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NATIVE AMERICAN TRIBES OF THE NORTH CASCADES NATIONAL PARK, ROSS LAKE NATIONAL RECREATION AREA, AND LAKE CHELAN NATIONAL RECREATION AREA

by
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With some explicit exceptions, the data of the preceding paragraphs describe hunting practices of the Thompson as a tribe and those of the Upper bands in particular. The extent to which they also apply to the Lower Division is not reported by Teit, though it may be assumed that most of these techniques, if not all, were likewise those of this downstream division on occasion. While the Upper people were plainly more generally hunting-oriented, Lower Thompson parties spent months pursuing game in the higher sectors of their territory and, as already observed, specialist hunters even existed within the division. Fortunately Ray (1942:116-124) provides hunting information for these downstream people specifically. I see no simple way of combining most of these data with those of Teit above without thoroughly muddying the description. The following summarizes this Ray residue material.

For the Lower Thompson Ray (1942:117-123, 140) confirms the running down of animals on snow by men wearing snowshoes, the stalking of them with bow and arrows and occasionally with clubs, the taking of grizzlies by daringly placing a sharpened bone in their mouth, and the use of trained dogs in hunting deer and bear. He also reports certain fresh data. Deer and elk were called with whistles of elderberry wood and cottonwood wood and by blowing upon a leaf placed in the mouth. Hunters are reported to have crawled into a hibernating bear's hole, tied a rope around its neck, and dragged it out. Hibernating ground hogs and perhaps bears likewise were occasionally smoked out of their dens. Beaver were ritually spoken to and called out of their houses. If this strategem failed, their dams were destroyed and the animals were clubbed in their effort to escape, or the hunter crawled into the house to capture the animals. Their musk was taken for perfume and their kidney for medicine. Deer, mountain goats, and birds were all caught in spring-pole snares. For deer the nooses were suspended from tree limbs on trails and were also set at openings in fences. For grouse the Indian hemp snares were placed on their trails, at their "dancing" grounds, on logs, on top of knolls, and in openings in stone or brush fences. Baited deadfalls were constructed for large and small game. Eagles were attracted to a brush hut by fish bait and were taken by hand by the hunter concealed within the hut. Young eagles were also captured in their nest. Birds' eggs were collected by the Lower Thompson and were boiled for food.

Among the Lower Thompson, the hunting leader divided the fat, meat, and skins almost equally among the entire party, only the best hunters being given a little more fat and an extra skin or two. A single hunter who chanced to have especially good fortune returned to his village and invited his friends to help him carry his kill home and share in the meat and hides. Skins and meat of trapped animals belonged exclusively to the trapper. (Teit 1900:264-265)

How meat was prepared for immediate eating is not well described in the ethnographic accounts. Roasting before an open fire and stone-boiling were, however, common methods.

For later consumption the flesh, with fat removed, was cut into thin slices, pierced with holes or slits, and dried by sun and wind on a pole framework, often over a fire. Sometimes it was dried and smoked over the lodge fire or hung up near the roof to receive this treatment. Chunks of fat cut from deer, elk, or bear meat were run through with thin sticks, the ends

of which were supported by forked sticks thrust into the ground, and a hot fire was kindled close-by. The drippings were caught in troughs of bark, wood, or stone. This melted fat was stored in a deer paunch. Larger bones were broken up and the marrow was melted and stored in deer or elk bladders. (Teit 1900:234)

The killing of a black or grizzly bear required a certain amount of special ceremonial attention on the part of the Lower Thompson hunter. He sang or talked to his kill, sometimes marched around the animal ceremonially, and wept for it. Certain parts of the body had to be removed at the kill site. The head was eaten with the rest of the meat and the skull was "set up," although how and where are not revealed by Ray's (1942:129) record.

There were among the Lower Thompson a number of meat tabus that applied to all or to special subsets within the social group. For example, no one could eat deer and salmon together. Nor could anyone eat coyotes, wolves, mink, crows, eagles, meadowlarks, reptiles, caterpillars, slugs, grasshoppers, yellowjacket larvae, frogs, and unlaid eggs of the magpie, crow, and certain other birds. Children were forbidden to eat the land otter. Female children were not permitted to eat blood, even if cooked, and the head of deer and mountain goats. Women were not allowed to eat the heart and kidneys of the game. (Ray 1942:130-131)

Plant Collecting

Roots, berries, seeds, shoots, stalks, and other vegetable foods were important in the diet of the Lower Thompson. The data assembled below are drawn primarily from Teit (1900) and Ray (1942) and are cultural in their focus. Additional Thompson food-use information together with a partly now outmoded botanical identification of the taxa in question can be found in Teit's (1930b:237-239) ethnographic study of the Okanagan group. A far more extended and botanically refined inventory of Thompson subsistence taxa and their edible components is assembled in the final section of this present chapter, that considering specifically the Lower Thompson utilization of the mountainous segment of their tribal territory, including the upper Skagit portion of the Park.

Roots

Roots comprised a significant part of the Thompson food supply. They were gathered in early summer and in fall, some in the dry valleys but most only in the high mountains. According to Teit, the principal roots obtained were "Indian potatoes" (spring beauty corms), tiger lily bulbs, wild onions, and the roots of the yellow avalanche lily, chocolate lily, wild sunflower, and cattail. Gathered also were a number of other local roots that are not identified in Teit's monograph of 1900 either by common English terms or taxonomically but only by their native Thompson names. According to Ray, the main food roots of the Lower Thompson were camas and bracken roots. The lack of correspondence between these two short lists of Teit and Ray may result from the fact that the former is speaking of the Thompson as a whole--or probably more especially of the Upper Division--and the latter of only the downriver segment of the tribe. More than 30 additional Thompson food roots

are listed by Turner (1978; see below), but none appear to have been individually of great importance. Bitterroot were secured by the Lower people in their barter with the Upper Thompson. (Ray 1942:131; Teit 1900:231-232, 236)

Roots were uncovered by women with a digger consisting of a curving hardwood stick, sometimes charred at the point, fitted with a perforated cross handle of wood or deer antler. As they were loosened from the soil, they were tossed into a small back-basket, which, when full, was emptied into a large basket close-by. Nests of squirrels and mice were also robbed of their roots and seeds. (Ray 1942:145; Teit 1900:231)

The occasional fish stocking of the Thompson has already been commented upon. In a second way in old traditional times the tribe undertook to increase its native food resources: sometimes they set fire to the hillside woods to obtain a greater abundance of roots (Teit 1900:230).

The Thompson methods of pit-cooking roots are described ethnographically. Certain roots were roasted in the earth ovens: the varieties prepared by this method are not specified by Teit, but the roots of the wild sunflower and large, lily-like roots are mentioned in passing. The pit was circular, 2.5 feet deep, and of sufficient diameter to contain the roots to be prepared. Four or five large flat stones were placed on the pit floor, and on these was piled dry fir-wood with "a quantity of small stones" on top. This heap was then lighted and allowed to burn until nothing but embers remained and the small stones had falled to the pit floor. Unburned wood was removed, leaving the ashes and heated stones. These latter were covered with a thin layer of damp earth and this earth, in turn, was overlaid with branches of bushes 6 inches or more in depth. Then followed in succession a layer of broken fir branches, one of dry pine needles, and another of fir branches, nearly filling the pit. On top of this heap the roots were placed. Then came more layers: fir branches, pine needles, and again fir branches. Finally the pile was covered with earth and a large fire was kindled on top to burn for 12 to 24 hours. Wild sunflower roots, difficult to cook, remained in the oven for two days. One of the great advantage of this root-cooking method was that large quantities of roots could be prepared at one time. (Teit 1900:236-237)

In regard to the above, it is worth noting that the roots were dry and that the bush-branches that formed the stratum above the thin damp-earth level are not described as having been fresh and moist, though they may have been. Further, as the following makes evident, no water was introduced into the pile. This cooking process was a dry roasting rather than steam-roasting combination, with presumed implications for the methods of preparing the roots further once they were removed from the oven and for the nutritional properties of the final foods.

The steam-roasting of roots, however, was also a Thompson practice: many roots and the black tree lichen were pit-steamed. Before the branches were placed in the pit, a stick was pushed vertically into the pit bottom to reach above the top of the final pile. The pile itself was constructed as in the preceding description. When the heap was completed, the stick was pulled out, water was poured down the resulting hole, and steam was formed as it struck the hot stones. "When sufficiently steamed, the usual fire was

kindled on top." (Teit 1900:237) This method is of interest in its own right because it apparently involved the sequence of two cooking procedures, not a single steam-roasting combination from beginning to end as common elsewhere in the Plateau.

Ray's (1942:137-138) description of this cooking process as practiced by the Lower Thompson is in essential agreement with the above. Still, its minor differences as well as its points of coincidence are not without interest, especially in an archaeological context. According to Ray's informant, the pit was 18 inches deep; the fire was burned with the rocks; the basal layer over the heated stones was of serviceberry leaves or spruce or pine needles or grass; this stratum was covered with earth; the food came next; this was spread with rye grass or occasionally spruce bark or cottonwood leaves; finally came the earth covering and the fire on top of the pile. When camas and lichen were being cooked, water was poured into the pile.

Roots were sometimes flavored by pit-cooking them with other plants: wild onions with leaves and flowers of the hummingbird plant; wild sunflower roots with penstemon flowers; and other roots with flowers and stems of wild strawberries. (Ray 1942:138; Teit 1900:237)

Men were not permitted to participate in the process of pit-cooking roots (Hill-Tout 1900:513), a practice also observed elsewhere among Plateau groups.

Roots, apparently sometimes raw and certainly on other occasions after having been cooked, were threaded on grass or bark string and hung up to dry (Teit 1900:235, 236-237)

Berries

Berries and other fruit were important Lower Thompson foods. Native forms that were eaten include the serviceberry (six different varieties were recognized by the tribe), whortleberry, gooseberry, swamp gooseberry, soapberry, Oregon grape, chokecherry (two varieties), bird cherry, salmon berry, raspberry, black raspberry, strawberry, currant, bearberry, elderberry, high-bush cranberry, hawthorn berry (two varieties), salal-berry, rose hips, and the berries of the dogwood and mountain ash. Other berries that have not been identified botanically were also collected as food by the Lower Thompson. (Ray 1942:133-134; Teit 1900:231, 232-233) Several other berries, all comparatively unimportant as foods, are mentioned by Turner (1978; see below) as traditional Thompson fruit foods.

Serviceberries, huckleberries, and other berries were spread on mats and sun dried. Or, fresh, they were baked into cakes and placed in cedar-root or birch bark baskets and stone-boiled. When the berries had cooled, the cooking stones were removed and the berries were mashed with a stick or kneeded with the hands and then spread on a layer of pine needles, leaves, or dry grass on a pole frame to dry in the sun and wind. The juice in the basket was poured over the drying berries, which were formed into cakes. Some of the extra juice was drunk. (Ray 1942:139; Teit 1900:235-236)

A "first-fruits" ceremony was celebrated in every population grouping before berries could be gathered (Teit 1930b:290-291).

Minor Plant Foods and Masticatories

Stalks of the cow parsnip ("wild rhubarb"), peeled stems of balsamroot ("wild sunflower"), and sprouts of fireweed and bracken and of various plants of the raspberry, blackcap, and thimbleberry group contributed to the Thompson diet. Other shoots and stems that responded in some measure to food requirements are recorded by the ethnobotanist Turner (1978, see use of the Park section below), who also adds information regarding other food substances in the following paragraphs.

Seeds were eaten by the Thompson to some extent. An itemized listing of these plant parts collected and used as food is not provided in the ethnographic accounts. It is stated, however, that chokecherry pits were consumed for their subsistence content, an interesting bit of information since, according to Turner (1978:194), these stones contain toxic cyanide. To a minor degree pine seeds were eaten, as were seeds of the balsamroot, these latter mixed with deer grease and stone-boiled. Balsamroot seeds appear to be reported specifically as a Lower Thompson food. Hazelnuts were certainly a Lower Division food, although these folk secured their supply through barter from the Halkomelem downriver and from their Upper Thompson congeners who collected them in large quantities (Turner 1978:126).

The cambium layer of the black and yellow pine, spruce, balsam-fir, Douglas spruce, and cottonwood was "sought after in spring." To secure this sweet substance from between the bark and wood, the bark was separated from the tree with a piece of horn or wood and this edible layer was scraped off with a sharpened bone or wooden implement. It is unclear whether the bark inner surface or the tree was scraped. In any event, the material was collected in a basket and generally eaten fresh. Still, that obtained from the yellow pine was not infrequently dried and stored for later consumption, and this may have been the case sometimes for cambium derived from other tree taxa.

A sugary crystalline substance that accumulated on some Douglas-fir needles and branches in drier parts of the country was also enjoyed by the Thompson whenever it could be found (Turner 1978:64; cf. Teit 1930b:239, fn. 5 for the Okanagan).

Mushrooms of several kinds were gathered, peeled, and eaten either raw or after having been slightly roasted. The black tree lichen was much eaten by the Lower Thompson.

Teas were brewed from various plant branches, twigs, needles, seeds, berries, bark, leaves, stems, and even flowers. Specific information on these drinks is provided in the Turner food plant inventory below.

While not food substances at least from the Thompson perspective, it is of interest in fully comprehending the Thompson utilization of the resources of their natural environment that western larch (tamarack) gum and the latex

of hawkweeds were chewed for enjoyment. (Ray 1942:131-132, 139; Teit 1900:233, 237)

Food Preparation

In the preceding sections the preparation of certain foods has been described. Meat, berries, and roots were often mixed, however, in various ways and combinations. The preparation of these "combination foods" and more general information regarding the making of edibles suitable for consumption are dealt with here.

Several important methods of cooking food were in general use. In addition to pit-cooking of roots of various kinds and lichen in the earth-oven as already described, some foods were stone-boiled in coiled baskets, stirred with carefully smoothed maple sticks or occasionally with sticks cut into paddle shape. Sometimes among the Lower Thompson dugout wooden containers--even canoes--were used in place of the boiling baskets. The hot stones were handled with wooden tongs, two flat sticks held one in each hand. Two boiling containers--certainly baskets but presumably other vessels likewise--were customarily used, "one containing water for washing off any dirt that might adhere to the heated stones, and the other for holding the food." Stone-boiling was also accomplished among the Lower Thompson by placing the meat and water in a stomach case hung over a fire; presumably this was largely an expedient of hunters and traveling parties, though Ray does not so state. To prevent salmon from falling to pieces in the boiling process, the fish was tied up in a birch bark wrapping. Spoons, ladles, and other utensils used in meal serving and eating are described below.

Meat was twisted around inclined spits and roasted in front of the fire. Various foods were roasted under ashes or in the underground ovens. Some of these methods have already been referred to.

Meat and berry mixtures were popular, with roots sometimes playing their role in the combinations. For example, dried venison and dried berries were pounded together with a stone pestle, mixed with hot deer grease, fashioned into cakes, and put away in sacks or wrapped in skin or bark. Pulverized deer or elk meat was cooked with bear oil and berries. Deer blood, a favorite food, was mixed with roots, berries (e.g., kinnikinnick), and deer fat and boiled. Soups were made with broken bones and kinnikinnick berries. Salmon roe and bearberries together were boiled in water in which salmon or trout had been prepared. Salmon eggs were likewise cooked with kinnikinnick berries or serviceberries. Salmon, soaked in water until half-decayed, were cooked with berries and roots. Floury roots (generally bitterroot) and serviceberries were boiled together, sometimes with black tree lichen, and the resulting soft, thick mixture was eaten with a little deer grease. (Hill-Tout 1900:512; Ray 1942:135, 136-138, 139, 141-142, 144; Teit 1900:203, 236)

Food oil was obtained by the Lower Thompson by boiling salmon bones and sometimes bear bones. Of archaeological significance is the fact already referred that this oil-boiling process was at times carried out in a pit in the ground. (Ray 1942:139)

Water was carried by the Lower Thompson in tightly coiled baskets woven of willow materials and in birch bark containers. As a temporary expedient, it was carried in a deer or mountain-goat stomach case. In preparing food, stone mortars or more commonly flat grinding slabs were used by the Lower Thompson. Spool-shaped stone pestles and wooden pounding mauls were important tools in food processing and wooden pestles of the potato-masher variety were employed in crushing berries. Berries were also mashed in the hands. (Ray 1942:140, 143)

The liquid in which meat or fish had been boiled was drunk with the meal; water itself rarely accompanied meals. Drinks of the tea sort were also created from a number of plant parts, including dried stalks and leaves of wild celery, of the rose bush, of the bearberry, and, at least in the postcontact period, of "Labrador tea," a plant of the heather family also called "Hudson's Bay tea," "swamp tea," and by a number of other local terms. Fir twigs were also dried by the Thompson and "used for preparing drinks." Serviceberry bark was brewed by the Lower people to make a tea-like drink. (Ray 1942:132; Teit 1900:233; Turner 1978:147)

In Lower Thompson country foods were eaten off the ground, covered in summer with grass and at other seasons with bark or cattail or tule mats spread on the dwelling floor. People at the meal squatted beside the ground cover. Liquids were served in the baskets in which the food had been cooked and were either eaten directly from these baskets or poured into small bark cups. Among the Lower Thompson, fish and roots were served in wooden trays or in basketry or occasionally birch or cedar bark dishes. Long-handled spoons, many large, were made of alder, maple, cottonwood, or birch wood and also of bighorn sheep horn. Short-handled spoons were fashioned of a deer skull-cap. Temporary spoons were created of a piece of birch bark. Ladles were fashioned of horn or wood. Napkins were of cedar bark. (Hill-Tout 1900:512; Ray 1942:140-142, 176; Teit 1900:199, 202)

When winter provisions were exhausted, a person in need was compelled to go begging in a ritualized manner. Wearing a dogskin blanket, rolled dogskins around his legs, and a birch bark mask painted black, to which horsehair whiskers and hair had been glued, he went to an underground dwelling known to have a food supply with a basket on his back. Inside, he danced, grunting, and received food gifts in his basket. (Teit 1900:299)

Technology

In this section are marshalled three sets of data, all concerned with material culture of the Thompson. The first considers the generation, the tending, and the uses of fire as a medium of technology in its broadest sense. The second brings together information on the various natural materials employed in technological processes, on the processes themselves, and on the cultural objects produced through the manipulation of these materials by these processes. The third describes the end products of an important segment of traditional Thompson technology, those artifacts that mediated between the individual and his natural environment and at the same time provided one of the few media in Thompson life for the visual expression of esthetic interests: clothing and ornamentation.

Fire Generation and Uses

Fire was kindled by the Thompson with a fire drill. One long dried stick of black-pine root or various woods was rotated smartly between the palms in a notch in a second dry stick. This latter piece was also side-notched from the top pit, so the incadescent wood fragments could fall down on the tinder of dry grass, shredded sagebrush bark, or cedar bark. Once the tinder was smoking, it was carefully blown to a blaze. (Teit 1900:203, 205)

With a "slow-match" rope of cedar bark, fire was carried from place to place in a basket or wrapped in green bark. Sometimes it remained lighted in the bundle for as long as two days. (Ray 1942:143-144; Teit 1900:205)

Fire served a number of functions essential to, or at a minimum of importance to, the traditional life patterns of the Thompson. Beyond its critical contributions in cooking foods for immediate consumption and smoking/drying them for future eating and in warming dwellings, fire was put to use, for example, in:

- Felling trees for various purposes.
- Shaping canoes and large "kitchen" utensils like dishes and serving trays.
- Group-hunting game by surround and driving techniques.
- Burning wild root grounds to make future crops more abundant.
- Smoking skins to be fabricated into clothing or to serve other functions.
- Charring the distal ends of the stick tools used by women in digging roots.
- Lighting dwellings during the dark hours.
- Warning friendly groups, through signal fires on heights, of the presence in the area of hostile raiding parties.
- Burning enemy dwellings in raids against enemy groups.

Traditional Plateau ethnographies devote little attention to the importance and uses of fire; and where some data on the subject are recorded, they are ordinarily scattered through much of the text. Accordingly, many uses of fire, including obvious and significant ones, are not noted in the literature. To illustrate: surely fire was generally called upon to dry wet clothing, but Teit, I believe, fails to mention the matter. A full and careful survey of such fire data for a single group where the ethnographic information is relatively full would, in my estimation, be a worthwhile exercise.

Technological Processes and Artifact Material Types

Here the material culture objects of the Thompson--tools, implements, utensils, etc.--are discussed from the perspective of the materials from which they were fabricated, with attention wherever data exist to the processes by which they were fashioned and to the uses to which they were put. Thus there are individual sections focused upon objects of stone, of wood, of plant materials, of materials of animal origin, and so on. This approach is most successful from a data-manipulating viewpoint in considering object types that were fashioned of only one or two kinds of material and served their purposes in several rather different functional contexts. Wedges, for instance, are a case in point: they were fashioned either of wood or antler and served important wood-working functions in constructing dwellings, canoes, and a variety of other objects. To present descriptive wedge data in each of these activity domains would result in unacceptable redundancy. This approach to the data is least appropriate where objects were employed wholly or largely in a single specific cultural context: Thompson bows and arrows, for example, are merely noted in this section, being described in association with hunting practices, the arena of their principal use.

The inventory is imperfect in several ways. The above two schemes of reporting result in a scattering of technological data through the report, a deficiency only partly compensated for by a bare-bones listing of these dispersed descriptions in this section. Essential fabrication and use data for objects are often not to be found in the ethnographic literature. In the interests of space control, especially rich ethnographic information--like that on clothing--is necessarily summarized. Moreover, in the time available, it has been impossible to collect here all relevant technological materials scattered through Thompson ethnographic reports and even all to be found in this present study. As a consequence, the artifact catalog that follows must be considered very preliminary. It would appear, however, that, especially as a resource aid to archaeological research, a full artifact inventory of this kind might be worthwhile. Except as otherwise indicated, the data in this section are drawn from the detailed ethnographic study by Teit (1900:182-191), where illustrations of many objects can be found.

Implements and utensils of stone, bone, and wood were manufactured by men; those of skins and flexible plant materials and animal hair were made by women.

Stone Artifacts

Only two sources of stone used by the Thompson in the making of artifacts have been uncovered in the ethnographic literature. One was near the headwaters of the Skagit River. The other consisted of large "points" made and left by an earlier, unknown people. These were found in large numbers by the Thompson and were reworked by them into the shapes they desired. (Teit 1900:241)

Stone was battered into shape, flaked with an antler tool, and cut with "gritstone" and beaver teeth. Even "jade" and "serpentine" are reported to have been cut with "gritstone." Stone grinding and polishing were uncommon,

although "steatite" pipes were polished with Equisetum stems--horsetail or scouring rush according to Hitchcock and Cronquist (1981:43)--and a mixture of grease and black pine pitch. (Teit 1900:182)

Stone tools included the following forms:

- Scrapers. Used in removing the fatty substance from the inside of hides. Also used in beating skins, stretched on a rectangular pole frame, to soften them; this scraper was fitted to a 3 or 4 foot wooden handle and so may be a different implement from that employed in defleshing skins. (Teit 1900:184)

- Hammers or mauls with enlarged ends of the "potato masher" type (Ray 1942:146; Teit 1900:183) (Figure 3-6). Used in driving antler wedges.

- Cobbles, apparently unshaped. Used as hammers in the initial, very rough shaping of boulders into blanks for arrow points. Hard stones were then used to trim off the edges of the blank in the next stage of the process. A hammerstone--surely not of the "potato masher" variety--was then employed to strike off large flakes. (Teit 1900:182)

- Clubs with flat sides. Used like the hammers in driving wedges. (Teit 1900:183)

- Flat river rocks, used as pile drivers. (Ray 1942:146)

- Flaked axes of "jade" or serpentine (Teit 1900:183). Said to be illustrated by Figure 3-7, but this celt appears to have been given a final grinding and polishing. Used in canoe making.

- Flaked adzes of "jade" and serpentine. Hafted among the Upper Thompson as shown in Figure 3-8 and among the Lower Division to a D-shaped wooden handle of a Vancouver Island type (Figure 3-9). (Ray 1942:146; Teit 1900:183) Used in canoe shaping.

- Chisels socketed into a wooden handle. Used in canoe building. (Ray 1942:147; Teit 1900:183)

- Flaked knives with a concave working edge and a straight, short wooden handle. Used for cutting and carving, and for scraping cedar roots for making coiled baskets.

- Flaked drills of glassy basalt fitted with wooden or antler handles.

- Small bowls of steatite and other stone. Used to hold red ocher and perhaps other paints. Scarce among the Thompson and probably not made by them.

- Large carved stone vessels. Used to catch oil drippings and in grinding tobacco leaves, berries, etc. (Figure 3-10). (Teit 1900:49, 184, 202)

- Large flat stones. Used in grinding dried meat and berries (Teit 1900:202).

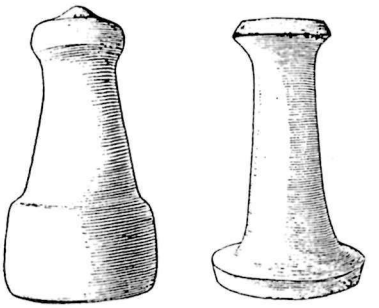


Figure 3-6. Thompson stone hammers (Teit 1900:183 Figures 120, 121).

Figure 3-7. Stone "axe" (Teit 1900:183 Figure 122). Though keyed in the text to flaked "axes" of jade and serpentine, this celt appears to have received a smooth grinding finish.

Figure 3-8. Upper Thompson stone aze hafted to handle (Teit 1900:183 Figure 123).

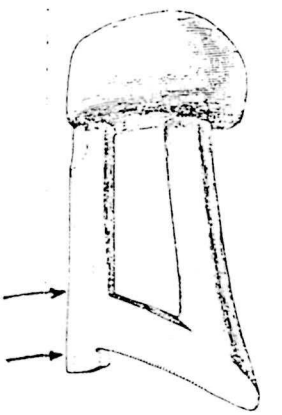


Figure 3-9. "D" type stone adz handle of Lower Thompson (Teit 1900:183 Figure 124). Arrows added to show surface against which blade was hafted.

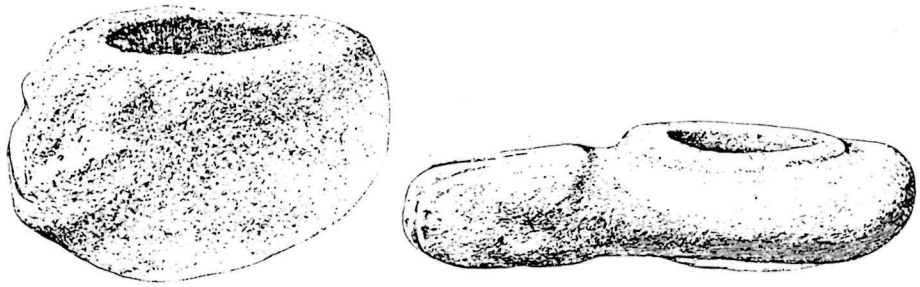


Figure 3-10. Large stone vessels, used in catching oil drippings and in grinding tobacco leaves, berries, and the like: A. representing a frog; B. depression with a snake coiled around it (Teit 1900:202 Figures 153, 154).

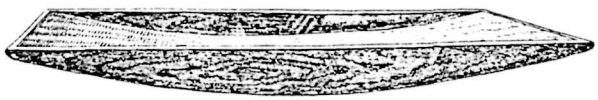


Figure 3-11. Lower Thompson wooden tray, 24.5 inches long (Teit 1900:202-203 Figure 155).

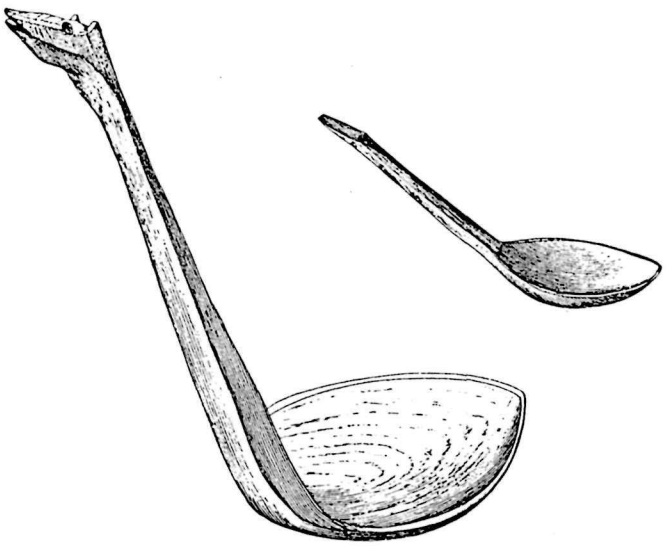


Figure 3-12. Wooden spoons: A. 18 inches long; B. 9 inches in length (Teit (1900:203 Figures 156, 157).

- Arrow points fashioned from workable stone in a series of steps. A boulder was reduced in size with a cobble hammerstone. The resulting blank was trimmed with a hard stone, chipped with a hammerstone, and finally pressure-flaked with an antler tool. (Teit 1900:182)

Artifacts of Wood

Wood was the basic material of a number of traditional tools and utensils. These included:

- Mallets fashioned of a piece of tree trunk with attached branch to serve as handle. Used in driving antler wedges in working wood.
- Wedges of yew wood.
- Needles (Teit) and/or awls (Ray) used in sewing skins.
- Root diggers employed in uncovering the small trailing roots of the cedar needed in making coiled basketry.
- Among the Lower Thompson, square boxes and buckets bent of wood as on the coast, taking the place of the woven baskets of the Upper Division.
- Pestles for mashing berries and driving wedges.
- Cooking stirrers, tongs, serving trays, and spoons (Figures 3-11, 3-12).
- Wooden dishes, hollowed from a block of wood with stone, bone, or beaver-tooth chisels. (Hill-Tout 1900:512)
- Handles for axes, adzes, scrapers, knives, chisels, and drills.
- Troughs to catch drippings from chunks of animal fat, heated by a hot fire.
- Dugout canoes of cedar and pine logs.
- Canoe paddles. (Ray 1942:145, 147; Teit 1900:183-187, 202, 203, 204, 234)

Antler, Horn, and Tooth Artifacts

Antler was likewise a technologically useful material. Pieces of deer and elk antler were made into wedges which, driven with hammerstones or stone clubs, served to fell trees and to do much of the rougher splitting and cutting work in wood (Figure 3-13).

Forked segments of antlers with one tine longer and round-pointed and the other shorter and sharp, were used in the final flaking of arrow points; the long blunt point took off the larger flakes and the shorter, sharper tine removed the smaller flakes (Figure 3-14).

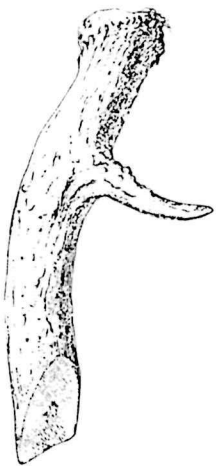


Figure 3-13. Thompson antler wedge (Teit 1900:183 Figure 119).

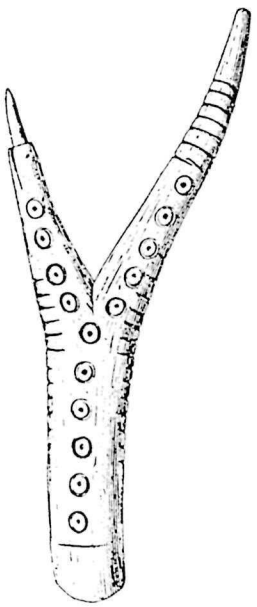


Figure 3-14. Antler arrow flaker ornamented with dot-and-circle pattern (Teit 1900:182 Figure 118).

Figure 3-15. Bone tool used by the Thompson in fleshing skins. Ends were wrapped to serve as handles. (Teit 1900:185 Figure 129)

Antler fragments were used in hafting some stone drills, knives, and chisels: the piece was first softened by being boiled and then the stone tool was driven into its end; when dried, the antler core became so hard and firm that no lashing or gum was required to fix the stone permanently in place.

With "horn" artifacts there are problems. Ray consistently used the term "horn" to cover both antler and horn; Teit sometimes does the same. Consequently, the following artifacts may have been of antler rather than of horn as the reports state. "Horn" chisels were used in dehairing buckskins for clothing and in woodworking. "Horn" needles were put in use in sewing skins. (Hill-Tout 1900:512; Ray 1942:145; Teit 1900:182, 183, 185, 186)

Beaver tooth blades were used as engravers, and beaver tooth chisels served more generally in working wood. Mounted beaver teeth found service as cutting and carving knives, even cutting "jade" and serpentine. (Hill-Tout 1900:512; Ray 1942:147; Teit 1900:182)

Bone Artifacts

Bone was sharpened and polished with "gritstone" and sand or with stems of Equisetum (horsetail or scouring rush) (Teit 1900:184).

Bone chisels were sometimes used to remove the hair from buckskins that were to be fashioned into clothing; they were also employed in wood working. A drawknife-shaped tool made of a deer ulna or more recently a horse rib, somewhat sharpened, was used to scrape the fleshy tissue from the inner surface of skins (Figure 3-15). The ends of this flesher were covered with sagebrush and skin to create padded hand grips. (Teit 1900:185)

Bone needles were used in sewing skins (Teit 1900:186). Whether these were true eyed needles is not made clear. Ray (1942:147) reports for the Lower Thompson sewing awls--clearly without eyes--made of the leg bone of deer and bear.

Pieces of bone, preferably of bear, were used as incising tools. The bone was notched, placed vertically against a bone object, and rotated so as to decorate it with a central dot and circumscribed circle pattern. (Teit 1900:183; see arrow flaker, Figure 3-14)

Bone awls, fashioned by splitting and pointing a deer long-bone, were used to split the small trailing roots of the cedar into strips for making baskets and in the coiling process itself to split the coil below to allow the stitching element to pass through it (see coiled baskets below for this weaving technique) (Teit 1900:187).

Bone hooks of various sizes were made to catch fish from sturgeon down to small fish and eels. Bone gorgets were likewise used in taking small fish. (Ray 1942:110-113; Teit 1900:252)

Spoon fabricated of the skull-cap of a deer and provided with a short handle were used in the cooking-eating context (Figure 3-16) (Teit 1900:203, Figure 158).

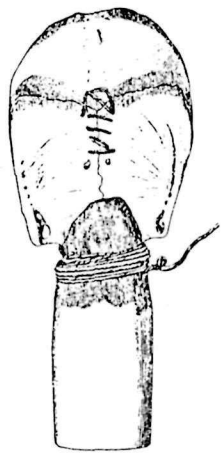


Figure 3-16. Short-handled spoon made of deer skull-cap (Teit 1900:203 Figure 158).

Artifacts of Fibrous Materials

Woven baskets, fabricated exclusively by women and girls, were important utensils among the Lower Thompson. Whether they also made bark baskets is unclear (see later Artifacts of Other Materials section). Without question, however, like the Chilcotin and Lillooet to the west and northwest and "a number of tribes inhabiting the Cascade Mountains, in . . . Washington," the Lower Division fashioned coiled basketry of split cedar roots (Thuja gigantea, which I take to be T. plicata [Hitchcock and Cronquist 1981:59]). Finger-sized roots were dug and buried in the ground to keep fresh until needed. Then they were uncovered, peeled or scraped, and hung up to dry. Later, in the weaving process, the roots were first split into long strips with a bone awl.

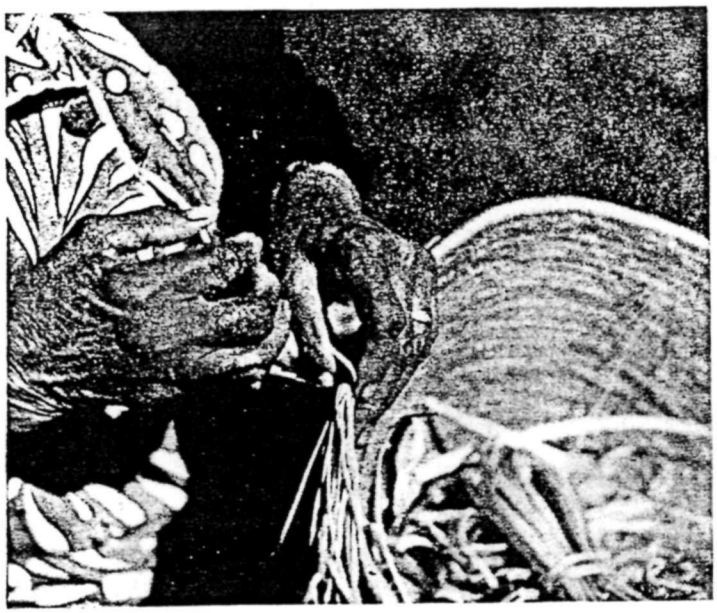
> [Pieces of] the desired width and thickness throughout their entire length are used for stitching purposes, while the others which split irregularly, or are too short or too thin . . . are put together in bundles of about a dozen each, to form the coils. In weaving, these are kept continuous and of uniform thickness by adding fresh pieces as required, and the whole is covered by whip-stitching with the long regular pieces of splint already mentioned. The coils are laid around, one on top of another, and stitched over and under, commencing at the bottom of the basket . . . . With each stitch the awl is made to split part of the splint whipped around the lower coil. The bottom of the basket is made either of coils worked in the ordinary manner, or of thin pieces of wood stitched over. Most of these baskets are water-tight. (Teit 1900:187-188; cf. Hill-Tout 1900:511-512)

This coiling process is illustrated in Figure 3-17 (Underhill 1945:103). According to Hill-Tout (1900:511), the roots, before being woven into the basket, were sometimes dyed red with alder bark or black by being soaked in black slime or mud.

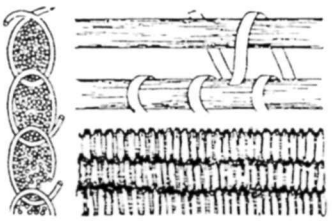
Baskets were also manufactured with "thin pliable strips of cedar-sap or other wood . . . used as coils instead of the bunches of split roots." These were stitched with the same materials and in the same way as the cedar-root baskets, but were less strong and durable and not water-tight.

Baskets were ornamented by a technique known as false embroidery, involving "hooking in strips of grass and bark with the stitches, so that they cover the latter on the outside only" (Figure 2-3). The grass employed was long, very smooth, glossy, and either yellow-white or, if previously beaten on a skin or mat with diatomaceous earth, white in color. The bark was chokecherry, either left in its "natural light reddish-brown color, or . . . dyed [dark brown or even black] by being buried in damp earth." (Teit 1900:188)

Large, open-work baskets of cedar twigs were also fashioned. The rim was made "by forming a coil out of the upper, free ends of the twigs, and whipping it with another long twig" (Figure 3-18). These, unknown among the Upper Thompson, were like such baskets made on the Coast. (Teit 1900:188)



A

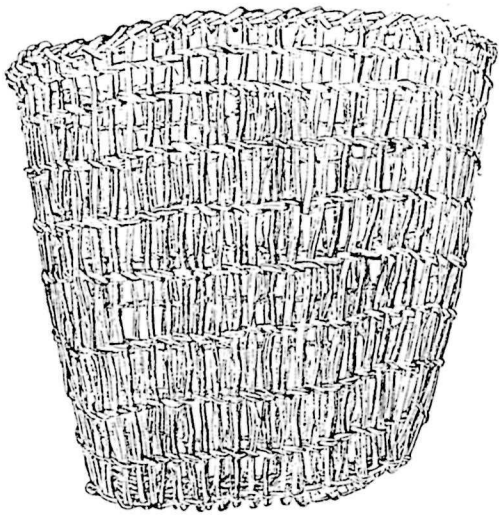


B

Figure 3-17. Technique of weaving a coiled basket (from Underhill 1945:103).

A. The weaver, a Coastal Salishan Duwamish woman, holds the cedar-splint warp in her left hand while the right pushes the awl through the completed warp below to make an opening for the stiff stitching weft.

B. Diagram of the horizontal warp and vertical sewing element. Left: end view of warp bundles and sewing stitch. Right top: horizontal warps with sewing stitch before being pulled tight. Right bottom: appearance of the finished basket.



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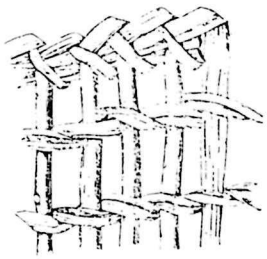


B

Figure 3-18. Thompson open-work basket.

A. Complete basket (Teit 1900:202 Figure 148).

B. Detail showing horizontal wefts, vertical warps and technique of finishing rim. (Teit 1900:189 Figure 131b)

Rigid twined baskets with round bottoms were also manufactured of willow bark by the Lower Thompson. At least some of these were employed as storage containers. (Ray 1942:159-161)

Baskets and bags of many kinds, shapes, and sizes were used by the Thompson for storage, carrying objects, cooking, and so on. Large oblong baskets were for storing food and clothing (Figure 3-19 A); conical ones for carrying things (3-19 D); nut-shaped ones for holding water (3-19 B); round ones for stone-boiling food; and ones with flat backs to hang against posts or walls for holding pipes and tobacco and fishing gear (Figure 3-19 C). Among the Lower Thompson they were woven of cedar roots as already noted; among the Upper Division, they were more commonly of birch and other bark. Large, open-work cedar-twig baskets served the Lower Thompson in carrying fish. (Teit 1900:199-201)

Bags, generally softer than the baskets and varying in size from small to large, were fashioned of matting--also of bark and hides (both stiff and dressed)--by folding the piece of material over and sewing up the sides with buckskin. These were used for storage, carrying provisions, and in other ways. Grass bags were ornamented with dyed grasses. Teit (1900:199-203) provides excellent illustrations of additional basket and bag types.

Tule and bulrush mats of various types were evidently made by the Lower Thompson, as they certainly were by the Upper people. These were sewed or woven together with bark twine made of dogbane (=Indian hemp, Apocynum cannabinum), which was secured by the Lower group in trade. The fiber was shredded and cleaned by being pulled over the sharp edge of a board, and was made into two-ply cordage by being twisted on the thigh. (Ray 1942:163; Teit 1900:188-190)

Large dwelling mats were fashioned of reeds or rushes set in a long parallel row held together by a dogbane bark cord run through them at several places along their length (Figure 3-20 A). A rosewood stick was placed at each end of the mat as a strengthening element, and bark twine bound the reed or rush ends together to secure them in place. (Teit 1900:188)

Lodge floor mats and eating mats of reeds and rushes were twined with warps of two-strand dogbane bark strings and with wefts of grasses of different colors to create ornamental patterns (Figure 3-20 B). Other table mats and even bags were fashioned of tule or bulrushes held side by side by paired twining elements of dogbane twine or twine of "Elaeagnus argentea" (i.e., E. commutata, silverberry or wolf-willow [Hitchcock and Cronquist 1981:302]) (Figure 3-20 C) (Teit 1900:188, 190).

Mats were likewise woven in simple checkerboard fashion of cedar-bark strips, as on the Coast (Ray 1942:160, 163; Teit 1900:190).

Threads intended for weaving were prepared from dogbane or from milkweed (Asclepias speciosa) as described above for the former material. Nettle was used when neither of those materials was at hand. Rectangular bags and round bags, some with constricted necks, were woven of warps and wefts of two-strand twine, often with selvage edges of skin strips. Pouches were woven like the large floor and eating mats mentioned above. Sagebrush socks

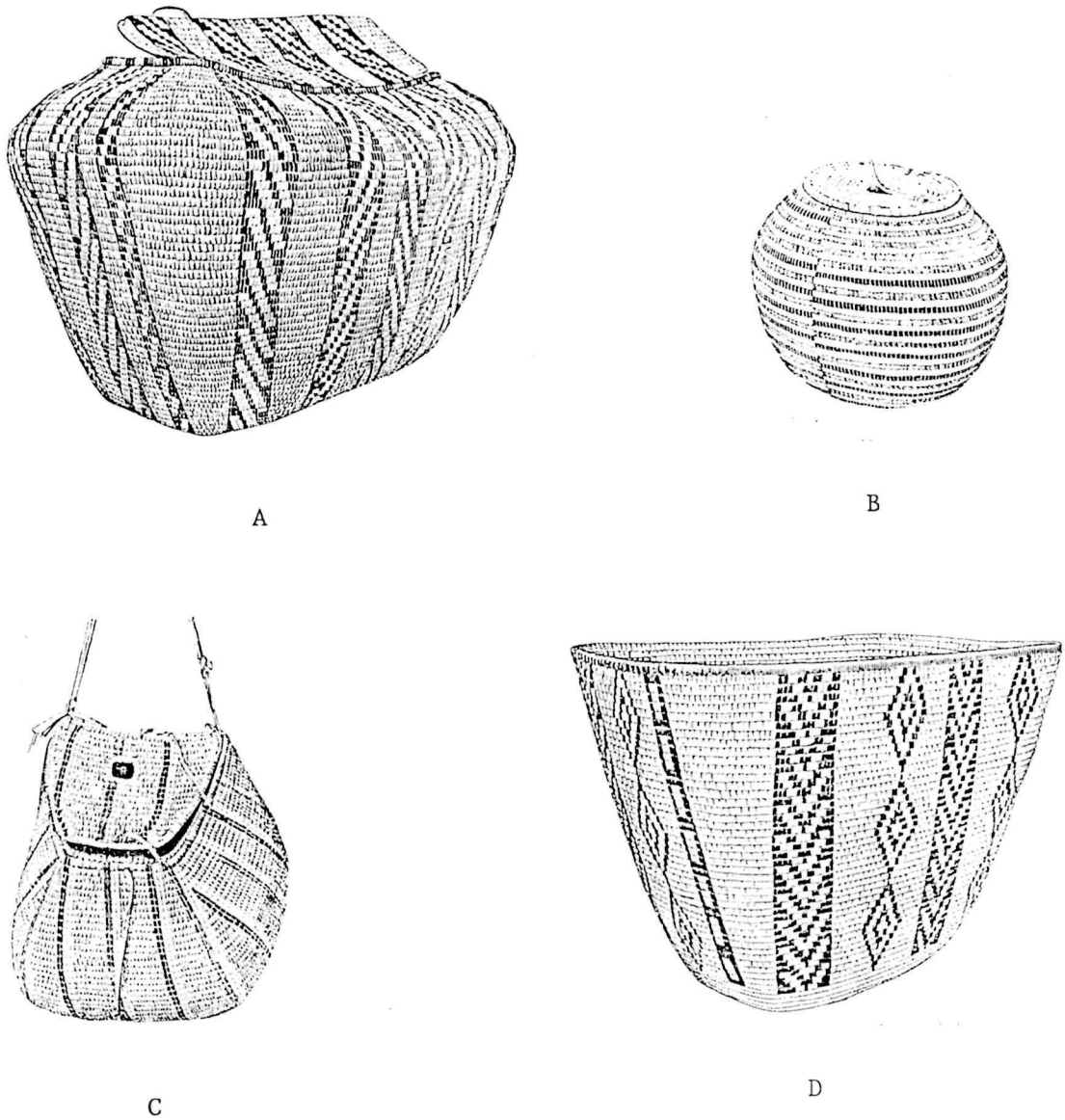


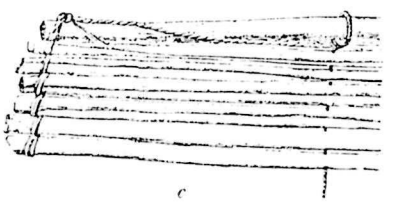
Figure 3-19. Four Thompson basket types.

A. Oblong basket for storing food and clothing (Teit 1900:200 Figure 143).

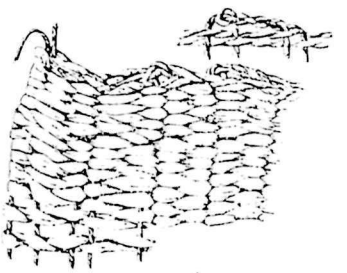
B. Round or nut-shaped basket for holding water (Teit 1900:201 Figure 145).

