

A SUMMARY OF COAST SALISH SUBSISTENCE PRACTICES ON THE LOWER FRASER RIVER

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1.0 Introduction

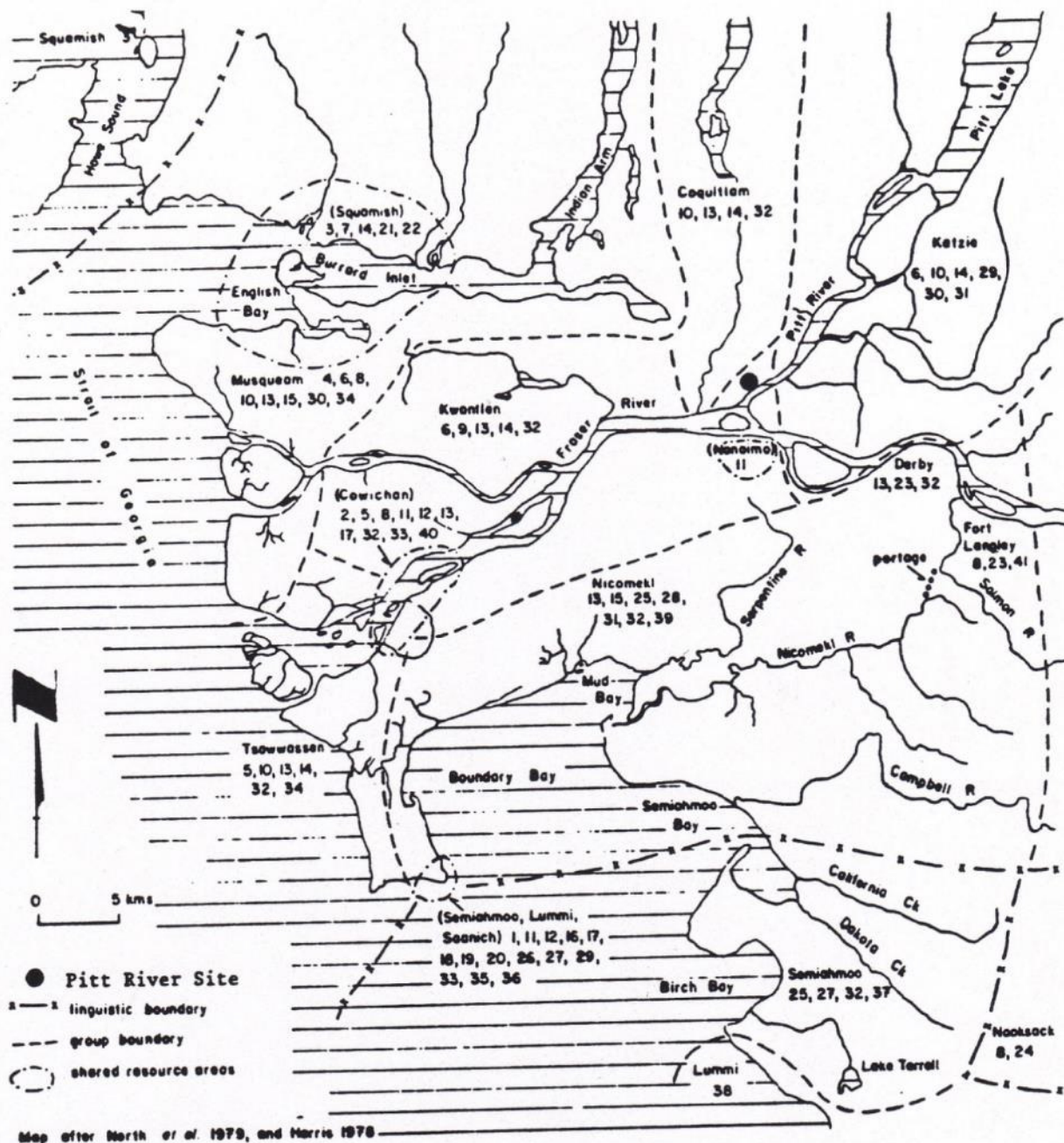
The Pitt River archaeological site is located within an area occupied by Coast Salish who spoke a Halkomelem dialect (see Map 3-1). Sources of ethnographic information on the Halkomelem peoples include the early work of Boas (1887, 1889, 1890, 1894) and Hill-Tout (1895, 1900, 1902, 1904a, 1904b, 1905, 1907). Later studies by Jenness (1955) and Suttles (1955) are primary references for the Katzie who inhabited the Pitt River drainage area. A wide range of available sources on other Coast Salish groups has been drawn upon in order to recover more detailed descriptions of subsistence activities and technology (Barnett 1975; Duff 1952; Gunther 1927; Smith 1940; and Suttles 1974).

1.1 Social Organization

The following is summarized from Ham (1982). Halkomelem society as a whole was divided into three classes; a large upper class, a small lower class, and a very small class of slaves. The primary socio-economic and political unit of the Halkomelem was the house group - one or more extended families occupying a plank house. Descent was reckoned bilaterally, while residence was often, though not necessarily, patrilocal. The house group owned, in addition to its house, certain ancestral names, legends, songs and dances, and rights to resource locations. These rights were maintained through inheritance and were generally held by the most important members of the house group.

Halkomelem villages generally consisted of one or more houses. Leadership was provided by the siyam, the most respected family heads in the village. The prestige of the siyam was based on their inherited social position and on demonstrated qualities of leadership.

Each village was linked through ties of marriage and kinship with other villages and these with still others to form a social network with no clear boundaries. Marriages were generally arranged between families of similar social standing from different villages. Members of different villages, who were united by family ties, co-operated in subsistence activities and shared access to each other's resources. Temporary summer camps often included relatives from several villages. Formal exchange between relatives from different villages provided a means for converting a temporary surplus of perishable foods into non-perishable wealth (Suttles 1963:514).



