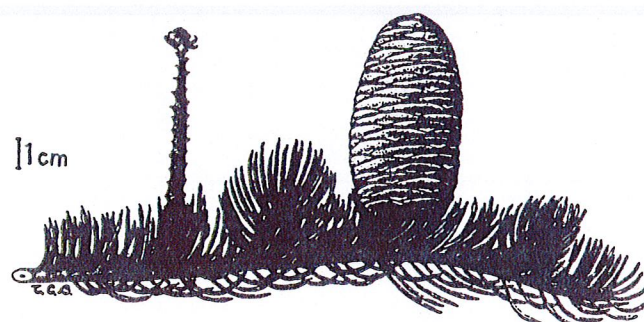
Ulkatcho Name:

tree	<i>ts'oochun</i>	
bark	<i>ts'oochun ulat'ooz</i>	"kind of sap inside"
needles	<i>ts'oochun 'ul</i>	
branches	<i>ts'oochun tel</i>	

Description: *Ts'oochun* (subalpine fir) is an attractive, relatively dense evergreen tree, bluish-green in colour and often tapers at the top. The flattened, stalkless needles are attached singly to the twig. The needles have blunt ends, and grow all around the twigs; there are many whitish dots (stomata) on both surfaces of the needles. The smooth and thin young bark has conspicuous blisters that contain strong-smelling liquid pitch. The bark becomes thicker and scaly or furrowed with age. Cones are borne upright on the upper branches and the scales and seeds fall away from the central axis rather than the whole cone dropping.

Where to Find: *Ts'oochun* grows mostly at high elevations, especially in subalpine areas of British Columbia and Alberta, and in northwestern parts of the boreal forest. In Ulkatcho country it is common in mountain forests and often is the main species of upper tree line.

Traditional Knowledge and Use: *Ts'oochun* is well known for the medicinal properties of its bark and pitch. The pitch is obtained by bursting the blisters on the bark of younger trees. Eliza Leon said that a spoon is used to collect the pitch. The pitch is then stored in a jar. It is often mixed half and half with grease (lard, bear grease or oolichan fish grease), according to Eliza Leon. This medicine was used, as needed, for a sore throat, tongue, mouth or teeth. It was heated and applied to the sore area. Eliza Leon



noted, "If a kid has a sore bum (diaper rash), works too." She concluded, "That's good medicine to treat anything - cold sick, stomach aches, sore throat, cut hand, teeth, diaper rash, everything."

The bark was boiled in water, in a 4-gallon pail, until the solution was dark brown. The top was skimmed off, the solution cooled outside, and the decoction used as a wash or drunk for internal problems. "It will make you healthy," said one elder. Henry Jack added that it was drunk for pneumonia, and was also good to drink for breast cancer. He said that one could simply remove the bark, take a piece of the white *ts'oochun ulat'ooz* (inner bark) about the size of his fourth finger, and chew on it or boil it to treat coughs, colds and stomach ailments. "It taste kind of like the cough syrup you buy in the store." Mack Squinas said about a tablespoon of pitch mixed with warm water could be drunk to treat the flu, or for any sickness.

Maddie Jack warned that, when making this medicine, one has to use an enamel pot, (usually a 4-gallon one); "Grandma said [you] can't use those kind of container [tin] if going to drink medicine. If inside [of the pot is] iron, not supposed to use it. No do you any good. Chew your guts inside."

Notes: Sometimes, when these trees are growing up in the subalpine zone, they are so dense that the horses cannot get through them. They make a good shelter to sleep under in the mountains. Moose are said to feed on these trees. Nowadays, people like to get them for Christmas trees.