C. Flat-backed basket, placed against dwelling posts or walls, for holding small objects (Teit 1900:201 Figure 146).

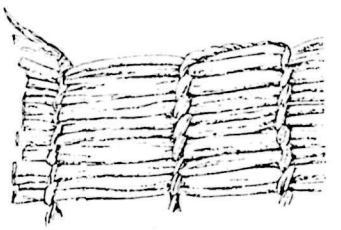
D. Conical carrying basket (Teit 1900:200 Figure 144).



A. Large bulrush mat used as dwelling covering (Teit 1900:189 Figure 131c).



B. Small bulrush and grass mat used as floor covering and "table mat" (Teit 1900:189 Figure 131d).



C. Small "table mat" of bulrushes (Teit 1900: 189 Figure 131e).

Figure 3-20. Corners of three Thompson mats showing different weaving styles.

were woven by the same paired twining-element technique as the table mats and bags mentioned in the matting section above. (Teit 1900:189-190)

Nets were made of dogbane bark thread; the meshes were kept uniform size with a wooden netting stick (Teit 1900:191).

Hide Artifacts

Skins were used by the Thompson for clothing, bedding, bags, and the like. Especially important were those of deer and elk, but the skins of bear, wolf, coyote, lynx, fox, marmot, hare, and marten were likewise put to service.

Methods of processing skins varied with the animal, with the use to which the skin was to be put, with the season and even with the weather at the time (e.g., whether warm or cool, when small fires sometimes had to be kindled to hasten the drying process; whether breezy or calm), and doubtless to some degree with the availability of processing materials, the skill and personal preferences of the processor, and other variables. Owing to these complexities and the fact that skin working methods involved multiple tool use and might reasonably be supposed to have left archaeological traces in some instances, much of Teit's (1900:184-187) data are summarized here.

These data also illustrate in summary fashion the richness of certain components of the Thompson culture and one of the significant contributions of women to the group's successful adaptation to their biophysical environment.

Buckskin intended for clothing had the hair removed with a stone scraper or a bone or "horn" (=antler?) chisel; hides to be used as robes and blankets were allowed to retain their hair. The skins were then dried and the fatty tissue was taken from the inner surface with a stone scraper. This inner surface was next thoroughly rubbed with decomposed deer brains, marrow from larger bones, or oil obtained by boiling salmon heads until the skins were soft, pliable, and oily. When dried, they were stretched on a rectangular four-pole frame and beaten or pounded until soft with a sharpened stick or a stone scraper with a long wooden handle. (Teit 1900:184-185)

Some skins--often those to be made into moccasins--were treated on both sides in a process of special significance to archaeologists. They were "smoked on a framework of bent sticks, the ends of which . . . [were] inserted in the ground near the edge of a hole about a foot and a half in depth, and not much more than a foot in diameter" (Teit 1900:185). The fire was of rotten wood: fir bark mixed with dry ponderosa pine cones was considered best but sagebrush was frequently used; if a dark color was desired, juniper (Juniperus virginiana) was added to the fire. An old blanket was spread over the frame to keep the smoke in and the air out. Smoking was thought to reduce shrinkage when the skin became wet.

When a glossy appearance was favored as in gloves, the skin was left in water until the hair could be pulled off but the cuticle remained. These skins were never smoked. (Teit 1900:186)

The following illustrate further variations in the above processing procedures:

(a) The skin was soaked in water for several days. It was then thrown over a peeled, smooth log inclined against a tree--often with the tree bark notched to secure the upper end--and a scraper of a deer ulna or horse rib, slightly sharpened, was employed to peel away the fatty tissue. The hair and cuticle were removed from the outside in the same manner. When dried, it was smoked and then soaked again in a basket of water. After a day or more, it was rolled lengthwise with dry grass, and wrung dry with one end fastened with a rope around a log and the other to a stick which was turned. Next it was stretched on a frame and pounded until dry and soft as noted above and then smoked once more.

(b) Fawnskins were generally spread over the knee and softened by scraping with a sharp stone or scraper.

(c) Skins were sometimes tanned in a decoction of birch (Betula papyrifera).

(d) The process of rubbing a skin with brains was thought by many women to make subsequent smoking of the material unnecessary. (Teit 1900:185-186)

The Lower Thompson data reported by Ray (1942:124-127) are at sufficient variance with the generic Thompson information summarized above to suggest an outline of these downriver data. Deer skins to be tanned with the hair removed were fleshed, soaked in water, placed over a slanting log and scraped with a deer or elk rib tool, cured with deer brains or fish oil, stretched on a frame with a fire nearby or simply with the hands, and grained with a hafted stone or wooden implement. For waterproofing, they were sometimes smoked. This process involved sewing the skins together into a tent-like shape, and placing them around a conical or hemispherical frame, set over a pit three feet deep. The smoke was generated with a fuel of rotten pine or fir wood. Bear and coyote hides were tanned with the hair left on, and so also sometimes deer and wolf skins. The tanning and otherwise working with hides was largely, but not entirely, women's work among the Lower Thompson.

It will be noted that this description fails to conform to any single treatment method reported for the Thompson as a whole by Teit. It seems to some degree to represent a kind of distillation of the essential steps of several of his processes and the combination of these into a single procedure.

Flat pieces of hide--presumably untanned--were used as surfaces on which to keep paints (Teit 1900:184).

Skins were sewed with needles of wood, bone, and "horn" (antler?) and with awls of different sizes. Long thorns answered for pins. Thread was of willow and other bark, deer sinew, and buckskin. Skins were embroidered with porcupine quills, often dyed different colors, and later (but beginning in pre-White days) with horsehair, also frequently dyed. Beads were widely in use prior to 1858, after which they rapidly fell out of favor. (Teit 1900:186-187)

Blankets and pouches were handwoven of strips of twisted rabbit skin with string warps. Blankets were likewise fashioned of marmot and groundhog skins, these being sewn together not cut into strips and woven into a single piece as with the rabbit skins. (Ray 1942:164; Teit 1900:190)

Artifacts of Other Materials

Various other materials available within the Thompson natural environment were put to technological uses. Two of these deserve particular mention.

Bark--in small pieces or very large strips--served many purposes in traditional Thompson life. Bark baskets were fashioned by the Upper Division in large numbers from birch bark and occasionally poplar or spruce (Figure 3-21) and were more commonly used than woven cedar root baskets. The bark strip was folded to form the container bottom; the sides were made to overlap and were sewed together with split spruce or poplar roots. The rim was strengthened with a hoop of split willow twigs, stitched in place by a lashing over the rim. The exterior surface was often ornamented with incised or red-painted designs. Varying greatly in size, they served as storage and carrying containers, in cooking, and as cups and buckets. Large ones included one type made of poplar or spruce bark, about 3 feet high, 3 feet long, and 2.5 feet wide, with hoops around the middle and rim and often painted with "pictures." These large baskets were kept inside the dwelling and were used for the storage of provisions. (Teit 1900:187, 200-201)

Whether the Lower Thompson fabricated bark baskets, with split-root side stitching and rim hoop as were common among the Upper people, is in some doubt. Teit remarks that they did not; Ray (1942:160-161) reports that they used baskets of birch, spruce, and occasionally cedar bark.

Bark served many other functions. Among these were the large strips that covered dwellings and objects stored on elevated caches, the smaller pieces that covered pit cache entrances and the entrance-smokehole of underground houses. Birch bark was used extensively as canoe-frame covering material by the Upper Thompson and to some slight extent also by the Lower Division. On occasion bark was pressed into service to line graves and then to fashion a conical tent over the grave.

Animal hair (often termed "wool") was used in weaving blankets, material culture items of considerable importance among the Lower Thompson. As to mountain goat hair, there is no question. It was made into flexible cordage by both Lower and Upper Thompson, sometimes first cleaned and whitened by being mixed with baked white diotomaceous earth and beaten with a flat stick. This cordage, in turn, was woven into the blanket. The technique of making the heavy thread, the weaving method, and the loom and spindle employed were essentially identical to those of the Lower Fraser groups. Most blankets were finished with a tassel fringe along one end. Ornamentation was achieved by weaving patterns into the fabric with threads of black-bear hair or goat-hair dyed yellow with lichens or red with alder bark. (Ray 1942:163-164; Teit 1900:184, 188, 191)

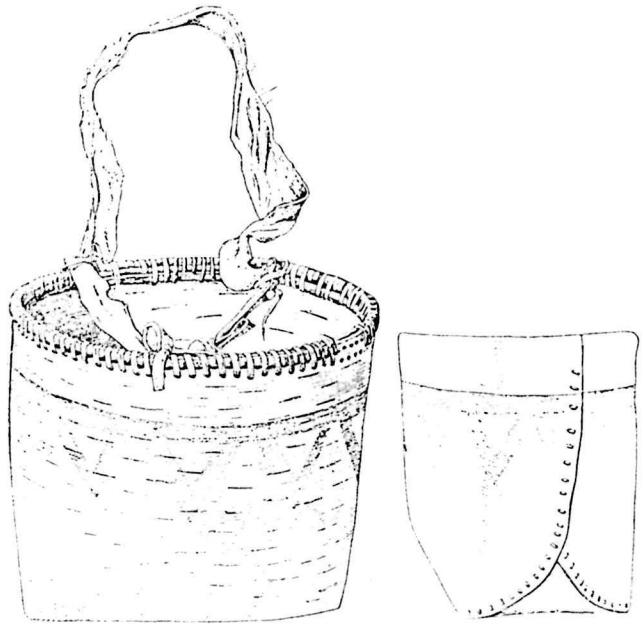


Figure 3-21. Upper Thompson birch bark basket, front view (A) and side view (B) (Teit 1900:201 Figure 147).

Whether dog hair was used in like manner, as it was on the coast, is less clear. Speaking of the Thompson generally and the Upper Division more particularly, Teit (1900:191) writes that the tribe "seems to have used . . . only" wild goat hair in their weaving, no dog hair. On the other hand, Ray's (1942:163) Lower Thompson informant indicated that his Division, whatever the case with the Upper group, put dog hair to the same fabric-making purpose as goat wool. With the available ethnographic data, there seems to be no certain way of resolving these discordant statements. One ethnohistorical fact, however, tends to support Ray's field information: ascending the Fraser Canyon in early July, 1808, Fraser (1960:116) secured "a blanket of Dog's hair" at a Lower Thompson village. It appears that here again we may have a significant cultural difference between the two Thompson divisions.

Pigment Substances

Coloring agents may be classified in various ways. For example, according to the form of the coloring material: i.e., whether a solid (crayon-like mass), a fluid suspension (paint), or chemicals in solution (dye). Or according to the method of application to the object to be colored: e.g., applied to the surface dry as a stick or chunk, or mixed with some sort of carrying fluid and spread thinly over the surface with a finger, stick, brush, or similar device, or as a liquid in which the object is immersed to soak. Or according to the origin of the coloring substance: i.e., whether an inert mineral or earth substance or an organic--animal or plant--substance.

The published ethnographic data are generally insufficiently detailed to allow the information to be classified comfortably according to either the first or second classificatory schemes. Moreover, the first two classifications depend in part upon some previous processing steps, whereas the third focuses upon the coloring substance in its source state, following the materials approach of the technology section above. For these reasons the information below is organized according to this third viewpoint. This possesses the additional merit of meshing well with the central bioenvironmental adaptive interests of this study.

Because a clear distinction seems to be rarely made in the original data between paints and dyes, as defined above, it is not always clear which is actually intended. Consequently in the ethnographic data that follow I use the term given to the coloring material in the source. This is so even in cases like the Lithospermum one below where I believe dye, not paint, must be meant.

Red, yellow, and brown ocher were the sources of red, yellow, and brown paint respectively. The red mineral was found in considerable quantities within the Thompson boundaries. In fact, a Lower Thompson village in the Fraser Canyon bore a name which translates as "place where red ocher is obtained." Cuprous clay yielded blue paint. White earthen materials and burnt deer bones gave a white paint. A village locality, also within the canyon walls, was named by a term that called attention to it as a source of white clay that was burned to a fine white powder; this was used in cleaning mountain goat wool in making blankets and, when mixed with oil or fat, in producing a white paint. Powdered charcoal furnished black paint. All of

these paints were kept in stone vessels or on hides and, when used, were mixed with melted deer grease, heated, and applied with a stick or finger. Mud was used to impart a brown or black color to grass to be employed in decorating baskets: the grass was simply buried in it. (Hill-Tout 1900:501, 502; Teit 1900:184)

Plant materials likewise furnished coloring substances. The root of the stoneseed or gromwell (Lithospermum angustifolium[?] [Hitchcock and Cronquist 1981:394]) yielded a red material used as a facial paint and especially in coloring skins; the fresh root was dipped into deer grease and rubbed on the object to be painted. Powdered hemlock fungus also furnished a red paint. The flowers of the larkspur (Delphinium menziesii [Hitchcock and Cronquist 1981:132]) produced blue coloring material that served both as a paint and as a dye. Yellow lichen juice provided a yellow dye. Rotten wood was boiled to give green and blue dyes, and alder bark likewise to give a light red dye. (Teit 1900:184)

Many tools and utensils made of stone, bone, wood, bark, or skin were painted. Heated prickly pear cactus (Opuntia) was rubbed on paints applied to skins to fix them. (Teit 1900:184)

Clothing

The clothing of the Upper and Lower Thompson differed a good deal as a consequence of environmental differences and so different patterns of resource availability and also as a result of differing opportunities for trade with other tribes. Although there were better and poorer hunters and sectors of their division territory that were better or poorer in deer, the Upper Thompson generally dressed in garments fabricated from dressed deer hides. The Fraser River country of the Lower Thompson, on the other hand, had few deer. (Teit 1900:206)

It is of interest that these differences in Thompson dress were perceived by the Okanagan, who told Teit that

> . . . the Thompson were not as uniform in their dress [as they themselves were], there being much greater variety in quality and style. Also some individuals were careless or peculiar in their dress, and some others were too poor to dress correctly. Possibly, however, [Teit speculates,] the chief reason may have been that the Thompson were more under different influences than the Okanagon, styles from west, north, east, and south all reaching them to some extent. (Teit 1930b:230)

Teit is surely correct in recognizing a higher and more complex level of extratribal influences on the Thompson. Yet intratribal differences in the availability of critical natural resources were obviously important in explaining Thompson dress variability, and even sociocultural attitudes and practices plainly played their role.

While the concerns of this survey lie only marginally with the Upper Thompson, it is useful to summarize here their typical clothing partly as an

illustration of the hazards of extrapolating from their cultural life to that of the Lower Thompson.

Men's clothing among the Upper Thompson was as follows, garments well described and illustrated by Teit (1900; see also Hill-Tout 1900:508):

- Sleeved shirts of two deer skins or a bison skin, reaching to the knees, made and ornamented in several styles. (Teit 1900:206)
- Skin jackets sometimes worn in place of the shirts. (Teit 1900:207)
- Fringed leggings that reached above the thighs, or short knee-length ones. (Teit 1900:208)
- Buckskin breechclouts fastened to a belt or passing over the belt front and back. Some old men wore only a front apron instead. (Teit 1900:208)
- Moccasins with soles of unsmoked buckskin and a doeskin leg piece. Until about 1840, the common style was made of a single piece of skin up to the ankle; its seam was on the outside of the foot close to the ground. About 1800 a new type was introduced from elsewhere. This had a seam around the top of the outside of the foot and the upper extended down nearly to the toes. Still a third style was in vogue by 1900. For walking on slippery ground, two skin strips were sewed crosswise on the sole. Moccasins were occasionally ornamented with colored porcupine quills, goose feathers, and various other materials. In winter, grass or sagebrush bark was placed inside the footgear for warmth. Poor people wore long boots of sagebrush bark. (Teit 1900:209-212)
- Deerskin mittens, hair inside. (Teit 1900:212)
- Skin headbands. (Teit 1900:212)
- Skin caps, sometimes with the animal tail hanging behind. (Teit 1900:213)

Special clothing and ornaments were worn by particular groups within the Thompson society. Hunters' headbands were elaborate. One described by Teit (1900:213) was made of coyote skin daubed with red ocher with a front cross-piece of horsehair dyed yellow and red, a red-ochered buckskin fringe, and eagle down. From its top rose hawk and eagle feathers. Sometimes long buckskin streamers were tied to the headband or hair in back, and to these were affixed dyed feathers and yellow horsehair. Warriors' headbands were adorned with red ocher designs, eagle feathers, and down, and were likewise fitted with the back streamers. Shamans affected high headbands to which were attached flicker feathers, yellow-dyed horsehair, eagle down, and sometimes ermine and other skins. (Teit 1900:213-214)

The clothing of Upper Thompson women was quite like that of the men:

- Sleeved buckskin or doeskin dresses (longer than the male shirts), highly ornamented with fringes, dentalia, beads, dyed porcupine quills, goose feathers, and horsehair. The cut differed widely: some dresses

were very wide while others narrowed considerably below the waist. (Teit 1900:214-216)

- A long, wide buckskin or sagebrush bark belt, rather like a bodice (Teit 1900:216).
- Long or short leggings, sometimes ornamented along the sides.
- Moccasins.
- Broad deerskin headbands or caps (Teit 1900:217).

Many poorer Upper Thompson people wore only the clout, moccasins, and a deer or dog skin blanket over the body (Teit 1900:217).

Girls wore a breech-cloth, and laced their robes tightly in front with buckskin straps. Their hair was plaited in four braids. They added necklaces and a buckskin cap or broad headband, this last adorned with embroidery or dentalia or designs painted in red. (Teit 1900:217-218)

In winter wealthy people wore robes of skins of beaver, coyote, lynx, wolf, or bear, hair side out. Poorer persons were forced to wear robes of sagebrush and willow bark and of deer, dog, marmot, and bison skins with the hair left on. Robes of woven skins of marmot, hare, and other animals were worn by both rich and poor. (Teit 1900:218)

Marmot robes were made of 10 or 12 skins sewed together, with a buckskin fringe at the seams. Bison robes were dressed with both sides soft and white, painted with designs, or with one side white and the other with the hair left on. Beaver robes required four to eight skins sewed together. Robes were also made of dressed deer skin. (Teit 1900:219)

Ponchos were fabricated of coyote, fox, and wolf skins, decorated with buckskin fringe and feathers, and generally lined with buckskin. Some men wore a very short poncho made of their guardian spirit bird or animal, the head in front. Ponchos were also fashioned of the black tree lichen, but the process is unfortunately not described by Teit. Rain-weather ponchos were also made of sagebrush, willow, and cedar bark (Figure 3-22). (Teit 1900:219-220)

The Lower Thompson data are not nearly as full. Presumably their clothing was generally like that of the Upper Division people unless otherwise noted by Teit or by Ray in the data that follow. Wealthier persons wore the same kind of breechcloth as in the Upper group, but many old men wore skin aprons instead. Occasionally men, Ray reports, wore willow bark clouts, and women sometimes a skirt of shredded cedar bark. Long, wide women's belts were also fashioned of cedar bark. Although some people preferred elkskin or deerskin caps, headbands were far more common, those of men consisting of bird or small animal skins with the head facing forward and those of women made of buckskin with dentalia ornamentation. Feather headdresses were not widely worn. In summer and in rainy weather, people went barefoot. In winter moccasins like those of the Upper Division were worn, padded with softened bear or mountain goat skin with the hair on. Poor

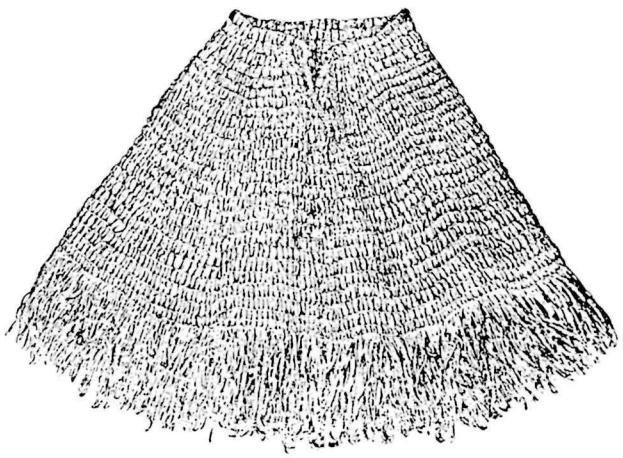


Figure 3-22. Rainy weather poncho of sagebrush bark (Teit 1900: 219-220 Figure 194).

people made do with footgear of dog-salmon skins, the feet first wrapped with shredded bark, grass, or deer hair. (Ray 1942:164-168; Teit 1900:220)

No buckskin shirts were worn, only robes. Most of these were woven of mountain goat wool often with an edge fringe and with black, yellow, and red patterns woven into the cloth. Ray writes also of Lower Thompson "blankets" of dog wool, with "[white] earth or fibers beaten in" and woven on a roller loom; presumably these doubled as robes. Robes fashioned of the skins of deer, mountain goat, ground hog, and marmot tanned with the hair on were also common. Woven rabbit-skin blankets were rarely seen and painted robes of dressed deerskin were unknown. Ponchos were woven of mountain goat wool or cut out of skins. Poor people used robes, ponchos, and aprons of cedar bark, sometimes dyed red. (Ray 1942:163-168; Teit 1900:220)

Two early ethnohistorical footnotes to the preceding ethnographic data are worth reporting. On his summer journey of exploration in 1808, Simon Fraser (1960:94, 116) passed through the entire length of the Fraser Canyon and hence by the principal salmon fisheries of the Lower Thompson. Only twice is there mention of clothing in his journals. He writes of the Nailgemugh--Lower Thompson--as having "robes made of beaver &c" and of having traded from them "a blanket of Dog's hair." In a way the observations of Simpson (1947:38) in October, 1828, are of special interest, both for their information, though scanty, concerning the Lower Thompson and for what they tell us about Sir George and his perceptions of the Indians. He reports having seen "scores of Naked Wretches" at their rocky salmon sites as his party in their watercraft passed down the Fraser Canyon. "A Leather or Dog hair waist band, was the only article of dress they wore, many dispensed even with that, and the only Fur we saw among them, was one piece of Beaver coating, and a few Siffleur [marmot] or Ground Hog Skins."

Personal Adornment

Both sexes wore ear ornaments of dentalia suspended from skin or bark strips passed through ear lobe and rim perforations. Attached to these shells as tassels were scalps of the red-headed woodpecker. Often as many as four pendants were hung from the helix of each ear. Among the Lower Thompson abelone-shell ear ornaments and bone beads were sometime favored. (Ray 1942:171, 207; Teit 1900:222)

Ornaments through the nasal septum were worn exclusively by women. They were generally dentalia or a piece of bone, although copper and slate pieces were not unknown; while some were crescent-shaped, most of these ornaments were straight. Whatever the material, they extended outward beyond the nostrils. Those with hollow ends were made colorful by having red-headed woodpecker scalps inserted in one or both ends. Nose rings and lip plugs of the coastal labret variety were unknown. (Hill-Tout 1900:507; Ray 1942:171; Teit 1900:222-223)

Necklaces were widely worn by both men and women. Shells, claws, teeth, cactus seeds, seeds of the silver buffalo-berry, small flat circular horn and bone beads, and even berries were all strung on buckskin or bark thongs for this purpose. Some necklaces fell close to the throat; others, occasionally worn in numbers, hung nearly to the waist. Small squares of sheet copper

were hung from necklaces, but whether only after the appearance of the fur traders is not indicated by Teit. Young women strung cactus flowers as necklaces. Men had neck ornaments consisting of a skin thong with eagle feather pendants. Shamans with a grizzly bear guardian spirit and hunters who had killed this animal commonly wore grizzly claw necklaces to advertise their bravery. (Ray 1942:172; Teit 1900:223)

In early days every Thompson, male and female, was tattooed to some extent on some part of the body. Most commonly it was on the front of the arms and back of the wrist, less often on the lower legs, and rather rarely on the back of the hands. On the face it was confined mostly to cheeks and chin. There were significant differences between the sexes in the frequency in which the various body parts were tattooed. Also notable differences between the bands and two divisions: facial tattooing, for example, was more common among the Lower Thompson than in the Upper Division. (Teit 1930c:403-405)

Continuous tattoo lines were created by pulling a thin thread, blackened with powdered charcoal, under the skin with a fine bone needle; dots, by drawing the pattern on the skin with wet charcoal and forcing this substance beneath the surface by pricking it in with a cactus spine, thorn, or porcupine quill. The tattooing process was usually commenced at about puberty, and continued off and on through early manhood or womanhood. It was carried out by an age-mate of the same sex more or less secretly but without attendant ceremonies of any kind. (Teit 1930c:405)

Although done largely as ornament, especially that on the face, tattooing was likewise carried out to demonstrate courage; to assist in acquiring a guardian spirit; with guardian spirit help and sometimes under its explicit instruction, to insure success, health, and long life and to cure illness; and to show fidelity and affection in marriage. Some marks were representational, depicting, for instance, sweathouse stones, mountains seen on guardian spirit quests, dreams, and arrows (to help a girl secure a husband). Slaves were tattooed at times with ownership marks on their hands. (Teit 1930c:405-407)

Tattoo designs varied widely. Many examples are figured by Teit (1930c:408-418). Those added to the face were always straight lines: Lower Division women often had a few such lines radiating from the mouth sideways and others down over the chin, or one or two lines from the nose to the ears. Patterns on arms, wrists, and other body parts were wavy, curved, or zigzag lines, circles, triangles, star-like, and so on. Some patterns were symbolic and so were named (e.g., eagle's tail, rainbow), but most were merely described (e.g., mouth tattoo double line). Interestingly, in his very extensive collection of Thompson myths, Teit found no reference whatever to tattooing. (Teit 1930c:403-416; cf. Hill-Tout 1900:507; cf. Ray 1942:171-172; cf. Teit 1900:228)

Face and body painting was universal among the Thompson, the face more commonly than the body. Most people washed and painted daily, a few young people several times a day. Some Thompson actually changed their designs almost every day.

The colors applied were several shades of red (ocher)--especially a rich brownish red--yellow (ocher), blue, white (clay), black (charcoal), and perhaps rarely green. A micaceous hematite paint yielded a shiny, sparkling appearance. The red earth was found in considerable quantities within the Thompson borders. One of the Lower Division villages, in fact, bore a name which translates as "place where red ocher is obtained." Good red paint was also secured often by Thompson visitors at Vermilion in the upper Similkameen Valley, a location that I have not yet identified but which was evidently in early days in the country of the Athapascan Nicola tribe (Figure 3-1) (Teit 1930b:218). A locality within the Lower Thompson canyon was named by a term that called attention to the area as a source of white clay, material that, when burned to a fine white powder, was used in cleaning mountain goat wool in weaving blankets and was mixed with oil or fat to produce a white paint. Vegetable stains were not favored. Most paint was mixed with water or grease before being applied with the fingers or brushes, or was spread dry on a wet or greased skin. Paint pencils were also used. Sometimes paint was put on and then scraped off in places to create the desired pattern. Most people carried small paint bags attached to the belt, the material being replaced as necessary from a larger supply left home. Paint mortars and mixing dishes were utensils in nearly every dwelling.

Colors carried complex symbolic meanings among the Thompson. For example, red (and brown) signified good, life, heat, day, and so on; black, the opposite. Yellow carried the meaning of earth and things associated with it: grass, trees, stones, water, etc. Blue was the sky color. White (and gray) was the "spirit" color, that of the ghost, dead people, bones, sickness, and the like. Curiously, these color meanings seem to have been limited to the facial and body designs, not much applied to patterns on baskets, clothing, and so on, where it was the decorative effect that counted.

The purpose of face and body painting was essentially the same as in tattooing: much for ornamentation yet much also had strong connections "with religion, dreams, guardian spirits, cure of disease, protection, prayers, speech, good luck, war, or death." Some painting styles were special to shamans, warriors, young women, elderly women, and certain ceremonials. Teit records a list of over one hundred specific design patterns with their individual meanings and cultural associations, and he figures many of these in color: ornamental designs, designs linked to the ghost dance and others to guardian spirit dances, patterns connected with dreams and guardian spirits, designs used in war dances, and painted forms applied by shaman instruction. (Teit 1930c:418-439; also Hill-Tout 1900:501-503, 507; Ray 1942:172; Teit 1900:228)

Body Care and Beauty Standards

As mentioned elsewhere in this report, sweat bathing and the cold plunge that followed were a practice of the Lower Thompson, but, Ray (1942:170) reports, were not regarded as of any great importance in maintaining physical health or in contributing greatly to hunting success and the proper conduct of ceremonials. Other data relating to body care are scattered through this survey. Here are considered a few odds and ends that fail to fit well in other contexts.

As a substitute for soap, the Thompson used water in which birch leaves had been allowed to stand, poplar-wood ashes, urine, and a special variety of white clay found on certain lake shores. Baths were occasionally taken by the Lower Thompson from hot water in birch bark baskets; the body was rubbed with spruce boughs. Rough skin was softened with deer back fat or, among the Lower Thompson, with salmon oil. In the Lower Thompson group, a cosmetic and hair oil was made from marrow extracted from bones that had been boiled and broken. Cosmetics consisting of deer, bear, and mountain goat tallow were also used as a protective coating for both face and body. (Ray 1942:136, 172, 182; Teit 1900:228)

Men removed their beard with horn or wooden tweezers and women narrowed their eyebrows in the same way. Frequently the hair part was painted red. (Ray 1942:169; Teit 1900:227-228)

As Teit (1900:224) observes, "special attention was paid [by the Thompson] to the hair-dress." The many stylistic variations in dress and ornamentation are so extensively described by Teit that only the principal facts and a few illustrations can be noted here. The hair was cut only in mourning. It was greased by the Lower Thompson with salmon oil, by the Upper bands with deer fat mixed with water in which balsam-fir, sweet grass, or other fragrant plant materials had been boiled. This grease was applied after the daily morning bath. Combs were thin, flat pieces of wood split finely at one edge and with the splints interwoven to separate their points slightly. (Ray 1942:170; Teit 1900:224) "A wooden comb of curious construction" was traded by Fraser (1960:116) from the Lower Thompson on July 9, 1808, one of the very few items mentioned in his narrative as having been secured from the tribe.

Hair dressing styles were very numerous. Among men: two side braids tied together near the brow; two side braids and one back braid; front hair with two braids beside the ears; front hair banged with the rest drawn back behind the neck; front hair knotted over the head; and so on. Women almost invariably divided the hair into two braids, the ends usually tied together in back. Buckskin strips embroidered with procupine quills or strips with dentalia or bits of bone, claws, or feathers attached were hung from the hair. Some men wore such strips, with the feathers, that were as much as four feet long. (Teit 1900:225, 227)

Smaller segments of Thompson society had their own particular fashions. Young women knotted their braids into small bundles on each side behind the ears. Both in normal times and when out on a raid, warriors wore their hair in special ways. For example, they knotted it on one side only and decorated this knot with hawk or eagle tail-feathers daubed with red ocher. Other fashions included rendering it stiff with white clay, painting it fiery red, and braiding it into different patterns, some that made it stand up like horns. Children to the age of puberty allowed the hair to hang loose. During their puberty rites, boys wore their hair knotted behind the head; girls put their hair up into two knots behind their ears. (Ray 1942:170; Teit 1900:225-226)

The Thompson had definite opinions as to the features that made for a physically attractive person: e.g., light smooth skin; tall stature; straight, spare body; long arms; legs of medium length; long, abundant hair;

bare face with sharp hair line; and so on for hands and feet, cheek color, eye and nose shape; etc. (Teit 1900:229)

The Settlement

In this section are discussed the various structures that comprised the typical Thompson settlement in winter and in the open season, certain matters relating to the location and character of their residential and task-oriented sites, and the domestic and tame animals that were not an insignificant component of the Thompson settlement.

Structures

The structures of the usual Thompson community consisted of the dwellings in their seasonal manifestations, of several ancillary shelters (menarcheal and menstrual shelters, and sweat lodges), and of various processing and storage structures (drying racks and caches).

Dwellings

A number of more or less permanent dwelling types, in contrast with the insubstantial temporary shelters used, for example, by parties camping to take advantage of seasonal subsistence resources, were in common use among the Thompson in traditional times.

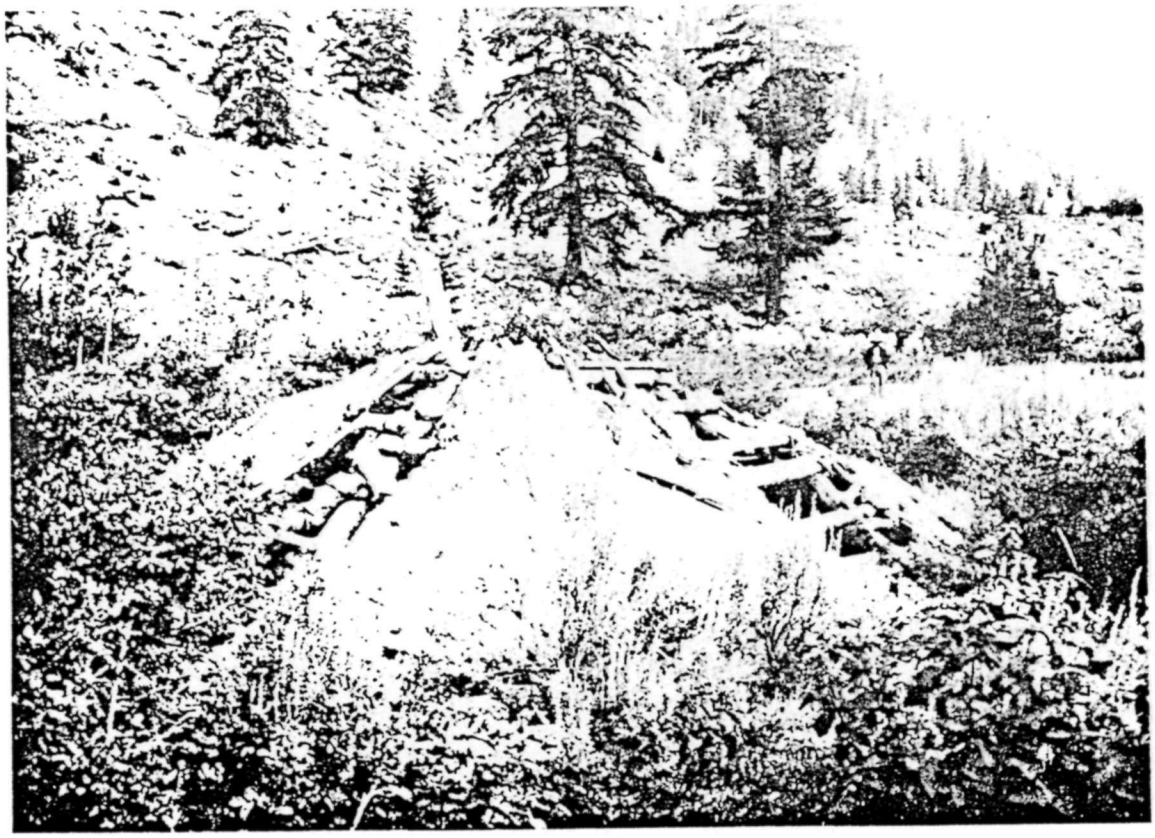
The most important dwelling was the semisubterranean winter house (Figure 3-23). It was

> . . . generally built in the valleys of the principal rivers, within easy distance of water, and . . . inhabited by groups of families related to each other, who, although scattered during the hunting and fishing seasons, dwelt together during the winter. These dwellings rarely numbered more than three or four at one place, and often there was but a single house. The size conformed to the number of people (from fifteen to thirty) to be accommodated. (Teit 1900:192; cf. Hill-Tout 1900:513)

Houses of this kind were located where the soil was loose. All the neighbors, fed by the house owner with the assistance of his relatives, aided in the construction, completing it sometimes in a single day. The outline of the pit was determined by knotting two bark ropes separately from 20 to 40 feet from one end to mark the full diameter of the structure and then laying them crosswise at right angles so their center points rested at the same spot. A man, by eye, described a circle, using the two rope ends and the two knots as his guide. The women dug the pit with their digging sticks, placing the dirt in large baskets from which it was dumped just outside the circle to be later used in covering the roof. (Teit 1900:192; cf. Hill-Tout 1900:512-513)

With all the heavy posts, lighter poles, withes, pine needles or grass, and other materials accumulated at the site, the framing of the structure

A



B

Figure 3-23. Two semisubterranean dwellings in the Nicola Valley, photographed in the 1890s by Harlan I. Smith (Boas 1975: Plates 19 and 20). The dwelling in B is in ruins.

began. Four heavy posts (Figure 3-24) of green wood, barked but not squared and with the tops notched to receive the main rafters, were slipped into the holes into the ground prepared for their butts. Their bases formed a square and their tops a larger one since they were slightly inclined away from one another. Four sloping main rafters (b) were then put in place: each ran from the ground outside the pit, over the upper notched end of its post, and to near the center of the house and the apex of the roof. Eight short side rafters (c) were next added, one end resting on the ground and the other on a main rafter (b). Horizontal poles (d) were laid on so as to bridge the twelve rafters, large and small, and support the roof covering. To frame the square entranceway at the roof top, four heavy timbers (e) were bound to the ends of the rafters. Save for the entrance, the entire structure was covered tightly with small poles or pieces of split wood (f), running from the ground to the entranceway. These were covered with pine needles or dry grass and finally with a layer of earth, beaten and stamped down firmly. Because of the heavy rainfall in their country, the Lower Thompson lined their underground dwellings with large pieces of cedar bark, inner side out. (Teit 1900:192-194)

Entry into the house was down a notched log (g), the base of which was placed near the center of the floor while its upper end rested against the west side of the peak entryway and extended out above it. A groove ran along the length of the back of the log to serve as a handhold. The top of this ladder was often crudely carved into an animal or bird head or was painted red. Generally these figures were ornamental, but occasionally depicted the owner's guardian spirit. The bottom of the ladder was protected from the nearby central house fire by a stone slab set on edge between the two. Etiquette required that an entering person call out to allow women cooking below to protect the food from dust and dirt. Smaller supplementary fires were kindled near the four main posts in bitterly cold weather and sometimes to cook food if the dwelling was occupied by many families. The central section of the house between the four roof-supporting posts was used by all resident families. Behind and around this area, under the sloping roof, each family had its own quarters. Interestingly, the spaces between the four principal beams were called "houses" and took their name from the points of the compass. A thick layer of brush, fir boughs, or dry grass, renewed every three or four days, was placed over the floor and covered with skins or grass mats. Skins or blankets woven of bighorn sheep or mountain goat hair covered sleepers. Pillows were the rolled-up ends of the grass mats or skin bags filled with bulrush "fuzz" or bird down. Meat was spread on poles above the fire or simply hung near the roof and dried in the smoke. Food was eaten from large mats spread on the ground (Hill-Tout 1900:512-513; Ray 1942:140, 179; Teit 1900:194, 199, 234). The interior arrangement, allocation of space, and the like are not otherwise described in the ethnographic literature.

The few details reported by Ray (1942:177-178) concerning this underground winter dwelling in its Lower Thompson form differ in no important way from the Upper Thompson data above except on one point. The diameter of the pit ranged from 12 to 20 feet, notably less than Teit's approximations. Possibly these structures were in fact smaller among the downriver division. On the other hand, it is not inconceivable that the two sets of measurements are both close estimates for the different time periods of Teit's and Ray's informants: during this 40 year span a considerable amount of depopulation

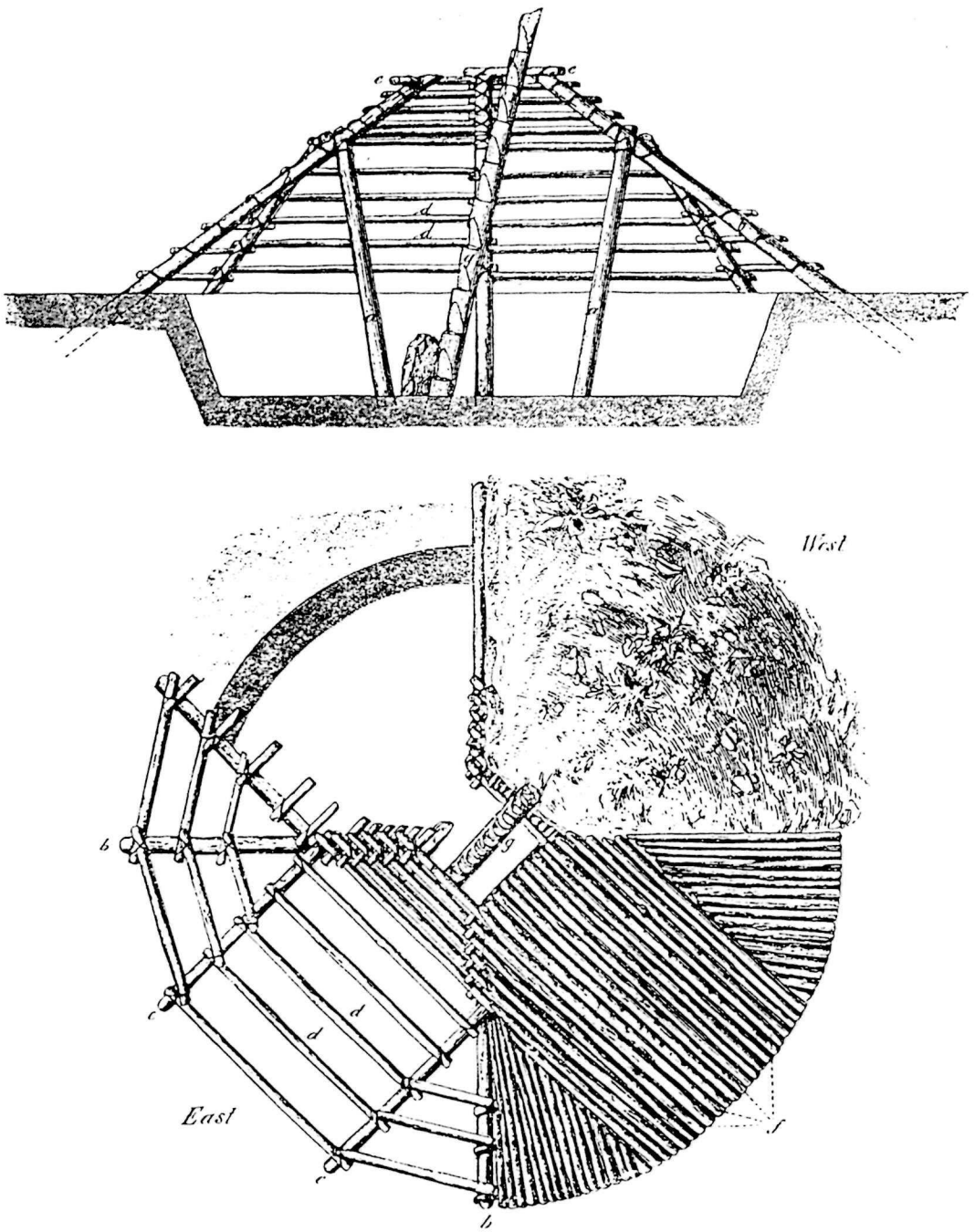


Figure 3-24. Construction details of Thompson semisubterranean dwelling after Teit (1900:193 Figures 135, 136).

occurred which may have been reflected in the dwelling size. Ray adds to Teit's data three items of some interest: the structure pit was approximately 4 feet deep; the basic roofing was of bark or brush or planks, these latter being evidently Teit's split wood; and a piece of bark was used to cover the entrance when this was desired.

These underground dwellings were generally occupied by the Thompson from December to February or even March, depending on the severity of the weather. Though inconvenient, they were extremely warm, making it possible for the occupants to remain scantily clad. Until about 1880 or a little later, almost the entire Thompson tribe lived in these houses. (Teit 1900:195)

Save for the three coldest months, the Thompson lived in above-ground "summer" lodges. These, among most of the Upper Division, consisted of a rectangular or square framework of poles, covered with mats or bark. One common variety (Figure 3-25 A, 3-26 A) was roughly rectangular in ground plan with straight sides and somewhat rounded ends. On a flat surface cleared of obstacles two pairs of strong poles (a) were tied together with willow withes at their small ends. The bases of each pair were separated and set in or on the ground to create two inverted V's about 10 feet apart. These were connected by four horizontal poles (b) on each side, bound in place. The gable ends (c) were framed with smaller poles, their tops against the end pole pairs (a) and their bottoms set out some distance so that the ends of the structure were rather rounded. The entrance was in one end. The entire shelter was covered with long reed mats in overlapping tiers, shingle-fashion, but with a long opening as a smoke exit and light entrance left at the top of the structure from one end to the other. A lodge framed in the same way but covered with cedar bark was used by the Lower Thompson. (Teit 1900:195, 197; cf. Hill-Tout 1900:513)

The Lower Thompson cedar bark dwelling of precisely this variety, exclusively a "summer" shelter, is described by Ray (1942:174-176, 180) with additional details. It was, he reports, 12 to 18 feet in length and 10 to 12 feet in width, positioned so its long dimension was with the prevailing wind. It was constructed with a double ridgepole. The strips of cedar-bark covering were generally placed horizontally, were overlapping, and were held more securely in place with vertical pole binders. The entrance was invariably at only one end; it was closed with a hanging tule or willow mat. The exterior was banked at the bottom with grass, covered with earth, and the interior was furnished with a tule mat lining. (Why this lining was in use in a warm weather structure is not explained.) The ridge was open only above the single fire, set in the central, end-to-end aisle. The floor was covered with rush mats or with twigs and leaves. Storage was over poles along the walls, over cross-poles or ropes, between wall and rafters, and sometimes at the ends of the dwelling or simply on the floor.

A lodge essentially like the preceding but with low vertical walls and a gable, inverted-V roof was also in use among the Lower Thompson according to Ray (1942:174).