Map 3-1: Ethnographic Groups, Fraser River Delta. (Adapted from Ham 1982: Figure 2-19)

REFERENCES TO TERRITORIAL BOUNDARIES

- | | | | |
|----------------------------------|------------------------|-------------------------|-----------------------|
| 1 Barnett 1975:20 | 11 Duff 1952:25 | 21 Kuipers 1969:33-39 | 31 Suttles 1955:9 |
| 2 Barnett 1975:22 | 12 Duff 1952:26 | 22 Matthews 1955:8c, 40 | 32 Suttles 1955:12 |
| 3 Barnett 1975:31 | 13 Duff 1952:27 | 23 Nelson 1927:5-6, 15 | 33 Suttles 1955:13 |
| 4 Barnett 1975:33 | 14 Duff 1964:25 | 24 Smith 1950:332 | 34 Suttles 1974:6 |
| 5 Barnett 1975:5 | 15 Hill-Tout 1982:406 | 25 Suttles 1949:3 | 35 Suttles 1974:21 |
| 6 Boas 1894:454 | 16 Jenness n.d., p. 8 | 26 Suttles 1949:7 | 36 Suttles 1974:23-25 |
| 7 Bouchard & Kennedy 1974:1, 5-6 | 17 Jenness n.d., p. 10 | 27 Suttles 1949:8 | 37 Suttles 1974:27-33 |
| 8 Duff 1952:20 | 18 Jenness n.d., p. 25 | 28 Suttles 1977:1 | 38 Suttles 1974:33-34 |
| 9 Duff 1952:23 | 19 Jenness n.d., p. 26 | 29 Suttles 1977:3 | 39 Suttles 1974:28-29 |
| 10 Duff 1952:24 | 20 Jenness n.d., p. 53 | 30 Suttles 1955:8 | 40 Wilson 1866:286 |
| | | | 41 McKelvie 1947:22 |

1.2 Halkomelem Group Territories

It is not clear whether the west bank of the Pitt River at its mouth was part of the territory claimed by Katzie, Coquitlam, or Kwantlen peoples in early historic times (Map 3-1). Points on the west and east banks of the mouth of the Pitt River were given names by Wayne Suttles' Katzie informant, Simon Pierre, although no reference was made to specific use of the Pitt River below the mouth of the Alouette River by the Katzie.

During the early historic period there were marked declines in population of most Halkomelem groups due to introduced diseases, and shifts in settlement by other groups. Simon Pierre of the Katzie Band indicated to Suttles that the Kwantlen had moved upstream from their earlier winter village sites in the New Westminster area to be near Fort Langley. They subsequently took over territory from other Halkomelem groups who had been decimated by smallpox. It is possible that during this period of rapid population reduction, much information regarding the Pitt River site, its use and ownership, was lost.

The entire Lower Fraser area, below present day Yale, was utilized by a number of Halkomelem groups from Vancouver Island (see Map 3-1). Cowichan and Nanaimo groups came to the Fraser River in large numbers every summer to catch and process sockeye salmon. The Cowichans had three summer villages on the south arm of the Fraser, below New Westminster, while the Nanaimo had a village on the Fraser a mile or two below Fort Langley.

Salmon fishing was not the only subsistence activity engaged in by groups visiting on the Fraser. After Fort Langley was established, it was noted that as many as 5000 native people, from various groups, would gather in the vicinity of Pitt River in October and November to dig wapato (*Sagittaria latifolia*) which grew in the slough channels of the area. Katzie territory was also famous for its cranberry bogs which were harvested by the Katzie during September. Blueberries, which ripen at about the same time as cranberries, are also plentiful in the bogs of the Pitt River area.

2.0 Subsistence Practices

2.1 The Seasonal Round

The primary adaptive strategy of the Coast Salish, for the exploitation of natural resources, was the seasonal scheduling of various subsistence activities. Expeditions were made from early spring through fall to locations with abundant resources, where temporary camps would be set up for a few days or weeks. At some camps, each family erected its own mat-covered shelter (described in some detail in Section 3.0 below). There were often permanent structures at the more important resource locations.

Men's and women's activities were made to coincide and complement each other during each season. While men hunted and fished, women gathered plant resources and processed a variety of foods for storage. Children usually accompanied the women and helped with gathering activities.

With the coming of winter, people returned to their principal villages, where provisions of dried food were stored away in large communal houses. Winter was a time of ceremonial activity, but short trips were made in the vicinity of the winter village to procure fresh supplies of food for immediate consumption. Table 3-1 outlines the Katzie year, divided into 12 periods which roughly correspond to our present system. The information presented in the table was drawn from Duff (1952), Jenness (1955), and Suttles (1955).

2.2 Fish Resources

For all Coast Salish groups, fish was the staple food. Therefore, the technology used to procure such an important resource was well-developed. Although various freshwater fishes were available year round in small streams and lakes, the Fraser River was the major focus of activity during the large annual runs of salmon, sturgeon, and eulachon, not only for the Halkomelem people but for several other Coast Salish groups as well. There were camps all along the Fraser River, at its mouth and upstream as far as the start of the Fraser Canyon, during the summer and early fall periods.

2.2.1 Tools and Techniques of Fishing

Nets

Coast Salish groups used the twisted fibres of stinging nettle, red cedar bark, and willow bark, for making fish nets. Various weights of twine were knotted into different mesh sizes, depending on the intended use of the net. Fishing nets can be divided into two main types:

1) **Seine Net:** The most common method of catching salmon in the lower Fraser River and larger tributary waters was by means of a seine net pulled down-river between two canoes. Often referred to as a trawl net, this net has been described in a number of ethnological sources. As described by Suttles (1955), the seine net was a rectangular piece of webbing which billowed out to form a pocket as the canoes moved downstream. The bottom edge was weighted by stone sinkers, while the top was held up with conical wooden floats. The net was held by two ropes, tied to the outer weights at the bottom and passed through rings along the sides to the ends of the upper edge. Seine nets were made in three sizes, with mesh and fibre weight corresponding to the overall size. All sizes were used in the same way.

The same seine nets used for trawling could also be used as set nets. They were set in position, extending out from a river bank or lake shore, by canoe, in order to catch salmon or sturgeon .

Table 3-1: The Katzie Seasonal Round

MONTH	MALE ACTIVITIES	FEMALE ACTIVITIES	LOCATION
March	Fishing: sturgeon, trout, steelhead	Gathering: sprouts and shoots	Small 2-3 family camps near Pitt Lake and Sturgeon Slough
April	Fishing: eulachon, sturgeon	Drying eulachon	Villages or camps on Fraser River
May	Fishing: eulachon, sturgeon. Hunting: grouse, ducks, geese, swan	Collecting and processing vegetable foods: cambium, roots. Preparing roots and bark for manufacture.	Camps near Pitt Lake and Sturgeon Slough.
June	Hunting: male deer, wapiti, goat, bear Fishing: trout	Dressing hides. Collecting and drying rushes for mats. Gathering early fruits and berries	2-3 family camps near Pitt Lake.
July 1 st half	as above	as above Collecting cedar bark	as above
July 2 nd half	Preparing for sockeye season. Some fishing & hunting.	Collecting summer berries. Weaving wool blankets. Making storage baskets.	Villages and camps on the Fraser River.
August	Fishing: sockeye	Drying fish. Collecting berries & other fruits	as above
September	Fishing: 5 salmon species Potlatching	Drying fish Gathering: cranberries, blueberries Potlatching	Autumn fish camps on Alouette River, Widgeon Creek, Sturgeon Slough and Pitt Lake
October	Hunting: deer, bear, wapiti, birds. Fishing: coho, chum, sockeye, steelhead	Drying meat. Gathering cranberries, wapato, crabapples	as above
November-December	Fishing: chum, sturgeon, steelhead. Hunting: deer, bear, beaver, wapiti Gathering firewood	Gathering: fern roots, wapato Drying meat. Making: garments, mats, housewares.	Winter villages
January-February	Fishing & hunting locally available species. Winter Dances	Making: mats, blankets Winter Dances	Winter villages

2) **Dip net:** A dip net consisted of an elliptical frame of vine maple, 1 to 2 m in diameter, attached to a 3 m handle of fir or cedar. A conical net was attached to bone rings which slid around the frame and were held open by means of a line held by the fisherman.

