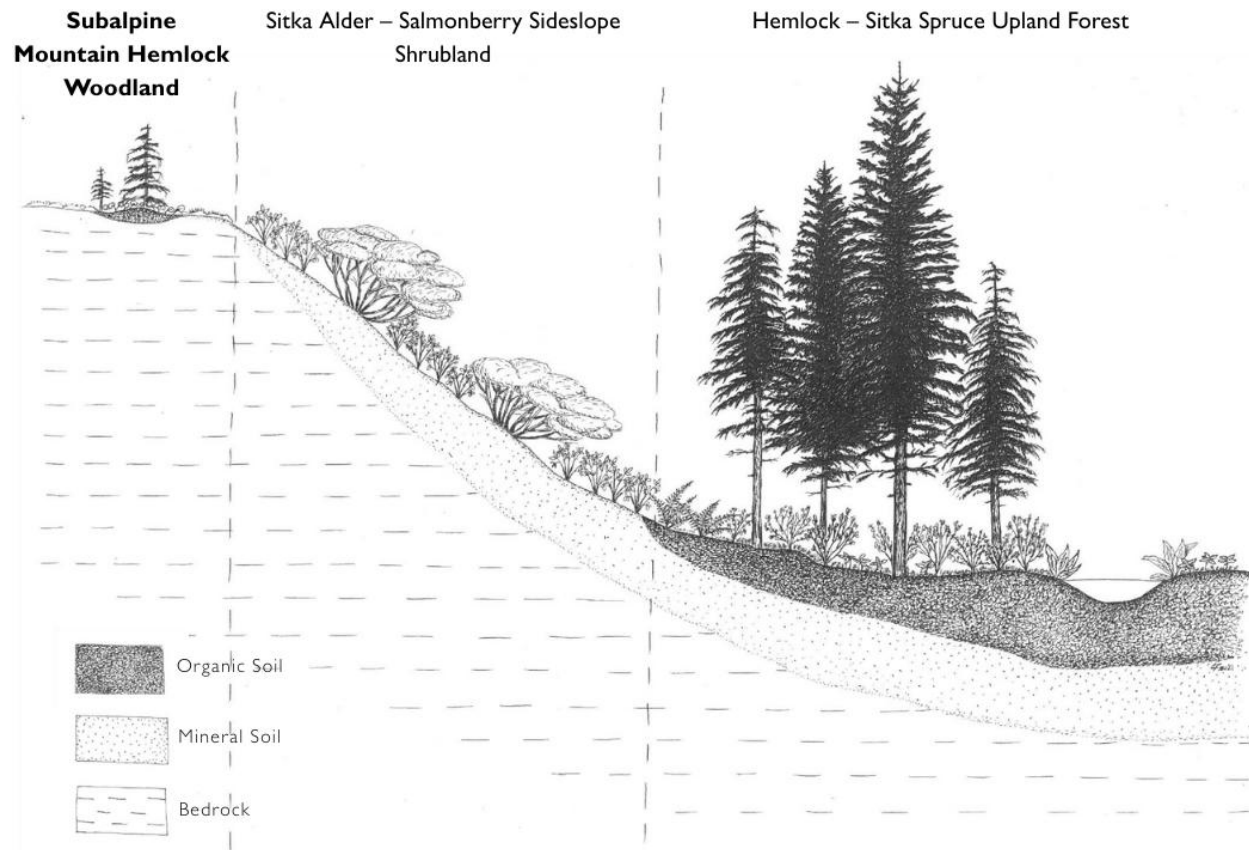


## Subalpine Mountain Hemlock Woodland



Subalpine mountain hemlock woodlands occur as a small-patch and locally-rare type restricted to exposed bedrock knobs and gentle slopes at treeline. The sparse tree canopy is dominated by mountain hemlock (*Tsuga mertensiana*), which adopts a krummholz form where exposed to wind. Dwarf shrub heaths and herb meadows grow in protected microsites. Heaths are comprised of ericaceous and other dwarf shrubs including crowberry (*Empetrum nigrum*), Alaska bellheather (*Harrimanella stelleriana*), partridgefoot (*Luetkea pectinata*), Aleutian mountain heath (*Phyllodoce aleutica*), and western moss heather (*Cassiope mertensiana*). Meadows are comprised of a diversity of herbaceous species including the forbs; deercabbage (*Nephrophyllidium crista-galli*), calthaleaf avens (*Geum calthifolium*), dogwood bunchberry (*Cornus canadensis*), and subalpine fleabane (*Erigeron peregrinus*), ferns; spreading woodfern (*Dryopteris expansa*), northern oak fern (*Gymnocarpium Dryopteris*), and deer fern (*Struthiopteris spicant*), and graminoids; small-awned sedge (*Carex macrochaeta*), Altai fescue

(*Festuca altaica*), and alpine sweetgrass (*Hierochloë alpina*). Lichens in the *Cladonia* genus (*C. stellaris*, *C. arbuscula*, *C. rangiferina*) are common.