Two slightly different reed-mat covered shelters (Figure 3-25 B, C) with a frame of four main poles set to form a square were also common among the Thompson. In both of these types all four sides inclined inwards. (Teit 1900:195, 197)

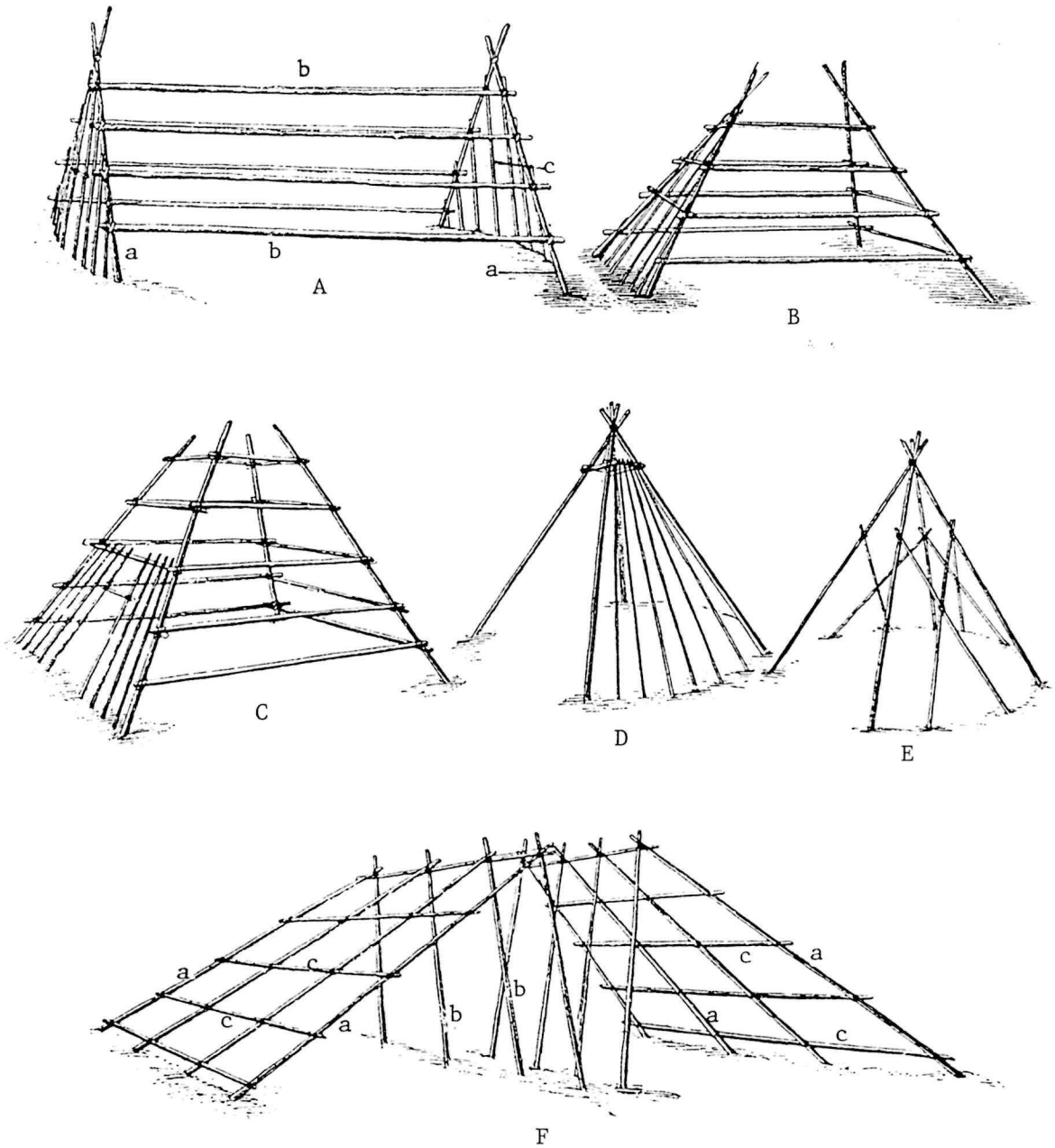
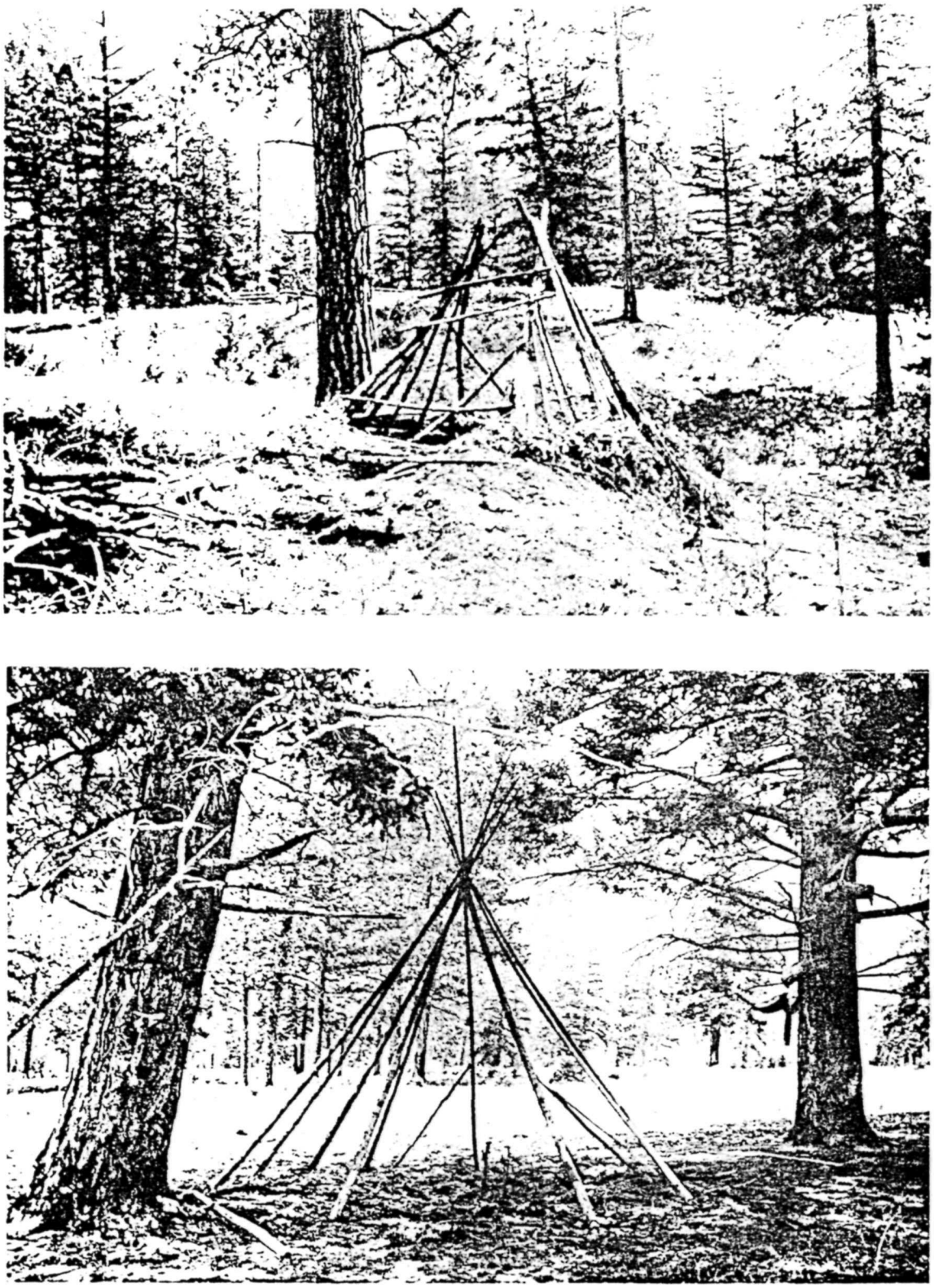


Figure 3-25. Construction details of six Thompson "summer" lodges after Teit (1900:197 Figures 137-142). The small letters in Teit's Figure 137 and 142 identifying the structural components have been replaced by larger and more readable letters.



A

B

Figure 3-26. Framework of two Thompson summer mat lodges, photographed in 1890s by Harlan I. Smith (Boas 1975:2 of unpaginated introduction, Plates 21, 22). A: though much smaller, appears to be in the pattern of Figure 3-25 A. B: shows features of Figure 3-25 D and E.

Conical lodges (Figure 3-25 D, E) with about a dozen or more pole supports arranged rather like those of a tipi were also in use by two Upper Division bands where they were covered with mats or the hides of large animals. A framework of this style was photographed in Thompson country by Harlan I. Smith in the 1890s (Figure 3-26 B). Conical dwellings are reported, however, not to have occurred among the Lower Thompson. (Ray 1942:179; Teit 1900:195-196, 197)

When many people gathered, as at Thompson "potlatches" and fishing sites, a larger structure (Figure 3-25 F) was necessary. It consisted essentially of two mat-covered lean-tos placed face to face. The diagram shows the simple construction details, but fails to suggest the typically large size of these shelters. The inclined roof poles (a) were set 10 to 12 feet apart. The distance separating the two halves of the house was about 15 feet; in this open space burned the large log fires. For better protection when needed against the wind, both ends were closed with fir-boughs or brush, making a single shelter often 50 to 60 feet long. (Teit 1900:196)

In autumn both the Lower and Upper Thompson constructed hunting lodges generally in sheltered valleys in the mountains near good hunting grounds. They were similar in their framing to the square lodges described above, but larger, fashioned of heavier poles, and covered with sticks and bark spread with fir branches. (Teit 1900:196)

In pitching lodges for rather short-term occupancy their entrances were generally positioned toward the place where the women secured the family's water. This prevented the women, when fetching water, from having to pass behind the part of the lodge where the heads of people were when they slept. (Teit 1900:327)

Temporary Shelters

A brush shelter, usually used but once for a very short time, was hastily constructed by Thompson hunting parties in winter and early spring. It had a square or conical frame of light poles and was covered among the Lower Thompson with long, wide strips of cedar bark. This lower division also made a small temporary shelter with a single slanting roof framed like one-half of the very large dwelling described above (Figure 3-25 A). (Ray 1942:179; Teit 1900:196-197)

The Lower Fraser made use of a summer shelter which apparently did not occur among the Upper Division bands--at least Teit fails to mention it. This was a flat-topped structure supported by four corner posts, with open sides and a roof of rush or willow matting or even of bark strips. Ray terms this a "temporary dwelling." Whether this signifies that it was in use only at fishing sites during the salmon season (as among the Sanpoil [Ray 1932:34-35]) or that it was a shelter erected, for instance, by hunting parties to be used for no more than two or three days--as an alternative to the brush shelter described in the preceding paragraph--is not made clear.

Menarcheal and Menstrual Shelters

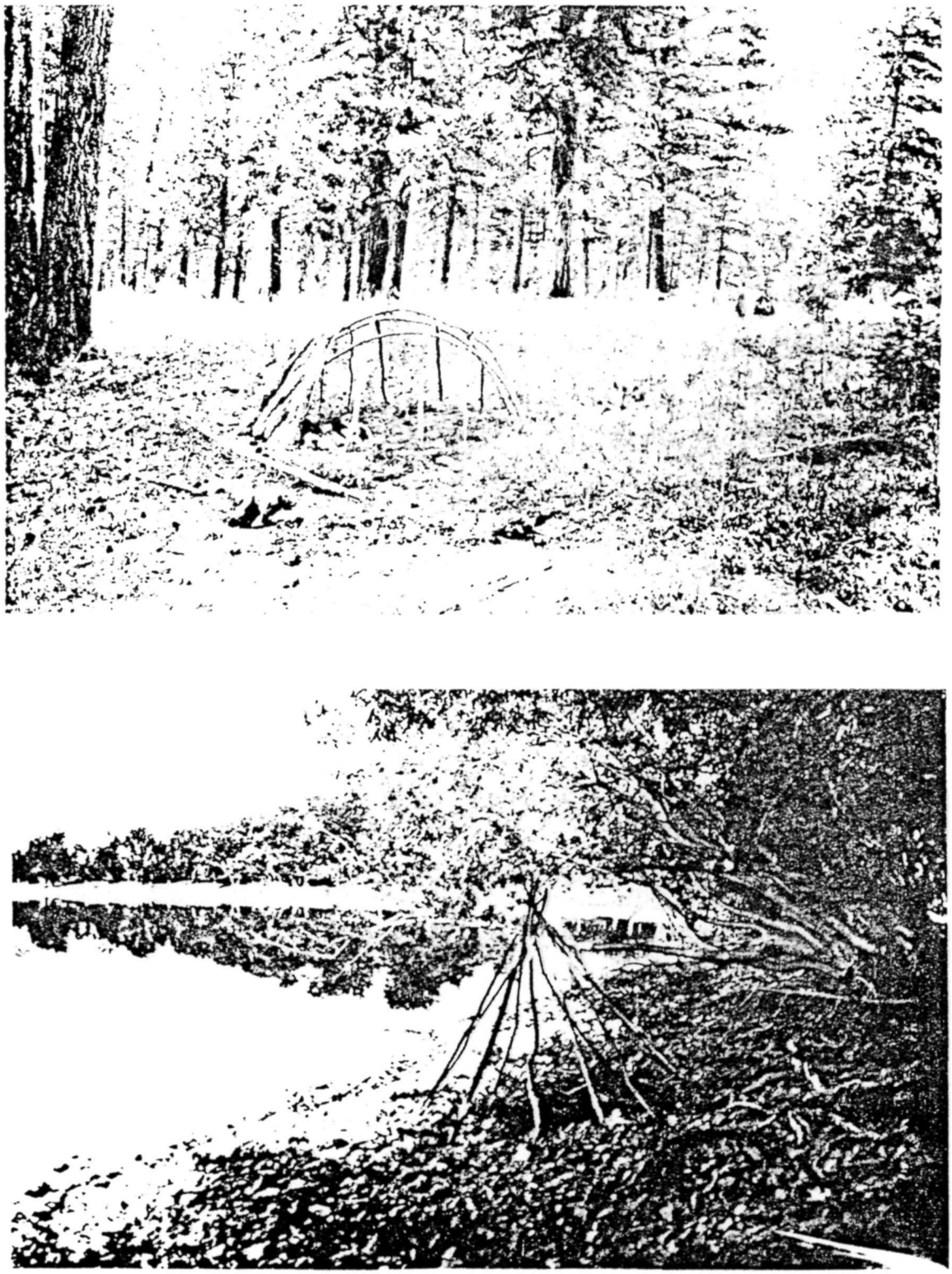
The menarcheal lodge of the Thompson was a temporary structure built as required near the village or hunting lodge. Conical, it was made by placing four small fir trees in a square, tying their tops and branches together, and filling in the open spaces with fir tops. It was just large enough to allow the girl to sit comfortably either in a shallow, circular pit or on the ground with her feet in the depression. (Teit 1900:198)

Every Thompson woman repaired to a small, generally conical structure "some little distance" from the village or temporary lodge as her shelter during every menstrual period. It was roughly constructed of brush among the Upper Thompson; of cedar bark by the Lower Division. The woman was taken food by other women but cooked it herself. In her hut she might weave baskets and engage in similar normal female pursuits, but she avoided all persons, especially males, venturing outside only when others were absent or asleep. At the close of her period and seclusion, she washed herself carefully, hung her clothing on a tree to be worn in later months, and put on fresh clothes.

This pattern of rigid seclusion was designed to prevent a menstruating woman from contaminating other persons and even animals and things. If, for example, a man ate food prepared by a woman in this condition or even ate in her company, or if he wore clothing made or patched by such a woman, he would have bad hunting luck and bears would attack him. Animals were insulted by any association with menstruation, however remote: accordingly, women were forbidden at any time to eat certain parts of large animals and, when menstruating, to eat any of their meat. While menstruating, they were not allowed to pass in front of weapons; to do so would make them useless unless purified. (Ray 1942:206; Teit 1900:326-327)

Sweat Lodges

Sweating was an important part of the cultural life of the Upper Thompson. Invariably close to water, sweat lodges were erected on a frame of two sets of bent willow wands with the two ends of each wand pushed into the ground and the two sets at right angles to each other (Figure 3-27 A). Each set had its longest wand in the center; its shortest at the two sides. Together they formed a dome-shaped framework. Withes tied the two series together wherever they crossed. The entrance between two wands was just large enough to allow a person to creep in. On one side of this door a foot-square pit was dug in the floor to hold the heated stones. The covering of these structures depended on their location and the frequency of their use. Those near villages, built with more wands to form a relatively tight network, were covered with a thick layer of dry pine needles and then a thick covering of earth; the doorway was closed with a blanket or skin. Or these were covered wholly or partly with bark. In contrast, those erected for more temporary and less frequent use were covered with blankets, which were removed to serve other purposes when the sweating was finished. The floor was covered with fresh fir-boughs, often with aromatic plants--like sagebrush or juniper--mixed in. These sweating structures accommodated from one to four people, all squatting. The sweating process was always concluded by a plunge into cold water. (Hill-Tout 1900:508; Teit 1900:198, 370)



A

B

Figure 3-27. Framework of two sweat lodges, photographed by Harlan I. Smith in the 1890s (Boas 1975:2 of unpaginated introduction, Plates 23, 24). A: Usual Thompson hemispherical type. B: Occasional conical type, photographed in Nicola Valley.

A variant and apparently uncommon framework for the structure consisted of small poles erected in conical "tipi" form (Figure 3-27 B) (Boas 1975:2 of unpaginated introduction).

While not extensively practiced by the Lower Thompson according to Ray (1942:170, 180-182), sweating was still part of the division's cultural heritage. His description of the group's lodge differs in some details from the foregoing and extends it in others as the following summary reveals. It was always sited near fresh water to allow the cold plunge that without exception followed the sweating. Large enough for only one person, it was constructed of a bent willow or fir frame, sometimes in a pit six inches deep, and of a covering of bark and then earth. The round entrance was closed with a hanging mat. Except for the pit for the hot rocks on either side of the entrance, the floor was covered with fir "twigs." The fire pit for heating the rocks was outside. Squatting as he sweated from the hot steam, a man prayed to the Sweat House, calling it "grandfather" and singing special sweat-house songs.

A Lower Thompson person was allowed to sweat at any time during the day, an activity carried out for cleanliness, curing, good fortune, and training depending on the circumstances at the time. The sweat lodge was owned by a single individual but used communally. Women were not allowed to approach men's sweat lodges; they had their own, built identically to those of males. (Ray 1942:180-182)

The difference between the Lower and Upper Thompson in the importance of sweating as described by Ray and Teit respectively raises the interesting question as to whether Ray could be mistaken. I suspect not, except perhaps in one sense. It appears more than conceivable that in this practice the Lower Thompson leaned downriver toward their Halkomelem neighbors, among whom little attention was directed toward sweating, while the Upper Thompson participated in the general central and southern Plateau pattern with its emphasis on sweat-bathing. Ray's data reporting an inconspicuous role for sweating among the Lower Division may, however, be less than fully correct. In the Plateau sweating was intimately associated with hunting. It could be expected, therefore, that the Lower people while at their canyon salmon fisheries and in their canyon villages paid comparatively little attention to the sweat lodge. But when they emerged from the chasm and went to the mountains to hunt--and gather and fish for smaller fish--they may well have followed the customary Plateau custom of extended sweat house use. Presumably this would have been notably the case for those Lower Thompson who were specialist hunters and those (perhaps the same group) who sometimes spent much of the year in the high country. As already remarked upon, Ray's Lower Thompson data seem oriented principally toward the canyon, fishing segment of their old life patterns.

Attendant Structures

In the vicinity of the dwellings, drying racks were erected. These consisted of a simple framework of poles: i.e., a supporting structure and a series of horizontal poles about five feet above the ground. In drying meat these horizontal poles were placed a few inches apart; beneath them fires were often kindled to assist in the drying process. Over mats placed on

these poles berries were thinly spread to dry under the hot sun. From these platforms it appears, though Teit is not quite specific on this point, roots, threaded on bark or grass strings, were hung to dry. Poles were also arranged near houses for drying salmon: after proper preparation, the fish were hung over these until dry and hard. Nearby sweat house frames--uncovered, of course, at the time--were sometimes used as meat drying racks when the quantity was small and it was desirable to dry it quickly. (Teit 1900:234, 1930b:240)

Likewise near their dwellings--at least in the late 1800s--were constructed scaffolds of poles, about five feet above the ground, for storing cumbersome articles like saddles (Teit 1900:199). The indicated height of this platform is of interest in view of the extremely troublesome nature of the native dog in the Indian camp. Generally poorly fed and dependent on scavenging for most of their food, dogs were accustomed to attack every edible article--including those of tanned hide--wherever they could reach them. A storage surface of only five feet in height would have scarcely been out of their reach. Teit fails to indicate how the Thompson controlled this constant threat to their edible property.

Thompson caches for provisions and objects were of two varieties. One was fashioned by tying poles horizontally from lower limb to limb in a large tree with spreading top, placing the food or gear on these poles, and covering the pile with mats and bark--planks or bark among the Lower Thompson--secured with ropes. The platform was reached by a ladder. The more common cache, however, was the pit variety, a circular hole about four feet deep used exclusively for storing baskets of berries, dried fish, and the like, the baskets covered with birch bark. The roof was a double layer of poles placed horizontally at right angles to each other and covered with pine needles and earth. The entrance in the center of the roof was closed with sticks or bark, covered with earth. Among the Lower Thompson, at least, the pit was lined with bark. Occasionally these--especially those containing fish--were in the side of a bank with a side entrance. The Lower Thompson also used a large board box on posts at least five or six feet high with an end entrance, reached by a short ladder. Sometimes these were as much as 10 feet above the ground, according to Hill-Tout, to insure that the stored food was well out of reach of prowling dogs and other animals. These above-ground caches were in part an adaptation to the commonly hard, rocky ground in the canyon bottom. Accordingly, they were likewise in use among the Upper bands where the ground was too rocky to permit the digging of the pit storage structures. (Hill-Tout 1900:513; Ray 1942:137, 180; Teit 1900:198-199, 234)

Residential and Task Sites

The villages of the Lower Thompson--i.e., their "permanent" communities in which they wintered year after year--were located "at favorable spots along . . . [both] banks of Fraser River, from . . . [about 3 miles] below the [Upper Thompson] village of Si'ska in the north, to . . . [the village of Spô'zêm about 2] miles below [the town of] Spuzzum in the south" (Teit 1900:168). Si'ska was situated where the present town of Cisco (Figure 3-1) is located, about 8 miles downstream from Lytton; Spô'zêm, of greater interest here since it was the downrivermost Lower Thompson winter settlement and therefore the nearest in direct line to the North Cascades Park, was

about 9 miles above Yale (Teit 1900:169, 171; BCGTB 1957). That Spuzzum was the southernmost Thompson village is also reported by Boas (BAAS 1890:801, 806; see NARN 1974:39, 41; cf. Hill-Tout 1900:501) on the basis of his own field research in the late 1880s.

The village sites of the Lower Division were unusually stable--substantially more so than among the Upper Thompson--and many families are said to have occupied the same village for generations. A roster of 19 of these locations, occupied in the 1890s, is provided by Teit (1900:169) for an approximately 37 mile stretch of the Fraser Canyon, about one every two miles on the average. Hill-Tout (1900:500-501), on the other hand, lists 25 or 26 villages for this same river distance and the same time period. In earlier years a number of smaller villages were situated at sites no longer occupied in the last of the 1800s.

These winter settlements are of no further interest in the present context since Spô'zêm, the nearest of them to the Park, was about 48 air miles roughly north of the point where the international border crossed the Skagit River. In short, it is clear from Teit's data that no Lower Thompson--much less Upper Thompson--winter villages were situated within the Park boundaries, a far from remarkable circumstance considering the difficult winter climate of even the lowest stream valleys within Lower Thompson country inside the North Cascades Complex.

On the other hand, as noted above, the area south of the Canadian boundary claimed by the Lower Thompson was considered by them as an extension of their hunting grounds north of the border. This being so, the group must have occupied temporary hunting camps, as well doubtless as other short- and medium-term task camps and more strictly traveling camps, in the region of the Park and the present Ross Lake (Figure 3-1). Unfortunately, there appears to be no ethnographic or ethnohistorical information on the specific locations of any of these sites.

It is, however, of some interest that Spô'zêm village was not many air miles or possible trail miles nearer Ross Lake than the closest traditional winter village of the Northern Okanagan, that at Keremeos on the Similkameen River (Teit 1900:166, 174). In neither instance was there an easy direct route, mountains being the problem in both cases. Lower Thompson parties had two obvious options. One required the party to thread its way to the upper Skagit through a continuous tangle of high mountains without major stream paths to follow, a route that would have kept them wholly within their own territory. The second, following a less difficult path, led down the Fraser River to the Hope district in Halkomelem Tait country and then southeasterly to the Skagit via either the Nicolum and Sumallo or the Silverhope and Klesilkwa. The Northern Okanagan Keremos might have made the journey, for instance, by way of the Similkameen, Ashnola, Pasayten, Similkaneen again, and the Lightning Creek trail to the Skagit (see DEMR Hope quadrangle 1970). Both of these river routes would have been somewhat roundabout, as well as carrying the party through the territory of another tribe.

These data raise the question of why the northeastern, Ross Lake corner of the Park region was traditional Lower Thompson territory rather than Northern Okanagan country. Perhaps it was because of the relatively small size and unusually rugged contours of the Lower Thompson hunting-gathering

territory above the British Columbia border, the tribe accordingly facing a more pressing need for the subsistence resources of this additional terrain in spite of its very difficult topography. But an important difference may have been that in early days the Lower Thompson, moving south down the Fraser, would have passed across the country of the friendly Tait tribe, while the Northern Okanagan would have had to traverse hostile Nicola land over a major part of their trail distance.

Different Thompson villages maintained their population integrity even when temporarily camping in a single locality. According to Teit (1900:294), when two or more groups took up residence at root grounds, they had their own camping areas.

Domestic and Tamed Animals

Any consideration of the Thompson village and its components cannot neglect the domestic and even tamed animal population.

Thompson dogs resembled coyotes in appearance. Though rather poor watch dogs, they were fine hunters. The best deer dogs were highly valued and taken good care of. It is uncertain whether dogs were trained to share light transportation duties. According to Teit, they were never used by the Thompson in any form of burden packing or hauling; among the Lower Thompson, Ray states, they were taught to carry packs. The resolution of this inconsistency is not obvious, unless relating to the different time period during which Teit and Ray gathered their field data. Dogs were generally named for some peculiarity in their marking or color. Some, however, were called after animals or birds that were noted for their swiftness, ferocity, or hunting abilities or that they were thought to resemble physically. (Ray 1942:159; Teit 1900:244, 256, 292)

Writing of the Lower Thompson specifically, Ray (1942:123-124, 163) reports that in the old days the Lower Thompson had many dogs, all with heavy hair. They were named, as Teit notes for the Thompson as a whole. Good dogs were leashed for their own protection and were allowed to live within the dwelling. They were trained with older dogs in the fine points of hunting, using deer parts in the training process, and were widely used in hunting both deer and bear. Dog "wool," like mountain goat wool, was used in weaving blankets on a roller loom. In times of famine dogs were eaten.

Horses reached the Upper Thompson toward the end of the 1700s. In early years they were extensively used for food. They were either named after the same fashion as dogs or given names like those possessed by people, including the special suffixes used for humans. (Teit 1900:292) I suspect that these animals were much less common among the Lower Thompson, but know of no hard data to support this proposition.

Beaver and bear were kept as pets by the Lower Thompson, the latter, however, on no more than a temporary basis (Ray 1942:124). If these two animals were held in captivity, other wild species were almost certainly tamed on occasion, to judge from the general Plateau-wide pattern.

Travel, Transportation, and Intertribal Relations

The Upper Thompson had watercraft of three different kinds. The preferred and most common was the birch-bark canoe. The dugout, fashioned from a cedar log with fire and adzes, was a less favored alternative. The skin canoe, an elk or caribou hide stretched over a wooden frame, was a hunter's canoe, used principally in ferrying family and gear over water in his path when out in pursuit of game. Double-bladed paddles were employed with bark and skin canoes; a single bladed type was used with the dugout. (Hill-Tout 1900:515)

Among the Lower Thompson fine dugout canoes were manufactured of cedar, and others of lesser quality from pine logs. Several types were made, most with a projecting prow and some with an extending stern. None were commonly more than 25 feet long. They were shaped with antler wedges and stone mauls and then with stone adzes, axes, and chisels. When finished, they were filled with water which was brought to a boil with red-hot stones and into which were placed dried salmon heads. After this mixture had simmered for 24 hours or more, the wood had absorbed the oil and was less in danger of cracking. The exterior surface was often carved and painted in red, white, and black and ornamented with rows of elk or caribou teeth and shells. Cedar canoes made by specialists were sold in large numbers to the Upper Thompson. Paddles of maple, often painted, were provided with a crutch handle. Pointed fir poles were also used, one on each side, in propelling the craft. Bailers were of birch bark or bent cedar bark. (Ray 1942:155-158; Teit 1900:183, 184, 255-256)

Their dugout canoes were in constant use in the less turbulent sections of the Fraser Canyon and even, on occasion, to negotiate the rapids, truly dangerous journeys. In his narrative of 1808, Fraser (1960:89-98, 115-118) makes clear the importance of the canoe to the Lower Thompson. On more than one occasion his party, traveling through the canyon, purchased or secured the loan of native craft.

Only a few spruce bark canoes were in use among the Lower Thompson. The bark was sewn with spruce root fibers and stretched over a wooden frame. Seams were sealed with melted gum. (Teit 1900:183, 184)

Rafts of logs lashed together with withes were used in fishing and in crossing streams (Teit 1900:256).

Goods were carried overland on the back of both men and women with the assistance of tumplines of buckskin, of cedar bark, or woven of mountain-goat wool. The burdens--e.g., meat, berries, roots, camping gear--were placed in coiled or birch bark baskets, which were then strapped to the back. (Ray 1942:147, 148; Teit 1900:256)

For traveling in the mountains over deep snow, the Lower Thompson used snowshoes of an "owl sole" type unique to their division. Its frame was of maple; its network consisted of twisted strings of raw deer-hide or bear hide. Its special features, however, included the fact that it was rather egg-shaped, was slightly shorter than most Upper Division shoes, and, in particular, was more turned up at the front, all excellent adaptations for climbing their steep mountains. Further, it was rather wide-meshed,

considered favorable for traveling on moist snow. Several of the subgroups within the Upper Thompson division likewise had their own peculiar, favored varieties. Fir branch toboggans were used by Thompson hunters in sliding down snow-covered hillsides. (Ray 1942:158-159; Teit 1900:256-257, 1930b:249)

Trails

A full tracing of the trails that ran within, through, and out of Thompson country is not possible from the fragmentary, scattered information appearing in the published ethnographic and ethnohistorical accounts. The following represents a compilation of such data as have been located, with special attention to the Lower Division.

Within the Lower Thompson country a trail ran the length of the Fraser Canyon, though whether there was a continuous path on both sides of the river is uncertain. This was an exceedingly difficult trail because of the sheer, towering cliffs and the great rock masses and the roaring stream with its almost or, in certain seasons, totally unnavigable rapids. Indeed, the several villages of the Lower Thompson "had little intercourse with one another, owing to the difficulty of travel in the Fraser Cañon" (Teit 1900:178).

The problems of traveling through this river stretch both by water and on land inside the canyon walls can best be comprehended by reviewing three early journeys through this fearful distance: that of Simon Fraser in late June, 1808; that of Sir George Simpson in early October, 1828; and that of Richard Mayne in 1859. These data also illustrate the remarkable efforts made by the Lower Thompson to facilitate along-river travel. For reference at other points in this chapter, such other ethnographic observations as are made are included in the following summaries of these two journeys. These native cultural notes of Fraser are of particular significance inasmuch as he and his party were, so far as is known, the first Westerners to see the Lower Thompson in their own country and before anything more than a stray bit of Western material culture had reached them through the intertribal trading network. No effort is attempted, however, to locate with whatever precision might be possible the natural features and Indian villages mentioned: in the present context it is sufficient to know that they lay between the confluence of the Thompson River, where Lytton now stands, just upstream from the northern limits of traditional Lower Thompson territory, and the foot of the canyon at Yale, just below the downrivermost Lower Division village.

The journal of Fraser (1960:86-98) recording his journey of exploration down the river contains the following relevant information:

June 19, 1808. Reached two large Hacamaugh [Thompson] villages at the Thompson river mouth. Observed two metal kettles and some Western clothing, trade items from posts east of the Rockies. "[C]hiefs and great men, appear to be good orators, for their manner of delivery is extremely handsome." Supplied with "salmon, berries, oil and roots in abundance and our men had six dogs [to eat]." Camped near Indian village.

June 20. Indians sang and danced all night. Obtained two wooden canoes. Presented with berries, roots, and oil in abundance. Asked for leather, but none was brought. Left villages at Thompson River mouth.

> Aided by heavy rapids and a strong current, we . . . came to a portage. Here the canoes and baggage were carried up a steep hill, the ascent was dangerous--stones and fragments of rocks were continually giving way from our feet and rolling off in succession; from this cause one of our men was much hurt, and a kettle bouncing into the river was lost. The Indians informed us that some years since, at this place, several of their people, having lost their balance from the steps giving way, rolled down to the river and perished, and we saw many graves covered with small stones all over the place. (Fraser 1960:89)

Encamped.

June 21. Indians singing and dancing on opposite bank. Terrible trouble for "three miles among rapids, cascades, whirlpools, &c. all inconceivably dangerous." Lost one of three canoes. (Editor's note: probably in "vicinity of Jackass Mountain, a dozen miles downstream from Lytton" [Fraser 1960:92 footnote 21]).

June 22. Four men brought canoes down by water, making several portages in the undertaking. Baggage carried by land. At village of about 110 men "were received with loud acclamations and generously entertained." Indians carried canoes past dangerous rapids. Encamped some distance from the village. At village Indians sang and danced and were very civil; gave Fraser's men three dogs and furnished party with "best [food] they could procure; but that best was commonly wretched if not disgusting." (Fraser 1960:92-93)

June 23. From past very dangerous experiences Fraser's men preferred "walking to going by water," even though walking "was difficult, the country being extremely rough and uneven." Canoes managed to negotiate rapids, but then one broken in portage. Camped at village of about 170 persons who call themselves Nailgemugh. Entertained "with singing, dancing, &c."

> The Nailgemugh Nation are better supplied with the necessaries of life than any of those we have hitherto seen. They have robes made of beaver &c. We visited a tomb which was near by the camp. It was built of boards sewed together, and was about four feet square. The top was covered with Cedar bark and loaded with stones. Near it in a scaffold were suspended two canoes, and a pole from which were suspended [word indecipherable], stripes of leather, several baskets &c. (Fraser 1960:94)

June 24. Secured two canoes by trading. By canoe for one mile, then a carrying place of 800 yards. Passed Indian camp. Arrived at portage

> with steep hills at both ends, where we experienced some difficulty in carrying the things. Ran down the canoes; but about the middle of the rapids two of them struck against one another, by which accident one of them lost a piece of its stern, and the steersman his paddle. . . . (Fraser 1960:94)

Repaired canoe. In evening arrived at Indian village of some 500 persons at some distance up the hill. Received from the "fresh salmon, hazle nuts, and some other nuts of an excellent quality. The small pox was in the camp, and several of the Natives were marked with it."

June 25. Embarked.

> After going a considerable distance, our Indians ordered us a shore, and we made a portage. Here we were obliged to carry up among loose Stones in the face of a steep hill, over a narrow ridge between two precipices. Near the top where the ascent was perfectly perpendicular, one of the Indians climbed to the summit, and with a long pole drew us up, one after another. This took three hours. Then we continued our course up and down, among hills and rocks, and along the steep declivities of mountains, where hanging rocks, and projecting cliffs at the edge of the bank made the passage so small as to render it difficult even for one person to pass sideways at times.
>
> Many of the natives from the last camp, having accompanied us, were of the greatest service to us on these intricate and dangerous occasions. In places where we were obliged to hand our guns from one to another, and where the greatest precaution was required to pass even singly, the Indians went through boldly with loads. (Fraser 1960:95)

Encamped at a rapid. On opposite bank an Indian fishing for salmon "with a dipping net." Fraser's Indian companions netted five salmon.

June 26. Continued portage, passing "over huge rocks," assisted by Indians. Determined navigation of river below to be "absolutely impracticable."

> As for the road by land we scarcely could make our way in some parts even with our guns. I have been for a long period among the Rocky Mountains, but have never seen any thing equal to this country, for I cannot find words to describe our situation at times. We had to pass where no human being should venture. Yet in those places there is a regular footpath impressed, or rather indented, by frequent travelling upon the very rocks. And besides this, steps which are formed like a ladder, or the shrouds of a ship, by poles hanging to one another and crossed at certain distances with twigs and withes [tree boughs], suspended from the top to the foot of precipices, and fastened at both ends to stones and trees, furnished a safe and convenient passage to the Natives--but we, who had not the advantages of their experience, were often in imminent danger, when obliged to follow their example. (Fraser 1960:96)

(Editor's note: Fraser was here in the Hell's Gate and Black Canyon area.) In evening was ferried across river to Indian camp where spent night. People still of Hacamaugh "nation," although "some men of a neighbouring nation called achinrow [i.e., Tait tribe or perhaps more generally Upper Stalo Halkomelem] were with them." Promised canoes for next day by villagers.

> But the canoes being above the rapids, some of the young men went for them. It being impossible to bring them by land, or to get them down by water, they were turned adrift and left to the mercy of the current. As there were many shouls [shoals] and rocks the canoes were in the greatest danger of being broken to pieces before they got to the end of the rapids (Fraser 1960:97)

June 27. Indians of village sang and danced. Indians carried part of baggage over a "route . . . as bad as yesterday." Came to the canoes that had been set adrift: one broken and the other much damaged. Repaired canoes. Some men with baggage embarked; rest walked. Came to a small camp of about 60 persons at a place called Spazum [Spuzzum] on the boundary line between the Hacamaugh and Ackinroe

> Nations. Here as usual we were hospitably entertained, with fresh Salmon boiled and roasted, green and dried berries, oil and onions.
>
> Seeing tombs of a curious construction at the forks [the mouth of Spuzzum Creek] on the opposite [West] side, I asked permission of the Chief to go and pay them a visit. This he readily granted, and he accompanied us himself. These Tombs are superior to anything of the kind I ever saw among the savages. They are about fifteen feet long and of the form of a chest of drawers. Upon the boards and posts are carved beasts and birds, in a curious but rude manner, yet pretty well proportioned. These monuments must have cost the workmen much time and labour, as they were destitute of proper tools for the execution of such a performance. Around the tombs were deposited all the property of the deceased. (Fraser 1960:97-98)

Spent the night here in the downrivermost village of the Hacamaugh [Lower Thompson].

At this point Fraser moved into the country of the Tait group and so need not be followed farther in his downstream travels.

In July of 1808 Fraser (1960:114-118) and his party returned up the Fraser River heading homeward and so once again passed through Lower Thompson territory. In this account ethnographically interesting details are fewer.

July 8, 1808. Heading up the canyon from its southern terminus, met at the northern end of the first portage by two canoes from the Hacamaugh Nation. Borrowed these canoes while their Indian owners went on foot up to their village. At village received plenty to eat. Entertained "with a variety of songs, dances, &c. during the evening." (Fraser 1960:115-116)

July 9. Went by trail until met by two canoes sent out to meet him from next village. At village was given

> two excellent dogs which made delicious meals for the men, besides fish and berries in abundance. Here we procured a few articles of curiosity; viz., a blanket of Dog's hair, a matted bag, a wooden comb of curious construction &c. Among these Indians we observed a variety of tools, pieces of Iron and of brass, a bunch of brass

> keys which were from the crew of a ship that the Indians of the sea had destroyed several years before. (Fraser 1960:116)

July 10. [Fraser's account of this day is of singular interest for its description of the simple but effective Indian climbing framework. He might be accused of some level of fabrication or at least exaggeration were it not for the impressively similar account of Mayne (see below).]

> Kept the left side of the river accompanied by several Indians who shewed us the way. The road was inconceivably bad. We had to pass many difficult rocks, defiles and precipices, through which there was a kind of beaten path used by the natives, and made passable by means of scaffolds, bridges and ladders so peculiarly constructed, that it required no small degree of necessity, dexterity and courage in strangers to undertake a passage through such intricacies of apparent danger as we had to encounter on this occasion. For instance we had to ascend precipices by means of ladders composed of two long poles placed upright and parallel with sticks crossways tied with twigs. Upon the end of these others were placed, and so on for any height. Add to this that the ladders were often so slack that the smallest breeze put them in motion--swinging them against the rocks--while the steps were so narrow and irregular leading from scaffold to scaffold, that they could scarcely be traced by the feet without the greatest care and circumspection; but the most perilous was, when another rock projected over the one you were leaving. The Indians deserve our thanks for their able assistance through these alarming situations.
>
> The descents were still worse. In these places we were under the necessity of trusting all our things to the Indians, even our guns were handed from one to another. Yet they thought nothing of these difficulties, but went up and down these wild places with the same agility as sailors do on board of a ship.
>
> After escaping innumerable perils in [the] course of the day we encamped about sunset. The Indians tried to fish, but caught nothing; they, however, supplied us with plenty of dried fish. (Fraser 1960:116-117)

July 11. Continued on the route. Crossed a rapid river upon a bridge, and soon after came to end of portage where found three canoes in which those who were lame embarked. Others continued by land. Arrived at village where slept on June 24. Were favored by Indians with plenty of provisions. Camped at village. (Fraser 1960:117)

July 12. Procured "a sufficiency of fish" and set out. Those who were indisposed traveled by canoe; others who went by land had to use the canoes now and then to ferry across [side] rivers. Left canoes at portage.

July 13. Received 40 salmon as gifts; young men sent by chief to carry them. Chief reported "the Indians above were poor." [He was obviously speaking of the Upper Thompson above the canyon where salmon fishing was less productive.] Unable to secure canoes, but "Indians assured us that the

rapids were too strong to use them with advantage." Passed a village where the Indians were poor and yet shared what little they had. (Fraser 1960:118)

July 14. Passed very treacherous rapids where party had such a narrow escape on June 20. Arrived at confluence of Thompson River. (Fraser 1960:118)

So much for relevant sections of Fraser's account. The difficulties of both the land trail along the canyon bottom and the water route through the Lower Thompson country at least during the summer high water are convincingly documented. Under these circumstances it is not surprising that intervillage social relations within the Lower Division homeland were not altogether close. On the other hand, during the winter season when the river water was at its lowest, it was possible for canoes to navigate the entire length of the Lower Thompson canyon stretch, though "always attended with considerable danger" (Mayne 1862:104). When the Fraser was low, cedar canoes were occasionally taken for trading purposes up the river from the Halkomelem country to the Lower Thompson village of Spuzzum, just above the lowest bad segment of the canyon rapids (Duff 1952:16).

In early October, 1828, Sir George Simpson (1947:36-39), searching for a practicable fur route by canoe from the interior to the sea as an alternative to the Columbia River route, descended the Fraser River from the Thompson River confluence. His narrative--not a daily mile-by-mile journal like that of Fraser--tells us nothing about the riverside trails, but it convincingly recounts his difficulties in negotiating the distance by canoe and boat, even though he had with him "three of the most skilful Bowsmen in the country, whose skill however was of little avail at times." His colorful description of this two-day journey and of the Lower Fraser people whom he encountered deserved quotation.

> [Almost immediately on leaving the Thompson River mouth] the character and appearance of the navigation became totally changed, assuming those of the very worst parts of Thompsons River; every new reach, as we descended, bringing to view fresh and more alarming dangers. The banks now erected themselves, into perpendicular Mountains of Rock from the Waters edge, the tops enveloped in clouds, and the lower parts dismal and rugged in the extreme; the descent of the Stream very rapid, the reaches short, and at the close of many of them, the Rocks . . . overhanging the foaming Waters, pent up, to from 20 to 30 yds. wide, running with immense velocity and momentarily threatening to sweep us to destruction. In many places, there was no possibility of Landing to examine the dangers to which we approached, so that we were frequently, hurried into Rapids before we could ascertain how they ought to be taken, through which the craft shot like the flight of an Arrow, into deep whirlpools . . . leaving our water logged craft in a sinking state. In this manner, the greater part of two Days was occupied, in which, we only made about 70 miles distance, as much time was lost in communicating with the Natives, who were exceedingly numerous and perfectly amazed and much terrified at seeing us, yet shewed no hostility, . . . Salmon, are innumerable and easily taken in those Rapids during the Fishing Season, and this accounts for the great population who house themselves in the Caverns & chasms of the Rocks, out of which on the least alarm

> being given . . . scores of Naked Wretches poped out, where a moment before there was not the least appearance of our being near the residence of man. Among the whole of this population of several thousand Souls, we saw no more than two or three Guns, but the men were all armed with Bows & Arrows, and either Bone or Iron bludgeons, and men, Women and children, had each a Knife attached by a leather thong to one of their wrists. A Leather or Dog hair waist band, was the only article of dress they wore, many dispensed even with that, and the only Fur we saw among them, was one piece of Beaver coating, and a few Siffleur [marmot] or Ground Hog Skins. (Simpson 1947:37-38)

An independent, more detailed, but less vivid record of this river voyage, in this instance in field journal form, was kept by Archibald McDonald (see Simpson 1947:xxxi-xxxiv). While strong on river conditions and navigational details, it furnishes little ethnographic information. Accordingly, nothing further need be said of it here beyond the fact that it corroberates Simpsons' resumé of the perils of the journey.

The serious difficulties encountered by Simpson in navigating the Fraser Canyon were sufficient to convince him at last of the impracticability of the Hudson's Bay Company using this waterway to carry its peltries to the coast and its supplies from the sea to the interior. Yet it must have been used to some extent since Mayne (1862:96) reports that Fort Yale, at the southern end of the canyon, "was selected by the . . . Company as a convenient resting-place before commencing the arduous ascent of the Cañons, and where, having come down, they might dry the furs and skins that had got wet in the passage."

In May, 1859, Mayne (1862:97, 104-109) traveled by land from Yale to Lytton and discovered, as did Fraser, the great dangers of the trail, especially in the two very narrow canyon stretches. His account provides no ethnographically significant information save for its description of the trails.

The "Little Cañon," beginning just upstream from Yale, was about five or six miles long; the "Upper Cañon," which commenced almost immediately above the upriver end of the little narrows, was six or eight miles in length. At least in 1859 there were three trails, sometimes merging in various ways for some distance. The lowest trail, a narrow one, was passable only when the river water was very low, "at which time there is a ledge of boulders along the bottom of the cliff, over which a rough path was carried." The middle trail "passed along from ledge to ledge, at a height ranging from 50 to 800 feet above the river." When the lowest path was blocked by rock jutting out into the river, the traveler was compelled to scramble up to the middle trail. These two routes crossed from the west side of the Fraser to the east at the mouth of Anderson River. The highest trail, which in Mayne's day had become the "Mule Trail," led up a considerable height and through a gorge between the two mountains, returning to the river again between the two canyons. This "road," blocked by snow during seven or eight months of the year, passed from the west to the east bank of the river at the Indian village of Spuzzum. Mayne's path led along the lowest trail whenever possible, but, blocked by some rock bluff projecting out into the river, he was forced constantly to climb to the middle path.

> The mode of rounding these cliffs, which literally overhang the river, is peculiar, . . . There are two or three of them, the trail coming up to them on one side, and continuing again on the other. . . . [P]assing the intervening space . . . was managed by the Indians thus: they suspended three poles by native rope, made of deer-hide and fibre, and from the top of the cliff, the inner end of the first and third resting on the trail, and the middle one crossing them on the front of the bluff. Of course there was nothing to lay hold of, and the only way was for the traveller to stretch out his arms and clasp the rock as much as possible, keeping his face close against it; if he got dizzy, or made a false step, the pole would, of course, swing away, and he would topple over into the torrent, which rolled hundreds of feet beneath. The land-slips in the mountain crevices are also very dangerous. Several times we had to make an ascent of about 200 feet up a land-slip, at an angle of quite 35°, in loose sand, and with nothing to check our downward progress if the sand should slip quicker than we could scramble over. The most dangerous of these . . . is called the Jackass Mountain. Several people have lost their lives in crossing this . . . [dangerous stretch].
>
> This mountain rises abruptly out of the river, and the old trail leads across the face of it. To pass it several land-slips, of twenty or thirty yards wide, and at an angle of about 50°, had to be crossed. To do this the traveller had to make a bolt from the rocky ledge on one side to that on the other; and if he chanced to get dizzy, or the land slipped away with him, he must inevitably be lost. (Mayne 1862:106-107

Remarkably the Lower Fraser people, carrying their heavy loads, passed along these great and dizzying hazards with wonderful ease.

Indian parties traveling between the upper Halkomelem country south and southwest of the Lower Thompson River had two possible routes that by-passed the Fraser Canyon dangers. One left the Fraser at the mouth of the Coquihalla, a stream noted for its trout, and led up this river. Perhaps where travelers left this stream and what path they took northward depended on their ultimate destination. But one track ran up the north branch of the Coquihalla, over to the south fork of Anderson River, down it and up its north fork, over to a tributary of the Nicola River, and finally down to the Thompson River. This entire route, save for a very short distance at the Coquihalla mouth, lay within Thompson country, the southern portion in that of the Lower Thompson. (Mayne 1862:67, 108)

An alternative by-pass route ran to the west of the canyon. It branched off the Fraser at the Harrison River confluence, went north by Harrison Lake, Lillooet River, and Lillooet Lake, passed over to Anderson Lake and Seton Lake, and then descended the "Inkumtch River" to the Fraser River. Here it joined the north-south trail from the Chilcotin confluence on the north to the Thompson River junction on the south. This route was wholly outside the Thompson homeland, except to the extent that the territory claimed by the Lower Thompson included a stretch of the eastern shore of Harrison Lake (Figure 3-1). (Mayne 1862:67, 93-94, 132-138)

To return to the Lower Thompson and their travel routes within their territory, trails obviously led southward from the Fraser Canyon to the Ross Lake sector, for the Division claimed this area as their hunting-gathering country, although, according to Collins (1974a:14-15), the Upper Skagit likewise considered it theirs. Lower Division parties crossed from a tributary of the Fraser River to "one of the northern headwaters of the Skagit River. They came in the winter on snowshoes and sometimes stayed through the summer to hunt and fish" (Collins 1974a:14-15, 66). Neither tributary is named and it appears rash to guess as to the streams in question. In part, the problem hinges on Collins' identification of her "Thompson" as having "lived . . . on the Thompson River, . . . and on the Nicola River . . . ." This would, of course, make them Upper Thompson, who, Teit's data (Figure 3-1) documents, laid no claim to the northern part of the Skagit Valley, not the much nearer Lower Thompson. It seems probable that Collins is merely locating the Thompson in a general way by reference to the main body of the tribe, with no intention of specifying a particular Thompson subdivision. Even assuming that it was the Lower Thompson to which Collins' informant alluded, whether she realized it or not, the data are too imprecise to permit an identification of the watercourses mentioned.