Soapberry or Soopolallie or Buffalo-berry (*Shepherdia canadensis* (L.) Nutt.) Oleaster Family (Elaeagnaceae)

Ulkatcho Name:

berries	<i>nawus</i>
bush	<i>nawus t'an chun</i>
leaves	<i>nawus t'an</i>

Description and Where to Find: see page 25

Traditional Knowledge and Use: *Nawus* berries are regarded as a good medicine, as well as a food, in the form of *nawus* whip, or "Indian ice cream." Eliza Leon said that one tablespoonful of *nawus* syrup, taken in the morning, is good for getting rid of gallstones. The whipped berries were said to have a laxative effect; if one has stomach problems, it will "clean you out". The leafy branches and roots were pounded and boiled to make a flu medicine. Maddie Jack recalled that a decoction made by boiling scrapings of the bark was used to treat sore eyes. A

clean cloth was soaked in the solution and placed over the eyes. Or, alternately, Wilfred Cassam noted that one could peel the bark and chew some of the green inner part, then take it out and squeeze the juice into the sore eye.

Notes: The Heiltsuk people from Bella Bella and the Nuxalk from Bella Coola say that the berries are good for treating arthritis; 1-3 tablespoons of fresh, mashed berries are eaten. A jar of berries is very valuable as a gift or trade item.



Illustration by Ronald Cahoose

Picking Nawus

Scouring Rush or Horsetail or "Goose Grass" (*Equisetum hiemale* L.)

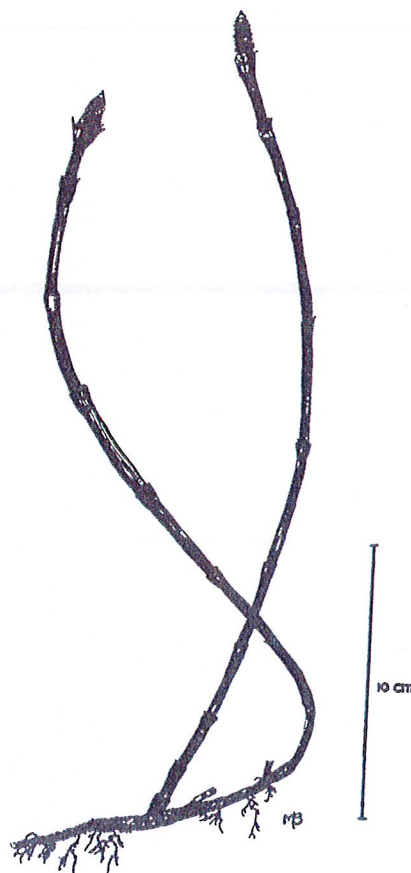
Horsetail Family (Equisetaceae)

Ulkatcho Name: *khahdai* ("goose food")

Description: The fertile and vegetative stems of this plant are similar, up to 1.5 m (5 ft) tall, growing singly or in clusters from creeping, slender, blackish underground stems. The erect evergreen stems are whitish-green and rough in texture, with a central cavity like a straw. Grey to green sheaths with dark brown to blackish teeth occur regularly spaced along the stem. Two black bands usually mark each sheath. Pointed spore-bearing "cones" perch at the tip of the stems.

Where to Find: *Khahdai* thrives in moist to wet areas along streams, on sandbars and in shaded forests where streams and river flood. This species inhabits a wide range and grows generally throughout British Columbia and many other parts of North America.

Traditional Knowledge and Use: *Khahdai* and its relatives, common horsetail (*Equisetum arvense* L.), and slender horsetail (*Equisetum fluviatile* L.) are all known as "goose grass" or "goose food". Geese, cows and horses eat them, but Maddie Jack warned that if a horse eats a lot of *khahdai*, it will die. Eliza Leon said that common horsetail was boiled to make a decoction to be drunk by a man who cannot urinate. Horsetails are known to be used for kidney and bladder problems by other Aboriginal groups, including the Secwepemc (Shuswap) and Nlaka'pamux (Thompson).



Notes: One kind of bird was observed to make its nest from a kind of horsetail and from dry grass (*tl'o*). Horsetails contain silicon in their cell walls; this makes them scratchy in texture, and useful as abrasives, like sandpaper, for polishing implements.