## Environment:

Mountain hemlock woodlands develop on mountain side slopes, basins, and ridges, with an elevational range extending from the subalpine to tree line. This habitat is most common at upper elevations that are exposed to cold temperatures and desiccating winds but also occurs at lower elevations in areas of cold air drainage. Soils are often thin organics over coarse-textured mineral soils underlain by shallow bedrock.

## Disturbance:

Heavy, late-lying snowpack restricts tree establishment, which contributes, in part, to the patchiness of the habitat type at elevational limits. Avalanches and landslides tend to control local extent on steep slopes (>30°).

## Animal Species Supported:

### Mammals:

Porcupine (*Erethizon dorsatum*) – **Nuuniq** [NW, PG], **Qangataaq** [Chenega]

Wolverine (*Gulo gulo*) – **Teglunaliq** [Chenega], **Alas'amakaq** [NW, PG]

Hoary marmot (*Marmota caligata*) – **Quirliq**, **Qusriq** [NW, PG]

Northern vole (*Microtus oeconomus*) – **Kriisaq** [N Alutiiq], **Ugna'aq** [S Alutiiq]

Short-tailed weasel (*Mustela erminea*) – **Amitatuk** [NW, PG]

Mink (*Mustela vison*) – **Qaugciciaq** [NW, PG]

Mountain goat (*Oreamnos americanus*) – **PaRanaq**, **Pehnaiq**, **Sepaq** [Chenega]

Ground squirrel (*Spermophilus parryii*) – **Qanganaq**

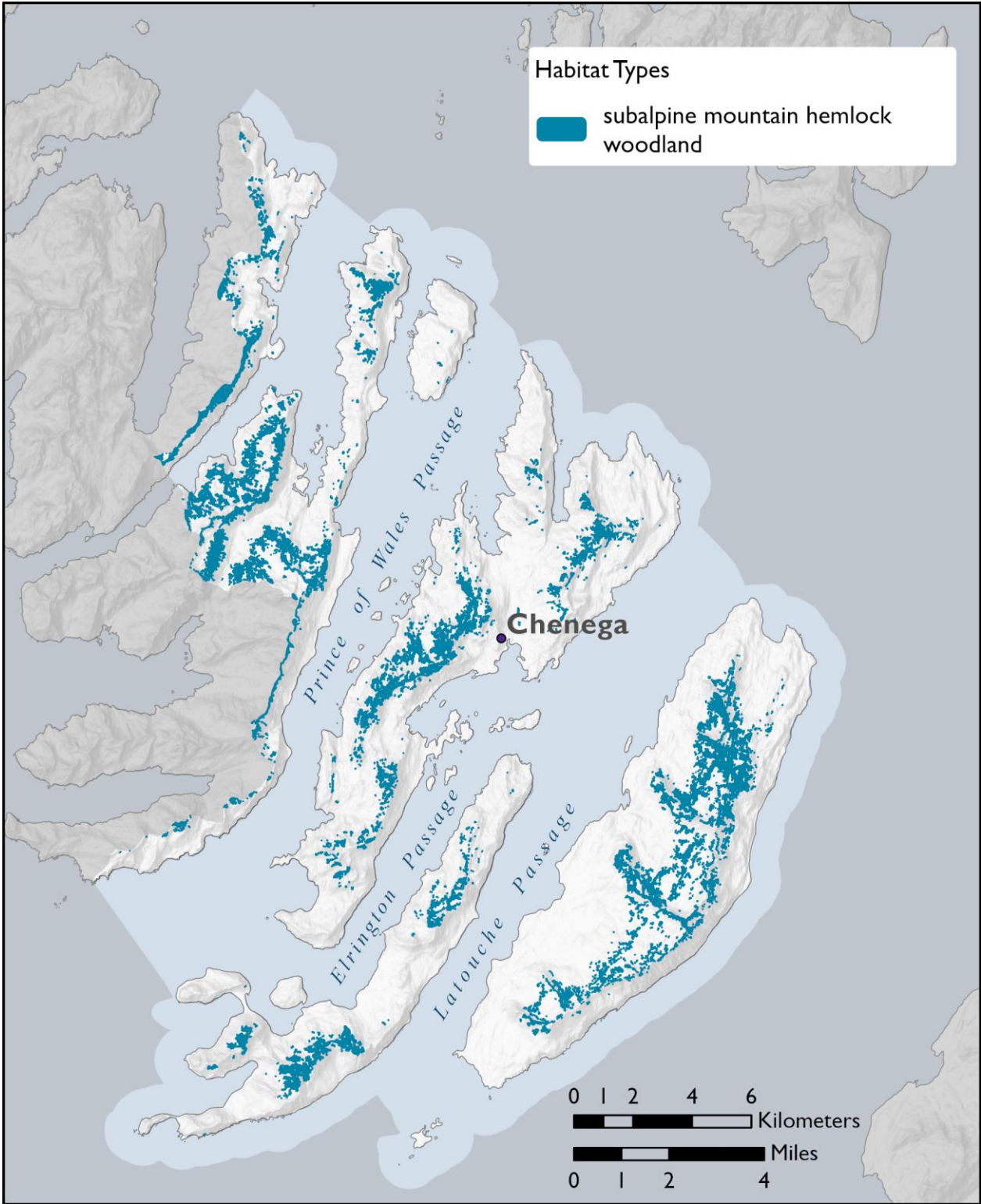
Black bear (*Ursus americanus*) – **Tan'erliq**