Trails also led through and out of the Lower Thompson area. An important route to the east, particularly after the arrival of the horse, cut through the heart of their hunting and gathering territory. It ran up the Coquihalla Valley from the Fraser and over to the headwaters of the Similkameen. It passed down this stream to the Okanagan River in Okanagan tribal territory (Figure 3-1). In the Coquihalla gorge through the Manson Range the snow lay deep for many winter months, which later made the route impassable to Hudson's Bay Company pack trains during this period. (Mayne 1862:95, 387; Teit 1930b:250) This heavy snow cover, however, evidently created no serious problems for Lower Thompson winter travelers. As already noted, they were snowshoe people, with even special mountain-adapted footgear. Further, as just reported, parties of Thompson--surely specifically Lower folk--wearing snowshoes chose to journey in winter to the Skagit Valley-Ross Lake region.

A number of other trails ran wholly or in part through Upper Thompson country to the north of that of the Lower Division. The following is certainly not an exhaustive roster of these.

One trail led overland from the lower Thompson River to the Kamloops area, where the North and South Thompson Rivers joined. This route, followed by Mayne (1862:111-115) in 1859, left the Thompson at the mouth of the "Nicowameen River," about 9 miles above Lytton, crossed over to the Nicola River, followed this stream up to Nicola Lake, and moved along a chain of small lakes roughly northward to the Fraser in the Kamloops vicinity, just over the boundary in Shuswap territory (Figure 3-1). To travel by this path was shorter than to go up the Thompson River all the way, cutting off the long Ashcroft river bend, and, moreover, it avoided a difficult stretch of the riverside trail below Kamloops.

A route from Lytton up the Thompson River to Kamloops in Shuswap country was an important one, particularly in prehorse times. Trade items of southern provenience were brought by a well-traveled path northward to Kamloops from the Okanagan homeland, traveling via Okanagan Lake, the

Spellumcheen River, Shuswap Lake, and the South Thompson River. The Kamloops-Lytton trail then took these goods down to the Upper Thompson. This line of travel was notable especially in early times because it was largely a water path and because it avoided the country of the Nicola, who were enemies of the Okanagan and Southern Okanagan in these prehorse years. (Teit 1930b:250, 252)

Later, with the availability of horse transport and the relaxation of hostilities between the Nicola and the Thompson and then between the Nicola and the Okanagan and Southern Okanagan, the overland Okanagan-Thompson trail via the head of the Nicola River and the cross-country Southern Okanagan-Thompson route via the Similkameen and Nicola Rivers gained significantly in importance. In both cases the trails led through open, well-grassed terrain with no physical barriers. Through increased use of these horse trails the Upper Thompson gradually became the principal recipients of influence from the south and southeast, taking over this position from the Shuswap. (Teit 1930b:252, 253)

Among the Lower Thompson, trails followed by a person or party were marked in various ways to inform those behind. For example, limbs were broken so as to point in the direction taken or stakes were pushed into the ground in an inclined position for this same purpose. (Ray 1942:190)

Trade

In early days the Lower Thompson carried on considerable trade with the Upper Thompson as well as with other neighboring tribes both toward the coast and in the interior.

With the Upper Thompson trade was almost entirely with members of the Lytton band, the group immediately up the Fraser River from them. Similarly people from the Spences Bridge band of the Upper Thompson on the lower Thompson River just upstream from the Lytton band, rarely came down into Lower Fraser country. The Lytton group were middlemen, passing on to other Upper Fraser bands goods acquired from the Lower Division and trading to these latter people items they had secured from the other three Upper bands as well as from tribes to the north and east of them. This pattern of restricted contact between Upper and Lower Thompson was partly the consequence of the great difficulty of moving into and through the river territory of the Lower people. But it was also the result of the Upper Division view that the Lower group was inferior to them. (Teit 1900:178)

To the Upper Thompson Lytton band, the Lower Thompson people traded dried salmon, smoked salmon-heads, salmon grease, dried huckleberries, hazelnuts, cedar bark, wood of different kinds for making pipe-stems, a special wood for fashioning bows, black-tailed deer skins for moccasins, woven mountain-goat hair blankets, baskets, cedar canoes, white vegetable paint, and red paint made of a fungus growing on hemlock trees. (The inclusion of hazelnuts in the above catalog is curious because, according to Turner [1978:126-128], the Lower Thompson imported these nuts both from the Halkomelem tribes downriver and also from the Upper Thompson, "who gathered them in large numbers.") In return, the Lower Thompson received from this Lytton band dried roots (e.g., bitterroots, wild carrots), berries

(especially serviceberries, soap-berries, and wild currants), buckskins, Indian hemp for making thread and string, bighorn sheep spoons, buffalo-skin bags, bags of Indian hemp twine, mats, dentalium shells, red ocher, pipes, and tobacco. (Teit 1900:190, 232, 233, 259)

From the Lillooet to their west, the Lower Thompson frequently imported stone hand-hammers used in driving elk-antler wedges in woodworking. These had a smooth cylindrical center, tapering toward the upper end, for the hand hold, a slightly enlarged upper end, and an enlarged lower "business" end but not the heavy termination of the typical nearby Plateau hammer. It was rather the hammer style of the Indians of Vancouver Island. (Teit 1900:183)

From Spuzzum at the southern end of Lower Thompson territory travel was relatively easy on down the Fraser. Accordingly, intercourse with near Halkomelem groups below them was not infrequent. To these tribes toward the coast, the Lower Thompson sold dried salmon; dried mountain goat meat; deer, elk, and mountain goat fat; wild lily roots and other roots; dried soapberries, serviceberries, and huckleberries; "moss cakes" (i.e., black tree-lichen cakes): dressed deer and elk skins; Indian hemp twine; cedar-root baskets; mountain goat skins and wool; and dentalia. In return the Lower Thompson received dried dog-salmon (i.e., chum salmon), sturgeon oil, rush mats, a grass variety, canoes, and abelone shells. (Teit 1900:178, 259)

The references to dentalia in the above lists call for comment. On the surface it seems very odd that the Lower Thompson would receive dentalia from the Upper Thompson and then trade these shells downriver to coastal (or near coastal) people, when the shells were of coastal origin in the first place. But the Upper Thompson are reported to have received their supply from the Shuswap to the north, who got theirs from the Chilcotin and Carrier to their west and northwest (Teit 1900:259). Evidently what we have here is a kind of trade loop that was structured rather like this: From the Nootka source on outer Vancouver Island the shells went to the mainland coast opposite the northern end of the island, then inland to the Chilcotin and Carrier, to the Shuswap, then to the Upper Thompson and Lower Thompson, and so on down the Fraser River to the coast opposite the southern tip of Vancouver Island.

In early days prior to the arrival of the horse, the Thompson traded very little with the Okanagan and Southern Okanagan. It appears to have been confined to the bartering chiefly of salmon pemmican and dentalia for Indian hemp and dressed skins. (Teit 1930b:253-254)

After horses were secured the Thompson had considerable intercourse with the Okanagan and evidently Southern Okanagan also, and trade increased appreciably. Occasionally the Lower Thompson at Boston Bar (Figure 3-1) were visited by Okanagan parties. To them the Lower people traded dried salmon in exchange for wild carrot and bitterroot roots, dried berries, and dressed buffalo and deer skins. To at least some extent, Thompson bartering parties journeyed eastward to the Okanagan country. To the Okanagan the Thompson "gave" especially dried salmon (as noted for the Lower Division people above), salmon oil, salmon pemmican, one or two kinds of roots, coiled baskets, dentalia, and some greenstone or "jade" celts, stone pestles, and stone hammers; occasionally even a slave. From the Okanagan the Thompson received in return mainly camas, horses, dressed bison skins and robes, dressed moose skins (rarely caribou skins), painted bison hide bags,

parfleches, woven bags of the Nez Perce type, and shell and bone beads from down the Columbia. (Teit 1900:259, 1930b:217, 237, 253-254, 277)

The Thompson traded coiled basketry also to the Nicola, who themselves wove no such baskets. From the Nicola they secured red paint, or Thompson parties journeyed themselves to Tulameen Forks or Vermilion to collect the ocher. These Athapaskan-speaking people claimed to have borrowed their "bow-shaped" style of root-digger handle of ram's horn from the Thompson. (Teit 1930b:223, 240, 254)

Wild sunflower roots were acquired by the Lower Thompson in trade, since the plant was not native to their country. Interestingly, they were unable to barter fern and certain other of their food roots to the Upper Thompson, because the people of that division did not care for them. The Thompson are reported to have secured dried moose, caribou, antelope, and buffalo meat through trade, these animals not occurring in their territory, but the extent to which the Lower Thompson specifically participated in this exchange is not indicated. (Teit 1900:230, 260)

There was no formal medium of exchange among the Lower Thompson. However, dentalia in fathom lengths served as an informal medium. At least some of the above-mentioned native trade articles were packaged and exchanged in units, demonstrating a measure of standardization in such transactions. Indian hemp, for example, was put up in bundles about two feet long and two inches in diameter; six bundles equaled one "package." Dried salmon was assembled in packages of 100 fish, this unit comprising one "stick." (Ray 1942:190; Teit 1900:260; cf. Mayne 1862:299)

Intertribal Marriage

The only Upper Thompson band with which the Lower Thompson intermarried to any extent was the Lytton group on the Fraser and lower Thompson River immediately upstream from the Lower Division village of Si'ska. To the south the situation was somewhat different, at least for the people of the village of Spuzzum, the downrivermost community of the Lower Thompson close to the exit of the canyon. For these folks communication with "the villages of the Coast Salish [i.e., Halkomelem below them on the Fraser] was fairly easy, and consequently . . . intermarriages were not infrequent." (Teit 1900: 178; see also 179)

The extent of intermarriage in traditional times with other Indian tribes to the west (like the Lillooet) is not indicated in the ethnographic accounts as I know them. However, to the east the Thompson occasionally married with Okanagan, especially those living in the more northern sectors of Okanagan country. Also, after friendly relations were established, they intermarried to some extent with the Athapaskan-speaking Nicola of the Nicola River and Lake and the Similkameen regions. (Teit 1930b:213, 215, 216, 223, 244) It is not surprising that intertribal marriage, at least among the Lower Thompson, was relatively uncommon considering the fact that, according to Teit (1900:178), even the villages of this Lower Division themselves "had little intercourse with one another, owing to the difficulty of travel in the Fraser Cañon."

Hostilities

The weapons of the Lower Thompson were bow and arrow, spear, knife or dagger, and war club. The bow was of the ordinary kinds as described in the Hunting section. War arrows were generally provided with barbed points and were sometimes fitted with detachable barbed foreshafts of antler or bone. The points were inserted in the shaft in a line parallel to the nock so as to enter between the enemy's ribs more easily, the bow ordinarily being held horizontally in shooting. They were "poisoned" with the juice of the flowers of the toxic baneberry, a preparation from certain roots, or with rattlesnake venom(?). Some warriors named their arrows after fierce animals or birds and painted these figures on the arrow shafts. The spears--thrust, not thrown--varied from 3 to 6 feet in length, shorter ones being preferred in wooded country. They were fitted with large stone points, at the base of which feathers were sometimes attached for ornamentation. The knife or dagger was of stone and double-edged. The club commonly consisted of a round stone encased in a thick hide and fastened to a handle; this handle was attached to the man's hand and wrist by a thong. In another type, if Hill-Tout understood correctly, the stone head was sewed in the center of an elk-hide strip, the ends of the hide being left to swing the weapon by. Clubs of stone, elk antler, bone, or wood, varying somewhat in their form, were also in use. Some of these wooden clubs were studded with stone or horn (antler?) spikes, according to Hill-Tout, and held to the wrist by a thong. To the preceding weapons roster of Teit save as indicated, confirmed at many points for the Lower Thompson by Ray, should be added the willow bark slingshot as both a man's weapon and a child's plaything. (Hill-Tout 1900:502; Ray 1942:152-153; Teit 1900:241, 243, 263-265)

Passing through the canyon home of the Lower Thompson in October of 1828, Simpson (1848:38) saw from his watercraft many members of this tribe at their salmon stations. Concerning their offensive weapons he notes: "Among the whole of this population of several thousand Souls, we saw no more than two or three Guns, but the men were all armed with Bows & Arrows, and either Bone or Iron Bludgeons, and men, Women and children, had each a Knife attached by a leather thong to one of their wrists."

Defensive protection was secured through the use of the cuirass, vest, and tunic. The cuirass, extending from shoulder to hip, consisted of two flat boards in front and the same in back, laced together and covered with thick elk hide. The vest, which encircled the body, was of rods or narrow wooden strips, arranged vertically and bound together with bark strings; it was covered with elk skin, often fringed, ornamented with feathers, or painted with animal or geometric designs as instructed in dreams. Heavy tunics of elk hide, soaked in water before being worn, were also used for arrow protection. Whether the rawhide shield was part of the Lower Thompson defensive equipment is unclear: it was not used according to Teit, though common among the Upper Division bands; a round rimless rawhide shield was in use by the lower group according to Ray. At any rate, the wooden or rod shield, also a common device among the Upper people, was clearly not a Lower Division artifact. (Hill-Tout 1900:502; Ray 1942:153-154; Teit 1900:265-266)

On the point of whether Thompson villages were ever stockaded the data differ. Hill-Tout (1900:500-502) gives as a name for an old Upper Division village on the Fraser above Lytton a term translatable as "palisaded

enclosure containing houses." (This village is not listed by Teit (1900:171-172) in his extensive Thompson settlement roster.) In contrast, Teit (1900:266), whose data I generally favor over Hill-Tout's, states that stockaded settlements seem not to have been a Thompson cultural pattern. On the other hand, small, heavy log-houses near major rivers were, Teit reports, not unknown among the tribe. These were largely covered with brush and earth, though they were provided with loopholes for shooting at attackers. Each had two or more long, low trench entrances, covered thickly with sticks, brush, and earth. Provisioned with food and water, they were impregnable: raiding parties were not equipped to lay seige in enemy country. Whether the Lower Thompson as well as the Upper Division constructed these structures is not made clear. (Teit 1900:266-267)

In early days, the Thompson often mounted raids on other tribes, although true tribal warfare was very rare. These expeditions, carried out by small parties or occasionally by groups of several hundred men often against the wishes of the chief, were for material plunder and slaves, adventure, and prestige, or to avenge murder, injury, witchcraft, or insults to chiefs or women. A dance was held in the village to generate support for the hostilities and to attract additional participants. To be an able fighter, specific spirit power was considered essential; any such man could lead a raid. Before the attack the raiders painted themselves and their clothing, red and black being the favored colors. The central technique was to surprise the enemy by stealthy early morning attack or "sudden onslaught," sometimes involving both treachery and what might be regarded as considerable cruelty. Bird and animal calls were used in directing the party's actions. Houses were burned; scalps--occasionally even entire heads--were taken; young boys and girls were seized as prisoners and slaves. Sometime later formal negotiations were held through intermediaries to arrange a settlement, but the material spoils were retained by those who had taken them. On the other hand, captives from other tribes were sometimes sent home to carry the news of the slaughter by the Thompson of their companions. (Ray 1942:224-228; Teit 1900:267, 1930c:407)

The party was under the direction of an experienced leader. Spies were sent ahead to watch the camp to be attacked. Little food was taken along and as few fires as possible were lighted. Minimum clothing was worn; the face and often the upper body were painted in red or in red and black. Communication was by signals, signs, and animal calls. Armor was donned by some men before the attack. Generally the leader divided the booty and slaves. Some scalping and even beheading occurred, these relics usually being soon discarded though sometimes scalps or hair were retained to ornament weapons or clothing. (Teit 1900:267-268)

The Lower Thompson were generally regarded, both by themselves and by others, as less hostile than the Upper Division groups. This was especially the case for their lower bands, which maintained amicable relations with all their neighbors and were seldom attacked by them. The more upriver bands of the Lower Thompson, however, were raiders, sometimes sending parties against the Lower Lillooet (see Figure 3-1), who had large stores of fish and other goods, and frequently against coastal tribes of the Fraser delta, often in company with Upper Thompson warriors. These coastal people seldom retaliated, even though it was from these people that the Lower Thompson took their slaves, largely young women, most of whom were sold by their captors

when they reached home. From time to time, however, the Lower Lillooet crossed the mountain range to retaliate against the Lower Thompson, in spite of the fact that these Lillooet were generally considered to be unskilled fighters. Apparently Lower Thompson raiders rarely went north to the Shuswap country; in contrast, Upper Thompson relations with these Shuswap were often, perhaps typically, hostile (e.g., Teit 1930b:269). The Lower Thompson were on friendly terms with the Okanagan to their east: when hunting parties met in the mountains presents were invariably exchanged. This, however, was not always the case with the Upper Thompson, parties of which in the real old days sometimes attacked the more northern of the Okanagan villages. Later, in the early 1800s, Thompson-Okanagan relations became very friendly, especially in the Similkameen Valley, where even extensive intermarriage occurred. When, on the other hand, Lower Thompson hunting groups encountered "Klickitat" hunters, fighting "always" ensued. (Teit 1900:268-270, 1930b:257, 265) By "Klickitat" in this context, Teit means the Upper Skagit (cf. Figure 3-1) and the region in question can only be the Ross Lake sector of the North Cascades Park complex; the Klikitat proper lived on the lower Columbia River (cf. Spier 1936:42-43).

Lower Thompson parties often met small groups of Athapascan Nicola when both were hunting in the Cascades "in the country back of Hope and Chilliwack." These contacts were always friendly. Quite plainly the geographical area involved was the region of the upper Skagit north of the present international line. This latter point is indicated by the fact that the Nicola are reported to have never encountered "Klickitat--i.e., Upper Skagit as above--"who did not go so far north" as to come face-to-face with them. Thompson hunting and war parties, on the other hand, "sometimes went a long way south along the Cascades": i.e., as I interpret the statement, into the Skagit Valley and surrounding mountains south of the Canadian line. In contrast, long ago toward the end of the 1700s, before such intermarriage occurred, the Upper Thompson engaged in frequent forays against the Nicola in their homeland on the middle Nicola Valley and in the upper Similkameen country. (Teit 1930b:257)

The Lower Thompson were invariably on a friendly basis with the various Upper Thompson bands, no raiding occurring between them. On the other hand, bitter blood feuds developed very frequently between Thompson families over even trivial insults and quarrels, and one may presume that these intense misunderstandings came about from time to time between families in the two divisions. So common were these feuds, according to Teit (1900:270, 271), who lived among the tribe, that no man went unarmed, sentinels kept watch over some villages at night, in some places fires were extinguished in the evening, and no one was perfectly safe. Perhaps this was the state of affairs only in Teit's time, but he intimates that it was no less the aboriginal pattern.

Raids against enemies were serious matters with a spectrum of links to the non-material world. Especially important were efforts to enlist the assistance of the supernaturals and of the women relatives at home at a magical level. Before setting out, the men of the raiding party sweat-bathed for several days, asking their guardian spirits for success and protection. Dressed in feathers and paint and carrying their weapons, they danced a mimic battle with all its sounds and actions. While the party was gone, the wives, with painted faces and knives and sticks as weapons, danced in imitation of

the fighting and supplicated their weapons to help their husbands kill the enemy. Only warriors with a scalp guardian spirit took and wore scalps, a guardian spirit that might be secured by washing in water in which arrowpoints had been placed. Men with a particular weapon as a tutilary were thought to be immune to injury by that weapon or, if injured, to have been able to recover quickly; they seldom wore armor in a fight. Warriors often smoked to the Sun, one of their favorite guardian spirits, and sometimes painted on their bodies and weapons patterns with some association with fighting. When a man killed an enemy, he blackened his face with charcoal to protect himself from the victim's spirit. (Teit 1900:356-357)

Social Structure

In this section are discussed the bonds of kinship among the Thompson and various segments of their cultural life that were closely linked to "blood" relationships, the bonds of geographical propinquity and the social groupings that existed in response to them, and inherited class stratification.

Kinship and its Cultural Associations

The following pages describe the nature of kinship in the Thompson view, the family unit, names and the naming process, the concept of property and the inheritance pattern, and hospitality and the potlatch.

Kinship Bonds

Neither the village nor the cluster of villages that comprised the band was a fixed social unit in the sense of possessing a dedicated kin-linked population. Any person or family was free to move about within the tribe--or at least division--and take up residence as he or it chose. As noted below, no formal political authority existed within either the village or the band, much less the tribe. The strongest social links were those of actual kinship. There were no totemic clans among the Upper Thompson uniting persons who were bonded by fictive kin links as on the coast; only two small clans were represented among the southernmost Lower Thompson. These two families claimed clan membership and the right to use totemic masks, carvings, songs, and traditions on the grounds that they were related to families in the Tait tribe, just downstream from the Lower Thompson, which belonged to these coastal clans and hence possessed these rights and privileges. (Teit 1900:290)

Blood relationship was followed in both male and female lines for generations. Kin clusters owned their own family names which only members could use. Because these were inherited, every person who had had the name had acquired it ultimately from the same ultimate common ancestor. One of the most important duties of kin was to avenge the death of a relative by organizing or participating in a punitive raid. (Teit 1900:290)

Family

The family--certainly the nuclear family--was the basic social unit of production and consumption. Husband and wife formed a tight, cooperative, economic team, the customary division of labor placing certain essential duties in the hands of each so that together the critical needs of the family unit could be expeditiously met. Still, in many families some sharing of responsibilities occurred, if convenient to the person not normally expected to carry them out. Among the Upper Thompson the individual families owned the deer fences and fishing constructions that they themselves built. With the Lower Division it was the individual, rather than the family as a whole, who possessed the fishing and hunting constructions, or so Ray reports, but I suspect that this was largely a fiction and that in actual fact it was here also the family that effectively owned these subsistence objects. The father and oldest son directed the family affairs, "although custom required that they should not do anything of importance to the family without first consulting its other family members." Each "male member of age" had the right to express himself and offer his advice in family sessions. (Teit 1900:290)

Closely related families commonly formed cooperative social and economic units at a level immediately above that of the nuclear family. The occupants of a multifamily, semisubterranean winter dwelling or a large summer shelter were ordinarily related. Surely in the typical situation they had cooperated in its construction, though this statement is not to be found in the ethnographic records. At least in the underground lodge they shared the single central fire. Beyond this we know little of the customary functioning of this loose extended family unit: e.g., the degree to which food was pooled or later shared when eaten; to which they participated as a unit in religious ceremonies; to which they traveled together as a unit throughout the year as to root grounds during the summer season and into the mountains on hunting expeditions; to which they organized as a unit in raids in retaliation for injuries to a member family, and so on. But to some extent all of these cooperative interfamily activities must have taken place.

Names and Naming

Generally children received their first name after they could walk easily, a name taken from either the father's or mother's side and at least a year after the death of its former owner. Usually it was the nearest kin who assumed the name. The most honorable way of conferring a name was by holding a feast for neighbors for this specific purpose. Very few names were held by two persons in the tribe at the same time. People changed their names frequently, some having as many as four or five in the course of their lives. (Teit 1900:290-291)

Nicknames were common and new ones were continually being invented. These frequently referred to something that had happened to the person, to a prominent physical characteristic, to a dream event, to a guardian spirit. These also became heritable cognomens. Men's and women's names of this kind were distinct: many of the men's ended in suffixes meaning "day," "head," and "stone"; many of the women's terminated in "water" or "bow." Among the

Lower Thompson, names referring to animals and plants were common; among the Upper Thompson they were far less frequent. (Teit 1900:291-292)

Most names differed somewhat in pronunciation from the ordinary words for whatever the names alluded to. They were normally either contracted or amplified. (Teit 1900:292)

Property and Inheritance

In general, the entire territory of the Thompson was considered common hunting, root-digging, berrying, and bark gathering country of all tribal members irrespective of their division or band affiliation. However, some restrictions prevailed as exceptions to general public ownership. Men of one band were not permitted to construct deer fences in the country of another band. Fishing constructions at salmon sites and mountain deer fences were the personal property of their builders and immediate families; golden eagle eyries were owned by their finders. (Hill-Tout 1900:504; Teit 1900:293-294) Ray (1942:231) provides data specifically for the Lower Thompson: individuals owned fishtraps, small weirs, and spearing platforms as well as hunting pitfalls, deadfalls, snares, and traps, rights to which were sometimes inherited. Title to other fishing sites was wholly by right of use.

There was even some overseeing of the tribal property restrictions. Among the Upper Thompson, for example, an old woman watched over important berry grounds to insure that no gathering occurred until the fruit was ripe; at that time any Thompson women were free to collect the berries anywhere in their country. But any non-Thompson without relatives within the tribe or without specific use permission who were caught hunting, trapping, or gathering subsistence resources within the recognized boundaries of the Thompson might be killed. (Teit 1900:293-294)

Inheritance of personal property on death apparently followed a rather loose pattern governed largely by practical circumstances. It was divided among the sons (and sometimes the daughters as well) or among all male and female relatives of age, or all the property was taken by the closest male relatives. More specifically, deer fences, fishing stations, and eagle nests were inherited in various ways by the male children, the eldest having the right of first selection. He might be expected to choose the fences if he was a hunter, leaving the fishing sites to the next brother. Or all brothers might henceforth use the property in common. If a man died without sons, the nearest male relatives took his hunting places; if he was without male kinsmen, his daughters and their husbands had the right to his property. Males inherited canoes and all hunting, fishing, and trapping implements. Dogs not killed went to the male children; horses were divided among sons and daughters. The possibilities and permutations seem virtually endless. At any rate, sons who inherited from their father had an obligation to look after their mother. (Teit 1900:292-293, 294)

A woman's effects were hers alone. If a separation occurred, she took all of her property with her, including the berries and roots that she had gathered. A widow with children inherited the lodge, all of the kettles,

baskets, and cooking utensils, and some of the blankets and robes. (Teit 1900:292-293, 294)

Hospitality and the Potlatch

True potlatches, gift distributions in which formal return gifts were expected, were not an active Lower Thompson pattern, but in a dilute form they occasionally occurred. They were held indoors in the spring or fall over a two-day period. All families in the village contributed property to be given away. Visitors from other communities, sometimes with faces painted, approached the village ceremonially. On the second day the property was distributed to all present, both men and women. Each person was called individually by a spokesman, in the name of the host, who then described the gift, held aloft, for the audience. Interestingly, even the local villagers received gifts. Reciprocal presents were made on the same day. The festivity was concluded by a dance. Potlatches of this very simple form were introduced from the Thompson to the Okanagan, among whom, however, they never took hold. (Ray 1942:231-232; Teit 1930b:277)

Socio-Territorial Units: Village, Band, Division, Tribe

The social units of the Thompson with a land base are not properly described ethnographically in any organized manner. The following summarizes such data as exist, scattered in bits and patches through the literature.

The winter village consisted of a few dwellings with their associated structures. Approximate population figures do not exist, to my knowledge, for the several individual villages listed in the settlement catalogs of Teit and Hill-Tout. But, Teit (1900:192) notes, they rarely numbered more than three or four lodges and often only a single one. Since these semisubterranean structures sheltered from 15 to 30 people, the typical village would have had a population roughly of from 25 to perhaps 100 persons. From his observations in October, 1828, Simpson (1947:33) writes that on the lower Thompson River from below Kamloops Lake to the river's confluence with the Fraser the "population is numerous, forming themselves into Camps of 10 or 12 Families at the different Rapids, where they collect Salmon, . . ." These data are not comparable to Teit's information, since Simpson's relate to the fall salmon season and the fisheries, not to the winter months. But his estimate of twelve families as a maximum in a single camp would seem to place the population of these largest groups at no more than 100 people. In the summer of 1808 Fraser (1960:92-94) encountered one "encampment" in the Fraser Canyon of "upwards [of] 500 souls," but a group of this magnitude may well have been a seasonal fishery aggregation from several winter villages or possibly even partly a collection of the curious drawn to a central point by the passage of his party.

Typically villages were composed of related families, yet these local units were fragile in the sense that individual families and households were free to relocate within the tribe as they preferred. Further, they were exclusively winter communities: during the remainder of the year the occupants scattered to hunt, fish, and collect plant products. In addition, because persons customarily married outside of their own village--the natural

consequence of the interlocking kin relationships of the component families and the prohibition against kin marriage alliances--one of the partners in the union--normally the wife--faced relocation on a reasonably permanent basis. Moving to her husband's community, she became a recognized member of his village and band. If, on the other hand, the husband resided with his wife's people for a year and made his home mostly with them, he was considered a member of her village and band (Teit 1900:192, 325).

The village population comprised a social unit. In addition to the normal daily interaction between families, more formal visits, feasts, and gift exchanges were organized during the winter, in which families or family groups hosted each other. Owing to the interfamily marriage links, the village was to some degree an economic entity of production and consumption. For example, group hunts were carried out and the meat shared; a hunter favored with unusual success distributed meat among the other families in the village; and in deep winter families with plenty of stored food shared their supply with families running short. In a way a village was also a ceremonial group: its occupants carried out together the first salmon and first berry ceremonies each year. The village was likewise a loose political entity: a mild form of guidance in many areas of daily life was provided by one or more headmen, who exercised their benign leadership through the consent of the villagers and with their continued backing. The village was not, however, a property-holding entity or a clan node of the coastal variety.

In late precontact and early postcontact days, there were three certain band units--village clusters--within the Upper Thompson Division. With the tribal expansion in the 1800s into the middle Nicola and Similkameen regions at the expanse of the Nicola tribe, a fourth band either expanded into a major band unit or then came into existence. These multivillage social composites were recognized as viable population entities by the Thompson themselves: each bore its own name. In general, the band through its individual component families exploited the fishing, hunting, and plant resources nearest its member villages, yet band men and women were free, if they chose, to pursue their subsistence quest anywhere within the tribal territory. To this freedom there was, however, one prominent exception: the members of one band could not erect deer fences in an area considered to be under the control of another band. Even less than the village, the band was not a political unit: there was no band headman save as some especially competent, revered, and powerful village head assumed this responsibility by consensus on some particular occasion. The extent to which the band as a unit played an active and recognizable role in Upper Thompson life is not reported, but it surely was minimal if it existed in any form. There were no bands among the Lower Thompson: evidently the group was too compacted and culturally homogeneous along their short stretch of the Fraser Canyon to develop such social subdivisions. Further, there was apparently far less social interaction among Lower Division villages than among the Upper Thompson: it was simply too difficult during much of the year to travel the trails along the bottom of the canyon wall and too dangerous to navigate by canoe the rapids, whirlpools, and very fast water in the river.

The two divisions of the tribe--Upper with its villages primarily on the Fraser in the neighborhood of the Thompson confluence and on the lower Thompson River, and the Lower with its winter settlements and summer fisheries in the Fraser Canyon sector--have been previously discussed. These

too bore distinctive names. They differed slightly at a dialect level. Likewise they differed somewhat in their life style, partly in response to their differing ecological base and partly through their exposure to differing neighboring tribal constellations: predominantly to Plateau peoples for the Upper Thompson and to lower Fraser, coastal influenced groups for the Lower Division. Although once again hard data are wanting, it is obvious that, by and large, the people of one division experienced a higher level of social and cultural interaction than they had with persons in the other division. As with the band, so within the division there was no structured political leadership.

The Thompson tribe, composed of the above two divisions, has also been discussed earlier in this report. It is sufficient here to note that it was a named and so self-recognized unit; that its speech comprised a language unique to itself, unintelligible to all other Salishan tribes; that it regarded as theirs a block of territory with its varied, essential natural resources and defended this country against interlopers; that it, in general, shared these resources freely among its villages and bands; and that its people had more social interaction with one another than they had with the members of other tribes. It was also a peace group; neither the divisions nor the bands are known to have squabbled among themselves, although interfamily feuds occurred. It was not, however, a political unit in the sense that a tribal "chief" or tribal council existed and exerted an influence over the life and activities of tribal members.

Social Rank

Among the Thompson there were no formalized and recognized distinctions between nobility and commoners, although slavery was an accepted institution. Differences between individuals, slaves excepted, was on the basis of wealth and personal qualities and achievements. (Ray 1942:228; Teit 1900:289)

Slaves were acquired by Upper Thompson men both through participating in raids against other groups and taking captives and through the purchase of captives taken by members of other raiding parties.

> When a captive woman bore children to her master, she was considered one of the tribe, and neither she nor her children were ever afterward called slaves, at least openly. Some captive children were treated well, and were even adopted into the family of their master, but other slaves were often treated cruelly. (Teit 1900:290)

In Lower Thompson villages the situation was evidently much the same except that slaves were numerous and the status was seemingly a trifle more rigidly circumscribed. One might conjecture that they were rather more useful and economically productive in these downriver, more sedentary fishing communities than among the more mobile Upper Division bands where hunting was substantially more important. According to Ray (1942:228-229), Lower Thompson slaves were owned primarily by rich men who captured some themselves, purchased others from other warriors in their own group, and imported some from the coast. They lived in their master's house. Still, they were permitted to marry only other slaves, their children sometimes but

apparently not always retaining slave status. Occasionally, slaves were ransomed by their own people or traded by the Thompson to other tribes: e.g., to the Okanagan (Teit 1930b:277).

Life Cycle

The ethnographic data concerning the life cycle of the Thompson are particularly rich in their coverage and detail. The following is nothing more than a summary of them.

Pregnancy

Pregnancy tabus on both the woman and her husband were very numerous, all intended to avoid the unfortunate consequences of her condition. A woman pregnant for the first time had to bathe, sweat bathe, and pray often. She could not touch salmon or scratch herself with her fingers. Her hair had to be dressed in a prescribed style. Her husband, for his part, had to bathe, hunt, and pray frequently. Any expectant woman had to bathe often, exercise vigorously, and eat sparingly to aid in an easy delivery. (Ray 1942:191; Teit 1900:303)

Any pregnant woman was forced to observe a great number of specific restrictions on her activities, each designed to prevent harm to herself, her husband, or her unborn child. She could not eat hare lest the child be born with a harelip; or anything killed by a hawk or it would resemble the animal killed; or the meat of a black bear, porcupine, lynx, dog, marmot, or a particular variety of trout. She could not look at a snake or anything ugly, step on certain animal tracks, tie knots, or see a corpse without visiting a shaman for purification. And so on. (Ray 1942:191-192; Teit 1900:303-304)

The husband of any woman with child had his own restrictions to observe. He could not hunt black or grizzly bear, porcupine, hare, fool-hens (else the child would likewise be foolish), squirrel, and a number of other animals. Some animals he could not eat, and other actions he was expected to avoid. (Teit 1900:304)

Birth

A woman gave birth in a special hut summer and winter, remaining there for the following two months. Lying on her side and holding onto a rope placed in position for this purpose, she had her child, delivering it onto a mat placed on the ground. An experienced elderly woman, later paid with a blanket, was sometimes in attendance; often the woman was alone or with only her husband. The birth experience was usually a very easy one; even in very difficult cases, the mother was not permitted to cry out. If problems developed, the husband was expected to dive into a lake or stream and to follow this act by certain other specific actions intended to hasten the birth. In really troublesome and dangerous births, a shaman was summoned to exercise his skills. Immediately after the delivery, the Lower Thompson mother drank a concoction prepared from cedar. (Ray 1942:193-194; Teit 1900:304-305)

Among the Lower Division the afterbirth was buried by the midwife near water (Teit), or hung in a secluded tree in the forest (Ray). The navel cord was tied with something soft (like squirrel hair) and smeared with black-pine gum. Or, occasionally among the Lower Division, it was not tied but simply smeared with the gum and tule pollen. As soon as the birth had taken place, the father shot an arrow into the air to prevent the infant's navel from swelling. Later the navel cord was sewed up in buckskin, embellished with quills, and tied to the buckskin band that extended around the head of the cradle, from which jingling objects (bone beads, fawn hoofs, etc) were hung. (Ray 1942:195, 197, 199; Teit 1900:304-305)

Abortion was accomplished by drinking a certain substance, but was rare. Newly-born babies were occasionally drowned or strangled, a practice vigorously disapproved of. Twins were the object of special beliefs and practices: e.g., their mother was required to camp alone for some months; their father acquired a special relationship with bear, being immune, for example, from attack by grizzlies. Orphans were sometimes given to grandparents to raise. (Ray 1942:202; Teit 1900:305)

For four days following the birth, the mother did no cooking and kept away from the fire unless shielded from it by a mat. For 60 days a newly delivered Lower Thompson woman ate no boiled or roasted fresh food, no meat or sturgeon, and no fresh berries. For three or four months, she bathed mornings, drank dried salmon broth and herb tea, and kept herself separate from her husband. The new-born infant had its mouth cleansed, was washed in warm water in which bark had been boiled, and was sometimes smeared with a mixture of black-pine pitch and deer fat to prevent it from becoming a crying baby. (Ray 1942:196, 197, 198; Teit 1900:305)

Infancy

Infants were bathed in baskets. When a few days old, a Lower Thompson infant was placed in a coiled basketry carrier shaped like an elongated basin with straight sides and rounded ends. Buckskin flaps were laced up to hold the child. A hoop at the head end, with hanging trinkets, kept a blanket from the infant's face. Carrying straps allowed the device to hang horizontally on the mother's back. This Lower Division also used carriers fashioned of black bear skin, hair side inward. Before receiving the baby, the carrier was lined with softened cedar bark. The baby itself was wrapped with softened fawn skin with the hair left on. Sometimes objects were placed with the child to magically quiet it and prevent it from urinating often. According to Ray, the Lower Thompson occasionally made use of a deep, trough-shaped, birch-bark cradle, stiffened around the edges. (Hill-Tout 1900:506-507; Ray 1942:197, 200, 201; Teit 1900:306-308, 1930b:279)

A very young infant was given tea and broth only if its mother proved incapable of nursing it. It received attention of a magical sort to encourage it to develop qualities admired in later life: e.g., the soles of its feet were rubbed with chipmunk feet to make it fleet of foot. A few Lower Thompson with coastal wives allowed their women to deform their children's head frontally with a strap and pad of cedar bark; otherwise among the Thompson this practice was derided. Customarily, however, moss was placed between the feet, the nose was pulled, the eyes were opened wide, and

the whole body was massaged to make the infant's form assume the configuration considered desirable. (Ray 1942:171, 196; Teit 1900:308)

The father generally gave a feast to neighboring families. In this celebration the infant was blessed by an old man or woman. An infant was at once given a temporary name of the nickname variety. After a month or so, it received a family name, that of a living or deceased kinsman, in a family feast in which gifts were distributed. Much later in life this name might be dropped in favor of another family name bestowed by paternal or maternal relatives or even by a self-chosen family name. Among the Lower Thompson these later names were sometimes unusual, taken from animals, plants, or dreams. (Hill-Tout 1900:506; Ray 1942:223-224; Teit 1900:309, 1930b:277)

Childhood

The outgrown cradle was hung in a tree some distance from the village, a new one always being made for each child. Once able to walk, a boy wore little or nothing; a girl, a breechcloth or robe. This was the pattern until puberty. Childhood was a time of great freedom. Children were, however, made to rise early and bathe all year-round to develop hardihood, and were forbidden to play after sunset and to make too much noise under pain of being carried away by Owl, which children greatly feared. (Boas 1975:2 of unpaginated introduction, Plate 22; Ray 1942:171, 201; Teit 1900:308, 309)

Children were often given to childless friends or to friends who had just lost a child of their own. They were reared well by these foster-parents and often thought more of them than of their real parents. (Teit 1900:308)

When a woman went up to the high mountains to dig roots or for some other reason, taking her child with her for the first time, she carried out a pattern of ritual acts. Because of the special interest of this present study in cultural behavior associated with high elevations, these details deserve to be quoted in full.

> . . . [T]he first evening after reaching her digging ground she would break a branch from a tree, and hang her child in its carrier on the broken limb. She painted her whole face, and sometimes the top of her head, red, and danced there before the infant, sometimes all night. She put her hands close together, as if holding something, blew in them, and ran off some distance; then, opening them, she made the motion of throwing away something. This was symbolic of taking disease or evil from the infant, and throwing it far away. She prayed constantly to the spirits of the place, or to the mountains themselves, asking that her child might never be sick, and that, if it were ever bewitched, and no shaman were near to help, nevertheless it might not die, or that she herself might have power to defeat the evil. She also addressed the spirits of the mountains on her own behalf, kneeling down, spitting on her hands, and rubbing her body upward over the front to the face, then over the top of the head backward, meanwhile praying that she might be delivered from all disease or trouble, that she might never be hurt in body, or be bewitched, and that, if sick, she might get well soon. (Teit 1900:309)

Twice during each winter boys and girls, from about 8 years of age until married, underwent a ritual whipping by an old man who descended into the dwelling through the smoke-hole entrance. Children could be spared the thrashing by a woman pretending to pick berries from the man's whip, by a man taking the whipping himself, or by the children bravely going forward one by one and pretending to pick his berries while dancing before him and singing. If lashed, a child was struck four times on its bare back, drawing blood. This rite was intended to help children overcome their bashfulness, to make them courageous, and to enable them to withstand pain. (Teit 1900:309-310)

First and second-born children were thought to become poor hunters and to be generally unlucky. The youngest son was felt to be the luckiest. Twins were announced to a mother before their birth by repeated grizzly bear dreams. They were regarded as different from other children, being under the protection of the grizzly, and were treated differently in many ways. They were, for example, thought able to create at will good or bad weather. Their father and mother were required to observe special behavioral restrictions and to perform special acts. For instance, the mother always nursed the eldest first. The entire family was compelled to move some distance from their village and for four years to live there in a fir-bough and bark lodge. When the twins first cried, a young man was selected by the parents to carry out a rather complicated ritual involving the grizzly bear in various ways. (Teit 1900:309, 310-311)

The first animal killed by a Lower Thompson boy was the occasion for a simple ceremony in which the food was eaten by the old people, though the lad himself was allowed none (Ray 1942:134).

Puberty

An incredible number of ritual proscriptions and prescriptions were associated with the attainment of puberty by both girls and boys, all with the purpose of making them healthy and successful and of protecting the community from the dangers of their condition at this time.

Girl's Puberty

On reaching puberty a girl was strictly separated from other people summer or winter, with her mother or close female relative serving as a kind of proctor. Sometimes her entire family moved into "the wilder parts of the mountains to give her a better opportunity to perform the required ceremonies." Otherwise she lived in a conical fir-branch and bark hut some distance from the village. During the day she squatted inside it, often in a deep hole. Her face was painted red; her hair was done up in a knot behind each ear; she used a bone scratching stick; she was wrapped in a heavy skin. For four nights she was forced to run hard, to split small fir trees, and to pray for a good husband. She dug long or deep trenches; wiped her eyes with small fir branches; remained unwashed; ate nothing; and drank water only through a hollow water-bird bone. She wore special clothing, including a fir-branch headdress. Inside her hut she sometimes wove baskets or engaged in ritual acts like picking needles off fir boughs; outside in the early morning or late evening, when she was least likely to be seen, she gathered

firewood or ceremonially tied knots in tree limbs. Some nights she wandered to lonely parts of the mountains where she danced, prayed to the local spirits, and slept alone, all in search of a guardian spirit. At the close of her isolation period she bathed ceremonially in a lake or stream, prepared her hair in a special way, and was escorted back to the village or camp by her mother. (Ray 1942:203-205; Teit 1900:311-313)

Even after the end of this four-day seclusion period, her ritual responsibilities continued in relation to eating, drinking, washing, praying, the clothing she wore, the paint she applied to her face, and a great deal more, many clearly symbolic of some desired future experience or condition. Again and again the Lower Thompson "pattern number" of four appears prominently in these rituals, which are described in uncommon detail by Teit (1900:313-317). In the old days the girl's isolation lasted for an entire year. Her hut was left to disintegrate of its own accord through time. Other things that she had used or worn were destroyed. (Teit 1900:317)

During subsequent menstrual periods women were isolated in a special conical brush or bark hut as already described (see Menstrual Shelter section).

Boy's Puberty

The ritual patterns followed by pubescent Thompson boys differed with their goals in life: aspiring hunters practiced hunting and shooting ceremonially; would-be warriors performed mimic battles and prayed to the Sun; those desiring to become successful gamblers played with gaming sticks. (Teit 1900:317)

Boys began their training when they first dreamed of an arrow, canoe, or woman, generally between the ages of 12 and 16. They then commenced a 4-day regimen of running, washing in cold water, painting their faces red, wearing special headbands and deer hoof ornaments, drinking through a tube, and using the scratching stick. Each night of the four they went to a mountain top, kindled a fire, danced, sang, and prayed. From then on, sometimes for years, they went alone to lonely parts of the mountains with water-basket, fire drill, and mat, remaining occasionally for as long as two months. There they fasted, living on what game they secured, sweat bathed, and prayed and were with the guardian spirits. Even after they returned home, they observed certain behavioral requirements: they ate sparingly, kept away from the fire, bathed twice daily, sweat bathed, and purged themselves. (Ray 1942:235; Teit 1900:317-319; cf. Hill-Tout 1900:510-512)

The sweat lodge used on these occasions apparently differed somewhat from the usual structure. The door, constructed of fir-branches, always faced east. Apparently, normally four or eight hot stones served to generate the steam. Inside the lodge sweaters struck their bodies with nettles, prayed, and sang, asking the Sweat-House to make them healthy, agile, wise, brave, and lucky and to help them be good hunters, trappers, and fishermen. After sweating, they rubbed their faces and armpits with pulverized leaves, fine river silt, or the white dust on cottonwood bark. They rolled in the dew, or washed themselves with dew-covered branches. (Ray 1942:206-207; Teit 1900:319)

The boys at this time were athletically active: during the night they jumped, ran hard, shot at marks, and so on. With a jadeite adz they made round holes in boulders, praying meanwhile. At daybreak they returned to their sweat lodges.

> When reparing to certain peaks and lonely places in the mountains, some youths set up a stone, danced and sang around it, and finally fired an arrow at it. If the stone moved or cried out, it was a sign that their efforts to become great hunters had been crowned with success. (Teit 1900:320)

These ritual activities continued until the youth experienced his guardian spirit dream. The nature of this experience and further information regarding the guardian spirit world are to be found in a later section of this study.