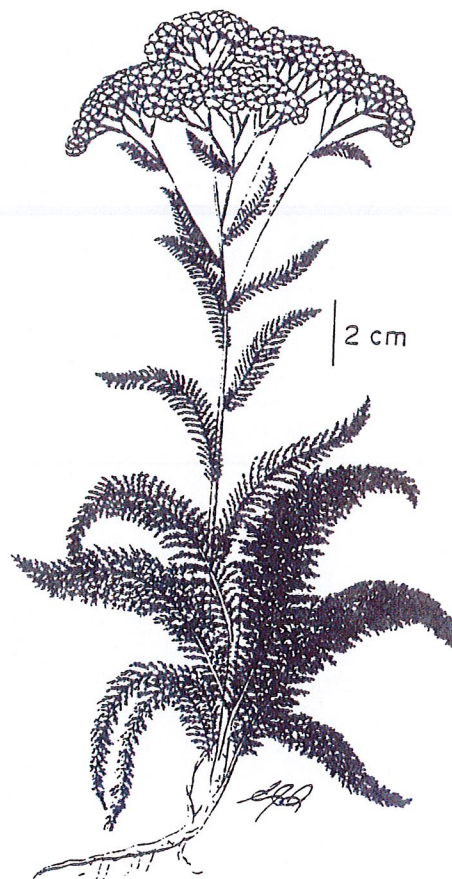
Yarrow (*Achillea millefolium* L.)
Aster Family (Asteraceae or Compositae)

Ulkatcho Name: *gagistl'ah che* ("mouse tail")
 dagistl'ah che
 agistl'ah che

Description: *Gagistl'ah che* (yarrow) is an aromatic perennial herb growing up to 100 cm (40 in.) high. The fern-like or feather-like leaves are finely divided. Most of the leaves are clustered at the base of the flowering stalk; these leaves are mostly 10-15 cm (4-6 in.) long. The small leaves on the flower stem are arranged alternately. The plant appears greyish-green because it is covered by many small hairs. The many tiny flower heads are white to pinkish. They crowd into flat-topped clusters which appear from May to October. The flower tops dry and turn brown by the end of summer, producing many one-seeded, smooth and flattened fruits.

Where to Find: *Gagistl'ah che* prefers well-drained, open sites such as roadsides, meadows and rocky slopes. It grows from low to high elevations and often becomes weedy at low elevations. *Gagistl'ah che* occurs throughout Ulkatcho territory and over much of North America.

Traditional Knowledge and Use: Strongly-scented *dagistl'ah che* was known to all of the elders, and is especially valued as a medicine for sores. The leaves are soaked in hot water, then used as a poultice for sore muscles. This same poultice could be used to treat saddle sores on horses. Mack Squinas said that a mixture of pink wintergreen (*Pyrola asarifolia*), juniper (*Juniperus communis*) and *dagistl'ah che* was drunk as a medicine for flu. If a person could not urinate, the leaves were boiled in water for about two hours and the solution was drunk.



Notes: The fresh, aromatic leaves were crushed and rubbed on the skin as a mosquito repellent, according to Andy Cahoose and Maddie Jack. Wilfred Cassam added that leaves could also be burned in a fire as a smudge against mosquitos.

Indian Hellebore or "Poison Weed" (*Veratrum viride* Ait.)

Lily Family (Liliaceae)

Ulkatcho Name: *whulhdulh*

Description: Indian hellebore, sometimes known as "poison weed", is a strikingly attractive leafy perennial, up to 2 m (7 ft) tall, with single stems each growing from a short, stout rhizome or rootstock. The bright-green, elliptical leaves grow to 25 cm (10 in) long. They are pointed, hairy on the undersides, and strongly ribbed to the point of appearing pleated. The flowers are small, star-shaped, and greenish-yellow with dark centres. Flowers crowd together into dense, drooping clusters at the top of the plant. Blooming occurs from May to August depending on the location. Some people compare the flower clusters to corn tassels; Maddie Jack calls it "corn plant". The fruits are small, brownish capsules.

Where to Find: *Whulhdulh* is most common in moist meadows and open forests at subalpine elevations. It grows throughout British Columbia and is common in Ulkatcho country. The range of occurrence includes the coast and mountains of western North America from Alaska to Oregon and extends eastward to the Atlantic coast.

Traditional Knowledge and Use: *Whulhdulh* is extremely poisonous (see the WARNING which follows), and is known to all of the elders as a plant to be avoided, or treated with the utmost caution. Several people knew about children, adults, horses or cattle being accidentally poisoned from eating it, in some cases, fatally.