Techniques for using dip nets varied with the physiography of different sections of the river system where fish were abundant. They could be used from rocky banks or platforms built out over the water, or where steep banks were not available, dip nets were used from canoes in backwaters and large eddies.

Larger dip nets were used to catch salmon, while small dip nets and hand-held nets were used by many Halkomelem groups to catch eulachon, though among the Katzie, this practise was less common than the use of rakes.

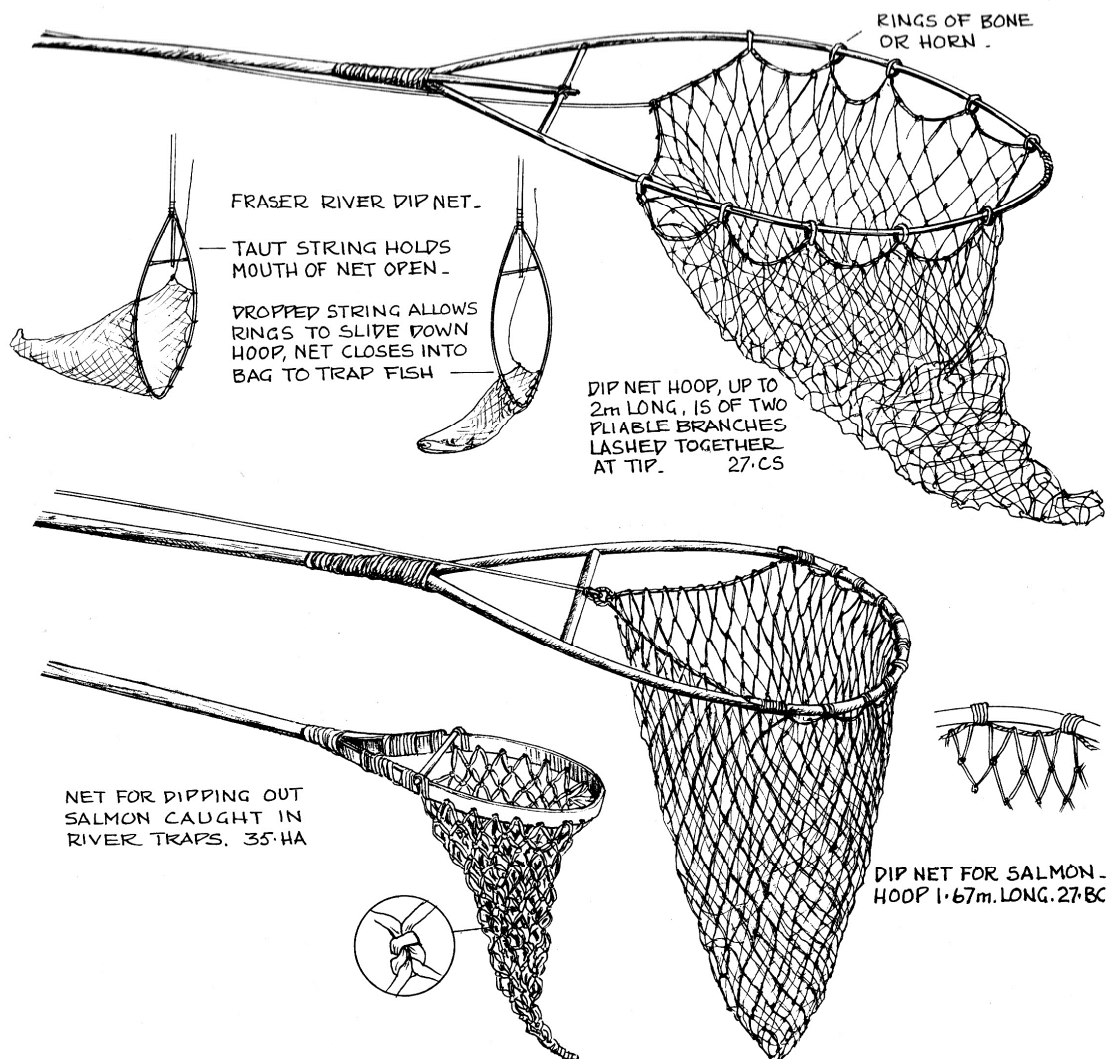


Figure 3-1: Coast Salish Sturgeon dip nets. [Stewart 1977:91]

Weirs

A weir consisted of a row of stakes or posts driven into a stream bottom against which were tied sections of woven cedar boughs. This extended across the stream and contained one or more openings. These allowed fish to pass through where they could be speared by waiting fishermen. A woven basketry trap could also be attached to weir openings. Suttles refers only to the use of weirs in combination with traps for the Katzie. However, Duff notes that the Upper Stalo used weirs with and without traps. When enough fish had been caught, several lattice work sections were removed to allow the rest of the run to pass upstream.