The Lower Thompson quest pattern differed in certain details. In the first place only a few boys and some girls were sent out on the search, going alone, at their father's behest, beginning at the age of about 12 years. The vigil typically lasted from four to eight days, repeated more than once over a period of several months. They were sometimes told where to go: e.g., to certain unfrequented lakes or mountains or to some isolated sweat lodge. They were instructed as to what activities to engage in: e.g., to keep alert, to sweat, to fast to the extent possible, to induce vomiting to maintain internal cleanliness, to drink certain medicines, and--as with the Upper Thompson--to carry out mimetic activities associated with the power they sought. They were given to carry with them a small part of the animal whose spirit they were to seek. (Ray 1942:235-237)

The spirit appeared to the Lower Thompson youth in a vision (occasionally a dream) in human form (sometimes as an animal). It gave him a special song and at times an object of symbolic significance to be carried and used throughout life. Upon returning home, his success or failure was made known only to his father or other proctor. (Ray 1942:237-239)

Many Thompson carried with them a bag containing a guardian spirit relic, like the skin of their spirit helper. Or they tied to their hair a part of the skin or the feathers of their spirit. (Teit 1900:320-321)

Adolescent boys were expected to observe their own set of tabus. They avoided menstrual lodges and touching the winter lodge ladder, this latter because women had done so. They drank no water in which meat had been boiled; they ate no roots or berries or any food prepared by women; they always ate alone. They painted

> records, which were pictures representing their ceremonies and their dreams, on bowlders, or oftener on cliffs, especially in wild spots, like cañons, near waterfalls, etc. These were generally pictures of animals, birds, fishes, arrows, fir-branches, lakes, sun, thunder, etc. Figures of women symbolized their future wives. It was believed that the making of rock-paintings insured long life. (Teit 1900:321)

The nasal septum and ears were generally pierced to receive their ornaments about the time of puberty. Tattooing was also carried out then. (Teit 1900:321)

Marriage

From puberty until marriage, a Lower Thompson girl's activities were restricted: she was chaperoned at all times, occasionally even "concealed completely" according to Ray's informant, although how this was managed in a strict sense is difficult to comprehend given the necessarily open life style of the tribe. Love songs were sung--presumably wholly or largely by the young men; prayers for success in love were addressed to slain bears and sometimes to the Sweat Lodge. Love magic was performed with the assistance of birds' hearts or hair of the person being coveted. Magical concoctions were rubbed on, or worn on, the person himself. However, unchastity, if discovered, resulted in enforced marriage at the discretion of the girl's family. (Ray 1942:207, 212)

The only formal restrictions on marriage were those of kinship: unions between even distant known relatives were criticized. Hereditary ranks and classes created no marriage problems, since these social units were nonexistent within the tribe. However, wealthy people preferred to have their children marry into families of similar prominence: hunters into families of hunters; warriors into warrior families, and so on. The Lower Thompson, both Teit and Ray state, favored intervillage marriages. (Ray 1942:213; Teit 1900:325)

Girls were considered marriageable at 17 or 18 years of age, once their puberty rituals had been completed; most males married between the ages of 22 and 25. Usually the husband was some five years older than his wife, though occasionally the difference was as much as 20 or more years. Men rarely married women much older than they were, unless they were taking the widow of an older brother. Occasionally children were betrothed, an arrangement formalized by a good-will gift exchange; the children involved henceforth lived together. (Ray 1942:212; Teit 1900:321-322)

Various kinds of marriage arrangements were in practice. One of the most prestigious involved taking presents to the parents and relatives of the girl through a go-between. The girl's kin considered the offer and, if they regarded it as a favorable marriage, the consent of the girl herself was sought. Among the Lower Thompson, wealthy people, if pleased with the new son-in-law, sometimes returned all or part of these marriage presents. Generally, however, they were retained by the girl's parents and were distributed among her relatives. In another common and likewise honorable pattern, the girl's parents took the initiative. If the man's parents agreed to the proposed union, the principals were considered betrothed. (Ray 1942:208-210; Teit 1900:322-323; cf. Hill-Tout 1900:505)

Under both of the above arrangements the husband went later at an agreed-upon time to claim his wife. He remained at her home for several days, then took her to his own family dwelling for a period. After a time the couple returned to the woman's house with presents and were received with a large feast. For a period the couple remained with the wife's family.

Later they returned to the house of the man's family, accompanied by the girl's kin and friends, where they, in turn, were treated to a fine feast. (Ray 1942:210, 211; Teit 1900:323)

Touching a girl, even accidentally, required marriage. Sometimes this action was taken openly as in religious dances. At times the man went secretly to the girl's house for four nights, sleeping each night on the edge of her blanket. If she failed to reject him, the pair were considered married and small feasts were celebrated. Depending on circumstances, the pair lived with her family or his. For their part, young women could similarly touch a man, but the latter was free to accept this overture or not. (Ray 1942:210; Teit 1900:324)

Elopements occurred, especially when a girl was chaperoned too closely by her parents or when they turned down all marriage offers. If her father pursued her and brought her home, he had to allow her to rejoin her husband. Young women were very seldom carried away by force. They sometimes committed suicide if their parents prevented marriage to one they favored or if they were compelled to marry against their wishes. (Teit 1900:324-325)

In general, residence after marriage was with the husband's group "to live with his family," although under certain circumstances it was with the wife's people. Even when it was in the man's village, the couple was expected to return temporarily to the woman's relatives. (Ray 1942:211; Teit 1900:292, 325)

Both the sororate and levirate prevailed among the Thompson. A widower was expected to marry his deceased wife's unmarried sister or other close female relative of the wife. Similarly, a widow was forced by custom to marry a brother or close male kinsman of her former husband, the eldest surviving brother having the first claim. She, in fact, could insist on such a union to support her and the children. This levirate custom resulted in a fair number of multiple wives. (Ray 1942:212-213; Teit 1900:325)

While monogamy was the norm, many men had more than a single wife--as many as seven or eight on occasion--if they were prominent and wealthy. Sometimes the several wives were sisters. Some hostility occasionally existed among the cowives, but this was somewhat reduced by assigning specialized duties to the women. (Ray 1942:231-214; Teit 1900:326) Apparently multiple husbands at the same time were unknown among the Thompson.

Divorce among the Lower Thompson was frequent, at the instance of either husband or wife. Desertion by a man released his wife from the marriage; the husband was criticized by others for this act if there were children. When a family divided, boys might go with either parent; girls, however, followed their mother. (Ray 1942:214)

Punishment for adultery appears to have been one-sided. A married woman's paramour was sometimes killed by the wronged husband and the wife at fault also. The fate of an adulterous husband with an unmarried woman, on the other hand, is not spelled out in the ethnographic accounts.

Berdaches were rare or unknown among the Thompson (Teit 1900:321).

Division of Labor

Adults of the two sexes divided the ordinary work of living in what appear to have been sensible ways that must have been roughly equivalent.

Men were expected to hunt, trap, and fish; to fight; to make all tools and weapons and fell trees; to look after the hunting dogs and help tend the horses; to protect their wives and beat them if they were lazy; and to instruct and advise their children, especially their sons.

Married women carried out almost all work of the house. It was their duty to help clean and dry fish, carry meat and game back to the camp or village, dig and cure roots, and gather and cure berries; to erect the lodges, keep them clean inside, light the fire, gather brush for beds, collect all firewood, fetch water, and wash and cook; to make all mats, baskets, sacks, and clothing; to dress all skins for clothing; to tend the horses; to look after the children and educate the daughters; and to be obedient and faithful to their husbands.

Some men assisted their wives in various of their duties: in tanning buckskin and erecting the lodges, by making tools for them such as their root diggers, and so on. (Teit 1900: 182, 295-296)

Death and Burial

When, among the Upper Division, a person expired within a semi-subterranean dwelling, the position of the ladder from the roof entrance to the floor was changed. The body was taken out and the ladder was then restored to its proper place. The Lower Thompson likewise removed the corpse from the dwelling without delay, through a hole in the wall when the house was an above-ground structure. A messenger announced the death to neighbors and friends, who then gathered at the dwelling and were feasted, though they had to force themselves to vomit immediately after the meal. (Ray 1942:215, 216; Teit 1900:327)

The body, without being washed, painted, or clothed in different dress, was doubled into a knee-chest posture and bound up in a tule mat, deer hide, or fur blanket. Among the Upper people, it was then placed on a temporary platform outside the house; in the Lower Division it was deposited in a tree until the burial. During that day and the following night it was watched over by relatives and friends with much ritual weeping, singing of mourning songs, and periodic face washing. These "watchers" were later rewarded with presents.

The interment took place the following day. Each group of families had its own burial ground some distance from the village. The grave was dug if possible where the soil was sandy to make the digging with the ordinary root digging stick less onorous. It was "swept out" four times with a fir or rosebush branch "to drive away evil influences," and was lined with grass or birch bark. The funeral procession was led by two pallbearers, who were later compensated for their services. Following them came the adult relatives and friends and lastly the children who wished to attend. Speeches of praise were made by an old man and by the kin of the deceased. The body

was placed in the pit in a sitting position--perhaps in an extended posture among the Lower people--and the weapons, tools, ornaments, and "medicine bag" of the deceased, all broken to "kill" them, were deposited with it. Sometimes a small heap of stones was piled on the grave and sometimes a conical tent of bark or branches was constructed over the grave. Weapons, broken intentionally, clothing, and broken utensils were hung inside the tent or on a tree in the vicinity. Poles, painted red, were pushed into the ground nearby. One or more of the person's dogs and horses were killed and their bodies or skins were left close-by. A postfunerary feast was held with the mourners as guests, the food provided by relatives of the deceased. All guests received small gifts in appreciation of their attendance at the interment. (Ray 1942:216-220; Teit 1900:328-330)

Prayers were addressed to the deceased person, asking that the surviving relatives not be harmed. Each year for some time thereafter the bones were gathered, cleaned, and reburied. Persons dying in the distant high mountains were often buried there of necessity and only months and even years later were the bones exhumed and carried back to the family burying ground. (Ray 1942:222; Teit 1900:330)

People who had handled the body were isolated for four days and observed various behavioral restrictions having to do primarily with eating, drinking, bathing, rubbing the body with fir boughs, and being fed ceremonially by relatives and friends. A lodge in which a person had died was burned; a winter pit-house was purified with water in which tobacco and juniper had been soaked and the floor was covered with fresh fir-boughs. Among the Lower Thompson the dwelling was fumigated by burning juniper boughs or in other ways. Property not placed in or at the grave was distributed among the relatives. A substantial number of other actions to magically protect the survivors were carried out: some, for instance, were designed specifically to prevent the ghost from returning to annoy and bring danger to the living. Mentioning the name of the deceased was tabu. Widows and widowers had to engage in many ritual acts in which the number four was very prominent; they were forced to eat, wash, and sleep in certain ways. They cut their hair and wore special thongs around their neck, wrist, knees, and ankles. The Lower group tabued hunting by a widower for a period, and root-digging and berrying by a widow for an entire year. Clearly the event of death and the days and months that followed were considered potentially very dangerous to the close kin and the families of the deceased. (Ray 1942:220-222; Teit 1900:331-333; cf. Hill-Tout 1900:506)

Long ago, according to tradition, the Lower Thompson buried their dead, doubtless following closely the pattern described above for the recent Upper Thompson. Then, it appears, stagings were erected and on these platforms grave boxes were placed. The bodies, wrapped in cedar-bark mats, were put in these boxes in a sitting position. Carved figures and poles surrounded these platforms. But for many generations before 1900 the Lower Thompson laid the bodies in large, square cedar boxes, supported on posts and provided with lids. These boxes and posts were often carved and painted. Each box belonged to one family or several related families. When one box became full, a new one was constructed close-by. Poles and grave figures, to which clothing and other articles were attached, were erected around these boxes. From their tops streamers flew in respect to the dead. Sometimes instead of human grave figures, carved figures of birds and animals were used. Near

Boston Bar on the Fraser River in Lower Thompson territory stood at one time a very large, wooden human figure with a hole in the back large enough to hold a corpse awaiting burial. (Ray 1942:218; Teit 1900:329, 335-336, 1930b:289)

Tombs of this box variety are mentioned twice in Fraser's narrative. Near the upper end of Fraser Canyon in a Lower Thompson camp, Fraser (1960:94), in late June of 1808, "visited a tomb which was near by the [Indian] camp. It was built of boards sewed together, and was about four feet square. The top was covered with Cedar bark and loaded with stones. Near it in a scaffold were suspended two canoes, and a pole from which were suspended [word indecipherable], stripes of leather, several baskets &c." Farther downriver in the Spuzzum area he observed

> . . . tombs of a curious construction. . . . These Tombs are superior to any thing of the kind I ever saw among the savages. They are about fifteen feet long and of the form of a chest of drawers. Upon the boards and posts are carved beasts and birds, in a curious but rude manner, yet pretty well proportioned. These monuments must have cost the workmen much time and labour, as they were destitute of proper tools for the execution of such a performance. Around the tombs were deposited all the property of the deceased. (Fraser 1960:97-98)

The bones of the dead were frequently removed from the box by wealthy families, bundled together, recovered with new material, and replaced in the box. Feasts accompanied such reburials. (Ray 1942:222; Teit 1900:336)

Shamans, suicides, and twins were all buried in the same fashion as ordinary people. When a Lower Thompson person died far from home, the body was sometimes cremated. (Ray 1942:218, 219)

Political Organization

The leadership structure of the Thompson from village to tribe was exceedingly loose and informal, without sharply patterned, dominating proscriptions and prescriptions. The only exception appears to have been, if Ray's data are valid, among the Lower Thompson at the village level where the community heads exercised sanctioned powers, noted below, somewhat beyond anything reported for the Upper Division.

In the village of the "ordinary" size there was one person who was recognized by popular consensus as the community head; in large villages two or more men comprised the leadership. These persons exercised no formally sanctioned leadership responsibilities beyond their own settlement, each village being autonomous in a technical sense though not necessarily completely so functionally as explained below.

The role of headman was not inherited. Rather the village leaders were men noted for their wealth, wisdom, oratorial abilities, and war prowess. Wealthy persons gained power largely by their liberality: they gave public feasts and presents, and they treated strangers well to spread their fame even beyond their Thompson tribe. Oratorial ability was especially important in determining leadership. When skilled orators were likewise wealthy and

wise, they exerted great influence over their fellows. Fortunately, the most able generally favored peace and harmony. Some of these leaders were well-known and exerted important influence outside of their own village; even so, they seldom made significant decisions without consulting the people. At least this was the Upper Thompson situation. In the Lower villages, according to Ray (1942:230), the chief not only served as arbiter among his people but was able actually to "command" them and to receive tribute from them, though at the same time sharing his wealth with them. The most important and influential chief among the Lower communities was the headman at Spuzzum. (Ray 1942:229-230; Teit 1900:289, 1930b:270)

Village leaders were distinguished visually by no special clothing or ornamentation. No female village heads existed among the Upper bands, though they apparently occurred in unusual circumstances among the Lower Division. The Thompson had their native term for these leaders, one that is customarily translated in the ethnographic literature as "chief." (Ray 1942:229; Teit 1900:289) Within the above context, this designation of "chief" is used for convenience in this present report, though technically improper--except perhaps for the Lower Thompson--in terms of contemporary ethnological theory.

Under this leadership pattern, hereditary chieftainship, as well as politically tied noble-commoner distinctions, was impossible. Sons of chiefs enjoyed a certain amount of popularity on this account, but did not themselves become leaders unless they possessed the necessary personal qualifications. When they had these, they sometimes assumed the leadership status of their fathers, particularly among the Lower Thompson where this is known to have occurred in a line for several generations. (Teit 1900:289)

Other individual leaders took charge of specially-focused activities. A raiding party was led by the man considered by the members of the group best qualified to direct its activities. As a matter of course, his decisions were rarely made without consultation. Hunting parties followed the direction of the most experienced member of the group. In dances and religious ceremonies, the person to play the most prominent part in the activity assumed the leadership. (Teit 1900:289)

Within even the village there was no formal council to provide advice and guidance to the chief. Rather, whenever anyone had in mind to engage in any activity that concerned the community as a whole--e.g., a raiding expedition or a marriage--he called all of its men together. Sometimes men from other villages with an especially high reputation for wisdom were called in by messenger. Each man in this ad hoc advisory body had an equal right to express his opinions and to vote in decisions. If the group was convened to discuss war or a lesser raid, and if the decision was favorable and supportive, a "war-leader" was selected then and there and this person sent messengers to nearby groups to solicit warrior assistance. Women took no part in these assemblies and council sessions. Generally the advice of the oldest and most experienced man was accepted as the will of the group. The man who convened the meeting and his close friends were expected to furnish the food for the group. (Teit 1900:289-290)

With no hereditary "chiefs" or firmly established headmen at the village level, it is not surprising that there were none for the band, division, and tribe as a whole. To the extent that recognized leadership existed in these

larger population entities, it was of the same loose sort as prevailed within the village: some man, through his skills of persuasion, wisdom, and liberality emerged to assume the leadership status as circumstances arose and wide public direction was needed.

Transgression and Punishment

There appear to be no organized ethnographic summaries of the Thompson view of criminal acts and means taken to seek redress. The few scraps of data assembled below have been extracted from miscellaneous cultural contexts and do no more than illustrate the customary pattern. One general point, however, is clear: punishment, if carried out, was at the hands of the injured party and/or his relatives and friends.

Adultery on the part of a married woman is a case in point. After a second offense, the man involved was generally killed by her husband and his kin and friends and she herself was either put to death or divorced (Teit 1900:326).

Similarly, shamans who were believed to have willfully caused the death of others through their malevolent supernatural powers were sometimes dispatched, with general public approval, by the surviving relatives and their friends (Teit 1900:361).

There were customary rules governing the construction of deer fences, the ownership of fishing sites, eagle nests, and various devices fashioned to take game, and the early picking of unripe berries. There was also a tribal conviction that members of other tribes should no make use of the natural resources within the Thompson territorial boundaries. But how infractions against these individual and public protective rights were punished is not reported.

Certain actions were widely condemned but evidently not punished in a physical manner. Such, for example, was infanticide: the killing of unwanted infants was strongly criticized but seemingly the person responsible received no punishment other than the usual overt and more subtle expressions of public disapproval (Teit 1900:305).

There is nothing to indicate that suicide was regarded as a private or public offense among the Thompson. Obviously the person could not be punished if the act were successful. But this is a convenient place, under Western conventions, to note that suicide was not unknown among the Thompson. In the Lower Division, suicide was more common among females than males, occasioned sometimes through disappointment in love but more commonly as a consequence of domestic troubles. The act was normally achieved by hanging. (Ray 1942:230-231)

Intentional, accidental, and unknowing transgressions against the supernatural world--guardian spirits, spirits at large, unnatural beings, and so on--were punished by illness, bad luck, and the like by these entities by supernatural means. As illustrated in the following section, the occasions for these action slips were virtually limitless and accounted for many of the misfortunes that beset a person in the course of his or her life.

Religion and the Supernatural

In this section are gathered data describing those areas of Thompson life that bore directly upon the supernatural world: on the traditional Thompson view of the world around them and of the land of the dead and especially on the relations of people to supernatural beings and forces.

World View

The earth, some Thompson believed, was square; others thought it to have been circular. The point where the Thompson River reached the Fraser River was regarded as the world center, for here Coyote's son descended from the sky. It was considered to be relatively level in the center, but rising to mountains and lakes, covered with clouds and mist, around the edges. East and west were the two important directions; four was the "mystic' number occurring in all ceremonials and myths. (Teit 1900:337)

The present shape of the world, its mountains, valleys, and so on, was made thus by several transformers, the greatest of which were Old Coyote and then Old Man. These beings in that very early period possessed both human and animal characteristics. Most large rocks of remarkable shape in recent Thompson country were thought to have once been these beings, transformed into stone. The origins or causes of many natural phenomena were explained in the rich body of Thompson myths: cold and warm winds, thunger (a grouse-like bird shooting arrows), fog, and the like. (Teit 1900:337-338)

The entire countryside in the late 1800s was believed to be still inhabited here and there by many mysterious beings. They lived in the peaks, lakes, creeks, and waterfalls of the high mountains. Strange and inexplicable objects (e.g., canoes crossing lakes without paddlers) and beings (e.g., grizzly bears that emerged from lakes) were sometimes viewed in those areas, but seeing them resulted soon in death. Some rock paintings, especially those overlooking water, were thought to have been the work of these beings. The Lower Thompson believed in mountain monsters and in man-like, harmless dwarfs that lived in steep cliffs and deep forests, that wandered around the mountains shouting or weeping, that fled from hunters but sometimes played tricks on people. They occasionally saw gaunt, naked, ghost-like beings that chased people. They knew of very powerful giants, dressed in skins and having a peculiar powerful odor, that lived in caves and ran down game with their superior physical abilities and sometimes chased and stole people. (Teit 1900:338-341)

Heavenly bodies--the sun, sun-dogs, moon, stars (including the Big Dipper and the Pleiades by the position of which the Thompson told time at night), and rainbows--were talked about and explained in many Thompson myths. (Teit 1900:341-342)

The land of the souls or ghosts of the dead (seemingly no distinction was made by the Thompson between the two) and the trail leading to it were known in great detail from reports of shamans who had made the journey in an effort to recapture the soul of a dying person. In a common view it had streams to cross, log bridges, short cuts (taken by shamans), climbing and descending stretches, and so on. Three venerable guardians were stationed at

different points along the route to turn back souls of people whose time had not yet come. Just before reaching the soul (or ghost) country the soul passed through a long lodge where it was greeted by the souls of the person's relatives and friends who had predeceased him. The land itself was a fine, warm land with plentiful food and much singing and dancing by the soul-people. (Teit 1900:343)

An alternate view of the trail to this afterworld had the soul crossing a lake in a canoe in dim light. Some Thompson held that there were animal underworlds, with concealed entrances, where the creatures were born, from which they wandered from time to time to the Thompson territory, and to which they sometimes returned in numbers, explaining why animals were occasionally scarce among the Thompson. (Teit 1900:343-344)

Prayers, Beliefs, Prescriptions, and Proscriptions

Thompson prayers and observances were all predicated on the existence of spirits (and so powers) that occurred through all nature: those associated with the stars, mountains, animals, trees, and so on endlessly. While most spirits were individual and personal, a few were so generally prayed to that they might almost be regarded as having been tribal supernaturals: the sun, dawn, rain, tops of mountains, certain lakes, the sweat-house spirit, and perhaps Old Man. The objective of these prayers was, in general, to fulfill the suppliant's desires and gain protection from harm. (Teit 1900:344)

Certain parts of high mountains, especially peaks, were considered the country of particularly powerful spirits. Visiting these areas, Indians appeased their resident supernaturals with offerings of a lock of hair, a bit of clothing, a piece of tobacco, or a stone and prayed for good weather and a successful hunt. Women picking berries or digging roots on certain mountains or coming in sight of certain lakes always painted their faces red as an offering in return for good weather and good fishing. (Teit 1900:344)

Roots growing near a lake with a strong and mysterious spirit should not be dug, nor should reeds and grass growing in its water be collected under pain of bad luck. Some of the first berries gathered in the season were offered to the mountains by an old gray-haired person who danced and held the first fruit out toward the mountain tops, and whose companions painted their faces red and danced. During a spell of heavy precipitation, Rain was prayed to in a simple ritual in which a stick heated in a fire was put to use. The Chinook wind received prayers. Every morning an old member of each household prayed to the dawn. (Teit 1900:345-346)

Beliefs that certain acts magically brought about certain specific consequences were widespread. Arrows with red tail-feathers of flickers shot at enemy houses would set them afire. Biting dog's ears to make the animals howl would drive thunder away. Killing a frog caused rain. Pointing at a rainbow resulted in sores on the finger. The number of beliefs of these kinds was evidently legion. (Teit 1900:346)

"Owing to the mysterious powers which animals and plants were believed to be possessed of, numerous customs were observed intended to propitiate them. Women, widows and widowers, and other unclean persons, had to treat

them with particular care." Teit (1900:346-350) illustrates this situation with many scores of examples. In summary, they had to do with how game (especially deer and bear) should be butchered, the meat handled and the offal disposed of. Deer meat, for example, was always taken into the hunting lodge through a hole in the back, not through the normal entrance, which was used by women. To insure hunting success, especially in bear hunting, a man sweat-bathed, supplicating his guardian spirit and sometimes the bear itself for a favorable hunt. Because bears could hear people talking, a hunter was careful not to mention a coming hunt. When one of these large animals had been killed, the hunter painted his face, sang the bear song, thanking it for allowing itself to be taken, and tied the skull to the top of a small tree. (Teit 1900:347)

In general, animals to be hunted had to be talked to and about with respect, and hunters observed numerous practices to assist themselves magically in attaining a successful hunt. Some creatures, however--snakes, frogs, shellfish, and particularly lizards--were abhorred and even feared. (Teit 1900:348)

Practices similar to those relating to deer, bear, and other important animals, though apparently far fewer, were followed in regard to fish. The Thompson, it is true, had no elaborate first salmon ceremonies such as were so common on the coast and among the Plateau tribes to the south. Still, children were not allowed to swim in rivers while the salmon were running. Sturgeon fishing gear was hung up in trees some distance from the house to avoid contamination. And there were other such fish-related procedures. (Teit 1900:348)

Many tabus regulating the eating of specific animals or parts of them were observed against untoward consequences for noncompliance. In some cases animals could be eaten by only one sex or one age group or only under certain conditions. In other instances certain actions were forbidden while others were enjoined to insure success. Such was the case with wild sunflower roots, which were difficult to cook. Women digging the root painted their faces and both while digging it and when cooking it abstained from sexual intercourse. By placing branches within the oven when putting it together and then pulling them out during the cooking operation and inspection their condition, women could determine how well the roots were cooking. Men were forced to keep away from these ovens while the cooking was in progress. (Teit 1900:349)

Guardian Spirits and the Winter Spirit Ceremony

Each person among the Upper Thompson had his own guardian spirit, acquired during the puberty rituals. According to Ray's (1942:235) Lower Division informant, the situation was different in his group: only a few boys and some girls were sent out as adolescents in search of spirit power. (For a description of the quest, see Boy's Puberty section above.) Furthermore, it was rare for a Lower Thompson to secure a tutelary spirit unsought. These data together can only mean, it would appear, that not every man and even fewer women acquired a spirit, unless they were obtained by gift from another person, by inheritance, or by some other route not noted by Ray. A few shamans among the Upper bands were thought to inherit their spirits

unsought in dreams and visions from parents who had been particularly powerful in the supernatural domain. (Teit 1900:354)

Certain animals (mammals, fish, birds, insects, etc.) and certain objects (both natural--like mountains, lakes, rocks, thunder, clouds, fire--and man-made) could become guardian spirits but their powers were somewhat differentiated (e.g., powers to assist in hunting or fishing vs. those to help in controlling the weather, seeing into the future, finding lost objects, fighting as a warrior, gambling, or exercising the functions of a shaman) and of different degrees of strength (grizzly spirit more powerful for hunters than coyote). By the same token, some animals were considered not to possess the ability to play the guardian role: e.g., chipmunk, fool-hen, butterfly. Only a few birds--as an exception the eagle was thought by the Lower Thompson to be an especially powerful spirit--and a very few trees could assume tutelary responsibilities. (Ray 1942:234-235; Teit 1900:354-356)

A detailed listing of the spirits that normally associated themselves with persons with the different important life emphases is provided by Teit (1900:354-356). The following does no more than illustrate some of these associations.

- Hunters acquired as some of their guardians the wolf, wolverine, bear, deer, elk, owl, hawk, deer's nose, canoe, and snare.

- Fisherman got, among others, water, loon, all kinds of ducks, many varieties of fish, canoe, paddle, nets, spear, and weirs.

- Gamblers had many different spirits and different kinds of spirits: e.g., natural phenomena, mammals (mountain goat was especially important among the Lower Thompson), bird (e.g., hummingbird), insects (wasp, ant, spider, etc.), and objects (sweat house, moccasins, dentalia).

- Warriors preferred the grizzly, hawk, eagle, thunder, various weapons (e.g., bow, arrow, knife), and especially sun.

- Shamans had as their favorite tutelaries heavenly bodies (e.g., sun, morning star); natural phenomena (sunset, thunder, fire, fog, snow-capped mountains, etc.); mammals (e.g., bear, wolf, otter, badger); specific birds, fish, and reptiles; parts of animals (bird down); trees; objects (e.g., tobacco pipe); parts of the human body; and death-related objects (ghost, grave rock mound, etc.). Certain spirits became "powers" to shamans alone. (Teit 1900:354-356)

Women secured as their guardian supernaturals the mountain goat, basket, basket kettle, root digger, and packing line.

It is apparent that there was an obvious association between many of the supernaturals--and the living or inanimate "things" of which they were spirits--and the interest focus of the group to which they became tutelaries: hunters had among their spirits the wolf, hawk, and owl; fishermen, the loon, fishhook, and canoe; warriors, blood and various weapons. This is not surprising, but two features of the guardian spirit world, as exemplified by

Teit's field roster, are remarkable. One is that parts of animals and things became tutelaries: e.g., deer tail, fir cone, gun nipple, and right side of an animal or object. The second: the spirit was an animal or object of an unusual or particular color, e.g., white stump, spotted dog, red fish, blue sky, and red cloud. (Ray 1942:235; Teit 1900:354-356)

All animals were thought to have names of their own, which the guardian supernatural could reveal to its human associate, giving the latter special power over the living animals. Knowing the sacred name of the grizzly and addressing the animal by this name rendered it gentle and harmless to the hunter. (Teit 1900:355)

Guardian powers were not vague, otiose, and fanciful supernaturals, but entered the daily life of the Thompson--at least the Upper Division--man and woman at every turn. Their intimate relation to the raiding party and its success or failure illustrates this point (see Hostilities section above).

The winter spirit ritual of the Lower Thompson was a simple one in contrast to the elaborate ceremony of the groups in the central and southern Plateau. It was no more than a one or two day session of spirit recognition in which each person in the gathering sang his own spirit songs, joined in brief periods of group dancing, and enjoyed a group feast. The entire community--men, women, and children--participated. (Ray 1942:253)

Shamanism

Both men and women among the Thompson became shamans through acquiring the proper guardian spirits and their powers. These were secured in essentially the same manner as "ordinary" guardian spirit powers: through a proper vision or dream. The tutelaries received were, however, at times specific shamanistic spirits. Typically shamans also obtained a greater number of spirits. At any rate, their close association with the supernatural world and the special non-natural skills they possessed set them quite apart from laymen. (Ray 1942:240; Teit 1900:360)

To secure these spirits involved training over a long period, sometimes years. Among the Lower Thompson a man could even secure a dead person as a tutelary by performing certain rites with a human skull. With the assistance of their spirits communicating with them through visions and dreams, they were able to perform their acts for good or evil. To mark their status Upper Thompson shamans walked with staffs and smoked pipes with carved or painted symbolic designs. Lower Division shamans wore eagle feathers in their hair, painted their face with certain colors and designs, sometimes wore their hair in special ways that announced their shamanistic powers, and walked more slowly than laymen. (Ray 1942:241; Ray 1900:354, 360)

As noted in detail below, illnesses among the Thompson were thought to have various etiologies. Curing specialization on the part of individual shamans was primarily by reputation for curing successes, less because they had received different kinds of curing powers from their tutelaries. Shamans were well compensated for their successful treatments, although they received no fee for their first case. They established the level of their fee on the basis of the patient's status. Sometimes they actually delayed their

treatment while they bartered for a more generous compensation. Further, they were "known" to have made healthy persons ill for the sole purpose of obtaining their property. In addition to a certain amount of greed as a driving force in the shamans' attempts to promote high rewards for their services, it was believed that the greater the payments to them, the more willing were their guardian spirits to work hard for cures when called upon in subsequent cases. Turn about, should they fail to effect a cure, they were compelled to return their fees to the kin of the deceased. It is not surprising that the prestige of shamans was on occasion greater than that of the "chiefs." At least among the Lower Thompson male shamans were more numerous than female ones, though the latter were considered as powerful as their male counterparts. (Ray 1942:240-241; Teit 1900:364)

Shamans were touchy about how others treated them. People, for example, did not startle them, or eat in their presence without inviting them to join in the meal, or allow their shadows to fall on them. It is not surprising that shamans were treated with respect.

Shamans had the power to cause sickness and misfortune in various ways. Even those who normally used their skills for good sometimes employed them for evil for the sake of gain or revenge. Using a deer nasal bone, they could "shoot" a person with their spirit. They could steal a person's soul and send it off to the sun, an act which, if not reversed, caused death. They could bewitch an enemy especially when the latter was eating, drinking, or smoking; for this reason people avoided doing thus in the presence of an unknown shaman. They could harm a person by using magically his nail clippings, a bit of his hair, or his weapons, unless the intended victim possessed greater supernatural powers than the shaman himself. They could make people fall ill by causing ghosts to frequent their houses. A shaman could cause a hunter to have bad luck by having a ghost accompany him on his hunt to frighten the game. Given this set of strong beliefs touching in such an intimate way on daily life, it is understandable that shamans were sometimes killed by relatives of persons who were thought to have died of witchcraft, if they suspected these wielders of great supernatural power as the perpetrators. In such instances, no compensation was claimable by the shamans' kinfolk. (Ray 1942:240, 241; Teit 1900:360-361)

If a shaman could be the cause of illnesses and misfortunes, so he had the power in many instances to cure ailments and reverse misfortunes. Sometimes more than one shaman worked on a case together or independently (Ray 1942:248). We have two accounts of Thompson shamanistic curing procedures: that of Teit recorded in the 1890s for the Thompson in general with special relevance to the Upper Thompson, and that of Ray secured in the 1930s for the Lower Thompson in particular. These are sufficiently different to merit individual summaries. Surely certain of these differences represent real group differences in procedures; others are undoubtedly only variations on the part of individual shamans on essentially the same procedures; still others are without question nothing more than informant data omissions on one side or the other. There seems to be no way to sort these out. The two accounts follow, the first, that of Teit, identified as "Thompson" and the second, that of Ray, labeled "Lower Thompson."

Summoned to treat a sick person, the Thompson shaman arrived with his face painted red and wearing various ornaments attached to his clothing:

eagle feathers, pendants of small animal skins, and deer hoof rattles around his knees and ankles. He summoned his guardian spirits one by one, requesting their help in the case, until at last one agreed. He was then able to announce his diagnosis of the ailment. (Teit 1900:361-362)

Before commencing the treatment, the shaman among the Thompson painted his hair and sometimes other parts of his body, and removed his upper clothing. Frequently he smoked his long shaman's pipe with its eagle-feather pendants by which he communicated with the spirit world. From his mouth he sprayed over the patient water taken from a nearby basket. He performed remarkable feats to demonstrate his supernatural powers: he might make the water in the basket increase, decrease, or boil; or might swallow glowing embers from the nearby fire; or might perform acts of slight-of-hand or ventriloquism. During much of the time he sang the song of his guardian spirit, keeping time with his feet and occasionally imitating his spirit by voice and gestures. He talked with his spirit in speech rather unintelligible to the audience. He sometimes danced in a jumping, jerky manner. He blew often on the patient's body and repeatedly passed his hands over it. Finally he attempted to suck the illness-causing agent from the person and, if successful, spat it out and exhibited it to the audience. It proved to be a deer hair, if the patient had failed to observe some hunting custom; blood if guilty of violating the tabu against associating with a menstruating woman; a bone if bewitched by another shaman. This object was disposed of by being thrown far away. At times, following his cure, he instructed a patient to paint his body in a certain way, to eat certain foods, or to give his (or her) children certain names, all based on dreams in which he was provided such advice by his spirit "power." (Teit 1900:362-363)

In cases of serious illnesses the Thompson shaman sometimes determined the cause to be the departure of the soul--of its own accord, by having been sent to the sun by a hostile shaman, or by being drawn away by a dead person. He was able to see it and overtake it on its journey to the soul-world if called to the case within two days of its departure. Wearing over his head a conical mask made of a mat, he pantomimed his spirit's search for the soul and, if necessary, its journey to the soul world to recapture it. He, through his spirit, first visited the group's graveyards and generally found the errant soul at one of them. If unsuccessful in this endeavor, he "left" for the soul country, taking shortcuts to try to head it off, jumping rivers and other trail obstacles, searching, talking with souls he encountered, and so on. If his efforts succeeded, he captured the soul and fled with it in his hands, fending off pursuing souls by stamping his feet to make his deer hoofs rattle and by fighting off assailants with a club he carried for this purpose. On his "arrival" back in the dwelling, he returned the soul to the person through his head. (Teit 1900:363-364)

In Lower Thompson villages when the services of a shaman were thought required, a messenger was dispatched to solicit his services. Gifts were taken to him then and others were promised. If the shaman consented to take the case, he went immediately to the sick person among his friends and relatives, who were expected to remain silent during the proceedings to follow. Without delay he began the treatment, washing his hands in cold water brought for this purpose and smoking as he sat beside the patient. (Ray 1942:242)

The first step in the treatment--an essential one--was the diagnosis of the ailment and its cause. To secure their aid, the shaman summoned his spirits by name. He placed his hands on the patient's body, blew and sprinkled water on him, and sang. Once the cause had been determined, he described it to the sick person and those in attendance, sometimes even naming the hostile shaman if the problem was believed to be shaman-initiated. He described the treatment he was to undertake and predicted its ultimate success or failure. (Ray 1942:243)

Curing was accomplished by the Lower Thompson in one of two rather different ways: by "drawing out" the illness agent or by removing it by sucking. On what basis the choice was made between these two techniques is not made clear by Ray's published data. To draw out the disease object the shaman repeatedly passed his hands over the ill person's body, though without touching it, blew on it, and finally removed the sickness, sometimes in parts, in the form of a foreign object. On the other hand, the sucking process consisted of two components. First blood was sucked out of the patient's body through a tube, the end of which was placed at the site of the intrusive object, commonly the temples, as determined during the diagnosis. The blood was allowed to flow from the tube into the shaman's hand. He then thrust his hands into the water that had been brought to his side when he had first arrived. This accomplished, the offending object itself was sucked out. Once this was in his mouth, the shaman lost control of his actions to such an extent that he had sometimes to be held by his assistants. The sickness--the object removed by the "drawing out" or sucking technique--was disposed of in various ways as noted below. (Ray 1942:243-244)

Illnesses among the Lower Thompson caused by a spirit, sent by a hostile shaman, invading a person's body could be cured only through its extraction by a shaman of greater spirit power than the malevolent one. The spirit took the form of a small object visible when removed to laymen as well as to the curing shaman. Once in the latter's power, it was sometimes simply blown back to its owner, resulting in his illness. More commonly it was held in the shaman's hands and "cut in two" by a helper, causing the death of the enemy shaman, or it was thrown into the fire or into water with the same result. (Ray 1942:245-246)

Sickness was also thought by the Lower Thompson to be brought about by a natural object--a hair, sinew, bone, pebble--being sent into a person by an evilly disposed shaman. Again, curing required its removal. This object, like the spirit in material form, was visible to both laymen and the doctoring shaman. (Ray 1942:246)

Illness sometimes resulted from the theft of one's guardian spirit by a malignant shaman. For recovery, the spirit had to be retrieved by a curing shaman and restored to the patient by being "rubbed into . . . [his] head." (Ray 1942:246)

Other pathological conditions were diagnosed by Lower Thompson shamans (as by their Upper confreres) as the consequence of the loss of a person's soul, as when stolen by an enemy shaman. Cure was effected by a ritual journey on the part of the curing shaman to the land of the dead in pursuit of the soul. Wearing a special hooded cloak fastened with a wooden pin, the shaman lay on the floor and went through a pantomime journey, recounting to

the patient and audience his experiences en route and naming the places visited. Occasionally the soul was not encountered before it managed the entire journey to the spirit world. If the shaman succeeded in overtaking it, he captured it on his cloak pin or between his hands and at once returned to the living world. Back from his mock journey, he bathed and blew upon the soul and returned it to its owner. (Ray 1942:246-248) While details differ, this curing pattern is very like that described above for the Upper Thompson under similar etiological circumstances.

Shamans were called upon, or took it upon themselves, to perform other services for persons or, in public spirit, for the larger community. Sometimes they were asked to cure especially valuable dogs and horses, using the same procedures followed in human cases. Occasionally through information received from their guardian spirits, they saw epidemics approaching as a fog blanket. To fend off this terrible danger, they had the people paint their faces and join them in singing their--the shamans'--guardian spirit song and dancing. From the food the people brought, they sacrificed bits to the epidemic spirit, and they and the people with them then ate the remainder. (Ray 1942:241; Teit 1900:364)

When game was scarce, shamans carried out a ritual to remedy the situation: they sat naked near a fire all night to secure a vision. In the morning after they and all the hunters with them had sung and washed in a nearby stream, the men went hunting where instructed by the shamans' vision. Some shamans had the power to look into the future--to tell whether an ill person would recover, what the weather was to be, whether the berries and salmon were to be abundant. Some, with their spirit power, could control the weather. Others could lay ghosts. (Teit 1900:364-365) With all of these specialist supernatural skills, it is clear why shamans were without question the most powerful members of a community, why they were both feared and relied upon for essential services, why many became wealthy, and why, in some measure, they were overtly or sub rosa at one another's throats.

Frequently shamans had contests to determine which of them possessed the greatest supernatural powers. These were very dangerous affairs, for losers either died or were somehow disfigured or crippled as a visible mark of their defeat. (Ray 1942:248; Teit 1900:363)

Magic

Charms which, in some non-natural manner, acted magically to produce the desired results were used by the Thompson to secure badly needed advice on some important matter, to protect hunters from danger, to cause lightly wounded game to die quickly, to change luck from bad to favorable, to obtain wealth, affection, or love. A few illustrations drawn from Teit's roster must suffice.

To locate game in bad times, a Thompson hunter noosed a fool-hen, cut its head off, and, praying, tossed its head up in the air. When it fell, its beak pointed in the direction of game. To protect himself from injury, a grizzly hunter wore the tail of a "double-headed" snake, the tail having two eye-like protuberances. To keep a wounded deer from running far, the skin of a mouse found "on the higher mountains" was placed on its track. To change

for the better a gambler's fortune, his wife hung a stone hammer above his pillow and turned it rapidly around. To gain affection, the male and female of a certain plant, as the Thompson identified sex in plants, were bound together with a hair from the man and one from the woman and were buried. (Teit 1900:370-371)

Magical means were used by the Lower Thompson to cause an out-of-favor person to fall ill. To achieve this goal, fingernail fragments, bits of hair, and the like from the person to be damaged were used, even on occasion scraps of his clothing. As already noted, illnesses of this etiology were treatable by shamanistic intervention. Charms identical or similar to those above and minor acts the efficacy of which derived from their magical powers were also practiced among the Lower villages. But mentioned specifically for this downriver group are only love magic and magical acts for bringing rain (using a beaver skin) and changing the weather (making use of a mountain goat skin). (Ray 1942:254)

Omens and Related Notions

Dreams were the result of the soul leaving the body, walking about the countryside, and experiencing whatever the person dreamed about. They were regarded as important indicators of things to come, the interpretation of them in their smallest detail being of great interest. Dreams of dead or sick persons or of a person falling, paddling a canoe, walking, and so on were interpreted differently depending on the immediate context: e.g., whether they were naked or clothed, moving toward the east or west, heading downstream or up or coming ashore, fording a stream or disappearing in the distance, climbing a hill or descending. Unfortunate consequences predicted on the basis of a dream could, at least in some instances, be countermanded by painting the face the following morning, sweat bathing, praying, and taking other recognized positive actions. (Teit 1900:372)

Happenstance events of an unusual sort, as well as some dreams, prophesied death: an orphan's itching head, the special taste of a pipe, a peculiar cry of an owl or coyote near a dwelling, a dead mouse on the trail, a repeated howling of a dog, and many more. Certain actions were to be avoided lest they themselves cause untoward consequences: e.g., to cut a buckskin thong from around the neck--symbolizing cutting one's throat--would bring about the person's violent death. If a person found a "lightning arrow-head"--a large projectile point or knife of unknown origin to the Thompson and widely found in their country--and took possession of it, he would ultimately go crazy. (And yet oddly they were said to have been picked up and reworked into new points.) (Ray 1942:233; Teit 1900:241, 372-374)

Some objects were by their nature unclean, contact with them to be strictly avoided to the degree possible. Corpses were especially so. Burial rites were designed to counteract these contaminating influences. To take a body across a river resulted in no fish catches for four days. A drowning caused a salmon run to cease for a time. (Teit 1900:374)

Thoughtless or uninformed actions of many other kinds produced unfortunate but less disastrous consequences. Bathing above a salmon fishing platform adversely affected salmon for a time. Numerous acts affected the

weather: mention of the coyote in winter by children, burning wood from a lightning-struck tree, and burning the hair of a bighorn sheep or mountain goat all brought cold weather. (Teit 1900:374)

Certain happenings or actions were merely and sometimes neutrally informative. For instance, sneezing meant that someone was talking about the person. The death of a person and the birth of twins and "Indians intruding on the haunts of spirits in the mountains" all changed the weather. Actions of other kinds--like burning beaver hair--predicted hot weather, wind gusts, or especially rain. The behavior of certain animals and the condition of certain plants also possessed predictive value: multiple berry crops in a single season foretold a hard winter to come; early migration of hares to lower ground as well as an early changing of their coats indicated an early winter. (Teit 1900:374-375)

Other omens foretold favorable events. A dog lying with its lower jaw on its forepaws indicated a visitor bringing food or presents. Many red worms in the wild cherries were believed by the Lower Thompson to predict abundant salmon. A sudden snapping of a morning campfire told a hunter that he would kill deer that day. (teit 1900:373-375)

Omens of these and doubtless other varieties must have been legion among the Thompson.

Prophets

It is unclear from the ethnographic record whether there were Thompson religious prophets, but such persons occasionally traveled through Thompson country from outside, each carrying some message from the spirit world they had visited in a trance and from which they claimed they had just returned. People listened respectfully to their discourse and dances were held wherever they went. (Teit 1900:365)

Some persons prophesied in secular matters through visions. They foretold the coming of Whites, the approach of epidemics, the introduction of dishes, stoves, sugar, and so on. One such successful prophet was a Lower Thompson chief who journeyed through the countryside about 1855 or before, telling of great changes to come. He, Teit concluded, received his information from Hudson's Bay personnel. (Teit 1900:365-366) It will be remembered from the preceding Chilliwack chapter that Fort Langley was established by the Company on the lower Fraser River in 1827.

Souls, Ghosts, and Unnatural Beings

Every person, animal, tree and other plant, and rock as well as fire, water, and so on was thought to possess its soul, seen only by shamans. On death or other form of destruction, all souls, with certain special exceptions, journeyed westward across a river to the underworld, retaining their earthly form. Humans there enjoyed a life without illness and with plenty of deer and berries. (Ray 1942:232-233; Teit 1900:357)

Each soul had a shadow that remained in the living world as a ghost for a short or sometimes very long period. The latter was the case, for instance, if a person were killed. While they were with the living, ghosts haunted the vicinity of the burial place, trying to bring fatal illnesses to their surviving relatives so their souls would join them in their journey to the afterworld (Teit 1900:357-358)

Ghosts in the Upper Thompson country were ordinarily invisible to all but shamans, dogs, and horses, appearing even to them, however, only at night. Whistling at night was carefully avoided lest it attract them. Their appearance and behavior were well known: they were often naked; they were light-gray in color with mouth and eyes like blue fire. They leaned forward in a jerky walk, cried out humanlike when shot with an arrow, followed people but insisted in keeping to the trails, sometimes ate and drank with the living and on leaving stole their souls, and were repelled by a person's smoking. (Ray 1942:232; Teit 1900:358)

To the Lower people, on the other hand, ghosts appeared only in a frightening non-human form, lightning-like or flame-like, but still emitting characteristic gnawing or other sounds. They were seen especially at the site of deaths. (Ray 1942:232-233)

The souls of suicides and persons who had been very evil did not go to the afterworld: shamans simply never saw them there. But whether they were lost, died, or wandered forever on earth was not known. The future of souls of people who drowned was similarly enigmatic. Souls of children who died were thought to be reborn in the mother's next child of the same sex. (Teit 1900:358-360)

Souls were believed to leave living persons sometimes for some reason, causing unconsciousness and ultimately death unless they were returned, or were recovered and brought back by a shaman before they reached the spirit-world. (Ray 1942:232; Teit 1900:360)

Certain localities on rivers in Lower Thompson country were regarded with particular awe. Presumably this was because they were believed to be the residence of unnatural beings or potentially dangerous spirits although this point is not made explicitly by Ray (1942:256). In any event, these places--better, their non-natural dwellers?--were propitiated and their status was recognized by travelers maintaining silence in their vicinity.

Diversions

In this section are discussed, to the degree that data exist, what might be termed the diversions of the Thompson, although every one of these action categories had its more serious cultural components, especially religious elements. Further these activities did not exist as separate cultural expressions. For example, singing and dancing were closely linked. Illustrative of this linkage are the observations of Simon Fraser. On his summer journey through the Fraser Canyon in 1808, Fraser (1960:93, 97, 116) mentions being entertained on three occasions by Lower Thompson--"Nailgemugh" to him--villagers "singing, dancing, &c." Similarly, the graphic and plastic arts were expressed as intimate components of weapons and utensils,

dwellings, religious objects, and so on. And myths and legends, while diversions for the adult narrators and for the auditors as well, were also the means of inculcating in children the traditional wisdom of the tribal past, the way the physical environment of mythic times was brought into its present shape, and the ethical precepts and sanctioned behavior of the group.

Art

Aspects of the plastic and decorative art of the Thompson, as known in the late 1800s, were described by Boas (1900) in an addendum to Teit's general Thompson ethnography. The data that follow are largely extracted from this source.