Andy Cahoose said that the roots (rootstocks) were scraped in hot water, then used as a poultice for a sore knee. They were also used generally as a poultice for swellings, stiffness, sore joints (as with arthritis) and aching muscles. Most people knew that the roots were formerly used as a medicine, and some had seen it done, but no one we talked to had actually



used it. Mack Squinas commented, "Really strong stuff. Poison. Use the roots. You can... rub them, you can boil them. Cut up into little pieces. Add a little water. You can mix." Later, he said, "Scrape off a little bit. Pour boiling water over; use to wash. Put anywhere; rub it on. Only top of roots." Maddie Jack said this medicine was well known among the Nuxalk people at Bella Coola. The top 10 cm (4 in.) or so of the root, with the rootlets cut off, was boiled. Her granny used *whulhdulh* as a poultice for her own knee when she could hardly walk.

This is known as a powerful plant. Maddie Jack said that it can cause bad weather if you pull it out; therefore you must “pay” it by putting tobacco in the hole and covering it up when you remove the root. The plant was also used as a good luck charm. Pierre West recalled that an “old guy” up in Tache or Babine takes a bath with these roots for good luck, and noted that he always wins at bingo. Using *whulhdulh* this way can be a dangerous practice though. Other elders have warned that the poison can enter the body through any cuts or openings in the skin, causing sickness.

WARNING: All parts of this plant are highly poisonous because they contain chemical compounds called “alkaloids” that affect the heart and central nervous system. This plant should never be eaten or

taken internally. Even using the solution as a wash may be dangerous because the poison can enter the body through cuts and other openings in the skin. *Whulhdulh* can cause blindness if it gets into the eyes. Those who used it as a medicine did so with great caution and an intimate knowledge of the plant’s effects. Its use today is not recommended.

Notes: In other regions, elders say that the only antidote for poisoning by this and other poisonous plants like water-hemlock, is to eat large quantities of fish oil, such as in fish-head soup. Bear grease, marmot fat and other fats may also be effective, but generally, this is a plant that is often fatal, when eaten, because it affects the heart and central nervous system.

Canada Mint or Field Mint (*Mentha arvensis* L.)

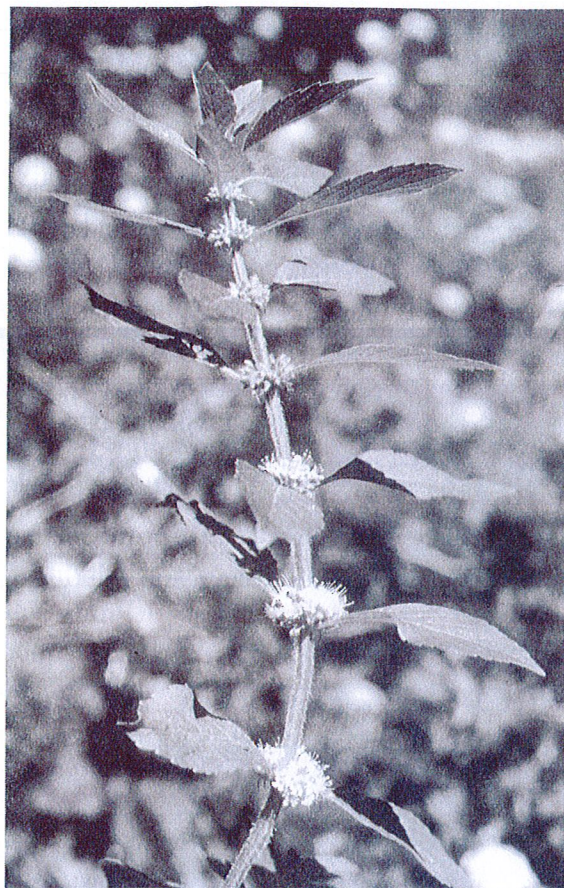
Mint Family (Lamiaceae)

Ulkatcho Name: *sooltsun* “it smells good”

Description: *Sooltsun* grows as an upright perennial herb up to 1 m (3 ft) tall, but usually much shorter. The stems arise from creeping rootstocks. As with other members of the family, the stems feel squarish when rolled between the fingers. All parts of *sooltsun* smell minty, particularly when crushed or trampled. The leaves are arranged in opposite pairs along the stem. Each one is pointed, oval to lance-shaped, and smooth to hairy. Small sharp teeth line the edges. Rounded clusters of small, pale purple or whitish flowers hug the stem where the upper pairs of leaves attach. Flowers appear in early summer. The fruits are small, inconspicuous nutlets.