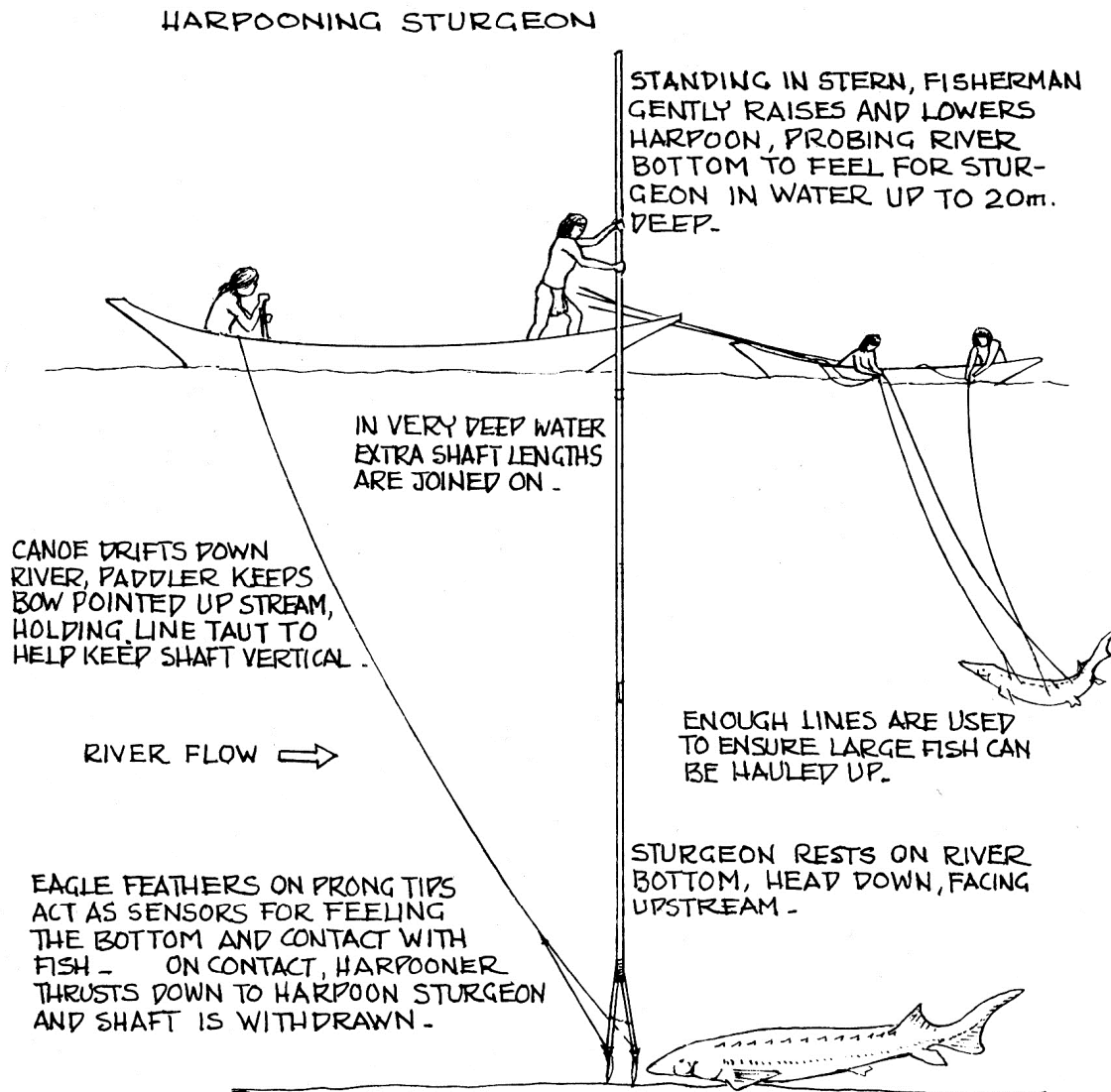
Harpoons, Gaffs and Spears

The salmon harpoon used by all Coast Salish people was composed of a cedar or fir shaft, 3 to 6 m long, with two or three divergent foreshafts of uneven length, made of saskatoon (*Amelanchier alnifolia*) or oceanspray (*Holodiscus discolor*), and topped with detachable heads. The three piece toggle type heads consisted of two antler valves holding a bone point, bound together with pitch and cherry bark. The valves were grooved to hold the foreshaft and the head was attached to the main shaft by means of a line.

The sturgeon harpoon, described by Duff (1952), had two large toggle heads on symmetrical foreshafts, each about 3 feet long. These shafts were angled to hold the points about 1 foot apart. The shafts converged to join a single foreshaft. The points were joined by lines to the main shaft and then to the line held by the fisherman. Charred cedar floats, about 2 feet in diameter, were attached to the long line held by the fisherman to serve as buoys. The main shaft of the harpoon was constructed in segments so that the overall length could be adapted to the depth of the water. This type of harpoon was used from a canoe. Historically, sturgeon harpoons over 50 feet in length were observed in use in Halkomelem territory (See Figure 3-2; Fort Langley Journal, 1827).

The gaff was also used for both salmon and sturgeon. It consisted of a large barbless hook of steamed and bent yew wood, inserted into a socket on the end of a long shaft of fir or cedar. The hook, which detached when a fish was caught, was tied to the shaft by a short line. Harpoons and gaffs were both used from canoes in deep water and from the banks of smaller streams.

The Coast Salish also made use of a leister spear, armed with two or three barbed hardwood prongs. With some leisters, these prongs were detachable, with the shaft fitting into a socket where the prongs joined. Spears with a single fixed point of bone, antler or stone, were used in shallow water. Sometimes even simpler spears in the form of quickly sharpened sticks were used.



37.C5

Figure 3-2: Historic Coast Salish Sturgeon fishing. [Stewart 1977:70]

Fish Rakes

Eulachon were taken with rakes used from canoes. The rake was made by inserting bone or saskatoon wood teeth into a cedar shaft, or by tying several twigs of black hawthorn (*Crataegus douglasii*) onto the shaft so that the thorns lined up to serve as teeth. The rake was swept through the water in a paddle-like motion, then drawn up and under the fish, impaling them on the rake teeth. The rake was then lifted out of the water and rapped against the side of the canoe, dropping the fish into the canoe.

Hook and Line

Hook and line fishing was another method used to catch sturgeon and other fresh water fish. Simple gorge hooks were used for flounder, while straight shanked hooks with bone barbs (trolling hooks) were common for trout. Larger hooks, consisting of a 25 cm long hardwood shaft with a 10 cm bone barb baited with salmon roe or eulachon, were used for catching sturgeon.

2.2.2 Processing and Preserving Fish

Men did most of the fishing while women were responsible for processing the catch for immediate consumption as well as preserving it for storage for winter months.

Fish species most abundant in spring were smoked during the drying process. Eulachon were strung whole on small poles of hazelnut, about 1 m long, and suspended from drying racks over an alder fire. The meat of the white sturgeon, which could weigh more than half a ton, was cut into large chunks and then sheets 1.5 cm thick which, held spread by sticks, were smoked for about 2 weeks.

Salmon were eaten fresh, or were sun-dried or smoked in very large quantities during the summer and fall, for use in winter. In preparation for drying, salmon were cut open on the back or dorsal surface and split along both sides of the backbone. The entrails were removed keeping the belly flesh intact. The flesh of the salmon was scored and held open with wooden skewers by which it was suspended on a drying rack (Figure 3-3). Heads and backbones with tails were generally dried on separate poles. The fish knife, described by Barnett, was made of thin slate and shaped like a half disc or rectangle with two rounded corners. The knife was set in a wooden handle [see Figure 3-3]. Some groups also used a blade of bone for fish butchering.