One of the more notable features of traditional Thompson art was its poverty in the carving domain. Only three examples of utensils with associated carvings are described by Boas (1900:376): a stone vessel in frog form, another vessel with a snake coiled around it, and a spoon with an animal's head at the end of the handle (Figures 3-10, 3-12). A stone head, seemingly a bowl of some sort found "24 miles above Yale" and therefore near the North Bend-Boston Bar sector of traditional Lower Fraser country, is figured by Harlan I. Smith (1907:428 Figure 192) (Figure 3-28). A few hammerstones ornamented with animal heads at the knob end of the handle were in use in Teit's time. By 1900 only a few stone artifacts with associated carvings had been discovered archaeologically in traditional Thompson territory and a few of bone, suggesting that plastic art was no more common in prehistoric times. (Boas 1900:376)

A very few human and animal carvings in wood were erected over graves. But all were crude, unlike the elaborate and technically refined carvings on the Northwest Coast. (Boas 1900:377) Fraser (1960:98) briefly describes some of these carvings observed in a Lower Thompson village in the Spuzzum sector: the boards and posts of the tomb were carved with beasts and birds "in a curious but rude manner," all rather well proportioned. The carving of these representations must have been laborious and time-consuming, he speculates, without proper metal tools.

Thompson decorative art conceived of animals as adapting themselves to the form of the implement to which it was applied; hence it was quite unlike that of the Northwest Coast which consisted predominantly of symbolic designs painted on surfaces to the shape of which they bore no relation. The symbols of Thompson graphic art were largely highly conventionalized, not realistic. A cross, for example, might represent two trails crossing; a single line, one trail; a dot, an offering; and so on. The same symbol, however, differed in its meaning depending on the implement which it ornamented: a design on a pipe might signify a lake with a river flowing into it, but on tongs it might represent a basket and ladle. On the other hand, the Thompson tended to paint designs with the same meaning on different examples of the same implement: e.g., lance heads often received skeleton patterns. Designs depicting guardian spirits were very common, endeavoring to endow the weapons or implements with special supernatural power. Clothing of men was frequently painted pictographically as instructed in the owner's dreams. During their puberty ceremonies, boys often painted their shirts and blankets in the same way, representing the mountains, for example, over which they

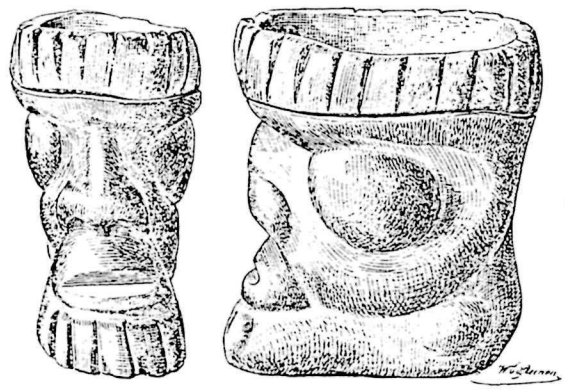


Figure 3-28. Sculptured stone bowl, about 5 inches high, discovered "24 miles above Yale" (Smith 1907:428 Figure 192) and hence about in the middle of the Fraser Canyon.

traveled in their guardian spirit search and others where they resided when trying to acquire a spirit "helper." Clubs were often decorated with patterns depicting the owner's guardian spirits; gambling implements with designs to bring good luck; digging stick handles with patterns representing dreams. Shamans' pipes were often etched with animal or bird patterns. These highly conventionalized symbols were rarely adapted to the shape of the object to which they were applied. (Boas 1900:377-382)

Putting aside the common ornamentation with feathers, hair, elk teeth, claws, beads, shells, quills, and the like, it is worth special note, in light of the paucity of art objects per se, that tools, implements, and other items of material culture were often adorned with simple etched or painted patterns, geometric or representational. Some of these are mentioned above. References to this type of art are legion in Teit's ethnographic account. A few of these are the following: bows with painted patterns, spears with red and white painted skeletons, wooden clubs with simple linear designs representing ribs, hide shields with painted suns, wooden-rod vests painted with animal and geometric designs, hot-rock tongs with geometric and realistic patterns, horn (antler?) or wooden tweezers and antler arrow flakers with etched dot and circle designs, gaming pieces variously ornamented, and so on. And, of course, the basketry with their geometric imbricated designs and wild-goat hair robes with intertwined colored thread patterns. (Teit 1900:182, 188, 191, 199-202, 205, 227, 240, 263-266, 272-273)

In the late 1800s many pictographs existed in Thompson country. Most had been made by boys and girls during their puberty rituals. Teit's Thompson informants provided him with "readings" of many of these, indicating that the pictographic tradition was still alive during their youth (Boas 1900:381-382). Many pictographs existed on Stein Creek, a mountain stream that enters the Fraser River about 5 miles above Lytton. This was a favorite sector for seeking guardian spirits, according to Hill-Tout (1900:505-506), of the shamanistic variety. These rock patterns were made by these aspirants, sometimes as high as 20 or 30 feet up the face of sheer cliffs.

Dance

Dancing among the Thompson was both a social and a religious event, or at least those described in the following paragraphs were such.

During the course of the year, the people of each neighborhood met from time to time for an entire day to feast, dance, and pray. In winter the dancing was in a large semisubterranean dwelling; in the open seasons, the dances were held in certain places through the tribal territory where the people could easily assemble and the land surface was suitable, as on sandy flats beside a large river. In preparation, the surface was smoothed and, if too sandy, was sprinkled with clay brought from elsewhere. (Teit 1900:350-352)

The people assembled early in the morning, finely dressed and wearing wide belts, headbands often ornamented with dentalia, and their ornaments. All faces were painted in various colors and patterns: all red, red vertical stripes (chiefs), black (warriors?), red with micaceous spots (some women),

alternate stripes of red and yellow, etc. With them each woman brought food to share. (Teit 1900:351-352)

The dances, beginning at sunrise, involved moving in a circular fashion in three concentric rows. They were led by a chief, who prayed and kept time, and by an assistant chief. The foot movements were accompanied by singing, praying, and symbolic arm and hand movements. Visions were sometimes experienced. During the first of the four morning dances, young men and women were allowed to touch one another to indicate their desires for marriage. At the close of these four dances, a communal feast, accompanied by prayers, was held with some of the food that had been brought by the women. Another set of four dances took place during the afternoon. These were followed by a second feast. Finally at sunset, a third series of dances occurred. Upon their conclusions, the people dispersed to their own houses. (Teit 1900:353)

A number of other dance types were enjoyed by the Thompson in connection with other sorts of occasions. One or more women or sometimes a man simply rose and danced, at the close of which they gave presents to the spectators for watching them perform. Birds (like the prairie chicken) and animals (e.g., the hare) were at times imitated in their normal actions of feeding and so on, creatures selected because their activities were suited to dance imitation and also because they were rarely the guardian spirits of anyone. During dances it was common for performers of both sexes to put bird-down in their hair (but not eagle-down which was reserved for shamans) and to paint the face red or in perpendicular red stripes. (Teit 1900:385-386)

Music

The Thompson had very few musical instruments. Drums were used, however, to accompany dancing and singing. They were of a large circular shape, the frame of birch or hardwood and the single head of fawn skin, preferably previously used as clothing. Generally the head was painted with symbolic designs. To the rim, deer hoofs were attached to rattle. These drums were beaten by hand or with a stick with the end wrapped with skin and packed with deer hair and adorned with pendant hawk feathers. Although Teit fails to mention them, drums consisting of a raised plank or log placed on the floor are reported by Ray (1942:186) as having been used by the Lower Thompson. Sticks were also beaten together or against the ground to accompany dancers. (Boas 1900:299, 383-385; Ray 1942:185-187)

Deer-hoof anklets were worn in dances. This according to Boas (1900:384, using Teit's data) was the only Thompson rattle, but Ray (1942:186) states that the plain wooden rattle was also a Lower Thompson instrument.

Apparently the Thompson had neither whistles nor flutes as musical instruments (Boas 1900:383-385; Ray 1942:186-187). A leaf whistle was in use, however, in calling game, hence was not a musical instrument in functional terms (Ray 1942:187).

The many songs of the Thompson were classified by them into the following principal categories: lyric songs dealing with love, valorous

deeds, etc.; dance songs; war songs; shaman's songs; sweat-lodge songs; mourning songs; prayer or religious songs; gambling songs used in the stick game (lehal); and cradle songs. (Boas 1900:384-385)

Feasting and Social Visiting

Feasts occurred in cold weather when the winter dwellings were occupied. Many were simply social gatherings to which neighboring families were invited to enjoy good and plentiful food and to talk. Others were more formally designed, though still social in their character. These consisted of a visit by one or more families as a group to a friend in the same community or in another village. A messenger, generally a women, was sent ahead to announce the coming visit, often leaving a present upon her departure. The host-to-be, with the aid of his friends, gathered and prepared the necessary food, especially quantities of a dish made of roots, berries, black lichen, and deer fat. Soon after their arrival, the visitors were feasted. On their departure after two or three days, they left presents for those who had assisted the host with the food and other preparations. (Teit 1900:296)

On other occasions three or four men went to a friend's semisubterranean house about bedtime, lowered a stone decorated with feathers and with a cedar-bark "slow-match" attached down the smoke-hole entrance, and, singing, swung it evasively from side to side. When it was finally caught by the occupants, the visitors threw in bundles of food, clothing, and the like while those inside scrambled for them. At some later date, the visit was returned in similar fashion. (Teit 1900:297)

The practice of wealthy persons giving large feasts of horse meat and distributing property as often as they could--a kind of attenuated "potlatch"--reached the Upper Thompson about 1850, though it had been adopted by the Lower Thompson somewhat earlier. Providing these occasions gained a person a great name for liberality and wealth. They were, however, not potlatches in the coastal sense: they were small and localized and the articles given away were presents, not calling for return gifts of any kind. They were apparently also devoid of the obsessive element of competition and of the ceremonial aspects of the coastal potlatch. In earlier times a wealthy man gave feasts to his friends in an open house arrangement, with visiting strangers invited to participate and receive small presents. One may suppose that the later, larger feast and gift distribution pattern was a further development of this earlier practice of generosity, with some knowledge of, and under the indirect influence of, the far more elaborate, complex, and formalized potlatch of the coast. (Teit 1900:297)

Games and Athletic Activities

Teit (1900:272-282) describes many games of the Thompson in considerable detail. The following is an abbreviated summary of his data.

Men played a game with carved or painted sticks. In each set of sticks two were encircled to mark them. Each of the two players spread his gambling mat before him and placed on it a bundle of dry grass. The beginning player took one of his marked sticks and an unencircled one, rolled them up in the

grass, and placed them on the mat. His opponent then guessed which of the two sticks was the unmarked one. And so it went, score being kept with counters. (Teit 1900:272-273)

Women enjoyed a game played with beaver-teeth dice, marked variously on one side. They were thrown down on a blanket or skin and were counted according to how the markings fell. (Teit 1900:272)

Men played a ring and spear game. The ring was a stick bent into a circle and covered with buckskin, the unfilled space being packed with sand to make the ring solid and heavy. The ring inside the central hole had sewed to it six variously valued counters. The player rolled the ring, ran after it, and threw his small spear so that the ring would land on it. The value of the throw was determined by how the counters lay on the spear. (Teit 1900:274)

A game played outside in good weather but inside the dwelling when cold was enjoyed by children and occasionally adults. It involved rolling a ring between two rows of players, while these latter threw feathered darts with a sharp point at the ring as it passed. The objective was to strike the ring and have the dart penetrate it. (Teit 1900:275)

In another game a small, finger-sized ring was placed on the ground about 10 feet from the players, each of whom threw two feathered darts at the ring, attempting to drop them into the center of the ring. (Teit 1900:275)

A very popular game was the "guessing game," "stick game," or "lehal." It was played by both men and women among the Upper Thompson, but rarely by women of the Lower Division. Players knelt in two facing rows. Each side had two short "bones," one marked and the other not. The "hiding side," while beating time with sticks and singing their gambling song, passed the bones through their hands for a time and then invited their opponents to guess which hand held the unmarked bone. (Teit 1900:275-276; cf. Hill-Tout 1900:507-508)

A game with birch bark cards, marked with dots, was played according to Teit (1900:276-277). I assume that this was not a traditional precontact diversion, but cannot document this fact.

Two games were played with a smoothened, round ball fashioned of a knot that grew on fir trees and sometimes covered with buckskin. One of these games resembled roughly our baseball. The other was a form of lacrosse, played by two teams with crooked, webbed sticks to catch and throw the ball, the aim being to get the ball over the opponent's goal. (Teit 1900:277-278; cf. Hill-Tout 1900:507)

Boys' games included trying to catch a grass ball, tied to a string, with a wooden pin as the ball fell; throwing pebbles over ice and trying to strike stones on the smooth surface; and catching a bouncing pebble, covered with skin, with a handled net as it reached the bottom of a hill. (Teit 1900:278-279)

Smaller boys and girls played "cat's cradle," creating "deer," a "conical lodge," a "man stealing wood," and so on. They enjoyed

hide-and-seek. They played with slings, tops of wood or bark, "bull-roarers" consisting of a piece of wood that produced a humming noise when swung rapidly from the end of a cord, and birch-bark or fir-bough toboggans. They made figures of birds, canoes, and the like on the ground with pebbles and they drew figures in the sand with sticks. Boys tried to spear balls of grass as they floated down a swift stream. The games children played were many and varied. (Ray 1942:184; Teit 1900:281-282)

Men, women, and children all enjoyed swimming, virtually every person possessing this skill, some the ability to swim long distances.

Men shot arrows at the nock of an arrow previously shot into a sandy bank, occasionally as far as 100 yards distant. Adult athletic games included foot-races, high running jump, long running jump, wrestling, and lifting of heavy stones. These competitive events were sometimes intertribal affairs. Thompson parties, for example, at times journeyed to a famous sporting center of the Upper Okanagan near Penticton to take part in such activities. The "tug-of-war" game was a common diversion. Betting accompanied all of these athletic competitions. (Ray 1942:182; Teit 1900:279, 280-281, 1930b:261)

Smoking

The smoking of wild tobacco, which grew in the warmest valleys of Thompson country, was an old practice of the men. In theory the use of the plant was considered the privilege of persons possessing supernatural power, shamans being the most notable members of this group, but since every (or virtually every) man had such power, smoking was practiced by a great many men. Women, however, seldom or never smoked. The Lower Thompson smoked much less than the upper bands of the tribe. (Teit 1900:302, 350)

The tobacco leaves were gathered, dried, and greased. When used, they were broken up and mixed with dried and roasted bearberry leaves. (Ray 1942:187; Teit 1900:300)

Tubular pipes were in use in the real old days. In more recent times pipes were L-shaped and generally of stone, though occasionally of sagebrush root or a buck's antler. Typically they had high, narrow bowls and long stems of maple wood. Occasionally they were provided with double bowls. Stone bowls were sometimes carved to represent heads of animals, birds, or men and were decorated in other ways, as with beads and feathers. They were kept in tubular buckskin bags with an opening in one end; these bags, sometimes fringed and ornamented with porcupine quills, were hung around the neck.

The social custom of passing a pipe around among all the men in a circle was common before speeches and discussions. Often two friends, meeting, smoked together briefly as a sign of good will before beginning their conversation. Smoking as a simple pastime was especially an evening practice and one enjoyed while storytelling. (Ray 1942:188; Teit 1900:300, 302)

A special rite was carried out by the occupants of each lodge when the first tobacco of the season was gathered and smoked. All the men and women

who smoked sat in a circle while an elderly man in the center cut up the new tobacco, mixed it with roasted bearberry leaves, and filled a large pipe with the material. The pipe was sent around the circle, each person briefly smoking it ceremonially. (Teit 1900:349-350)

Myths and Legends

Several early and extensive collections of Thompson traditional myths and legends have appeared in print. Particularly notable are those of Hill-Tout (1900:534-583) and Teit (1898, 1912, 1917, 1937).

The mythology of the Upper Thompson, Boas (1898) has written based on his analysis of about fifty tales recorded by Teit (1898) in the 1890s, exhibits an unusual interest in mythic transformers and their activities. There were four such beings that, in their own ways, changed the shape of the world: Coyote and the three brothers Qoā'qLqaL (the most important of the trio), Kokwē'la, and Old Man. In general, they undertook their transformations, by fair means or foul, largely to serve their own personal and sometimes selfish ends. These changes were sometimes to the benefit of mankind to come, but others were for the worse. These beings were not, therefore, truly benevolent, altruistic entities, motivated by a desire to remake the world into a more pleasant and fruitful place.

Of these four transformers Coyote was the most important to judge from this early mythic corpus. A being of great power, he was responsible for many of the physical features of the countryside, some, largely incidentally, to the advantage of future generations. In many of his activities, on the other hand, he proved to be a sly trickster with motivations and behavior contrary to the traditional Thompson ethical canons. The Coyote mythology was, in Boas' view, both coastal and Plateau in its affiliation.

Of the three brothers, Qoā'qLqaL was no more altruistically intentioned than Coyote. The myths involving this supernatural personage were linked, Boas believed, to the mythic tradition of the lower Fraser peoples and were brought to the Thompson from that area in somewhat simplified form. Old Man appears in few elaborate Thompson myths and these seem related to the tales of the Kutenai of the southeastern corner of British Columbia and to those of the northern Great Plains region. Where Old Man appears he is often in power contests with Qoā'qLqaL. While most of the Thompson myths in this early Teit compilation are palpable borrowings from other tribes, they exhibit modifications in detail that adapt them more closely to the physical environment of Thompson country and to the tribe's cultural background.

Clearly in this analysis Boas' interests focus on the transformers' roles in making the world as it was in Thompson traditional times--or from the Thompson point of view on how and why prominent physical features of their territory came to be--and on area-wide diffusional relationships of the myths. In a recent evaluation of Teit's myth recordings, Maud (1982:68-69) argues inter alia that his myth assemblage of 1898 was collected with Boas' current interests in mind and that it is atypical of Thompson myths as a whole. The Thompson, Maud contends, were not nearly as concerned with etiological explanations of terrain features and the actions of natural forces--like thunder--as this particular collection suggests.

So far as Teit (1900:178) was aware, the Lower Thompson had no migration legends. In relation to this fact and its possible interpretation, a cautionary observation is in order. The absence of such traditions does not necessarily signify a population long resident in a particular area. Nor, contrary to some ethnographic opinion in the past (cf. Turney-High 1937:11-12), does the presence of migration accounts mean the reverse. Myths, legends, and traditions were such only, and may be historically essentially factual records of past events, or contain germs of historical fact, or be entirely fanciful. Only other kinds of evidence of a cultural, linguistic, archaeological, or biological-genetic sort afford commanding documentation in regard to human population stability and movements.

Unfortunately neither time nor space permits summaries and analyses of this extensive body of mythology. A careful sifting of these myths (and likewise of the published Thompson traditions) for bits of cultural information and traditional behavioral insights, the introduction of these data fragments into this present study, and a comparison of this information with the ethnographic facts collected by Teit, Hill-Tout, and Ray to illustrate possible Thompson culture change through time would be a useful and perhaps even revealing exercise. As Teit (1930c:416) points out, for example, not a single reference to facial and body tattooing occurs in his myth collection, a curious fact considering its universal practice within the tribe in early traditional times.

Cognitive Culture

This section deals with those elements of Thompson traditional culture that are largely mental in their base or that rely importantly on a background of "observational" knowledge of a weakly emperical variety. Such, for example, are their notions of time and distance, their patterns of conventional gestures and signs, and, partly for lack of a more appropriate location within this ethnographic summary, their medicinal drugs, practices, and beliefs, some of which were surely efficacious while others were plainly nostrums (like folk-medicine everywhere), the potency of which, if such there was, was mental.

Time and Distance Units

The year was divided by the Lower Thompson into both lunar months and seasons. The latter recognized the major temperature and weather changes through the year. The former bore names indicating typical and important human activities associated with the period and, during the open span of months, the foods secured. These food-referencing designations underscore the absolutely fundamental importance of the subsistence quest to the people as opposed, for example, to one that might call attention to significant social or religious activities.

It is of particular interest that considerable differences prevailed between the moon designations of the Lower Thompson and those of the Upper Division, and further in regard to the moon that marked the year's beginning (Teit 1900:237). One may wonder if these variations are not somehow tied to subtle local environmental differences in the timing and importance of

various regularly-occurring natural events in the various population clusters.

In general the Thompson, apparently including the Lower Division, commenced their year with the beginning of the deer rutting season. But many Lower people began theirs with the mountain goat rutting time. Also as exceptions, among various Upper Thompson subgroups the lunar year was thought to begin at the end of the deer rutting season or when the ground-hogs entered their winter dens, or--especially in the case of shamans--with the rutting season of the bighorn sheep. (Teit 1900:237)

Among the Lower Thompson, the common schedule was as follows, with the moons indicated as numbers. Moon #1, deer rutting time; #2, people enter winter houses; #3, last people enter winter dwellings; #4, alternate cold and warm winds: some people camp out in lodges; #5, last cold: people reenter winter houses for a time; #6, winter dwellings left for good; fish bag-netted; #7, short hunts; #8, berries picked; #9, salmon fishing began; #10, salmon caught and cured; #11, salmon oil prepared; finally "autumn" (unnumbered), large game hunted and smaller animals trapped. (Ray 1942:189; Teit 1900:238-239)

Five seasons were recognized by the Thompson according to Teit (1900:239; 1930b:347): (1) winter beginning with the first snows that stayed on the ground and ending with its disappearance from the valleys; (2) spring, the period of frequent Chinook winds; (3) summer, three lunar months long; (4) early autumn, two months in length; (5) late fall, a season of indefinite length because the time of the initial snowfall varied. The Lower Thompson year was divided into six seasons according to Ray's (1942:189) informant.

The heavens were also observed by the Thompson, and its phenomena were interpreted in various ways. For example, by sitting on certain rocks and viewing the sun's position in relation to specific trees or other marks on the mountains, the old-time Thompson determined the solstices "within a day" of their correct timing. A few constellations were perceived and named by the Lower Thompson. The position of the Little Dipper in the sky at night indicated the time. Closed parhelia were thought to foretell cold weather; so also light paraselene. The characteristics of the sunrise and sunset were also regarded as predicting future weather. The Lower Thompson saw a frog or a coyote on the moon. (Ray 1942:189-190; Teit 1900:239)

Only two of the cardinal directions were important to the Lower Division: toward the sunrise and in the direction of the sunset (Ray 1942:189-190).

Gestures, Signs, and Signals

Meaningful hand movements were considered essential to effective speaking and story narration. Many of these gestures were quite specific in their meaning and so were used when oral communication was unwise, as when hunting and on raids. Teit (1900:283-287) lists 87 gestures of this sign language. Sharp and subtle distinctions were made in subject areas of cultural importance. For example, signs distinguished between deer generically, buck, doe, buck sighted, buck trotting, deer jumping, deer lying

down, deer falling, doe moving slowly and looking from side to side, deer on the alert, deer risen, and deer walking.

Shouting in different patterns and bird and animal cry imitations were used by hunters to communicate information regarding the advance of the hunt. In high-mountain hunting near spirit haunts, special call signals were employed to enable hunters to distinguish between their own signals and the calls of spirits, using the usual signs, to summon hunters to them. (Teit 1900:287)

A complex pattern of simple but effective signs served to pass significant information to parties that might be following. These involved the use of sticks of varying sizes in different numbers and positions, of leaves that would wilt in time, and of animal bones or hair. These materials told, for instance, how many persons had left the camp, in what direction they had gone, the time of day of their departure and, by deduction, the number of days elapsed since they had left, the number of animals (if any) they had killed, the number of horses they had packing meat, and the number of enemy killed if the group was a war party. Branches were broken and left hanging as a party proceeded to apprise followers of the trail taken (Teit 1900:287-288).

Ethical Concepts and Conduct Codes

It was bad, the Thompson held, to steal, be unvirtuous, lie, be lazy, commit adultery, boast unless one were great, be cowardly, borrow often, be inhospitable or stingy, or be quarrelsome. The social consequences of such behavior differed in detail, but in general a person guilty of such condemned actions would be laughed at, gossiped about, avoided, mocked, and dishonored, and would find himself friendless and not trusted in speech or action. (Teit 1900:366-367) Surely this is a catalog of consequences that most Thompson were at considerable pains to avoid.

On the other side of the coin, it was:

> good to be pure, cleanly, honest, truthful, brave, friendly, hospitable, energetic, bold, virtuous, liberal, kind-hearted to friends, diligent, independent, modest, affable, social, charitable, religous and worshipful, warlike, honorable, stout-hearted, grateful, faithful, revengeful to enemies, industrious. (Teit 1900:367)

To ensure proper behavior some old person of the household especially on winter nights talked to the people, particularly the young, about acceptable behavior and its rewards and the unfortunate results of improper acts. He related his war and hunting experiences and his ideas of future life. He told the tribal myths. Often elderly persons took turns at telling the myths and legends until all their hearers had fallen asleep. (Teit 1900:367)

Secular Medicines and Medical Treatments

Ailments considered of natural causation--as opposed to those resulting from witchcraft, failure to observe guardian spirit dictates or customary procedures as in hunting and fishing, and inimical actions of the dead--were treated among the Thompson by various medicines, many of which consisted of plant substances. Fifty-four plant taxa were collected by Teit (1900:368-370) during his field research in the 1890s and are cases in point. They include medicines for a wide range of internal ailments, for unusual body statuses (e.g., chills), and for abnormal external conditions (e.g., burns, running sores), and others even to cause cradled infants to sleep.

These plants are listed by Teit according to their uses. Here they are reordered by plant form, alphabetized by Teit's botanical binomial. A further treatment of this roster can be found in the Steedman (1930) ethnobotanical analysis. Certain of Teit's plant identifications are now greatly outmoded. An attempt has been made elsewhere to mesh these old and now abandoned binomials with the contemporary taxonomy of botanists and to define the habitat characteristics, altitudinal preferences, and biogeoclimatological associations of them (Smith 1985a). These matters are, however, too complex to discuss here.

Teit's catalog of 54 medicinal plants follows:

1. Abies grandis. Decoction of young shoots and sometimes bark as a stomachic; (?) very strong decoction of gum and bark for gonorrhea. Possibly as curative for other health problems.

2. Acer glabrum. (?)Decoction of wood and bark drunk for sickness caused by exhalations from corpse.

3. Achillea millefolium. Leaves roasted until dry and brittle, powdered, and applied to running sore. Used in other medicines.

4. Anemone multifida. Bunch of fresh leaves and flowers placed across nostrils for nose bleed.

5. Apocynum cannabinum. Precise medicinal use unreported.

6. Arabis drummondii. Decoction of whole plant for kidney disease; very strong decoction of entire plant for gonorrhea; powder of leaves and stalks, sometimes--but rarely--mixed with grease, for running sore.

7. Arctostaphylos uva-ursi. Decoction of leaves and stems as tonic; decoction of root for blood spitting; water in which leaves and stems have been boiled as eye wash.

8. Artemisia canadensis. Decoction of whole plant for diarrhea.

9. A. tridentata. Decoction of stems and leaves for colds; bunches of stems and leaves, or leaves only, tied to nostrils for colds.

10. Asclepias speciosa. Precise medicinal use unreported.

11. Astragalus purshii. Precise medicinal use unreported.

12. Canothus velutinus. Decoction of stems and leaves drunk for dull pain and applied externally at same time to aching area. Decoction of four or five branches boiled for 24 hours together with four or five branches of Shepherdia canadensis (#46); three large cupfuls drunk for gonorrhea for three days. Decoction used as a wash.

13. Chaenactis douglasii. Precide medicinal use unreported.

14. Chimaphila umbellata. Precise medicinal use unreported.

15. Clematis ligusticifolia. Precise medicinal use unreported.

16. Cornus pubescens. Decoction as tonic; decoction of wood, bark, and leaves drunk after childbirth.

17. Delphinium menziesii. (?)Decoction as tonic.

18. Equisetum. Ashes of burned stems as powder for burns.

19. Erigeron filifolium. Precise medicinal use unreported.

20. Eriogonum heracleoides. Entire plant with root roasted, powdered, mixed with grease, and applied to swelling with running sore. Precise other uses not reported.

21. Euphorbia glyptosperma. Rubbed on rattlesnake bite.

22. Fatsia horrida. Decoction of stems, cut in small pieces, as blood medicine; water in which mashed stems have been soaked drunk as stomachic; stems burned and ashes mixed with grease and applied to swelling with running sore.

23. Ferula dissoluta. Root roasted until brittle, powdered, applied to running sore.

24. Fragaria californica. Plant boiled slightly and used as wash.

25. Gaillardia aristata. Precise medicinal use unreported.

26. Geum triflorum. Precise medicinal use unreported.

27. Helianthus lenticularis. Dried, powdered, and used for running sore.

28. Heracleum lanatum. Decoction of root used occasionally for syphilis; decoction of root used for purification. Other medicinal uses but not specifically reported.

29. Juniperus communis. Decoction of stems and needles as stomachic; decoction as eye wash; decoction of stems and needles used for purification.

30. Juniperus virginiana. Very small quantities of berries eaten fresh for kidney disease.

31. Nicotiana attenuata. Decoction as head wash for falling hair.

32. Penstemon menziesii. Decoction of stems, flowers, and leaves for kidney disease; stems, flowers, and leaves soaked in cold or warm water and used as eye wash.

33. Peucedanum macrocarpum. Leaves used as cradle padding, causing child to sleep and not be troublesome.

34. Picea sp. Decoction of needles and young shoots as wash for purification.

35. Pinus contorta. (?)Ointment from boiled gum, mixed with deer grease, rubbed on body for pains.

36. Pinus ponderosa. (?)Salve of boiled gum mixed with bear grease for eyes; (?)ointment of gum boiled and mixed with bear grease for sores.

37. Populus tremuloides. Decoction of stems and branches drunk freely for syphilis, accompanied by cold sitz bath of several hour's duration in same decoction; powder made of ashes of the wood, sometimes mixed with grease, for swellings with running sores; decoction used as a wash; used as medicines in other ways not described.

38. Potentilla glandulosa. (?)Precise medicinal use unreported.

39. Prunus demissa. Bark decoction as tonic; decoction of bark drunk after childbirth.

40. Pseudotsuga douglasii. (?)Decoction of branches or twigs as body wash for purification; (?) other medicinal uses also but undescribed.

41. Rhus glabra. Decoction a powerful syphilis remedy.

42. Ribes sp. Decoction of root as stomachic.

43. Ribes hudsonianum. (?)Decoction of leaves and stems for cold and sore throat; (?)decoction of leaves and stems as stomach medicine.

44. R. lacustre. Water in which cambium layer has been soaked used as eye wash.

45. Rosa gymnocarpa. Decoction of stems as tonic; water in which bark has been boiled used as eye wash; other medicinal uses but specifics not reported.

46. Rubus sp. Decoction of leaves for blood spitting; decoction of root as stomach medicine; decoction of leaves "for vomiting," [i.e., evidently to cause, not cure, vomiting condition].

47. Salix sp. Precise medicinal use unreported.

48. S. longifolia. (?)Precise medicinal use unreported.

49. Sheperdia canadensis. For decoction for gonorrhea see Canothus velutinus (#12 above); decoction of bark as stomachic; decoction of bark [drunk] for purification; other medicinal uses known but unreported.

50. Spiraea betulifolia. Precise medicinal uses unreported.

51. Symphoricarpos racemosus. Decoction of stems as stomach medicine; other medicinal uses known but unreported.

52. Valeriana sylvatica. (?)Decoction of root for colds.

53. Veratrum californicum. Decoction made by boiling for a long time ashes of burned dried root used as blood medicine; decoction, in small doses, of ashes of burned dried root, mixed with bluestone reduced to ashes, drunk as medicine for syphilis.

54. Zygadenus elegans. Mashed-up root baked in ashes or roasted at a fire and rubbed on paining body part.

The significant implications of these botanical data for an understanding of how the Thompson utilized their homeland, including the Park segment, are analyzed and discussed at length by Smith (1985a) elsewhere and have been deleted from this present study in the interest of report brevity.

Only two roots are mentioned specifically by Ray (1942:131) as having been used by the Lower Thompson for their medicinal properties: those of the sunflower and the soapberry. The sunflower is, however, a non-native, introduced plant, but perhaps the native and visually similar balsamroot (Balsamorhiza sagittata) is intended. According to Turner (1978:216) Plateau Indians often call the sunflower by the term they apply to the balsamroot, or at least the seeds of the two by the same designation. Soapberry (Shepherdia canadensis) appears in the preceding Teit list.

Animal parts also served curative needs (Teit 1900:368-370):

- Dried beaver testicles were soaked in water and the liquid drunk for severe and sudden pain. The testes were redried and retained for future use.

- Bluejay meat was eaten "for vomiting," presumably meaning to promote that condition.

- A mixture of oil and water in which sturgeon liver had been boiled was drunk "for vomiting," again, I gather, to induce it.

- Rotten matter--e.g., decomposed salmon--which was full of worms was used to treat blisters on the feet. The person walked on it, remained off his feet until sundown, and then washed his feet in cold water.

More general descriptions of several additional medicines are provided by Teit (1900:368-370):

- Hot fir branches or small sacks or pieces of skin filled with hot ashes were applied to the abdomen for colic or cramps. Hot liquids were drunk for this same purpose.

- The sweat bath was resorted to for pains, soreness, or stiffness in any part of the body. This condition was also treated by repeated, and sometimes violent, rubbing of the area with the hands; by applying hot fir branches, ashes, coals, or stones; and by drinking hot water or medicine.

- Women's milk served as eye wash.

- Herbs were rubbed on the arms to purify them.

- Rattlesnake bites were treated by tying one or two wet buckskin strings, rubbed with red ocher and having as an attachment the head of a weasel or ermine, very tightly just above the punctures. When the region became greatly swollen, they were unfastened and tightly retied four or five inches higher up. "Cutting, burning, and sucking the wound . . . [were] resorted to," herbs were rubbed on the affected area, and shamans with rattlesnake guardian spirits performed incantations to aid in the recovery, all, I gather, after the application of the string bindings.

While sweat-bathing had a very significant ritual purification function, it also served importantly both in keeping physically clean and, in the Thompson mind, in curing certain ailments. Sicknesses were also occasionally cured by eating certain foods as prescribed by shamans who received the instructions from their guardian spirits in their dreams. (Teit 1900:370)

The Thompson performed a number of surgical operations, not all simple in nature. Boils were pierced with porcupine quills, and aching joints with large, sharp awls. Cataracts were removed, it is said, by touching the eyeball with a rough, charred bone from a black bear, causing the thick skin to adhere to the bone, raising the skin, and cutting it with a very sharp knife. Warts were removed by cutting them off close to the skin and applying black lichen which had been exposed to the fire until hot. Thought to represent subsurface accumulations of blood, moles were lacerated with an arrow point and allowed to bleed freely. Rheumatic areas were cauterized by placing powdered charcoal on the aching spots and burning it. (Teit 1900:370)

Use of North Cascades National Park and Ross Lake National Recreation Area

An attempt is made in the following pages to extract from the preceding ethnographic data all information relating directly or by implication to the Thompson use of the mountainous segments of their traditional territory and to organize these materials into a meaningful whole. The basic data having already been presented, literature citations often seem unnecessary and are accordingly frequently omitted.

The data of Teit and Collins together demonstrate that the Lower Thompson regarded the northern and northeastern segment of the Park and

particularly all but the southernmost portion of the Ross Lake Recreation Area as a part of their traditional hunting and gathering territory, although the southern fringe of this lake area and the flanking mountains were likewise claimed by the Upper Skagit as within their subsistence grounds. From the Lower Thompson viewpoint this region was nothing more than a natural southern extension down the Skagit Valley of their Cascades Mountain country north of the British Columbia boundary. That the Lower Thompson not only claimed this region but made more than occasional use of it is independently attested to by the Upper Skagit record of their hunting parties having encountered Thompson parties in the area.

That the Lower Thompson exploited mountain country to any considerable degree may seem strange at first blush, for they wintered in their villages down in the deep, narrow Fraser Canyon between Spuzzum and Siska, spent much of the warmer season at their superb salmon fisheries along the Fraser, rarely saw people from neighboring villages owing to the difficulties of travel in the canyon, and, as the observations of Fraser and Mayne attest, must have found formidable and fatiguing the climb up out of the canyon, quite apart from the ascent of the mountain slopes themselves. Further, if Teit's appraisal bears weight, the Lower Thompson "were quieter and steadier . . . [than the people of the Upper Division and] slower and less energetic." And more: "They . . . [were] better fishermen [than the Upper Thompson] and more expert in handling canoes," implying in general a lesser ability or lesser interest as hunters. Still, the Thompson as a whole are described by Teit as having been fond of hunting and some were remarkably determined and persevering in their pursuit of game. This was hardly less true of the Lower Thompson, although by and large they plainly devoted less time during the year to hunting activities.

The ethnographic and ethnohistorical literature as I know it unfortunately says next to nothing explicitly and in an organized fashion concerning the Thompson use of their high country in subsistence and other activities. Such data as exist are widely scattered through the literature and are often almost in the nature of minor asides and chance remarks in many different subject contexts. Assembled as they are below, they are, however, reasonably full and, while far less comprehensive and detailed than one would like, are sufficient to establish the importance of the mountains to the Thompson and outline the principal associations of the tribe with this elevated terrain. Because these data are mostly generic Thompson data, they reveal very little about any differences that may have existed between the way in which the two divisions exploited their individual upper elevation resources. This appears, however, to be a relatively insignificant problem. However much the life patterns of the Lower people in their canyon centers may have differed from those of the Upper Division in their low, open country upstream from the gorge, the two groups could hardly have lived in their respective high lands very differently and made use of the animal and plant resources there in a very different manner, except as these responses were conditioned by minor biogeoclimatological variations between the two regions: the Lower country was largely in the Cascades and west of the mountain crests; the Upper extended eastward from the Cascades watershed down through the high mountains and out into the ponderosa-bunchgrass country. Similarly we are even more poorly informed about any differences that may have prevailed between the Lower Thompson use of their particular mountainous lands north of the present international border as against those in the Park

region to the south. Here, however, there were notable biogeoclimatic differences that should be commented upon: above the line were six of these biozones in the remarkably ecologically diverse Lower Thompson homeland; below, only three (Franklin and Dyrness 1973; Krajina 1969; Smith 1985a). The significance of this difference in terms of the animal and plant resources of these Lower people has not yet been fully assessed, though a beginning has been made in this direction (Smith 1985a). At this point, because of the extent to which most animals and plants of the Lower Thompson territory occurred over a considerable elevational range and were adapted to varied habitat zones, it appears that the fact that the ecological base south of the boundary was more limited was of no great importance in practical subsistence terms (Clark 1973, 1976; Henry 1915; Piper and Beattie 1914, 1915; Smith 1985a; Taylor and MacBryde 1977). Accordingly, it is reasonable to assume provisionally that, unless the ethnographic facts or bioenvironmental data explicitly indicate otherwise, the general Thompson mountain-use information is in the main acceptably descriptive of the Lower Thompson use patterns within the Park sector.

Deer, salmon, roots, and berries were the staple foods of the Thompson tribe, deer being the principal food of the Upper Division as salmon was of the Lower people. It seems to follow that Teit (1900:230) is referring in particular to the Upper Thompson when reporting that

> a large portion of the tribe lived in the mountains during the greater part of the year, moving about from one root-digging or deer-hunting ground to another, according to the harvest-time of certain roots and berries, or as the deer changed their feeding-grounds during the seasons . . . . Only when winter set in did they return to their winter houses.

Still, the Upper bands took many salmon at their Fraser and Thompson River fisheries: Simpson, for instance, reports small salmon camps at each rapid on the lower Thompson River in October of 1828. During much of the salmon period--especially in the autumn--the Lower Thompson, for their part, made good use of their excellent canyon-bottom fisheries, which yielded plentifully every year. And yet they, too, hunted game and collected roots and berries to an important extent. When engaged in these pursuits, Lower Division hunters and their wives, no less than the Upper people, must have followed the seasonal pattern described by Teit above.

The diversity of the subsistence base of the Thompson as a whole and the Lower Thompson more particularly is well illustrated by their calendric terms and these, in turn, furnish oblique insights into their subsistence utilization of their mountainous country. The moons of the year were designated according to the principal activities of the people, the main food obtained during the period, or some notable feature of the natural rhythm of the local animal or plant life. In counting moons, many Lower Thompson commenced with the rutting season of mountain goats. In view of the general Thompson practice of counting from the deer mating season or, in the case of one Upper Thompson band, from the entry of ground hogs into their winter dens, this alternative Lower Thompson pattern suggests the special importance of mountain goats to this division of the tribe. The designation of the months by the Lower Thompson also reveals those segments of the year during which the mountains were mainly visited in their subsistence quest. With the

first month considered to be that of the deer rutting, the second through the fifth month found the people in their winter lodges. In the sixth, the second moon of the two spring months, they took fish in bag nets; in the seventh they went out on short hunts; and in the eighth they picked berries. During the ninth (the last summer moon) and the tenth and eleventh moons (the early autumn months) the Lower Thompson were primarily involved in catching and preparing their salmon. The final month, of somewhat indeterminate length and equivalent to late autumn, was the season when the people hunted large game and went trapping. Viewed as a sequence, these month terms imply that notable Lower Thompson journeys to the mountains took place in particular in early summer and even more importantly to the high country distant from their canyon winter villages and fisheries--including and perhaps particularly to that in the North Cascades Park area--in the mid- and late autumn period.

"Hunting, trapping, and snaring of game," Teit (1900:239) writes, "was one of the most important occupations of the Thompson Indians" as a whole. And even the Lower Thompson,

> although they had an abundance of fish, spent much time in hunting. They even hunted on the mountains on the western slope of the Coast Range. Hunting parties who visited the most southern part of their hunting-grounds were sometimes absent for seven months, returning only when the snow began to melt in the mountains. (Teit 1900:239)

This is a particularly revealing statement on two points that intersect with the limited special concerns of this present study. First, in light of Teit's boundaries for the aboriginal Lower Thompson territory (Figure 3-1), reference to the southern portion of the group's hunting country must almost certainly allude to hunting activities in the North Cascades Park region. Second, the melting snow note makes plain a subsistence quest pattern that one would hardly suspect, one in which parties left their Fraser canyon center to hunt in the mountains during some or even all of the colder months of the year. When these trips lasted for the seven-month period, they must have extended from, say, October through April. The span of time is made more transparent by the Thompson moon count calendar already discussed. Other evidence indicates that these task groups that wintered in the Ross Lake sector occasionally remained in the lake area into or even through the following summer.

These data must signify that the Lower Thompson maintained winter camps in relatively high country, presumably including the Park area. While many may be assumed to have been temporary camps, others were surely more in the nature of bases of longer occupation. Unfortunately, there is to my knowledge no ethnographic information regarding the location, settlement plan, and other characteristics of these cold season, mountain hunting occupation sites.

So much for Thompson subsistence resources in general and the somewhat differing emphases placed upon these major categories by the two divisions. In the following paragraphs the three principal food quest activities--hunting, fishing, and plant gathering--are briefly examined as they relate to the high terrain segments of Thompson country.

For all the importance of salmon to the Lower Division, hunting was an indespensible food provider to these downriver people. Specialist hunters existed among them no less than among the Upper Thompson bands. The Thompson as a whole--and so one must suppose the Lower group to a greater or lesser degree--ate many deer, elk, bighorn sheep, beaver, procupine, and squirrel as well as grouse, ducks, geese, cranes, and robins. Moreover, the downstream division also ate rock rabbits, animals not used as food by the Upper Thompson. Other animals were secured for purposes other than subsistence: e.g., for their various parts to be used technologically or as medicines. Principally the Lower Thompson "hunted . . . mountain-goat, black bear, and marmots," while deer were most important among the Upper Division.

Considering the restricted character of the canyon homeland from virtually every point of view, most of the above animals must have been obtained in the high lands outside the canyon. Unlike some Upper Thompson bands, the Lower villagers "had few deer in their country," probably especially in and on the flanks of their canyon home but also to some extent in their mountain forests. Nevertheless, they used deer hides in many ways and, in fact, supplied the Upper Thompson with the skins of black-tailed deer for making superior moccasins. Certainly the mountain goats that furnished the wool for their woven blankets and ponchos and the skins for moccasin stuffers, the marmots from which, when tanned, robes were fabricated, the elk whose skins--like those of deer--were made into caps and headbands, and the bear from the skins of which foot wrappers were fashioned for inside-moccasin wear were all hunted in the hills and high mountains beyond the canyon rim (cf. Dalquest 1948).

Details of the devices and methods employed by the Thompson in securing game have already been described. They need be noted here only as they relate, or may logically relate, in some measure to mountain hunting in general or to the Park region more specifically. These observations by Teit are largely of an oblique or incidental nature, but are nonetheless of considerable interest.

- "Stone for their arrow-heads . . . [was found by the Lower Thompson] near the head waters of Skagit River. Many were made out of large chipped heads, which are found in great numbers in the valleys. The Indians believe that the latter were made by the Raven." (Teit 1900:241)

- "Bows and arrows were the principal weapons used [by the Thompson] in the pursuit of game." Deer were generally hunted with these weapons, frequently with the aid of their excellent hunting dogs. According to Teit,

> To hunt deer single-handed required intimate knowledge of the deer's habits and of the ground which they frequent at different seasons, ability to take advantage of cover and to get within range, and capability to track and to shoot well. Some Indians, especially single men, while hunting on the mountains endured much hardship and exposure. Some of them would start out with cold weather in the winter-time, taking with them neither food nor other clothing than that which they wore. They lived entirely on what they shot, and used raw

> deerskins for blankets. They made rough kettles of spruce-bark or deer's paunches. A hole was dug in the soft ground near the fire, into which the kettle was placed, with brush underneath. . . . Hot stones were put in to boil the food. These paunches were also sometimes used as water-pails. (Teit 1900:239, 244, 246)

- "A favorite method of procuring deer was by means of deer-fences [which were owned by those who made them]. These were formerly very numerous, and their remains may still be seen [in the mid-1890s] in several parts of the mountains. They were in common use as late as . . . [1880].

  "Some of these fences were built in order to catch deer in the summer-time, but most of them were intended for capturing deer from the latter part of September to the beginning or middle of December, since they were placed in those parts of the mountains which the deer frequent at that time of the year. They were generally built in little valleys or defiles between mountains, and especially in those which were favorite places of deer crossing from one mountain to another, or at spots where large numbers of deer generally passed on their way down from the higher elevations to their winter grounds." (Teit 1900:246)

- When sufficient hunters were on hand to join forces, deer were driven in winter often in "one of the larger gullies . . . as the deer frequent such places during cold weather." (Teit 1900:247)

- "Deer and elk were . . . killed in winter, when there was very deep snow in the mountains, by being run down by hunters on snowshoes, who shot or clubbed them when near enough. Dogs also soon ran them down when the snow was deep and had a thick crust." (Teit 1900:248)

- Nooses were set by the Lower Thompson on deer trails so as to catch the animal's head or antlers. Deer fences with nooses set in openings were, however, not much used by men of this Lower Division. (Teit 1900:247)

- Black bear were usually hunted with bow and arrow, sometimes with dogs to assist, and were also trapped in deadfalls. (Teit 1900:249)

- "Mountain goat and big-horn sheep were hunted with bow and arrows." (Teit 1900:249)

- Beaver were occasionally hunted with dogs and killed with a spear with a bone point. (Teit 1900:249)

- "Coyotes and foxes were often caught by digging or smoking them out of their holes." (Teit 1900:249)

How many of the animals reported above were available to hunters within the Park perimeters is not stated, but it appears from Dalquest (1948) that all but, it seems, the bighorn sheep should have been.

Further unequivocal evidence of Thompson hunting in high altitude country is provided by the fact that special communication signals were employed when parties were dispersed in the pursuit of game. "In hunting in

the high mountains," Teit (1900:287) reports, "in those places which were thought to be the haunts of spirits, a different call was used, because, if the ordinary call were used, the spirits, it was said, imitated it, and might call one of the hunters to him."

Such data as we possess strongly suggest that the search for game was a principal motivation for Lower Thompson journeys into the higher elevations of their traditional territory and hence into the Park region.