### Birds:

Grouse (*Falci pennis canadensis*, *Bonasa umbellus*) – **Elcaayuq** [NW, PG], **Egtugtuliq**

Ptarmigan (*Lagopus lagopus*, *L. mutus*) – **Qateriuk**, **Qat'riuk**, **Qateriuq**, **Qat'riuk**, **Qategyuk**

[PWS]



## Subsistence Plants:

Species: Common name (*Scientific name*) – **Alutiiq name** [if known]

[NW = Nanwalek; PG = Port Graham; PWS = Prince William Sound]

Mountain hemlock (*Tsuga mertensiana*) – **Allcig**: No documented use by Alutiiq, but other regional groups used bark and pitch as an infusion to treat tuberculosis, diarrhea, toothache, and as a poultice for burns and skin trouble. Bark can be used as fiber and branches are used to collect herring eggs during spawning.



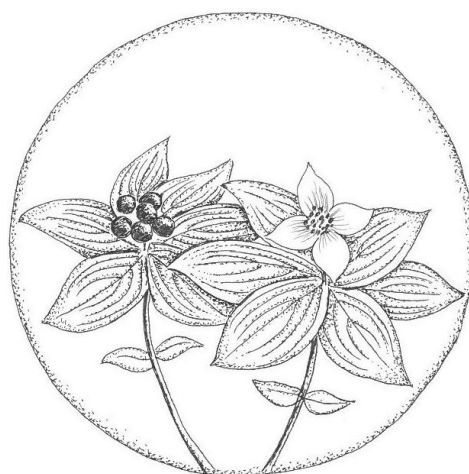
Reindeer lichen (*Cladina* spp.): No documented use by Alutiiq, but other regional groups used lichens by boiling into a tea to treat chest pains, diarrhea, and colds.

**CAUTION:** lichen acid content can cause an upset stomach if not cooked well.

Subalpine fleabane (*Erigeron peregrinus*) – **Teptukuiraat** [PWS], **Teptukui'aq** [PG]: Roots can be chewed raw or dried and boiled into a tea to alleviate colds, flu, congestion, measles, or pneumonia.

Crowberry (*Empetrum nigrum*) – **Augyaq, Shiksha, Pakik** [Chenega]: Berries are collected in August or September and eaten fresh, used in *akutaq*, or cooked with fish. Berries are used in jams, jellies, and desserts, or frozen for long-term storage. Stems can be boiled into a tea to facilitate menstruation, burnt into a smoke used for fumigation, or to cleanse homes and visitors of diseases and evil spirits.

Bunchberry dogwood (*Cornus canadensis, C. suecica*) – **Alagnaq, Tatangqurhnaq** [PWS]: Leaves can be used as a poultice and placed on wounds to help with healing. Berries are eaten opportunistically, but are not harvested in quantity. **CAUTION:** can cause nausea and vomiting when eaten in large amounts.







An example of subalpine mountain hemlock woodland habitat (PC: ACCS – Cordova, AK)