Only in the Fraser Canyon could constantly blowing winds be relied upon to dry salmon. On the lower river, sun-drying of salmon was the most common practice. In some areas, swarms of blowflies during July and August made it necessary to dry fish with the aid of smoke from alder wood fires kept going under the racks. During wet fall weather, salmon were dried in small smokehouses made of mats, bark or planks.

A drying rack consisted of a framework of sturdy poles to which were tied several tiers of smooth, round, parallel poles to hold the drying fish. [Figure 3-4] The pole structure was tied together with willow or cedar ropes and supported a roof made of layers of branches or mats to keep sunlight and rain off the fish. The sides were open as the drying process was dependent on free circulation of air as well as the warmth from smudge fires built below the rack. Dried fish were stored in bundles in large square baskets, made of cedar bark or rushes,

which had both handles and lids. These were usually stored on racks suspended from the roof of the winter house.

In summary, the anadromous fishes which ascend the Fraser River in large annual runs, together with the migrant sturgeon, provided a predictable and reliable resource for the people who had access to the lower Fraser River. Large quantities of fish were procured by a variety of methods including nets, weirs, gaffs, harpoons and spears. Preservation of these fish resources provided a large supply of food for winter, contributing to the importance of fish in the overall economy.



Figure 3-3: Coast Salish salmon processing using a ground slate knife. [Stewart 1973:82]

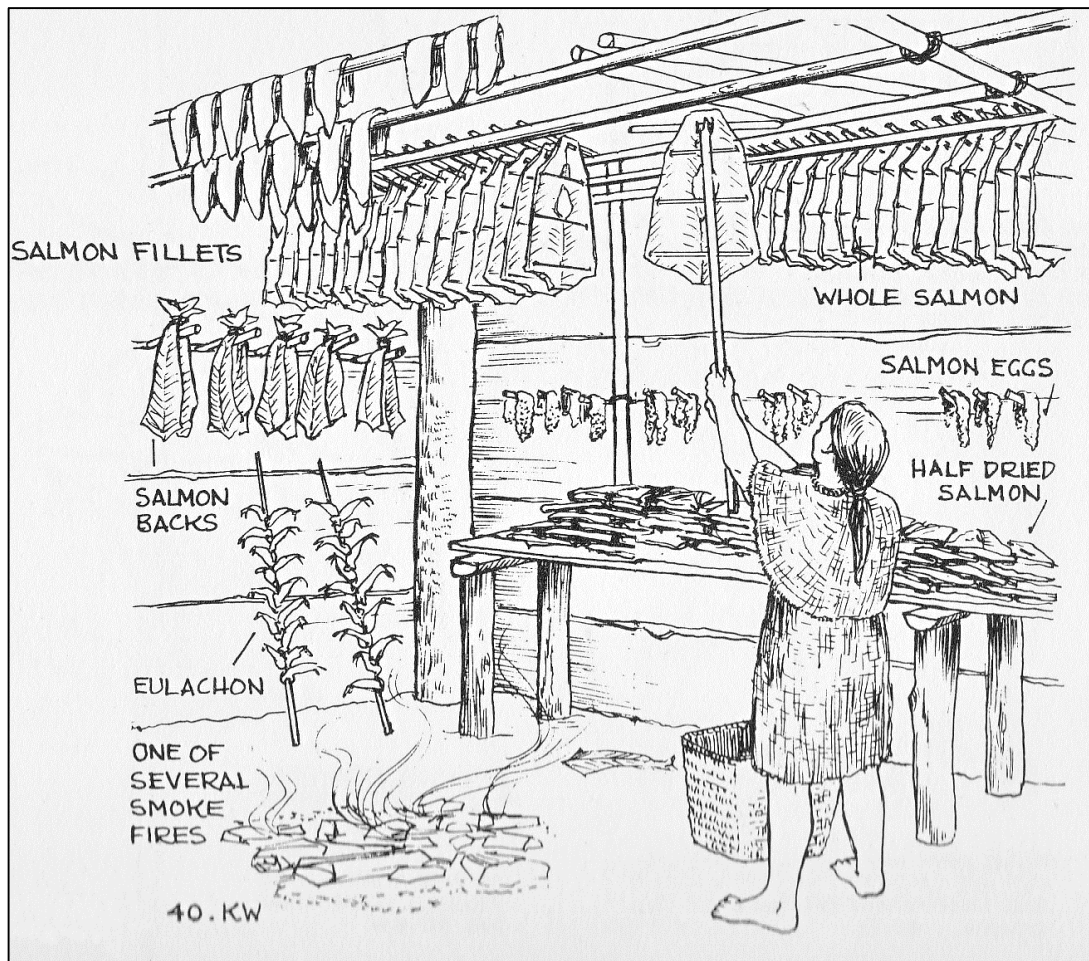


Figure 3-4: Salmon prepared in a variety of ways for smoking and drying. [Stewart 1977:140]

2.3 Mammalian Resources

Hunting of land mammals was somewhat more important to the mainland Halkomelem than to coast-based Coast Salish groups. This was most likely due to the abundance of terrestrial mammals along the Lower Fraser River. Although some hunting could be carried out year round, most mammals were more desirable or more easily obtained at certain times of the year. Most hunting was done in fall when animals were fat. Little hunting was carried out in summer, due to preoccupation with fishing and restrictions on hunting females with young. All men were expected to be able to hunt and fish, although a few particularly good hunters came to be regarded as specialists.

2.3.1 Important Species

Deer, wapiti [or elk - *Cervus Canadensis*] and mountain goats were important sources of meat, hides, antler/horn, and long bones for tool manufacture. Deer bucks and wapiti stags were

usually hunted in spring and early summer, while does and hinds were considered best in late fall and early winter. Mountain goats were numerous in the mountains close to Pitt Lake. They were especially important for their wool, which was the principal material in the local woven blankets and was widely traded.

Black bears were hunted in the summer, while they were eating berries, rather than during spring when they ate skunk cabbage which imparted a foul taste to their meat. They were also desired as sources of meat, hides and bones. Grizzlies were occasionally hunted by the Katzie for their hides alone.

Seals were available as they followed migrating fish up the Fraser and into Pitt River and Pitt Lake, where they also stayed to breed. A variety of small mammals, such as beaver, rabbits, and marmots, were hunted for both their meat and skins. Small fur-bearing carnivores were taken for their pelts only.