The use of mountain goat wool by the Lower Thompson in making woven fabrics speaks further to the visits of parties to high elevations. It does not necessarily demonstrate hunting of the animals, however, though, as noted above, there is abundant other evidence for this practice: wool shed by the animals could be collected where, for example, caught in vegetation, it had been pulled from the animal.

There is little ethnographic information relating to the use of locations in the high mountains as fishing sites. As noted above, the stretch of the Fraser River occupied by the Lower Thompson was a rich salmon source. Owing to the nature of the river and its banks, it was particularly well suited to bag netting salmon, though not to spearing fish, fishing through holes in the ice, and, for the most part, to the use of weirs and traps. Furthermore, when they reached this area the salmon were still in good condition, and even in bad years they were plentiful. This being so, the Lower Thompson confined themselves to curing the fish they most esteemed--chinook salmon. Sturgeon of small size were also taken by the people of the Lower Division. The implication of these data is that the Lower Thompson normally had little occasion to search for fish outside of the Fraser River canyon. (Teit 1900:251-254)

Nevertheless, at least some hook and line fishing was carried out by this Lower group in the high country, while the people were in the region for some other reason. For Teit (1900:253) writes: "A few mountain lakes . . . contain[ed] trout; and the people who camp[ed] near by for the purpose of hunting and digging roots, fish[ed] for them from rafts with hook and line." Whether salmon could be found in the Skagit River headwaters that were claimed by the Lower Thompson, I do not know, for I have seen no references to salmon above the Newhalem sector. But in view of the group's rich salmon fisheries on the Fraser, anadromous Skagit River fish, if available, could hardly have been important, except perhaps as fish consumed in the immediate area of the catch. Trout and other non-salmonids of many types were likewise fished for by the Thompson, especially during the spring and autumn. Because both were seasons to be in the mountains, this small fish taking must have occurred largely in the high country.

Roots, gathered in early summer and in autumn, and also berries were important in the Thompson subsistence base. There is to my knowledge, however, no listing of the plants sought by the tribe, or more specifically the Lower Division, for food in their mountain environments. This is the more surprising since it is said that most of the root harvest of the Lower people took place in the mountains, and even that most of the roots "were obtained in the higher mountains only." The address this information vacuum, relevant Thompson data have been culled from Turner's (1978) compilation of the traditional food plants of the interior British Columbia tribes. An

effort has been made to identify those native to mountain terrain and those specifically stated to have been collected and eaten by the Lower Thompson. Inasmuch as these data are somewhat technical and the discussion is rather extended, these basic data and my preliminary analysis of them seem rather out of place in this more general survey. Accordingly, they appear as a separate item at the close of this section.

Both roots and berries were secured by women, which in itself indicates that entire families undertook the journeys to the high country during the collecting seasons. In the preceding subsistence section of this chapter appears a partial ethnographic roster of the various food roots and berries of the Thompson, as well as a few stalks and sprouts and other lesser edibles. With the habitat biodata at hand, none of these plants can be identified as peculiar to that part of the Park Complex claimed by the Lower Thompson. The larger and more technical food plant catalog that concludes this present chapter identifies a substantial number of these plants as growing at mountain altitudes, yet provides no specific information in regard to the occurrence of these plants within the Park perimeters and the gathering of them there by Lower Division groups.

The Lower Thompson were skilled makers of cedar dugout canoes, many of which were traded to the Upper Thompson. Several types were fashioned, six of which are diagrammed by Teit (1900:255 Figure 237). Whether any of these varieties were in use in the mountains away from the Fraser River is not stated. This seems unlikely in view of the fact that bark canoes were also fabricated by these Lower people and, it is explicitly reported, were generally employed in crossing lakes and deep mountain streams. (Teit 1900:255)

Since much of the travel at higher elevations was surely by land, the back-packing of burdens must have been customary when within the Park region. On this point, Teit (1900:256) states in general terms that in olden times goods were carried on the back by means of tump-lines of cedar bark or woven mountain goat wool. "Meat, baskets filled with berries and roots, and the few necessaries of a travelling family, were transported in this manner." Dogs were never used by the Upper Thompson as pack animals, "probably because," Teit (1900:256) suggests, "the country was too rough and mountainous," a description that certainly applies to the terrain within the Park perimeters. If they were sometimes fitted with packs by the Lower Thompson, as Ray states, this presumably occurred, following Teit's explanation, in lower and more gentle areas.

As noted in an earlier paragraph, winter hunting and travel in the mountains was not avoided by the Lower Thompson. When the snow was deep, they made use of snowshoes of a variety with rounded frame which Teit (1900:256-257, 257 figure 242), perhaps following the Thompson themselves, terms the "owl sole." This shape with its turned-up front was thought to be "best adapted for travel on steep mountains," and the rather wide meshes with which they were provided "were considered favorable for travel in moist snow."

In considering the extent to which the Lower Thompson utilized the resources of the mountainous sector of their territory and so to some degree those inside the limits of the Park, it is instructive to examine published

traditional trade data for the group. These data indicate resources possessed in quantities above their own requirements, needs that were to some degree unmet by their own exploitative activities, and items for which they acted as mere middlemen, passing them from one outside group to a different tribe.

Teit (1900:258-259) provides a listing of materials exchanged between the Lower Thompson and the Lytton band of the Upper Thompson, whose country lay immediately up the Fraser River from that of the Lower Division. Also a roster of items traded between the Lower Thompson and the Okanagan, surely the Northern Okanagan whose traditional territory adjoined that of the Lower Thompson on the east; small parties of these peoples came "at long intervals" to Lower Thompson country to trade. And a catalog of materials that passed between the Lower Thompson and "Coast tribes," without doubt preeminently the Halkomelem tribelets along the Fraser River immediately downstream from the Lower Thompson. These data are assembled in Table 3-1. In addition to those appearing in this trade-item roster, wild sunflower roots--not native to the Lower Thompson area--were obtained in exchange, though their source is not specified.

If this inventory of trade goods is examined in terms of probable mountain provenience, the following items, starred in Table 3-1, emerge:

- To the Lower Thompson, bighorn sheep horn spoons from the Upper Thompson and no mountain items from the Halkomelem.

- From the Lower Thompson, woven blankets of mountain goat hair to the Upper Thompson and dried meat, fat, skins, and hair of the mountain goat, elk fat, dried elk skins, wild lily roots, and lichen cakes to the Halkomelem.

In the context of the interests of this study the natural habitat data for the mountain goats, elk, and bighorn sheep mentioned in the preceding two items require brief examination.

(1) The mountain goat, Dalquest (1948:407) writes,

> is an animal of the high mountains. Their habitat is the bare-rock cliffs and rock-strewn slopes of the Arctic-alpine and Hudsonian life-zones. Where extensive, open rocky areas occur they descend to the Canadian Life-zone. Even in winter they keep to the high cliffs where steep slopes and strong winds keep the snow from the plants on which they feed.

Their range in the early years in Washington State included "the entire Cascade range from Mt. Adams and Mt. Saint Helens north to the Canadian boundary." They extended "west to Mt. Baker, Mt. Higgins and Mt. Index and east to Lake Chelan. . . ." (Dalquest 1948:409)

(2) Elk were surely obtained in the mountains within the Park borders. For, according to Dalquest (1948:391, 393), elk were "found over most of the forested areas of Washington. . . .[They ascend] "to the open meadows of the Hudsonian Life-zone in the early summer and . . . [return] to the dense forests of the Transition and lower Canadian life-zones with the

Table 3-1. Items Traded In to and Out from the Lower Thompson.

Items	Northern Okanagan	Upper Thompson	Lower Thompson	Halkomelem
Dried salmon		◄---------		
" "	◄----------			
Dried dog [chum] salmon			◄----------	
Dried kwoi'a salmon			----------►	
Smoked salmon heads		◄---------		
Salmon grease		◄---------		
Sturgeon oil			◄----------	
* Dried mt. goat meat			----------►	
* Mt. goat fat			----------►	
* Mt. goat skins			----------►	
* Mt. goat hair			----------►	
* Woven mt. goat hair blankets		◄---------		
* Elk fat			----------►	
* Dried elk skins			----------►	
Deer fat			----------►	
Dried deer skins			----------►	
Dressed deer skins (buckskins)		---------►		
" " " "	----------►			
Black-tailed deer skins		◄---------		
Dressed bison skins	----------►			
* Wild lily roots			----------►	
skamete roots			----------►	
Lomatium roots		---------►		
" "	----------►			
Bitterroot roots		---------►		
" "	----------►			
Serviceberries		---------►		
Dried serviceberries			----------►	
Dried huckleberries		◄-------	----------►	
Soapberries		---------►		
Dried soapberries			----------►	
Dried berries of some kinds	----------►			

Table 3-1. (Continued)

Items	Northern Okanagan	Upper Thompson	Lower Thompson	Halkomelem
Wild currants		---------▶		
* "Moss" cakes			----------▶	
Hazel nuts		◀---------		
* Bighorn sheep horn spoons		---------▶		
Bison skin bags		---------▶		
Bark twine			----------▶	
Bark for thread and string		---------▶		
Cedar bark		◀---------		
Bark twine bags		---------▶		
Baskets		◀---------		
Cedar-root baskets			----------▶	
Mats		---------▶		
Rush mats of one kind			◀----------	
nxo'itlaxin grass			◀----------	
Wood for bows		◀---------		
Canoes		◀---------	◀---------	
Pipes		---------▶		
Wood for pipe stems		◀---------		
Tobacco		---------▶		
Red ocher		---------▶		
Vegetable paints (white and red)		◀---------		
Dentalia		---------▶	---------▶	
Abalone shells			◀----------	

winter snows." This winter feeding area is in the 2,000± foot range (Smith 1985a) and so within mountainous terrain in the Fraser Canyon and Skagit Valley country.

(3) Bighorn sheep "inhabited most of the eastern Cascade Mountains, . . . [and] the cliffs of the Columbia River Valley in eastern Washington." They were also native to "the eastern or Columbian Plateau side of the river and therefore probably occupied the cliffs of Moses Coulee and the Grand Coulee. Their habitat seems thus to have included rocky areas from the Upper Sonoran to the Hudsonian life-zones." (Dalquest 1948:405)

As with the elk, it is evident that bighorn sheep were to be found at low elevations--lower even than the elk--as well as in the higher country. It is notable also that these native distributional data place these animals to the east of the crest of the Cascades, implying their absence on the western flank of these mountains. If so, they suggest their absence as a significant part of the aboriginal fauna of the Lower Thompson hunting territory, which, in the Fraser Canyon, lay in the heart of these mountains and in the Park region to the south was entirely on the western Cascades slopes.

These trade data fail to approximate amounts of each item exchanged or even to hint in other ways at the importance of the individual materials as trade products. But at least in terms of the raw numbers of mountain-derived items--those starred in Figure 3-1--as against those derived wholly or in large part from lower elevations, they seem relatively unimportant. But it is certainly true that appreciably more of them moved from the Lower Thompson to other groups than the reverse. Even here, however, they were limited, so far as our present information takes us, to mountain goat and elk products, "wild lily" roots, and lichen cakes. The sole possible high elevation item received by the Lower Thompson, according to Teit's record, was the bighorn sheep horn spoon, which must have been relatively insignificant as a cultural item in comparison to the mountain goat meat and other products traded out.

It is of incidental interest that all mountain-derived materials bartered out by the Lower Thompson went down the Fraser River. (Most Upper Thompson people, incidentally, disliked mountain-goat wool blankets because they made their skin itch [Teit 1900:260].) In any event, these items of high country provenience among the Lower Thompson demonstrate further their exploitation of high mountainous terrain.

The ethnographic data on Lower Thompson warfare confirms in a convincing way their use of the mountainous region of the Park south of the international border. The group was less warlike and less skilled in fighting than the Upper Thompson, as they themselves admitted and the people of the Upper Division asserted, and had "very few real trained warriors among them" (Teit 1900:269-270).

The Lower Thompson were generally "on good terms with all surrounding tribes [with whom they had frequent contact] and rarely sent out any war parties" against these nearby groups. Nevertheless, they occasionally engaged in hostilities with the Halkomelam tribelets on the Fraser farther downriver (Teit 1900:268-270). This fact raises the possibility that they

met Chilliwack parties in the upper reaches of the Chilliwack drainage basin, where their territories adjoined or even overlapped (Figures 2-1 and 3-1), and contended with them there, just within the northwestern boundary of the Park. There appears, however, to be no mention of such affrays in the ethnographic literature.

The Lower Thompson were on very friendly terms with the [Northern] Okanagan, "and, when their hunting parties met members of . . . [this] tribe in the mountains, they invariably exchanged presents" (Teit 1900:271). But "when they fell in with hunting parties of Klickitat, . . . they always fought one another" (Teit 1900:261). As Teit's map of Thompson territory and their neighboring tribes reveals (Figure 3-1), his "Klikitat" in this instance were Upper Skagit, admittedly a curiously mistaken designation for these people. But this statement of Lower Thompson-Upper Skagit hostility is not inconsistent with a similar report of inimical Upper Skagit-Lower Thompson relations by Collins (1974a:115). Indirectly these data provide further evidence of the Upper Thompson--and Upper Skagit--utilization of the valleys and high mountains of the Park, for this is where hunter groups of the two tribes would have met according to both Teit's tribal map and Collins' Upper Skagit territorial information.

According to Teit (1900:169), the Lower Thompson captured slaves from lower Fraser River groups. Nothing is said, however, about their taking them from peoples encountered in the Cascades to the south. On the other hand, they are reported by the Upper Skagit to have taken as slaves a few people of their tribe (Collins 1974a:118).

We know little about the sociocultural dimensions of the Lower Thompson in their high mountain regions or, for that matter, for the Thompson as a whole at higher altitudes. However, the territory claimed traditionally by the Lower and Upper Thompson together was considered to be open to hunting parties of the entire tribe. As Teit (1900:293) remarks:

> Land was looked upon as neither individual nor family property, since every one had a right to all parts of the common country for any purpose. There were no particular hunting-grounds peculiar to, or the sole property of, certain families or bands. Of course each band had their usual hunting places, naturally those parts of the country nearest to their respective homes; but Indians from other villages, or other [bands or] divisions of the tribe, frequently hunted in each other's hunting-grounds without being considered intruders; and sometimes hunting-parties representing two or three tribal divisions [bands] would hunt over the summer hunting-grounds of another [band or] division without rousing any feelings of resentment.

There were, however, two exceptions to the holding of mountainous tribal land in common.

(a) The Lower Thompson were not permitted to build deer fences in the mountains of the Upper Thompson, just as men of one band of the latter were not allowed to do so in the high country of another Upper band or in that of the Lower Thompson. In fact, a deer fence was "looked upon as the property of the individual who . . . maintained the fence. The

> erection of another fence in the same pass, in proximity to the first, would materially affect the chances of capturing deer by it" (Teit 1900:293-294).

(b) Golden eagle eyries were regarded as the property of individuals or families (Teit 1900:294).

On the other hand, while available to all Thompson hunters with the two preceding exceptions, the Park region was plainly utilized primarily by Lower Thompson hunting groups, otherwise Teit's informants would not have defined the area as Lower Thompson country (Figure 3-1). It was, after all, appreciably nearer the winter villages and summer fisheries of the Lower Division than those of the Upper people. Further, the latter had large areas of mountainous territory available to them without journeying so far afield and perhaps they were more at home in their drier bioenvironment east of the Cascade crest than in the less familiar country of the higher slopes and crags west of the Cascade watershed.

The territory of the Thompson was vigorously protected from trespass by non-Thompson, unless these latter had kinsmen among the Thompson. Indeed, as Teit (1900:293) phrases the matter, if a person "not related to a Thompson Indian were caught hunting, trapping, or gathering bark or roots, within the recognized limits of the tribal territory, he was liable to forfeit his life." This explains the Thompson hostilities against the Skagit in the upper Skagit Valley and nearby mountains within the boundaries of the North Cascades National Park to which both Teit and Collins attest: the Thompson, claiming this territory (Figure 3-1), obviously saw the Skagit encountered within the area as unrelated intruders.

Hunting, trapping, and snaring, as well as fishing, were among a man's important duties (Teit 1900:295). The Thompson, according to Teit (1900:295), perhaps including the Lower Thompson in spite of the great economic importance of their splendid Fraser River salmon fisheries, regarded "hunting [as] the most honorable occupation." The importance to the Thompson as a whole of deer fences and eagle eyries, both predominantly of the high country, is underscored by the rather formal rules that governed their inheritance. Like fishing stations on the Fraser, both fences and eyries:

> were inherited by all the male children, the eldest having the right of dividing, and taking his choice. If he was a hunter, he generally took the deer-fence, leaving the fishing station to . . . [others]. Sometimes these places were used by all the sons in common, until some of them died, the survivor claiming all, and his sons inheriting from him. If a man died without sons, the nearest male relatives took his hunting places. (Teit 1900:294)

Game taken by Lower Thompson hunting parties, which generally worked the higher terrain, was distributed by the hunting chief in a formal manner: this in itself suggests the more than casual importance of animals as food. The meat, fat, and skins were divided equally among the group, except that the best hunters were allotted a skin or two and a little more fat than the others. A man, hunting alone, who killed several animals invited friends to return to the kill site to help in the butchering and skinning process; he

then divided all among the group. "Skins and meat of animals which a man trapped belonged entirely to himself." (Teit 1900:295)

As with the hunting grounds, the root digging and berry gathering areas, mostly up in the mountains as already observed, were likewise common property of all Thompson (Teit 1900:294). Women, of course, dug and cured or cooked the roots and collected and cured the berries (Teit 1900:296).

Little is reported concerning the more social aspects of traditional Lower Thompson life associated with root and berry gathering in the mountains. However, that certain rituals were carried out by the Thompson while engaged in such activities at high altitudes is attested by the following:

> When a mother went up the high mountains to dig roots, etc., taking her baby there for the first time, the first evening after reaching her digging-ground she would break a branch from a tree, and hang her child in its carrier on the broken limb. She painted her whole face, and sometimes the top of her head, red, and danced there before the infant, sometimes all night. She put her hands close together, as if holding something, blew in them, and ran off some distance; then, opening them, she made the motion of throwing away something. This was symbolic of taking disease or evil from the infant, and throwing it far away. She prayed constantly to the spirits of the place, or to the mountains themselves, asking that her child might never be sick, and that, if it were ever bewitched, and no shaman were near to help, nevertheless it might not die, or that she herself might have power to defeat the evil. She also addressed the spirits of the mountains on her own behalf, kneeling down, spitting on her hands, and rubbing her body upward over the front to the face, then over the top of the head backward, meanwhile praying that she might be delivered from all disease or trouble, that she might never be hurt in body, or be bewitched, and that, if sick, she might get well soon. (Teit 1900:309)

At puberty, a Thompson girl "was at once separated from all other people" to live in a conical hut of fir branches and bark and to perform in private the many ritual, largely symbolic acts summarized in an earlier section of this Lower Thompson chapter. Of particular interest in this immediate context is the fact that sometimes "parents, when one of their daughters reached this age, would move into the wilder parts of the mountains to give her a better opportunity to perform the required ceremonies" (Teit 1900:311-312). In the late 1800s the period of isolation lasted four months, but long ago, according to Teit's (1900:317) informants, it extended over a year. One reference to a specific ritual use of high elevations by the new menstruant is given us in Teit's detailed description of the girl's various puberty activities:

> [Some] of the first menstrual fluid was preserved by the girl, and tied up in a rag. It was afterward taken to the top of some lofty ridge, deposited in the windiest spot which was devoid of vegetation, and there burned by the girl, who prayed that she might never be troubled with prolonged periods of menstruation. (Teit 1900:316)

The ritual procedures followed by Thompson boys during their puberty years varied according to their aspirations in life. Those, for example, desiring to become great hunters practiced "hunting and shooting in a ceremonial way" (Teit 1900:317). If, on the other hand, a lad "wanted to develop into an extraordinary man, the ceremonial isolation and practice were extended over years, which he spent alone with his guardian spirit in the mountains, fasting, sweating, and praying, until he gained the desired knowledge" (Teit 1900:318). While most of the ritual acts carried out by adolescent boys are not described as having required a high altitude environment,

> [on] the night of the first day they had to repair to a mountain-top and light a fire, and dance and sing there all night. The next three nights they repaired to the same mountain-top, or some other near by, where they spent the night dancing, singing, and praying to the Dawn of the Day, also firing arrows at targets in the early morning. They lighted the fire and prayed, that they might live long and always be healthy. The fire was also intended, it is said, as a signal to all the world that had attained puberty. They then left their homes at intervals, and went to the lonely parts of the mountains, where they remained from two to ten days at a time. If the weather were good, they generally staid away a month or two at a time, living on what game they shot. The first time they returned to the mountains, they had to stay four days and nights, during which they were supposed to fast. Some staid eight days. (Teit 1900:318)

Further:

> On repairing to the mountains, they took along a water-basket and a fire-drill, also a mat. There they fasted sometimes for many days. They also purged themselves with medicine, made themselves vomit by running a thin pliable stick, or four small sticks tied together, down their throats, and purified themselves by means of the sweat-bath and by washing in cold water. This last, however, was not done until the second sojourn in the mountains, or about ten or more days after the beginning of the ceremonies. (Teit 1900:318-319)

Moreover:

> When repairing to certain peaks and lonely places in the mountains, some youths set up a stone, danced and sang around it, and finally fired an arrow at it. If the stone moved or cried out, it was a sign that their efforts to become great hunters had been crowned with success. (Teit 1900:320)

The mountain environment within which boys searched for their guardian spirits was sometimes painted by boys, during their puberty ceremonials, on the aprons which they wore. Boas (in Teit 1900:380) describes and figures one such apron. The patterns represented include a depiction of "four mountains resting on an earth-line, with a lake between two of them. These are the mountains over which he travels. At the bottom are the principal mountains where he resides while trying to obtain a guardian spirit. The

spikes . . . [up the sides and over the top of the mountains] represent trees; and the long lines inside, gulches."

From these few data it is evident that many of the boy's puberty activities not noted above but summarized in an earlier part of this chapter were carried out either by choice or by custom in a mountain environment.

The Thompson Indians believed:

> . . . in the existence of a great many mysterious beings. The 'land mysteries' are the spirits of mountain-peaks. In the lakes and at cascades live 'water mysteries.' Some of these appear in the form of men or women, grisly bears, fish of peculiar shape, etc., emerging from the water. Any person who may happen to see these apparitions will die shortly afterward. (Teit 1900:338)

Teit mentions such unusual beings in certain high mountain lakes and creeks in Upper Thompson country; people passing in their vicinity avoided looking at these localities lest they see these apparitions and die. He likewise identifies specific Upper Thompson mountainous areas with their resident mysteries, the viewing of which was an evil omen (Teit 1900:338-339). Presumably the Lower Thompson likewise recognized certain high country lakes and mountain masses with similar in-dwelling monstrous beings, but no examples of such are provided.

The Lower Thompson also believed:

> . . . in different kinds of [seemingly non-resident] monsters to be met with occasionally in the mountains; as, for instance, a human body of white color, without any limbs, which constantly rolls over the ground, uttering cries like an infant. A person who sees any of these monsters will die shortly afterward. . . . . On some cliffs, pictures in brilliant colors are seen, which vanish as suddenly as they appear. (Teit 1900:339)

Monsters of this kind, according to Teit (1900:339), appear to have been unknown to the Upper Thompson. This point is of some importance since it calls attention to the cautions that should be exercised in assuming that data assigned by Teit to the Upper Thompson--as opposed to the Thompson in general--necessarily apply to the Lower Thompson as well.

The Lower Thompson, like the Upper people, believed in a race of human-like folk, inhabiting steep cliffs and forests, some of whom were dwarfs and others very tall. Informants described them thus:

> [They] can make themselves visible or invisible at will. . . . the dwarf women do not exceed three feet in height. A few of the men, however, are tall, surpassing the tallest Indians in stature; but none of them are of medium height. They all wear clothes similar to those formerly worn by the Indians, but have never been seen with bows and arrows. They inhabit low, dense forests, or live in dense woods in the mountains. It is said that they never kill, steal, or chase people. Some people believe they are cedar-trees, or their spirits, and that they have the power of transforming

> themselves. They are rather fond of joking, and playing tricks on people. (Teit 1900:339-340)

Two specific examples of encounters with these supernatural beings are reported by Teit (1900:340). In one instance a man, after pushing his wedge into the canoe he was fashioning, fell asleep, was awakened by a dwarf with the wedge in his body, and was told by this being before it vanished that he (the man) should henceforth paint his face red when shaping a canoe to make the labor easier. In the second case, a woman slept overnight in the forest and woke at dawn with a piece of burnt cedar wood in her body, placed there by a dwarf while she slept.

In addition, naked, gaunt, human-sized beings, with visible bones and very large, protruding eyes, were reported to have chased Thompson people until they fainted (Teit 1900:340). Presumably these occurred in the Lower as well as the Upper Thompson area.

Giants, some 30 feet tall, did not inhabit their country, according to the Lower Thompson, as they did that of the Upper Thompson. Nonetheless, they occasionally entered it from the territory of the Upper Thompson or Okanagan.

> [These beings] dress in bear or dog skins. Some wear long black robes, while others again go almost naked. Sometimes they chase or steal people. They are not known to have any weapons. Once a giant is said to have chased two hunters, who sought refuge in a large fir-tree. Presently this giant was joined by two very tall friends, who tried in vain to reach the hunters. The latter shot at the giants, who caught the arrows in their hands and broke them. After a while one of the giants discovered that he had lost his dog-skin apron, and seemed very much concerned about it. They all concluded to go in search of it, and left the hunters, who then came down from the tree, and went home. (Teit 1900:340-341)

As made clear in the preceding general survey of the Lower Thompson traditional lifeways, individual guardian spirits were the principal supernatural figures of the tribe. In a sense, however, the tops of mountains and certain lakes might be considered tribal deities. Speaking of the Thompson as a whole, Teit (1900:344) explains:

> Certain parts of the high mountains, especially peaks or hills, were considered sacred, being the residence of 'land mysteries' . . . . Some of these places, when trodden upon by human foot, were always visited by snow or rain. In other places, snow or rain fell only when they were trodden upon or visited by a stranger for the first time. Indians, therefore, when hunting in the vicinity of these places, visited them, and appeased the spirits by making an offering to them, thus insuring good weather during their stay, and good luck while hunting. These offerings generally consisted of a lock of hair, a rag from the clothing, a little [gun]powder, a few shot, a piece of tobacco, a stone, and so on.
>
> The women, when picking berries or digging roots on certain mountains, always painted their faces red. In general, they paint

> their faces wholly red before coming in sight of certain lakes, that they may be favored with good weather and good fishing. The paint is considered as an offering to the spirits. Sometimes, when they came in sight of these lakes, they made the sign of good will or blessing . . , and prayed to them to give them good weather and plenty of fish. They also did this to some of the mountain-peaks near their hunting grounds.

Whether any bodies of water such as mentioned in the following description existed in Lower Thompson country is not specified in the ethnographic literature. But inasmuch as women from this group are known to have dug roots at higher elevations, this is quite possible. Teit (1900:345) writes:

> Roots, etc., growing near a haunted or mysterious lake, should not be dug or gathered. Vegetation near such a lake is called its 'blanket.' Swamp-grass and reeds growing in the water of the lake are called its 'hair.' The lake, if robbed of its blanket, will take revenge by visiting sickness, bad luck, or death upon the root-gatherer, or by sending an apparition or death-warning to the person, shortly after which the offender herself, or one of her near relatives, will die.

Some of the first berries of the season were given by the Thompson "to the earth, or more generally to the mountains." This offering was made by an old, gray-haired person, who, dancing, "held the fruit out toward the mountain-tops . . . . The people painted their faces red, and danced for some little time." (Teit 1900:345) Again, this is supposed to describe a custom that prevailed among both Thompson groups.

A great many specific practices with magical or supernatural overtones were mandated among the Thompson in connection with the subsistence quest, and others were proscribed. Three examples relating to hunting, importantly a high terrain pursuit, will illustrate those that were prescribed:

- "If a deer-hunting party had bad luck, they staid in camp for a day or two, sweat-bathing, singing, and praying to their guardian spirits to give them success, and also asking the deer to present themselves to be shot at" (Teit 1900:346).

- "Deer's bones were always burned by the hunters while on hunting-trips, as a safeguard against the spell resulting from any woman who happened to come in contact with the fresh bones, or from any dog which might take a bone in its mouth" (Teit 1900:346-347).

- In bear-hunting, a man preceded his hunt by sweat bathing, during which he prayed to his guardian spirits and begged the bear to allow itself to be taken without danger. The bear skull was tied to a small treetop, as high up as could be reached, and left there. (Teit 1900:347)

Two examples, also associated with hunting, are sufficient to illustrate subsistence-related tabus:

- A deer's head was never given by a hunter to a man who was the first or second born of a family, nor did a hunter ever eat with such a person. To do otherwise would result in the deer becoming very wild and difficult to shoot. (Teit 1900:347)

- Deer meat was never taken into a [temporary or open-season] lodge through the normal entrance, since this door was used by women. In a hunting lodge it was carried in through a hole in the back of the structure. (Teit 1900:347)

Surely these very numerous customs, bolstered by magical or supernatural sanctions, were observed when hunting in the mountains no less than when pursuing game at lower elevations. Assuming their practice in the mountains, some--like placing bear skulls in trees--might have left their mark, at least for a time, in the high country. Others testify to cultural traits--like hunting sweat lodges and hunting lodges--which might, with great good fortune, be preserved in the archaeological record. And still others--like the burning of the deer bones--would explain why in mountain hunting sites few osteological remains of deer hunting should be expected.

But none of these ritual or ceremonial practices are explicitly reported by Teit as having been observed in the high terrain, and so none, save for the preceding examples, are noted in this section. These behavioral mandates, both positive and negative, are summarized, however, in the earlier general section devoted to the Lower Thompson.

Among the many animals that might be acquired by the Thompson as guardian spirits were hoary marmots that became tutelaries of some hunters, and mountain goats which (as well as common marmots) were obtained by some "gamblers, runners, etc.," and which were secured by some women. The mountain goat, at least so far as they were associated with "gamblers, runners, etc.," were, Teit (1900:355) observes, principally Lower Thompson guardian spirits.

Charms of many sorts were used by the Thompson in various ways, as noted in the preceding general culture description. One, consisting of the body or skin of a mouse worn by hunters, is of particular interest because the mouse was "found on the higher mountains" (Teit 1900:371). Failing to overtake a wounded deer, the hunters placed this charm on its tracks, causing it to travel only a short distance before dying.

Among the many beliefs recorded by Teit were those that regarded human activities, intentional or otherwise, as affecting the external world by a kind of magical potency. Two are reported that testify to the Thompson use of the high country: the intrusion of Indians "on the haunts of spirits in the mountains" caused weather changes; the burning of ptarmigan feathers or the hair of the mountain goat or bighorn sheep resulted in sudden cold weather or a snowstorm (Teit 1900:374), a statement that provides further, though oblique, evidence of high terrain hunting.

As noted above, winter hunting camps were sometimes established in the mountains and so presumably from time to time within the Park boundaries. Surely summer camps also, though I have found as yet little hard data in support of this assumption beyond a Skagit statement reporting meeting

Thompson hunting parties in the present Ross Lake region in the warm season. How these mountain camps were arranged and socially organized, if differently from villages and camps at lower elevations and along the Fraser River, we do not know. But Thompson hunting parties were led by their most efficient member, at the request and subject to the group's approval (Teit 1900:289). This is to say, obviously, by the man most skilled in hunting the particular animal in the region being hunted over and most competent in directing the collective activities of the party.

Mountain Food Plants of the Thompson

The ethnographic data identifying many of the native plants and plant parts that found their way into the diet of the Thompson and describing the ways in which they were secured and prepared have been summarized from several sources with a few supplementary notes from Turner's (1978) ethnobotanical publication (see Subsistence section). Here the ethnobotanical information regarding Thompson food flora--and a few tea plants and masticatories for good measure--is examined in greater detail, with a particular focus upon the elevational distribution of these floras. The central question is this: which of these Thompson subsistence plants grow in lower, middle, and high mountain environments and hence are plants that the Lower Thompson may reasonably be assumed to have exploited in their aboriginal territory within the North Cascades Park perimeters?

To my knowledge there are three compilations of the food floras utilized by the Thompson: vis., one by Teit (1930b:238-239) in his Okanagan ethnographic study where he lists the Thompson plant names beside those of the Okanagan, botanically identified; one by Steedman (1930) based on Teit's extensive field records of the 1890s; and one by Turner (1978). Turner's data are in several respects the most useful for present purposes. They report largely her own field findings among the Thompson in the 1970s, present a thoroughly competent and contemporary botanical identification of the plants, and are placed within the domain of earlier and on-going ethnobotanical studies, including her own, on the Northwest Coast and in the British Columbia Plateau. They demonstrate a familiarity with Teit's pioneering information and make use of it as appropriate. In this published semipopular inventory, however, her Thompson data are not compiled in catalog form for the Thompson alone, as in the case of the Teit and Steedman reports, but are buried in her description of the botanical characteristics, habitat, geographical distribution, and traditional (and present-day) uses of each plant by the interior British Columbia Indians as a group: the Thompson information must be teased out of this context, plant by plant. Further, collected some half century after Teit's field research, there must have been some slippage in the information available relating to traditional Thompson plant knowledge and subsistence usage: e.g., memory loss of plants once used, especially those marginally collected in early times; of peripheral uses for plants whose principal dietary contributions were the only ones remembered; and of the fact that certain of their present and recollected food plants were added to the roster of Thompson food sources in postcontact times as borrowings from nearby tribes or even from Whites or Oriental neighbors. Nevertheless, these Turner data are the best available for present objectives, in part because of their habitat and geographical distribution notes, and this is the information presented below.

In brief, the purposes of this flora listing are threefold: to provide a more complete and botanically precise roster of Thompson food plants and their native uses, prepared by a competent, experienced ethnobotanist, than the somewhat general observations in the preceding subsistence section; to specify those plants in the catalog that grow in low, mid, and high elevations of traditional Thompson territory, thus furthering the general Indian-land adaptation interests of this study; and more particularly, as already stated, to suggest the floral subsistence resources presumably available to the Lower Thompson within the borders of their country inside the Park.

The plants catalogued below are individually identified either with the Thompson ("T") as a whole--perhaps more especially with the Upper Division although this point is generally left uncommented upon--or with the Lower Thompson ("LT") or with both explicitly. In a few instances this Thompson identification is assumed rather than specifically stated by Turner: i.e., when plants are reported to have been eaten by "all of the Indian groups of the central and southern [British Columbia] Interior," "virtually every Indian group in British Columbia," "all Interior Salish groups," or something similar. No attempt has been made to incorporate into these Turner data the information from the ethnographic sources summarized previously, lest her material be contaminated by less carefully collected and analyzed data or by botanically misidentified or archaically identified plants. Furthermore, any such conflation would be unwise, since it would require assembling from the scattered root, berry, stalk-stem, seed, and other separate ethnographic sections all use information appearing to relate to a single plant, when, in fact, there may be no assurance that they all belong to the same taxon, and then often taking a best-guess approach to the taxon in question, the botanical binomial either not being given in the ethnographic record or being an outmoded designation.

It has not been possible to check Turner's plant habitat and distribution statements or to make them more refined for the British Columbia Thompson country specifically, as through the use of the botanical-ecological information in the Hitchcock and Cronquist (1981) Northwest flora compendium or in the Krajina (1969) biogeoclimatological study. Nor has it been possible to locate and extract comparable plant habitat material from such floral studies of the western Cascades slopes in the general Park region as may exist. Owing to the incompleteness of this environmental background and its lack of focus on the specific Park sector as well as for other reasons, the following plant data must be viewed as a preliminary summary.

Considering these habitat deficiencies, it is fortunate that in the general Park area the same biogeoclimatic zones extend north and south of the border, the differences within this Thompson mountain terrain not being latitudinal but primarily those of elevation, slope direction, precipitation, and the like (Smith 1985a). Accordingly, Turner's plant habitat information for British Columbia north of the Park appear to be satisfactorily applicable to the Skagit sector of the Park exploited in protohistoric and early postcontact times by the Thompson. Unhappily, habitat data are not furnished by Turner for every plant for which she documents Thompson food use. In a few such cases, mostly where the plants are reported to have been gathered by the Lower Thompson, the essential ecological information has been extracted from the Hitchcock and Cronquist volume. The remaining plants of unspecified

habitat are assumed for the purposes of this present analysis to have been non-montane floras, doubtless an assumption that further research would prove inaccurate for some.

This is not the place to discuss in detail the biogeoclimatic zones of the Lower Thompson country. This situation is very complex, as might be expected from its location astride the Cascades, having not only great elevational, temperature, and precipitation differences but also both coastally pointed flora on the west side and interior linked plants on the east. As I plot these zones from Krajina's (1968) very detailed data, they were the (1) Coastal Western Hemlock Zone in the Skagit Valley and its northern extension into Canada and long the Fraser Valley; (2) the Interior Douglas-fir Zone in the Fraser and Coquihalla Valleys; (3) the Mountain Hemlock Zone in the higher country flanking Zone (1); (4) the Engelmann-Spruce Subalpine Fir Zone in the high Cascades, and (5) the Alpine Tundra Zone in the loftiest mountains (Smith 1985a). The Chilliwack Valley assigned to the Lower Thompson by Teit as hunting-gathering territory is excluded from consideration as actually Chilliwack tribal country as already noted.

The lower and upper elevational limits of these several zones vary considerably in the Thompson country between the leeward and windward faces of the mountains and according to other factors, including very local ones. But roughly the boundaries of the five zones enumerated above are these: Coastal Western Hemlock: 0-3,250 feet; Interior Douglas-fir: 2,000 (locally somewhat less)-4,000 feet; Mountain Hemlock: 3,300-5,500 feet; Engelmann Spruce-Subalpine fir: 4,000-7,000 feet; and Alpine-Tundra: 5,500 feet to the highest peaks. The Interior Douglas-fir band is considered by Turner (1978:17) to lie at "moderate elevations."

The lowest elevation of the aboriginal Thompson hunting-gathering country inside the Park boundaries is a little below 1,600 feet, in the bottom of the Skagit Valley now inundated by Ross Lake. This strip along the river lay, according to Krajina's plotting, in the Coastal Hemlock Zone, as already noted. The higher mountain slopes on both sides of the river are in the Mountain Hemlock Zone. The very high peaks and their immediate vicinity, both to the east and west of the middle Skagit Valley and the Park, rise to over 8,000 feet and lie in the Alpine-Tundra Zone. Apparently neither the Interior Douglas-fir nor the Engelmann-Spruce-Subalpine Zones occurs to any important degree in the general Park region south of the international border.

Turner's plant habitat information is, however, not keyed to these technical zones but rather largely to rough and general elevation bands. Using her almost entirely descriptive material, it seems reasonable and informative to divide into three elevational categories the Thompson subsistence floras she identifies:

(a) Plants for which she gives no habitat data whatever and those said to grow at the lowest elevations with nothing to indicate higher altitude growth. These latter include the plants that she describes as existing on dry hillsides and open plains, in valleys and foothills, on sagebrush deserts, near sea level, and so on. Of the 108 Thompson subsistence

taxa mentioned by Turner, 59 plants belong in this group. In the following plant list no habitat data are entered for the individual taxa in this category, even where such are provided by Turner: these floras, if Turner's information is followed, are of no immediate interest in this mountain-use section. To designate these plants, they are unmarked with stars.

(b) Plants growing as high as the lower and middle altitude mountains and their valleys--possibly at still more elevated levels but Turner provides nothing to demonstrate this point. These comprise the plants that Turner (and Hitchcock and Cronquist where called upon for supplementary information) describes as found "in the mountains," "in montane elevations," "in mountain meadows," "in lower mountains," " on lower mountain slopes," "at moderate elevations," "at mid-montane altitudes," "in mid-elevations," "up to 2,500 feet," and the like. Of the 48 definite mountain-environment plants (this category [b] and the following category [c]), 28 fall into this lower and mid-montane group. These floras are marked with a single star in the roster that follows.

(c) Plants specifically stated by Turner (in a few instances by Hitchcock and Cronquist) as occurring in the high mountains, some also, of course, at lower elevations as well. This cluster consists of those floras stated to grow "in high elevations" or "in high mountains," "at upper elevations in the mountains," "well up in the mountains," "in the mountains and high valleys," "in high mountain valleys," "on mountain ridges above lower mountains," "in subalpine" or "alpine country," "near timberline," "toward tree-line in the mountains," "above tree-line," and so on. In this high altitude group fall 21 of the 48 mountain flora. This signifies that half of the mountain subsistence plants were available high up on the mountain faces. These floras are indicated with double stars in the listing that follows.

In the case of the montane plants of categories (b) and (c), such germane habitat facts as are reported are entered with each plant.

1. LT Acer macrophyllum, broad-leafed maple.

   Young shoots peeled and eaten raw. Sprouted seeds boiled and eaten. (Turner 1978:208)

2. *T Alectoria fremontii, black tree lichen, black tree moss.

   Cleaned of twigs, soaked in fresh water to remove bitter substance, steamed overnight in grass-lined pit, cut into cakes. Eaten immediately or dried and stored for future use. Dried "moss" cakes had to be soaked to make them soft before eating. Stored properly, cakes lasted three or more years. To add flavor, often cooked interspersed with layers of onions or mixed with serviceberries. Dried "moss" dipped in broth or soup and eaten like a cracker. Often boiled in a soup. Boiled with dried Indian carrots, yellow avalanche lily corms, tiger lily bulbs, serviceberries, or dried deer meat. In an emergency eaten raw. Especially in montane forests. (Turner 1978:35-39)

3. LT Allium acuminatum, Hooker's onion.

Bulbs eaten. (Turner 1978:71,72)

4. T LT Allium cernuum, nodding onion.

Bulbs sometimes eaten raw, "leaves and all." Usually steam-cooked in pit oven, at times interspersed with layers of shrubby penstemon and red alder leaves, and occasionally covered with scrapings of alder bark to give them reddish color. (Turner 1978:71)

5. T Allium geyeri, Geyer's onion.

Bulb "undoubtedly" eaten, since it grows in Botanie Valley. (Turner 1978:71)

6. T Amelanchier alnifolia, serviceberry, Saskatoon berry, June berry, shad-bush.

Most popular and widely used berry. At least four varieties recognized. Dried on mats like raisins. Or mashed, boiled in baskets with hot rocks, and spread on grass, mats, or rocks to dry in cakes. Or placed on racks over a fire or sun dried. Often juice collected and added little-by-little to drying berry cakes, or saved to use in other cooking. Dried cakes broken up and eaten as snack. Or soaked and boiled with bitterroot or salmon eggs, cooked with tiger lily bulbs, deer meat, or bear grease, mashed with other berries (e.g., red-osier dogwood berries), or rehydrated and eaten as dessert. Berries cooked in soups and stews or used to sweeten other dishes. Dried berries were a common trade item, especially between interior and coast. (Turner 1978:181-182)

7. **T Arctostaphylos uva-ursi, kinnikinnick, bearberry.

Berries eaten raw or "fried"(?) with salmon oil or bear fat or boiled in soups or with deer meat or salmon. They were too dry to be eaten alone. Young leaves boiled or merely immersed in boiling water to make a tea, drunk as beverage or as tonic or diuretic. Sea level to high elevation. (Turner 1978:143-144)

8. LT Armillaria ponderosa(?), pine mushroom.

a. Eaten in Fraser Canyon area. (Turner 1978:42)

9. *T Balsamorhiza sagittata, balsamroot, spring sunflower, wild sunflower.

White succulent shoots dug before plants appeared above ground and eaten raw; a good famine food. Large taproots beaten to loosen tough outer skin and peeled; white inner part steam-cooked overnight; cooked, they had a sweetish taste. Eaten immediately or threaded on a string or stick and dried. Flower stems broken off, peeled, and eaten raw, steamed, or boiled for their pleasant nutty taste. After flowers gone to seed, the small black fruits were

sun-dried or roasted; then eaten whole or generally pounded into a flour. Properly dried seeds, well sealed, lasted for years. From lowlands to moderate elevations in the mountains. (Turner 1978:116-119)

10. T LT Berberis aquifolium, Oregon grape, barberry, mahonia.

Berries, though tart, gathered when fully ripe and eaten fresh. (Turner 1978:124-125)

11. LT Berberis nervosa.

Berries eaten fresh. (Turner 1978:124-125)

12. T Brodiaea douglasii, fool's onion.

Corms eaten. (Turner 1978:73)

13. *T LT Brodiaea hyacinthina, fool's onion, cluster lily.

Corms eaten raw or boiled and dried. Open flats to midmontane meadows. (Turner 1978:73)

14. T Calochortus macrocarpus, mariposa lily, sago lily, desert lily.

Corms ("sweet onions," "wild potatoes") eaten raw or threaded and dried with or without being steam-cooked first. Flower buds eaten raw, being sweet from nectar at base of petals. (Turner 1978:75)

15. T Camassia quamash, blue camas.

Bulbs eaten, perhaps only in dried form as a trade item. (Turner 1978:77)

16. LT Cantharellus cibarius, chanterelle.

Mushroom, eaten fresh or dried. (Turner 1978:42)

17. T Chimaphila umbellata, pipsissewa, prince's pine.

Leaves, stem, and roots boiled to make tea. (Turner 1978:211)

18. *T Cirsium edule, wild thistle, Indian thistle.
19. *T C. hookerianum, Hooker's thistle.
20. T C. undulatum, wavy-leafed or woolly thistle.

Roots of all three species eaten. Peeled, cut up, steam-cooked in pits or boiled in stews. C. edule: chiefly in the mountains; C. hookerianum in montane areas; C. undulatum in foothills and plains. (Turner 1978:121)

21. **T Claytonia lanceolata, spring beauty, Indian potato.

Small, round corms eaten in large quantities, an important source of carbohydrates. Dug, washed, and steamed in underground pits or

boiled with very little water. Resemble potatoes in taste, but sweeter. Sometimes cooked with other roots (e.g., yellowbell bulbs). Could be stored for later use, though whether smoked, dried on mats, or cooked, mashed, formed into cakes and dried is unclear for the Thompson specifically. Sagebrush foothills to alpine meadows; usually at higher elevations, especially mountain meadows. (Turner 1978:172-174)

22. T Coprinus comatus, shaggy mane.

Mushroom, cooked and eaten when young. (Turner 1978:44)

23. **T Cornus stolonifera, red osier dogwood, red willow.

Berries, though extremely bitter, eaten fresh, frequently pounded and mixed with sweeter fruit such as chokecherries or serviceberries. From valley bottoms to near timber-line. (Turner 1978:137-138)

24. T Corylus cornuta, hazelnut, wild filbert.
LT

Buried in ground for 10 days or more to allow prickly husk to rot away. Sometimes process hastened by adding water to hole before it was filled in, and by covering nuts with wet mud. With husks removed, nuts shelled and eaten. Often located already husked in squirrel caches. Lower Thompson traded them from Fraser Valley Halkomelem and from Upper Thompson, who gathered them in large quantities. Upper people also traded them to Shuswap. (Turner 1978:126-127)

25. T Crataegus columbiana, red hawthorn, red thornberry, red haw.
26. T C. douglasii, black hawthorn, black thornberry, black haw.

Fruit of both were eaten, though not highly regarded because of their large seeds, lack of taste, and mealy texture. (Turner 1978:185)

27. T Disporum hookeri, Hooker's fairy bells.

Berries eaten raw. (Turner 1978:80)

28. T Epilobium angustifolium, fireweed, willow-herb, blooming sally.

Succulent pith at center of young stalks eaten raw. Stems also boiled or steamed, but this was less common. (Turner 1978:170-172)

29. **T Erythronium grandiflorum, yellow avalanche lily, yellow dog-tooth violet, snow lily, Indian sweet potato, Indian potato.

Starchy corms eaten in large quantities. Botanie Valley north of Lytton in Thompson territory was a prime locality for gathering these corms. Many families from different parts of the country collected there annually to harvest these and other wild plants.