Where to Find: Canada mint prefers moist sites such as swamps, stream banks, wet meadows and lake shores, at low to moderate elevations. It is found across Canada, north to Alaska and Yukon and south to California and New Mexico. *Sooltsun* is common in moist meadows and swamps in Ulkatcho country.

Traditional Knowledge and Use: *Sooltsun* has a pleasant smell, and is known to almost everyone. It is used to make a poultice for sore joints. Eliza Leon said to boil “lots” in water, soak a towel in the hot solution, and place the towel over a sore knee. Maddie Jack experimented with it as a mosquito repellent, but it did not work very well.



Notes: *Sooltsun* is enjoyed for its scent, and it can be used to make a beverage tea. You can mix it with other tea materials such as rose hips. Aboriginal people elsewhere used the tea as a medicine for colds and flu.

Yellow tree lichen (*Cetraria canadensis* (Raes.) Raes.)

Ulkatcho Name: *dahgha*
dah "limb", *gha* "hair"

(a name used for several hair-like lichens that grow on branches)

Description: This *dahgha* is a bright yellow lichen that grows as a leafy tuft on the branches and trunks of trees. Lichens, which are now called "lichenized fungi", are actually fungi which contain algae living within them. This lichen has a wrinkled body with obvious brown, disk-like structures which produce the spores. The edge of the body is finely lobed or divided.

Where to find: This yellow *dahgha* grows on many trees throughout Ulkatcho territory. You will find it on many pine trees around Anahim Lake. It grows only in western North America west of the Rocky Mountains.

Traditional knowledge and use: Boiled *dahgha* made medicine. According to Wilfred Cassam the elders used to make a tea from this plant. It could be collected in the winter and put in a plastic bag. A couple of handfuls of *dahgha* were put into a pot containing about 1 litre (about 1 quart) of water to make the tea. Then it was drunk. This medicine was good for cough or "cold sick". Fresh *dahgha* could be chewed to help the lungs. If you were lost in the bush and hungry you could suck the juice.

Notes: Ulkatcho people were familiar with many lichens. For example they knew that black hair lichen (another kind of *dahgha*) (*Bryoria fremontii* (Tuck.) Brodo & Hawks) was eaten by caribou when there was big snow. Maddie Jack told a story that one



time she tore up a yellow table cloth to use as a trail marker. "Couldn't tell it from yellow *dahgha*!". Historically many Aboriginal Canadians collected *dahgha* types of lichens and boiled or cooked them. Some groups dried the boiled *dahgha*, powdered it into flour and put it into water overnight. A jelly-like food was the result.

WARNING: Many *dahgha* (lichens) contain bitter acidic compounds, called lichen acids, that make them poisonous. Yellow tree lichen, in particular is poisonous. Also lichens are generally indigestible when raw, and even the edible ones have to be soaked and cooked for along time before people can eat them. Caribou and deer have different digestive systems than humans and can eat lichens directly from the trees and ground. One type of hairy, yellow tree lichen, called wolf lichen (*Letharia vulpina* (L.) Hue), is notably poisonous and was used in Scandinavia to poison wolves.

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COMMON NAME(S)	ULKATCHO NAME(S)	SCIENTIFIC NAME	PAGE
alder, mountain	k'us	<i>Alnus incana</i>	57
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bush	nawus t'an chun		
leaves	nawus t'an		
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branches	ts'oo tel		
needles	ts'oo 'ul		

COMMON NAME(S)	ULKATCHO NAME(S)	SCIENTIFIC NAME	PAGE
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