2.3.2 The Tools and Techniques of Hunting

When Europeans arrived on the coast, the principal implement used in hunting all mammals was the bow. Five arrow types were known for the Katzie, ranging from a sharpened shaft to shafts with detachable heads. Points were made of bone or stone and were attached to the shaft with sturgeon glue or tree resin and bound with cherry bark strips.

Communal drives were organized to capture deer. Several people would chase deer up a ravine, or into dense brush, to a place where hunters waiting in ambush could kill them with clubs or bows and arrows. Pitfalls, with sharpened stakes set in the bottom and leafy branches for cover, were set along game trails. Other traps included deadfalls and snares. Dogs were sometimes used for hunting deer, particularly by individual hunters.

Hibernating animals, such as bear and beaver, were driven from their dens in winter and killed with spears. Seal were harpooned from canoes at night or clubbed as they lay sleeping on shore.

2.3.3 Processing Mammalian Products

Mammals were important not only as a source of food but for a variety of other products as well. The meat of deer, wapiti, bear, beaver, and rabbit was fire-dried. Strips of meat, 1 cm thick and 20 cm wide, were laid on rack poles less than a meter above a fire of alder wood. Meat drying was done at temporary hunting camps when expeditions lasted several days or more.

Antler, horn, bone, wool, and hides were important raw materials for tools, eating utensils, ornaments, and clothing. Deer hides were tanned by women but men usually worked the

heavier wapiti hides. Furs were used for ceremonial dress as well as for blankets and robes in winter. Wool from the mountain goat was used in weaving blankets and was widely traded. The hides of deer and wapiti were tanned into soft leather for use in clothing such as shirts, leggings, moccasins, and mittens for winter.

2.4 Avian Resources

Migratory waterfowl, including a wide variety of ducks, geese, and swans, were plentiful in spring and fall in the marshes and swamps along the Pitt River and its tributaries.

2.4.1 Tools and Techniques of Hunting

Birds were taken mainly with large nets made of the same materials used to make fish nets. The nets were suspended between two tall poles permanently erected at locations of flyways. Many of these net locations were mentioned by Simon Pierre as being owned by Katzie families. Small hand nets were used to capture marsh birds from canoes at night, and in day time by a man hiding in tall grass or reeds, waiting for ducks to pass over.

Arrows used for hunting birds often had blunt or knobbed wooden points, as well as single or double points of barbed bone. The five pronged spear used for hunting ducks at night by other Coast Salish groups, appears to have been used only for salt water diving ducks and its use is not mentioned for the Halkomelem peoples.

Ducks were usually eaten fresh and were a favourite food at feasts and for gifts. Ducks could be preserved for a short time by roasting whole and drying the outside over a fire to keep flies away.

2.5 Plant Resources

The Coast Salish had access to and utilized a wide range of plant resources for food, construction materials, and medicine. Since plant resources were most often concentrated at particular locations and for limited periods of time, it was most economic for groups of people to harvest a given plant resource in an intensive manner. Often, group expeditions were made to the resource location where temporary camps were set up for several days and where some processing might take place. Some plant resource locations were the property of a particular family, with other groups having to obtain permission to use or gather resources there. The gathering of plant resources was usually the responsibility of women and children while men were engaged in hunting and fishing nearby. However, it does seem likely that men would aid in the gathering of abundant plant crops, particularly those which ripen over a short period.

2.5.1 Edible Plants

The gathering of food plants required detailed botanical and ecological knowledge. Most plant foods were gathered into watertight coiled baskets, made of split spruce or cedar roots, basket sedges, and other grasses. Such baskets may have been a special product of the Fraser River area, traded widely to other Coast Salish groups.

Young Shoots

The first vegetable foods available in spring were young shoots and tender stems of several plants. These included shoots of berry bushes such as salmonberry and thimbleberry, and the tender stems of water parsnip and some types of ferns. Shoots were harvested in March and April and were generally eaten raw, or sometimes steamed in earth ovens. Although most shoots could be broken off with the hands, a cutting implement may have been required for some, along with baskets for carrying them.

Roots

The Pitt River area was famous for wapato (*Sagittaria latifolia*) which grew in slough channels and swampy areas along the Pitt River. The plant has a fleshy root, somewhat similar to a white potato in flavour and texture (Figure 3-5). Many specific wapato harvesting locations, mentioned by Simon Pierre, were the inherited property of Katzie families while others were owned by whole village communities. Permission had to be obtained by outsiders to dig wapato in these locations. A family might establish a single season claim to a wapato harvesting location by clearing the tract of competing growth to make harvesting easier. "A family who cleared such a tract might camp there in a mat house for a month or longer harvesting the roots". Wapato could be stored raw and unwashed for several months, then cooked as needed by steaming in earth-ovens.

Fern roots were occasionally steamed in an earth oven but were more often roasted before a fire or heated on rocks. They were then pounded until the woody cortex loosened and could be removed. Since this starchy root was constipating, it was generally eaten with fish products such as roe or oil. Fern roots were gathered during late fall and winter for immediate use and were rarely stored.



Figure 3-5: Wapato, also called Arrow-Head Plant because of its distinctly shaped leaves, grows in tidal mudflats along the Pitt River. [MRM P03848]

Fruits and Berries

A wide range of fruits and berries were available from early summer to late fall. The earliest maturing berries in June and July, including salmon-berries, thimbleberries, and strawberries, were generally gathered and eaten fresh, being too juicy to dry and preserve.

The bogs and swamps along the Pitt River abounded with blueberries, ripening in August, and cranberries which ripen in September and October. Some locations were owned by individual Katzie families while others were considered communal property. Many outside groups came to pick berries in the area, being required to ask permission first before gathering from these locations. Fruits and berries were preserved for storage by drying. Some berries, such as huckleberries, were spread out thinly on mats so that they dried slowly in the sun. More commonly, berries were spread out about 2 to 5 cm thick on a frame of loosely woven cedar bark covered with maple, fern, or skunk cabbage leaves. This frame was usually rectangular, 30

by 60 by 5 cm. Frames were placed on a drying rack about 120 cm above a fire. The berries dried slowly in the form of cakes from the combined heat of sun and fire, the smoke helping to keep flies away. Sometimes berries were boiled in baskets using fire-heated stones, before being mashed and spread out into frames to dry. Berry cakes were rolled up and stored in loosely woven bags, baskets, or wooden boxes. Elderberries would preserve well by first boiling or steaming, then storing them in loosely woven baskets lined with leaves and placed in cold stream water. Crabapples were picked green and stored in cattail bags to ripen slowly.

Cambium

The cambium, or inner bark layer of red cedar, hemlock, maple, and cottonwood, was collected in spring, while the sap was running, by means of a wooden knife. It was eaten fresh by several groups. Some groups dried hemlock cambium into cakes for winter use. After men had cut slabs of bark from the trees, women separated the cambium layer from the outer bark. The cambium was steamed overnight in an earth oven, then pounded on a large rock, rolled into balls and dried slowly into cakes on drying rack frames.

2.5.2 Plants Used in Manufacturing

Men were responsible for harvesting and working with wood products, while women collected fibrous plant resources including bark, stems, and roots. In the Coast Salish area, the most extensively used plant species was red cedar (*Thuja plicata*). Its wood was used for house posts and planks, canoes, and storage boxes as well as other large articles. The bark was put to many uses including rope, twine, matting, basketry, and clothing. Pliable branches were used for rope and roots were used in basket manufacture.

Trees were felled using stone mauls (hammers) and adzes as well as chisels of shell, bone, or stone. Logs were split into planks using mauls and wedges of antler or hardwood. The bark from cedar trees, as well as a wide variety of other species, was usually gathered in late spring or early summer while the sap was running. At that time, the bark is more pliable and easy to separate from the wood. Bark was usually taken from trees in long strips, using stone or wood knives to make the necessary cuts.

The stems and leaves of various reeds and rushes were gathered in late spring, as well as late summer, when plants were fully mature. The most common of these were cattail stalks and tule stems used for making mats for house walls, bedding and a number of other purposes (Figure 3-7). Leaves and stems were cut to even lengths and allowed to dry before use. In size, mats ranged from 1.5 to 2 m wide and from 3.5 to 6 m long. When placed on shelters, mats were arranged in tiers and overlapped at the edges so as to shed the rain. While being transported, mats could be rolled up or used to cover other goods.

Cedar roots for basketry were dug with digging sticks similar to those used for digging edible roots. Tree roots could be gathered at most times of year but were usually dug most intensively in late spring when bark was most easily removed. The roots were heated over a fire before removing the bark and then split lengthwise and dried.

2.6 Methods of Cooking

Three methods of cooking - roasting, stone boiling, and steaming in earth ovens - were used along the entire Northwest Coast and are described for the Coast Salish by Barnett (1975:60-61), Elmendorf (1960:131-133), Gunther (1927:209), Haeberlin and Gunther (1930:23), Jenness (n.d.:43), and Smith (1940:230).

When cooking for a few people, fresh meat and fish were generally roasted on a stick before a fire. Chunks of meat were simply impaled on a stick, sharpened at both ends and stuck into the ground slanting over a fire. Fresh salmon were impaled lengthwise on a stick which was split in half for three quarters of its length and tied together above and below the fish. Smaller sticks were inserted crosswise to keep the fish flat as it cooked. Birds were roasted whole, on a horizontal spit, supported by two Y-shaped branches, and turned as they cooked through. Fats were rendered by roasting meat on a spit with a receptacle underneath to catch the melted fat. Meat could also be roasted directly on hot rocks or coals.

"Stone boiling" was used for cooking many foods including soups and stews. Watertight wooden boxes were partially filled with water. Then, hot fist-sized stones, taken from the fire with wooden tongs and rinsed with clean water, were placed in them. Dried foods were often soaked in water before being cooked by this method.

Steam baking in earth-ovens was the method used to cook roots and bulbs before storing them. It was also used to cook fish and meat in large quantities. The following description of an earth-oven has been drawn from several ethnographic sources and appears to be the common steaming method used in the Coast Salish area. Pits were dug into a loose, sandy soil, with size depending on the amount of food to be processed, but usually about 60 cm deep and 120 cm across. Rocks were thoroughly heated in the pit by means of a brisk fire. The fire was then allowed to die down and charcoal and ashes were removed. The heated rocks were covered with a layer of skunk cabbage leaves, maple leaves, or fern fronds to protect the food from direct contact with the hot stones. The food to be steamed was then laid on top of the leaves and covered with another layer of the same leaves, along with berry branches. The entire pit-oven was then sprinkled with water and covered with mats. The pit might be covered with a layer of sand with a fire kindled on top of it to keep heat in, particularly if the food required cooking for several days.

Food was served in carved maple wood bowls and dishes of various shapes and sizes. Ladles were made of maple wood, mountain goat horn, and clam shells. Large wooden troughs, or even canoes, were used to serve food at feasts.

3.0 Dwellings

The major dwelling type of the Katzie was the large communal structure known as a "long-house". The following description is from Jenness (1955:6-7):

Each was a long barn-like structure with a roof that sloped gently from front to back. The frame was joined by two lines of square or rectangular posts, often carved, that were joined by cross-beams, and these cross-beams overlain in turn by rafters. The walls were overlapping boards set horizontally between up-right poles planted in the ground just outside the line of posts, so that they were really quite separate from the frame. Heavy planks overlapped each other on the rafters, giving a fairly rain-proof roof, even though every board was displaceable at need to let out the smoke. In the long side of the house facing the water were one or two doors; there was a door also at each end; and here and there a gap between the horizontal wall-boards served as a window, which could be closed at will with a rush mat.

Habitations at seasonal camps were of several types ranging from simple lean-tos to structures having frameworks like those of winter houses, only smaller. Many wealthy Halkomelem families had shed-type bark houses which stood all year at their summer fishing and gathering stations. The most common temporary habitation consisted of a pole framework covered with rush matting. These shelters were of various sizes according to the number of people to be

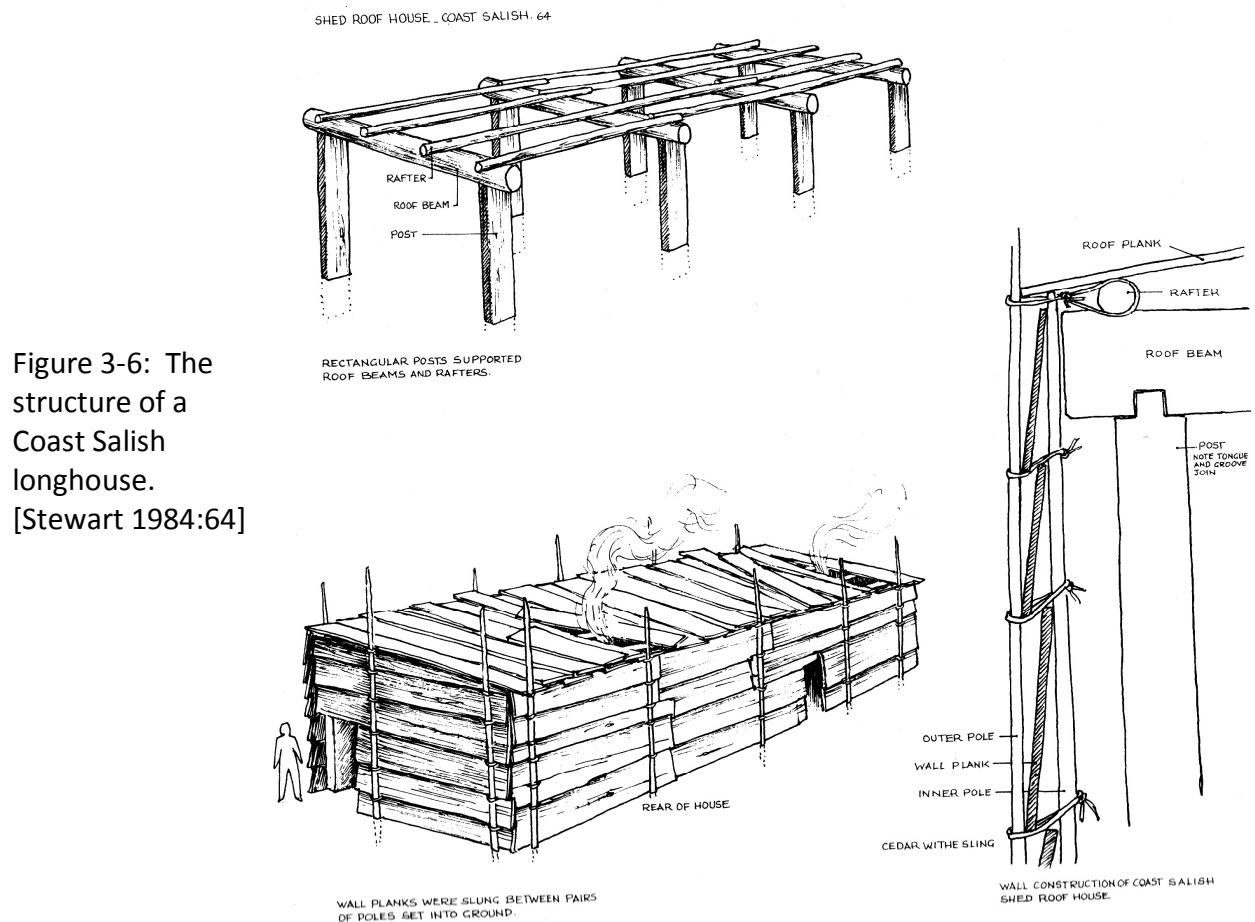


Figure 3-6: The structure of a Coast Salish longhouse. [Stewart 1984:64]

accommodated. According to Barnett, frames were of two types - lean-to, with two sets of uprights connected at their tops with a brace (Figure 3-7) and a four posted structure with a single-pitched shed roof (Figure 3-8). Most temporary houses were large enough to accommodate a single family and a few belongings. Several families would build their mat shelters around a common fire pit, as cooking was usually done outside.

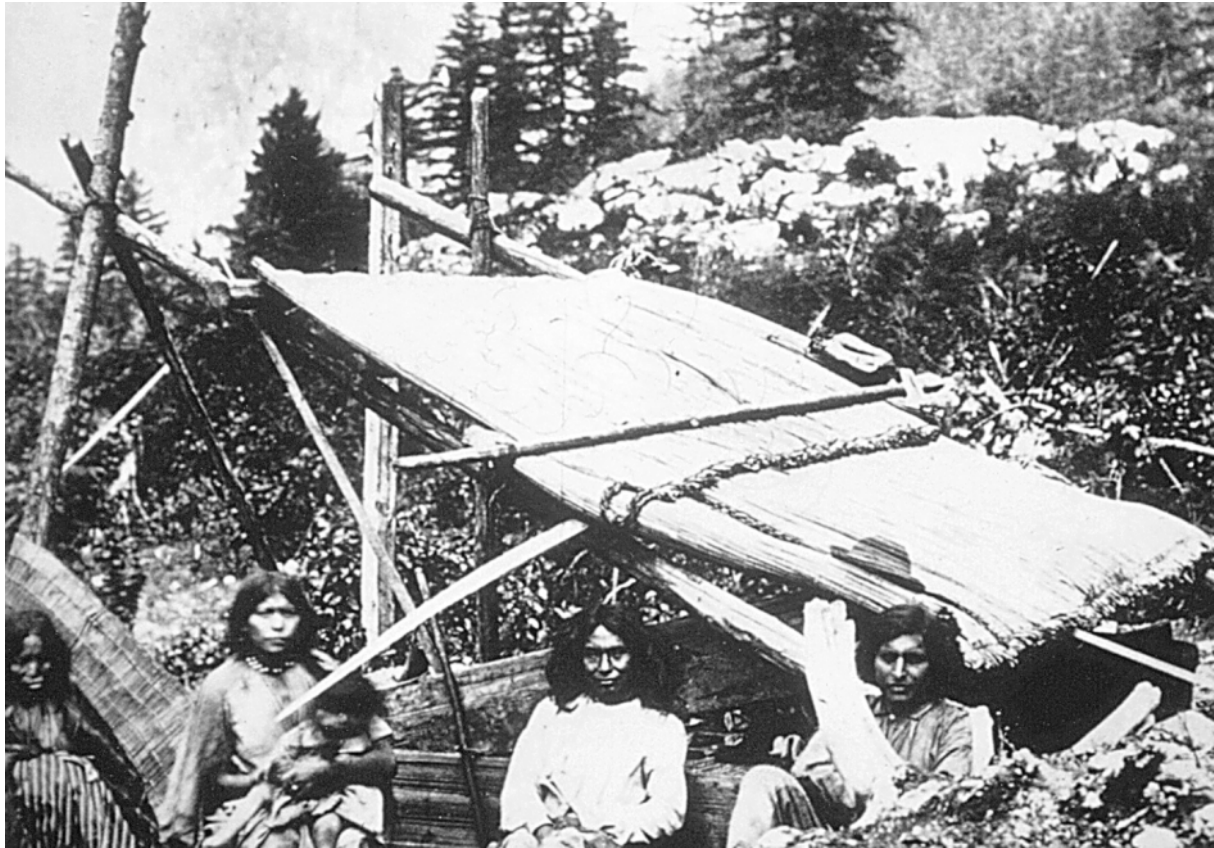


Figure 3-7: Temporary mat-covered lean-to shelter at a Fraser River fishing camp near Yale, B.C. (MRM P01624; B.C.P.M. Photo #PN 882).



Figure 3-8: Mat-covered, shed-roofed temporary shelter. (MRM P01623).

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