> For immediate use the corms were steam-cooked, roasted in hot ashes, or boiled for a short time. To preserve for winter, they were allowed to soften for a few days, peeled, then threaded on a string of twisted red cedar or Rocky Mountain maple bark and hung up to dry, until they were hard and brown. Circular strings of avalanche lily corms, usually of measured length from hand to elbow, were an important trading item. The corms could also be dried unstrung and stored in sacks. Before being eaten the dried corms were soaked until they had regained most of their moisture, then boiled or steam-cooked in underground pits until they were soft and chocolate-brown. (Turner 1978:82)

In mountains and high valleys. (Turner 1978:81-82)

30. T Fragaria vesca, wild strawberry, tall strawberry.
31. T F. virginiana, wild strawberry, blue-leaf strawberry.

A favorite fruit, especially of children. Usually eaten fresh. If large enough quantities were obtained, mashed and spread over grass or mats to sun-dry. Dried cakes eaten thus or rehydrated and eaten alone or used as sweetener. Flowers, leaves, and stems sometimes used to flavor roots in cooking pits. (Turner 1978:187)

32. **T Fritillaria lanceolata, chocolate lily, Indian rice.

Bulbs boiled in soups or steam-cooked. Not dried for storage, although they could be kept fresh for a short time in underground pits. Sea level to high mountain valleys. (Turner 1978:83)

33. T Fritillaria pudica, yellowbell, yellow snowdrop.

Bulbs eaten raw, boiled, or steam-cooked for a short time. Used only "sporadically"; not often stored. (Turner 1978:87)

34. *LT Gaultheria shallon, salal.

Berries mashed and dried in cakes. Lowlands to lower mountains. Hitchcock and Cronquist 1981:344, (Turner 1978:208)

35. **T Geum triflorum, purple avens, old man's whiskers.

Roots boiled or steeped to make tea as beverage, appetizer, or medicine for colds and fever. Foothills to subalpine ridges. (Hitchcock and Cronquist 1981:212, Turner 1978:215)

36. **T Heracleum lanatum, cow parsnip, Indian rhubarb, wild rhubarb.

Young stalks and leaf stems peeled and eaten raw, or occasionally boiled, steam-cooked, or roasted for short time. Sea level to above tree-line in the mountains. (Turner 1978:95)

37. **T Hieracium ssp., hawkweeds, mountain dandelions.

Leaves and coagulated latex of two or three species chewed. Stem was broken allowing milky latex to exude and harden. Collected into a little ball, it was chewed for pleasure. From lowlands to moderate or high elevations. (Steedman 1930:492, Turner 1978:122)

38. **T Hydrophyllum capitatum, waterleaf.

Long, fleshy roots always eaten cooked, either boiled or steamed. Frequently eaten with other types of roots, such as yellow avalanche lily. Plants common in Botanie Valley. Lowlands to well up in the mountains. (Turner 1978:168)

39. T Hygrophorus eburneus(?), ivory-capped Hygrophorus.

Mushroom, eaten freshly cooked or dried. (Turner 1978:39)

40. **T Juniperus communis, common juniper.
41. *T J. scopulorum, rocky mountain juniper.

Branches and berries of both species boiled to make a "tea" beverage, but mostly a medicine for colds and other ailments. J. communis grows from near sea level to subalpine or alpine areas; J. scopulorum, on dry plains and valleys and lower mountains. (Turner 1978:51-52)

42. *T Larix occidentalis, western larch, tamarack, western tamarack.

Sweet-tasting gum that exudes from tree and hardens in air was broken off and chewed for pleasure. In mountain valleys and on lower slopes. (Turner 1978:53)

43. *T Lewisia columbiana, bitterroot.

Eaten occasionally but less favored than L. rediviva. At higher elevations than L. rediviva, which grows in lower mountains. (Turner 1978:175, 179)

44. **T Lewisia pygmaea, bitterroot.

Taproot eaten on occasion though not as well liked as L. rediviva. In mountains to above tree-line; high mountain slopes. (Turner 1978:175-179)

45. *T Lewisia rediviva, bitterroot, sand rose, desert rose, rock rose, spatlum.

Most important of all edible roots to Upper Thompson; Lower Thompson also fond of it and used it whenever available. Roots peeled, very bitter red-orange structure near root top removed, then baked or boiled and eaten. Or dried for several days on a mat or strung on strings or sticks to allow them to be kept for a year. Traditionally stored in fiber bags, sometimes buried in earth pits

lined with pine needles. To avoid stomach problems, dried roots had to be boiled or steamed in small earth pits; almost always mixed with other foods, especially serviceberries. Aboriginally a major item of commerce in southern interior British Columbia. Thompson obtained it from Okanagan and traded it on to the Lower Thompson and Lillooet. Sagebrush plains to lower mountains. (Turner 1978:174-179)

46. **T Lilium columbianum, tiger lily, Columbia lily, panther lily.

Large bulbs eaten; "very popular in the old days" in spite of their peppery, bitter, and strong taste. Often used as flavoring to enhance taste of other foods. Never eaten raw. Boiled, sometimes with two water changes, or steam-cooked for several hours. Cooked roots sometimes sun-dried, either whole or mashed in thin cakes, and stored for winter. Often boiled and eaten with other foods (e.g., deer meat, fish, fermented salmon roe, serviceberries). Sea level to subalpine elevations. (Turner 1978:87-90)

47. T Lithospermum incisum, long-flowered stoneseed, puccoon, gromwell.

Large deep taproots cooked and eaten. (Turner 1978:129)

48. T Lomatium ambiguum, Indian celery.

Flowers, leaves, stems, and seeds used for flavoring and tea as with L. nudicaule. (Turner 1978:109)

49. *T Lomatium dissectum, chocolate tips, wild celery, bitterroot.

Roots, especially from young plants, eaten. Sea level to moderate elevations in the mountains. (Turner 1978:102-103)

50. T Lomatium macrocarpum, wild carrot, Indian carrot, desert parsley, hog-fennel, biscuit-root.

Long taproots, strong-tasting and peppery, were eaten raw but generally roasted or boiled, often with other foods. Cooked with meat or tiger lily bulbs and fermented salmon roe. (Turner 1978:105, 106)

51. *T Lomatium nudicaule, Indian celery, wild celery.

Young sprouts, leaf-stalks, and leaves were a popular green vegetable, eaten raw or boiled. Young roots also eaten. Flowers, leaves, stems, and seeds used as flavoring for teas, soups, meat stews, and tobacco. As tea, plants fresh or dried were put into water and brought to a boil; considered good for colds and sore throats. Botanie Valley furnished good supplies of these plant parts. From valleys and foothills to moderate elevations in the mountains. (Turner 1978:108-109)

52. T Lomatium triternatum, Indian celery.

Flowers, leaves, stems, and seeds used for flavoring and tea as with L. nudicaule. (Turner 1978:109)

53. **T Lycopus uniflorus, bugleweed, water horehound.

Fleshy tubers were washed and steam-cooked in pits. Have a sweet, pleasant taste rather like a milk radish. Lowlands to upper elevations. (Turner 1978:168-170)

54. T Opuntia fragilis, prickly-pear cactus.
55. T O. polycantha.

Succulent stem segments collected, spines scorched off, segments roasted or pit-cooked and peeled, inner fleshy part eaten. "Flesh," mixed with berries, cooked into soup. Fruits also eaten mixed with berries. (Turner 1978:131)

56. LT Osmaronia cerasiformis, Indian plum.

Berries regarded as edible, but not much eaten lest lungs bleed. (Turner 1978:209)

57. *T Osmorhiza chilensis, sweet cicely, sweet root, dry land parsnip.

Thick aromatic roots either steam-cooked in underground pits or boiled with salmon roe or meat in stews. Had a delicate, sweet flavor. From sea level to moderate elevations in the mountains. (Turner 1978:109-111)

58. T(?) Phaeolepiota aurea, golden Phaeolepiota.

Mushroom probably eaten (as it certainly was among Okanagan and Lillooet) with cottonwood mushroom. Boiled or mixed with deer meat to make soup. Dried for winter use. (Turner 1978:46-47)

59. **T Pinus albicaulis, white-bark pine.
**LT

Large seeds roasted in hot ashes and often combined with serviceberries when eaten. Also parched and pounded with mortar and pestle into fine flour, which was mixed with water to form mush. Often traded by Lower Thompson to Upper Thompson in exchange for hazelnuts. "Subalpine to timber-line, on ridge-tops, and exposed rocky slopes"; "toward tree-line in mountains"; seeds gathered each year "from local mountain ridges." (Turner 1978:55-57)

60. **T Pinus contorta, lodgepole pine, shore pine, jack pine, black pine.

Sweet, succulent cambium eaten fresh. From sea level to subalpine elevations. (Turner 1978:58, 60)

61. *T Pinus ponderosa, ponderosa pine, yellow pine, red pine, bull pine.

Cambium eaten. Seeds eaten raw as confection. Up to 3,000 feet. (Turner 1978:60, 62)

62. LT Polypodium glycyrrhiza, licorice fern.

Rhizomes chewed, especially for colds and sore throats. (Turner 1978:207)

63. T Polyporus sulphureus, sulphur Polypore, cottonwood mushroom(?).

Usually boiled and fried. (Frying was not a traditional Thompson cooking method. How they were prepared following the boiling in early days, if they received further treatment, is not described.) (Turner 1978:47)

64. *LT Polystichum munitum, sword fern.

Rhizomes eaten. Near sea level to midmontane elevations. (Hitchcock and Cronquist 1981:53, Turner 1978:207)

65. T Potentilla anserina, silverweed, cinquefoil, Indian sweet potato.

Long, fleshy roots steam-cooked or roasted and eaten. Also eaten raw. (Turner 1978:188-189)

66. T Potentilla glandulosa, cinquefoil.

Leaves or entire plant boiled to make tea, "said to have slight stimulant properties." (Turner 1978:215)

67. *T Prunella vulgaris, self-heal, heal-all.

Plant soaked in cold water to make a common drink. Turner was unable to confirm. From sea level to mid-elevations in mountains. (Hitchcock and Cronquist 1981:406, Steedman 1930:494, Turner 1978:215)

68. *T Prunus emarginata, bitter cherry, bird cherry, wild cherry.
69. T P. pensylvanica, pin cherry, bird cherry, wild cherry.

Fruit eaten on a casual basis. P. emarginata: sea level to moderate elevations in the mountains. (Turner 1978:189)

70. T Prunus virginiana, chokecherry, wild cherry.

A very popular fruit in spite of their large stones and slight astringency. Eaten fresh, or sun-dried on mats, or mashed and dried in cake form. Cakes soaked in water before being eaten or pounded with salmon roe, heads, or tails. (Turner 1978:191-192)

71. T Pseudotsuga menziesii, Douglas fir.

Young twigs and needles made into a tea with tonic properties. Sugar--"a white crystalline substance which forms under special circumstances on the leaves and branches of some trees"--eaten as a confection. If gathered in sufficient quantities, preserved to use through the winter. Sometimes mixed with other foods (e.g., black tree lichen, balsamroot seeds) as sweetener. (Turner 1978:62, 64-65)

72. *LT Pteridium aquilinum, bracken fern.

Rhizomes eaten raw or peeled, roasted, and pounded into flour. Young shoots ("fiddle-heads") eaten raw, after being soaked in salt water; possibly a non-tradition food, the eating of which was learned from local Japanese. Widespread except at higher elevations. (Turner 1978:49-50)

73. *LT Pyrus fusca, wild crabapple.

Fruit eaten. Coastal bogs to mountain slopes up to 2,500 feet. (Hitchcock and Cronquist 1981:222, Turner 1978:209)

74. *T Ribes ssp, wild gooseberry.

Eaten but not highly regarded. Secured mashed wild gooseberries mixed with bitterroot from Okanagan in trade for dried salmon. Some species on wooded mountain ridges; others on lower mountains; others on wooded hillsides. (Turner 1978:164-165)

75. LT Ribes bracteosum, stink currants.

Eaten though not often. Seldom dried or stored for winter. (Turner 1978:163)

76. T Ribes cereum, squaw currant.

Rather tasteless and dry berries eaten fresh. Not dried or stored for winter. Eaten also to relieve diarrhea and gain strength. (Turner 1978:162)

77. *T Ribes hudsonianum, northern black currant, wild black currant, Hudson Bay currant.

Eaten; liked by some people but not by others. At the edge of mountain meadows. (Turner 1978:162-163)

78. **T Ribes lacustre, swamp gooseberry.

Small berries, used fresh or cooked. Sea level to subalpine forest. (Turner 1978:166-167)

79. T Ribes sanguineum, red-flowering currant.

Usually mixed with black currants or other fruit. Not often eaten and rarely dried for winter. (Turner 1978:163)

80. T Ribes viscosissimum, sticky currant.

Eaten infrequently. Seldom dried and stored for winter use. (Turner 1978:163)

81. T Rosa ssp, wild rose.

Outside rind of hips eaten casually or as scarcity food. Tea made from leaves, branches, and inner bark. Leaves and bark of R. gymnocarpa toasted, dried, and powdered and then smoked. (Turner 1978:197)

82. T Rubus idaeus, wild raspberry.

Extremely popular food. Eaten fresh or mashed and dried in cakes for winter. (Turner 1978:201)

83. T LT Rubus leucodermis, blackcap, black raspberry, wild loganberry.

A common food. Mashed and dried in cakes. Dried berries soaked in water and eaten as dessert or mixed with dried meat or fish like pemmican. Lower Thompson peeled and ate young shoots in spring. (Turner 1978:201)

84. T Rubus parviflorus, thimbleberry.

Very popular. Soft and juicy, so seldom picked in large enough quantities to be dried for winter. Sometimes mixed with wild raspberries or blackcaps. Young shoots in spring peeled and eaten either raw or with meat in stew. (Turner 1978:204)

85. *LT Rubus spectabilis, salmonberry.

Berries eaten fresh, seldom dried. Young shoots eaten in spring. Lowlands to midmontane elevations. (Hitchcock and Cronquist 1981:224, Turner 1978:209)

86. *LT Rubus ursinus, trailing wild blackberry.

Berries eaten but not widely available. From near the coast to midmontane elevations. (Hitchcock and Cronquist 1981:225, Turner 1978:209)

87. LT Sagittaria latifolia, arrow-head, wapato.

Secured tubers from Halkomelem people below them on the Fraser. Carried up river in large baskets. Steamed in pits or boiled like potatoes. (Turner 1978:208)

88. *T Sambucus cerulea, blue elderberry.

Large quantities of fresh berries eaten; much fruit dried for winter use. Near sea level to moderate elevations in the mountains. (Turner 1978:132-133)

89. LT Sambucus racemosa, red elderberry.

Berries steamed or boiled. Salmon sometimes soaked in red elderberry juice overnight before being baked; gave the fish an excellent taste. (Turner 1978:133)

90. T Scirpus sp.

Pollen and flowering spikes occasionally eaten, especially by children. (Steedman 1930:484, Turner 1978:68)

91. T Shepherdia argentea, silver buffalo-berry.

Berries occasionally eaten fresh or dried, although sour. (Turner 1978:211)

92. **T Shepherdia canadensis, soapberry, russet buffalo-berry, soopolallie, foamberry.

Sour, bitter berries used fresh or dried for later use by being boiled and spread on trays over small fire. In use, berries were placed in basket, water was added, and the mixture beaten to a foam with hands or a beater. Serviceberries and other sweet berries were mixed to act as sweeteners. From lowlands to subalpine forests. (Turner 1978:138-140)

93. T Sium suave, water parsnip, swamp parsnip, wild carrot, wild saccharin.

Sweet, finger-like roots washed and eaten raw or steam-cooked. Raw roots crisp and delicious. Young green shoots eaten. Dug at Nicola and Coldwater Lakes. (Turner 1978:113, 115)

94. T Smilacina racemosa, false Solomon's seal.
95. T S. stellata, star-flowered Solomon's seal.

Ripe berries of both species eaten raw; seedy but extremely sweet. (Turner 1978:90, 92-93)

96. **LT Sorbus sitchensis, Sitka mountain ash.

Berries eaten occasionally. In mountains between 2,000 and 10,000 feet. (Hitchcock and Cronquist 1981:117, Turner 1978:209)

97. T Spiraea pyramidata, spiraea.

Stems, leaves, and flowers boiled to make tea. (Turner 1978:215)

98. T Typha latifolia, cattail, bulrush.

Long, white rhizomes eaten, after being pit-steamed. Considered one of the most delicious of spring foods. (Turner 1978:93, 95)

99. *LT Vaccinium alaskaense, Alaska blueberry.

Fruit eaten fresh or dried. Lowlands to montane environments. (Hitchcock and Cronquist 1981:350, Turner 1978:208)

100. **T Vaccinium caespitosum, dwarf blueberry, mountain blueberry, low-bush blueberry.

Berries extremely popular, said to be sweetest, best-flavored blueberry variety. Eaten fresh as a treat or mashed and dried in cakes. A common trading item in early days. Usually at higher elevations; common above timber-line. (Turner 1978:148-149)

101. *T Vaccinium membranaceum, mountain bilberry, black mountain huckleberry, blue or black huckleberry, twin-leafed huckleberry.

Large, dark berries eaten fresh or dried under the sun or over a small fire. Mountain slopes. As "season progressed the women would venture higher into the mountains to get them." (Turner 1978:150)

102. *T Vaccinium ovalifolium, oval-leafed blueberry, mountain blueberry, high-bush blueberry.

Generally not as popular as other blueberry and huckleberry types, having coarser seeds and tending to rot easily. Eaten fresh or dried. No specific mountain habitat information; but "later in the season at higher elevations"; "usually gathered at the same time as black mountain huckleberries." Also note alternative popular name "mountain blueberry." (Turner 1978:153)

103. T Vaccinium ovatum, evergreen huckleberry.

Sweet berries much gathered according to Steedman, but Turner doubts availability to Thompson. (Steedman 1930:487, Turner 1978:209)

104. T(?) Vaccinium oxycoccus, bog cranberry, wild cranberry, moss cranberry.

Tart berries eaten raw or boiled with meat. (Turner 1978:156)

105. LT Vaccinium parvifolium, red huckleberry.

Berries eaten fresh or dried. (Turner 1978:209)

106. *T Valeriana dioica, mountain valerian.
107. **T V. sitchensis.

Dried powdered roots and leaves mixed with tobacco as flavoring. V. dioica: in mountains; V. sitchensis: at mid- and upper elevations in mountains. (Hitchcock and Cronquist 1981:455, Turner 1978:215)

108. **T Viburnum edule, highbush cranberry, squashberry.

Tart berries eaten raw, the juice swallowed and seeds discarded. From near sea level to subalpine forests. (Turner 1978:134-136)

Note that these data say nothing about differences in the quantities and quality of these subsistence plants between those of the lowlands, lower and middle mountains, and high elevations where the same plant grows in two or three areas. Nothing about the locations of the most important food plants. Nothing about the relative lengths of their seasons at different altitudes. Nothing about the levels of labor expenditure required in getting to the gathering areas, in the harvesting process, and in transporting the plants back to the camp or village. Nothing about any other elements of Thompson life that would enter into a decision as to whether to undertake a collecting journey to the high country as against securing the same food resource closer by: e.g., how the men of a party might be productively engaged while the women collected and processed the plant parts. But the fact remains that, according to the clear ethnographic record, Thompson parties frequently visited their middle and high mountains. Irrespective of whether the principal motivation for the journey was to collect vegetable materials, to hunt, or to pursue some still different goal, the women, it must be supposed, generally used this opportunity to gather whatever food plants were in season in the vicinity. Further, some plants that grew over a considerable range of altitudes attained their best form in their higher growing grounds. As Turner observes regarding Lewisia ssp. in particular:

> The best time to dig bitter-roots is just before the plants flower, when the buds are still tightly closed but showing a pink hue. This varies from early to late May, depending on the elevation. Different populations of bitter-root vary considerably in the size and bitterness of their roots. Generally, plants of higher elevations (over 760 m or 2,500 ft) produce larger, less bitter roots than those of the dry desert lowlands and valleys. (Turner 1978:176, 178)

There was likewise some patterned movement of plant gathering parties up the mountain slopes following the ripening of some taxa. Such was the case, for example, for the mountain bilberry (Vaccinium membranaceum):

> These large, dark berries were eaten when available by all Interior Indian peoples. They were harvested from July to September, depending on the elevation; as the season progressed the women would venture higher into the mountains to get them. (Turner 1978:150)

In summary, the taxa in the above ethnobotanical catalog that are marked with asterisks were plants that were gathered by the Thompson when they left the Fraser and Thompson River valleys to pursue their subsistence quest in the mountainous sections of their country. On this evidence almost half of the food flora utilized by the tribe, 49 plants of the 108 total, were available in their mountain environment, 21 at high or very high elevations. As the information accompanying the specific plants in the inventory reveals, many mid- and high altitude floras grew also in the lower mountains. Evidently many of these mountain plants were to be found in the Skagit Valley and nearby high country within the Park confines, territory roamed over in traditional times by Thompson subsistence quest parties.

Finally, what do these data say regarding the Lower Thompson use of mountain plant foods, as opposed to use by the Thompson in general? Unfortunately, not much. It appears that Turner obtained her Lower Thompson information, as identified in the plant catalog above, somewhat incidentally in the course of her Upper Thompson inquiry. Moreover, it is probable that she sometimes collapses into a generic "Thompson" category positive data regarding a specific plant which she secured in the field separately for the Upper and the Lower Divisions. Nevertheless, it is of interest that of her 108 subsistence taxa, 25 are explicitly mentioned as having been utilized by the Lower people. Of these 25, eight are identified as occurring in mountainous country of low or medium elevation and two in high elevation terrain. Considering the extent to which the ethnographic evidence indicates that Lower Thompson parties utilized their high territory food resources, this can only be seen as a very fragmentary assessment of their mountain plant activities. Still, since the Division homeland and the center of its village life were deep in the Fraser Canyon, where the tribe had its remarkably productive salmon fisheries, the fact that a third of their alimentary flora, as reported by Turner, grows in the mountainous regions is worth noting. However, that these ten taxa occur in the mountainous segments of Lower Thompson country does not necessarily signify that their edible products were harvested in these upland areas. In fact, eight of the ten also grow at low elevations, the two wholly high-land forms being the white-bark pine in subarctic terrain and above and the Sitka mountain ash at 2,000 foot elevations and above.

CHAPTER IV

CHELAN

Data Base

Consistent with the procedure adopted in the preceding chapters, the summary of the traditional life patterns of the Chelan presented in the following pages represents a merging of the available ethnographic and ethnohistorical data. Unfortunately both sets are singularly meager, requiring a special fall-back and not very satisfactory descriptive procedure that must be explained.

The ethnographic information for the Chelan is essentially limited to casual remarks in ethnographic studies of nearby tribes. Fortunately, however, they were one tribe in a small cluster of regional groups that possessed quite similar life patterns: the Chelan, the Methow of the Methow Valley immediately upstream, and the Entiat and Wenatchi in their own valley systems below on the Columbia (Figure 4-1). Accordingly, in theory it should be possible with caution to extrapolate from the traditional life habits of the last three groups to those of the Chelan. As a practical matter, however, this is possible to only a limited degree, for the Methow and Entiat are ethnographically as poorly described as the Chelan. The Wenatchi, in contrast, are measurely better known, thanks largely to the single study by Ray (1942). The best that can be done is to make maximum use of what little Chelan information is available, extending it by reference to relevant Wenatchi data. Because the Chelan data are so scanty and that for the Wenatchi so much fuller, the pages that follow often have the appearance of a Wenatchi study with occasional references to the Chelan, expanding upon, confirming, or altering the Wenatchi ethnographic facts to the explicit Chelan situation.

This "altering" aspect calls for further comment. While the Chelan and Wenatchi evidently shared many basic cultural traits (Ray 1939:145-149; Teit 1928), they are either known or can be reasonably presumed to have differed in at least some segments of their lifeways. In the first place, no two tribal groups in the Plateau, however close geographically, followed precisely the same constellations of cultural patterns, just as every group had its own speech peculiarities. These differences in cultural behavior were fostered by a mixture of circumstances of varying importance: the influence of different sets of past leaders and community pattern-setters, contacts with a somewhat different groups of tribes, and other differences in their histories. But a factor of generally greater importance was the special features of the ecological niches to which the culture of the group was adapted. In the case of the Chelan and Wenatchi the two tribes occupied rather difference bioenvironments. That of the Chelan was a unique riverine-lacustrine and intensely mountainous one: while occupying a short stretch of the Columbia Valley, they were essentially a lake people, maintaining most of their camps and winter villages on the shores of Lake Chelan and exploiting in particular the small streams and timbered mountain slopes draining into the lake (Smith 1983). The effective bioenvironment of the Wenatchi, in contrast, was largely a riverine one, their mountains playing a lesser role in their life: the tribe lived on the banks of the

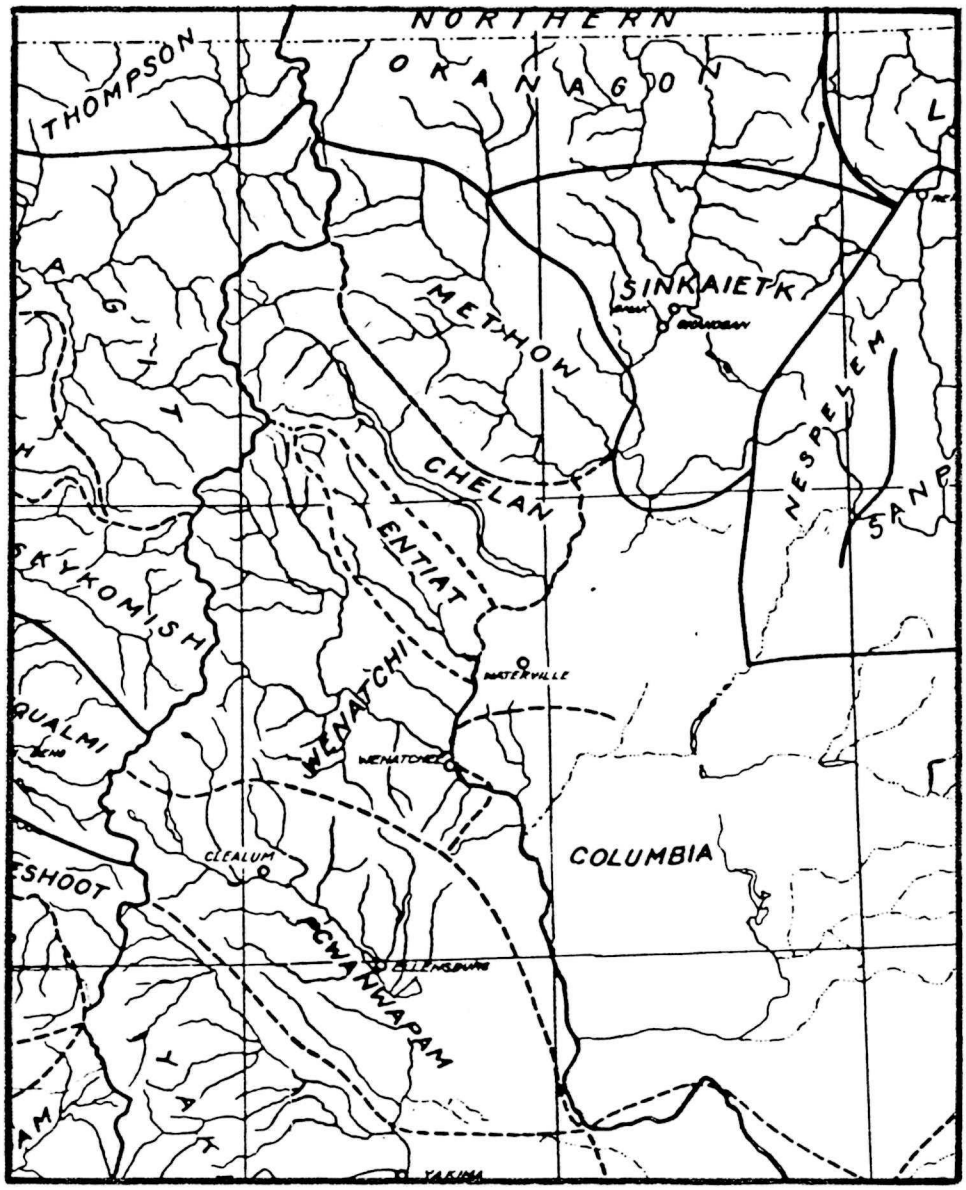


Figure 4-1. Approximate traditional territorial boundaries of Chelan, Methow, Entiat, Wenatchi, and Columbia. The Sinkaietk are the Southern Okanagan. (After Spier 1936:42-43, modified by addition of Entiat, elimination of Sinkaqai'ius as a tribal entity, and redesignation of Middle Columbia as Columbia.)

Columbia and even more importantly along the Wenatchee River and its major tributaries and made great use of these stream resources, including hordes of salmon in season. To the extent possible, this study makes a particular point of identifying the cultural consequences of these environmental differences.

The Columbia "tribe" (the "Moses Columbia" of the latter part of the nineteenth century) on the eastern side of the Columbia River are sometimes linked, as noted below, with the Chelan, Methow, Entiat, and Wenatchi into a "Middle Columbia (Salish) group." After the Wenatchi, the Columbia are ethnographically the best known of this larger cluster. Yet in this present report, these Columbia data are not widely referred to, since, in spite of a deeply rooted life-mode similarity, their culture rested on a third ecological base, one including a Columbia Valley segment and a major part of the dry Columbia Basin with its steppe and shrub-steppe vegetation (Franklin and Dyrness 1973:6, 45). Further, their lifeways in posthorse times tilted toward those of the bison-hunting Sahaptian neighbors to the south. The Columbia cultural data are, therefore, only marginally useful in the Chelan context.

In the interests of clarity, an effort is made to assign data explicitly to the Chelan or Wenatchi (or occasionally to some other group). Where not so identified to avoid tiresome repetition, the information is to be understood as Wenatchi-specific.

The greater part of the limited ethnographic data for the Wenatchi is to be found in Ray's (1942) culture element survey. This provides detailed information concerning many segments of traditional Wenatchi lifeways, though this is less rich than for other groups investigated at later times in his field research period. There is, however, a problem in the use of these data in terms of this present study: because they are recorded in an individual item-list fashion, the functional relationships between items and especially between item clusters are neither invariably apparent nor always reconstructable with assurance. Thus weir and fish trap elements are cataloged separately, rendering it difficult to sense how the weirs and traps were combined in organic complexes. Specific instances of this kind are noted in the ethnographic summary that follows.

A second difficulty lies in the interpretation of Ray's (1942:104) symbol "( )," which he explains as indicating that "informant qualified answer by terms such as 'sometimes' or 'a few.'" But in his tables he uses both (+) and (-) without defining the difference between the two. Perhaps (-) signifies "sometimes absent," implying that the trait was generally present, and the opposite for (+). This interpretation seems improbable to me, but I really do not know. Accordingly, I have opted for translating the two identically to indicate 'sometimes,' 'occasionally,' or 'a few.' Thus: "Traps: withes of fir (+)" (Ray 1942:107) might be reported in this study as "traps were sometimes made of fir withes" or "a few traps were fashioned of fir withes." And Ray's (1942:111) "eel hook (-)" might here appear as "the Wenatchi had a few eel hooks" or "they occasionally used hooks for eels."

A third point in regard to my free use of Ray's survey data: in most instances I pass over his negative data entries. Plateau informants even in the 1930s were unaware of the full richness of their traditional culture.

This was especially true, of course, of those cultural traits that disappeared soon after first White contact. But their native lifeways were, in general, characterized by alternative ways of achieving the same objective. Surely this was partly a response to a typically broad range of bioenvironments within the country of a single tribe. But it appears also to have been partly related to their basically loosely structured society in which individual choice and experimentation were not only permitted but fostered. As a consequence, no informant, however knowledgeable, could be expected to be well acquainted with the variant behavior patterns followed by only a few tribal members or that had been practiced under peculiar, infrequent conditions or in atypical geographic sectors of the group's territory. Negative evidence is, in short, somewhat tainted by these circumstances.

Fourth, the Wenatchi were the first group surveyed by Ray, using a list of traits that was very incomplete in comparison with the expanded element roster that guided his later inquiries among other tribes. Accordingly, the failure of a cultural trait to be mentioned in the following survey as an aspect of Wenatchi culture cannot be interpreted as necessarily indicating its absence among the group.

Finally, Ray's Wenatchi data have been subjected to a careful cross-checking process. This is necessary since traits are sometimes mentioned in one context but not elsewhere where they might be expected to appear. One illustration: bark baskets are noted as Chelan water carriers in the "Utensils and Dishes" section, but the entire "bark basket" section is left blank for the Wenatchi, evidently indicating only that no data were gathered as an inquiry unit concerning bark containers (Ray 1942:140, 160-161). Still, I have doubtless overlooked some dispersed data of this kind.

Not included in this Chelan section are data reported by Teit (1928) for his Middle Columbia Salish cluster except where the Chelan are mentioned specifically or inferentially. It is often impossible to determine--at least as presented under Boas' editorship--whether tribally unassigned data apply to all the Middle Columbia peoples--Chelan, Methow, Entiat, Wenatchi, and Columbia--or to some limited segment of this large cluster. When "Wenatchi" are identified specifically with data, it is uncertain whether this information describes the situation for the Wenatchi tribe alone or for the entire "Wenatchi" group--the Chelan, Methow, Entiat, and Wenatchi proper. Incidentally, in gathering these Middle Columbia ethnographic facts, Teit (1928:89) apparently relied on Columbia and Wenatchi informants, having had none from the Chelan and Methow. Evidently Ray's "Wenatchi" data, on the other hand, relate only to the Wenatchi people and so possess in this present context the particular merit of tribal specificity.

Early historical documents relating specifically to the Chelan area are likewise not numerous. To this point, no more than 19 dating to the 1811-1850 period have been identified as concerned with the Columbia Valley segment of the aboriginal territory of the Chelan; only one is known for the Lake Chelan area.

The Columbia River data may be considered first. It may seem surprising that there are so few accounts of travels through the area in this initial 40

year period, particularly in view of the very considerable annual movement of Euroamerican traders up and down this major river highway and, later in the period, the journeys of missionaries and casual travelers. Unfortunately, however, most of these travelers kept no record of their goings and comings: many were men who were bold adventurers and fine canoemen but who possessed little education. Others apparently chronicled their adventures only to have them lost or still curated as archives. Of those riverfarers whose accounts have made their way into print, some report on only one or two of their several journeys, or reduce their daily travels to only the barest essentials, or recount their journeys in narrative form too deficient in specifics to be helpful. And virtually all slight the Chelan and middle Columbia segment of their river travel. How can this patent disinterest in this particular region be explained?

To understand this circumstance, it is necessary first to review briefly those segments of these published, pre-1850 travel accounts that concern the Columbia Valley in Chelan territory. Whatever ethnographic data are provided are not included here but are integrated into the culture-descriptive sections to which attention is soon turned.

- In early July, 1811, David Thompson (1914:52, 1962:344-345; Smith 1983:25-35), descending the Columbia from Kettle Falls, evidently saw no Indians in Chelan country. As the first White man to traverse the river from Kettle Falls to the Snake River confluence, he had "as usual" put ashore when he had observed villages of the Sanpoil, Nespelem, and Methow and as he later did at the Columbia village at Rock Island. Both as a matter of trading strategy and to insure his safety when he expected later to ascend the river slowly against its strong current, placing him at a disadvantage in case of native hostilities, he stopped wherever he found an Indian camp to explain the purpose of his journey of exploration and to smoke with its occupants (Glover 1962:344). While he is entirely silent on Indians in this Chelan sector, the fact that he passes the area without pause seems proof enough, in light of his expressed and observed policy, that he noticed no native camps in this distance. These data are of special interest not only because they report the initial Euroamerican journey through the Chelan sector of the Columbia, but also because they have implications for an understanding of salmon fishing among the Chelan, a matter discussed below in the fishing context.

- In late August, 1811, Alexander Ross (1966:103, 139-142, 289-290; Smith 1983:43-51) canoed up the Columbia from Astoria on his first upriver journey. Passing through Chelan territory, he observed "a small but rapid stream, called by the natives Tsill-ane, which descended over the rocks in white broken sheets." Indeed, he was even informed by the Indians that "it took its rise in a lake not far distant," the first reference to Chelan River and Lake in the historical literature. A short distance farther up the Columbia he met "some Indians," put ashore, and encamped for the remainder of the day and following night. Precisely where this encounter took place is uncertain. For several reasons, however, the location seems to have been about 6.5 miles upstream from the Chelan confluence (Smith 1983:49-51) and at any rate within Chelan territory. Ross' few observations concerning these "very friendly, communicative, and intelligent" people--surely Chelan and the

first Chelan seen by Whites in their own country--are noted in the following culture-descriptive sections.

- In April, 1814, Alexander Ross (1956:21-31; Smith 1983:51-59) again ascended the Columbia River, on this occasion with a flotilla of watercraft. In his travel record no mention is made of the Chelan or their country as he moved up the river. Nor is attention directed to either when, a few days later, he left the area of the Okanogan confluence and rode horseback down the Columbia through the Chelan sector to the Kittitas Valley in search of horses and then, with purchased animals, returned along the river trail to the Okanogan Valley.

- Gabriel Franchere (1854:276-280; Smith 1983:59-63), a member of Alexander Ross' large boat brigade of April, 1814, makes no mention of seeing Indians along the riverside between Priest Rapids and Kettle Falls.

- By his own count, Ross Cox (1957:5, 218-227, 256; Smith 1983:63-66) made several journeys up and down the Columbia River between the mouth of the Snake and the confluence of the Okanogan. For most of these watercraft passages, we are favored with no information. In November of 1815, he relates, however, the frail bark canoes and cedar-plank boats of his party were halted by river ice, as they moved up the Columbia. This point of blockage was certainly below the Chelan region, at Rock Island I believe on the fragmentary evidence provided. In mid-February, 1816, after a hard winter's encampment and following the breakup of the river ice, Cox and most of his group continued their water journey upstream to the Okanogan, mentioning no Indian sightings en route.

- In April, 1817, Ross Cox (1957:268, 271-272; Smith 1983:66-71) undertook his final journey up the Columbia from Fort George, on this occasion in a party traveling in two barges and nine canoes. Again, unfortunately, he mentions no Indians as he traversed the distance from Priest Rapids to "Fort Oakinagan."

- In late June and early July, 1817, Alexander Ross (1956:94-95; Smith 1983:71-73), traveling in a boat of the North West Company brigade, made his way through Chelan country. While he mentions no Indians specifically for this section of the Columbia, he writes on leaving Priest Rapids:

> Henceforth we travelled among those more friendly [Indians] as we advanced towards the north. The innumerable bands of Indians assembled along the communication this year rendered an uncommon degree of watchfulness necessary, and more particularly as our sole dependence lay on them for our daily subsistence. I have passed and repassed many times but never saw so many Indians in one season along the communication; . . .
>
> On arriving at Oakinacken . . . I set out immediately for my winter quarters at the She-whaps [Shuswap], . . .

Though some slight room exists for interpreting these comments regarding band numbers as applying only to the troublesome groups downriver from Priest Rapids, it seems, coming at the close of his brief journey account as it does, to apply to his entire canoe experience from Fort George to the Okanogan. This would include the segment of the Columbia River from Priest Rapids to the Okanogan confluence and so presumably to the Chelan territory. Yet whether any of these "bands" were in fact at the riverside within Chelan boundaries remains problematical. In any event, these statements are of considerable general importance in revealing, through the eyes of a competent and experienced observer, the extent to which Indians varied greatly in their numbers along the river from year to year and season to season, but more significantly at the same season from year to year. And, furthermore, that this variation occurred during the first decade of Euroamerican contact.

- Early in November, 1824, George Simpson (1931:36-53) descended the Columbia from the Boat Encampment at the foot of the Rockies. Below the Okanogan he notes passing "a small River." That this can only have been the Chelan River I have elsewhere demonstrated (Smith 1983:73-75). Importantly, he states explicitly that he "Saw no Indians on the communication to Day," i.e., during the day when he passed through the Chelan territory. Were the three and perhaps as many as five Chelan winter villages reported ethnographically to have been located on the west bank of the Columbia not occupied that winter for some reason, for surely they should have been in their cold season settlements by November? Or were the dwellings, on the river terraces, subterranean pit structures with earth-covered roofings raised so little above the land surface as to be invisible from canoe level? If the latter were the case, why were there no ancillary, specialized structures to be seen--e.g., platform caches and even summer salmon and plant food drying racks, for, according to Ray (see later section), three and possibly five Chelan sites on the Columbia supported warm season camps? Interesting and, it would appear, unanswerable questions.

- On April 3, 1825, Simpson (1931:130-131; Smith 1983:74-75), returning up the Columbia from Fort George in a flotilla of four boats, moved through the Chelan area without comment of any sort.

- In 1826 David Douglas (1972:71, 75, 85, 122-124; Smith 1983:75-77) journeyed through the Chelan area on no less than three occasions: the first heading up the Columbia in late March and early April; the second moving downstream in June; and the third again descending the river in August. In all of these water passages he mentions only once seeing Indians, or evidences of them, between the Okanogan mouth and Priest Rapids: on his August trip at Rock Island well below the Chelan country. This appears odd and must, it would seem, reflect nothing more than Douglas' disinterest in the native peoples, save where he needed their services. Because the salmon were still running--he observed in August an old man spearing these fish opposite Fort Okanagan--he had excellent opportunities to view activities at various river fisheries and summer camp sites. This would have been especially the case at the Methow Rapids where he was compelled to take to his feet down the riverside while his Indian companions ran his canoe down the fast water, and again at the Wenatchee River confluence where he encamped over

night; both of these localities are reported ethnographically to have been the site of summer camps. The point, to repeat, is that no mention by early river travelers of Indian villages or camps or of Indians laying in their store of salmon cannot be safely interpreted, failing some evidence to the contrary, as signifying the absence of native communities and activities in or along the river.

- On April 4 and 5, 1827, Edward Ermatinger (1912:70-78; Smith 1983:77-83), in the York Factory express boat, followed the Columbia through the Chelan homeland. On the evening of the 4th, after having traveled the distance from his night camp of the 3rd, pitched "5 miles above the Piscouhoose [Wenatchee] River," he made camp "a league above the Clear water Creek," i.e., Chelan River. The "league" of the fur personnel at the time seems to have been about seven miles, as Simpson's (1931:52; Smith 1983:73) journal of 1824 demonstrates. This suggests that Ermatinger and his party encamped at or very near where, on independent evidence, I suggest that Alexander Ross pitched his camp on July 27, 1811 (see above). Alternatively, if the dictionary definition of the league "of English-speaking countries" as about three miles is assumed to have been that of Ermatinger, then his night's stopping locality would have been approximately where his traveling party paused to sleep on April 3, 1828 (see 1828 item below). On April 5, 1827, he arrived at Fort Okanagan. In his journal entries of neither the 4th nor the 5th is any mention made of sighting Indians.

- In October of 1827, Ermatinger (1912:110-112; Smith 1983:83-88) and his Hudson's Bay Company party coursed down the Columbia from the Boat Encampment to Fort Vancouver. Unfortunately, Ermatinger makes no reference to any Indians between the Okanogan and the White Bluffs area below Priest Rapids.

- On April 3, 1828, as a member of the Hudson's Bay Company express of two boats bound from Fort Vancouver to the Boat Encampment, Ermatinger (1912:112-118; Smith 1983:88-89) again passed through Chelan territory. The night of that day found the party camping "2 or 3 miles above Clear Water Creek [Chelan River]." The site of this encampment, if his mileage estimate is essentially accurate, would have been very near the town of Beebe, or perhaps slightly farther upriver. Once again there is no reference in Ermatinger's account to any sighting or encountering of Indians in the Chelan region during either this day or the 4th, when, after breaking camp, the travelers negotiated the northeastern corner of the Chelan country and moved on into the homeland of the Methow.

- In late May and early June, 1828, John Work (Lewis and Meyers 1920:106-107; Smith 1983:90), with a large brigade, journeyed by boat from Fort Colvile to Fort Vancouver. On May 28, the party, aided by a strong current and by being propelled with oars rather than with paddles, traveled the entire distance from the Okanogan confluence to just upstream from Priest Rapids. While Indians are mentioned at Priest Rapids, no sightings of natives between Okanogan and these rapids are recorded. As in the case of so many of these early accounts, Work's report of this journey is one of great terseness, with no room for what he would reasonably consider commonplace and irrelevant.

- On August 8, 1828, John Work (Lewis and Meyers 1920:112-113; Smith 1983:92), as a member of a brigade with nine heavily laden boats, moved up the Columbia through the lower part of Chelan country, to camp that night "a little above Clear Water [Chelan] River." Here the flotilla was met by a man with horses from Okanagan. On the 9th, Work and a companion left the watercraft and rode through the northeastern sector of the Chelan area and on to the fort. Work, whose narrative of each day's events hardly exceeds a half-dozen lines, provides no information concerning the Indians of the Chelan and Methow regions, though he reports on August 6, when the party passed Rock Island, that there were "Very few Indians in the River, and Salmon very scarce" and that in the Wenatchee sector his group "Traded some Salmon from the Indians." His informative salmon and salmon fishing remarks, coupled with the Chelan focus on the Lake Chelan subsistence area (discussed below), suggest that the few Chelan, in fact, may have been on the Columbia when Work passed, but this is, of course, in a measure conjecture.

- On June 2, 1836, Samuel Parker (1842:300-307; Smith 1983:92-93) left Fort Okanagan in a bateau with two Indians and two French voyageurs. Guided by his companions and driven by the river "in full freshet," he put behind him on this first day the entire distance to a point a few miles above Priest Rapids. He fails to mention Indians in his account of this day when he rushed through the Chelan country. However, he observes on June 3, during which he traveled through Priest Rapids and all the way to Walla Walla, that salmon were "ascending the river in great numbers, and groups of Indians are scattered along pursuing the employment of catching them." And later, writing retrospectively, he contrasts the life style of the Middle Columbia Salish--Chelan, Methow, Entiat, Wenatchi, and Columbia--with that of the Sahaptian peoples farther down the Columbia River, the gist of which is remarked upon in a later section of this present report.

- On August 20, 1841, George Simpson (1847 1:141, 153-162; Smith 1983:93-94) embarked from Kettle Falls in a flat-bottomed bateau, propelled by six oars, high water, and a strong current. Driving very hard as was his headlong style, he passed through the Chelan area on his second day of travel, making no reference to Indians until he reached his evening camp at Rock Island.

So much for the early historical documents pertaining to the Chelan segment of the Columbia River. Plainly they furnish precious little information regarding the Chelan and their homeland in the 1811-1850 period. Two of these early travelers (David Thompson in July, 1811, and George Simpson in November, 1824) either explicitly report no Indian sightings along this Chelan River stretch or present data making this a safe deduction. Only one traveler (Alexander Ross in August, 1811) mentions observing and camping with Indians on the riverside in Chelan country. On three other occasions parties journeying on the river (those of Edward Ermatinger in April of 1827 and of 1828, and John Work in August, 1828) encamped for the night on the river bank in Chelan territory yet fail to note Indian sightings within Chelan borders. In the remainder of the water passings identified above--13 out of the total of 19--the travelers moved through the Chelan homeland without pitching camp within the Chelan boundaries and without so much as a word concerning Indians. These last 16 river boatmen whose travels have been

brought to print may have observed no signs of residential units or of Indians themselves, or, seeing them, may have simply neglected to mention the fact. This question deserves some attention for what it reveals concerning both these early Euroamerican river users and the Chelan and their traditional life style.

Why might it be expected that these travelers along the water highway would have seen Chelan or at least their cultural marks in passing through their country? For several reasons, among which the following appear the most persuasive:

- The river journeys summarized above were distributed through nine months of the year: only September and, not surprisingly considering the cold season conditions of the river and the severe winter traveling problems in general, December and January saw none.

- According to the ethnographic evidence (Ray 1936:141; 1974a:419, 423), the Chelan maintained both winter villages and warmer month camps along the Columbia riverside. Four of the documented 19 early travels were made in the period from late October through March. During this season all Chelan villages on the river might reasonably be expected to have been occupied. Warmer weather river journeys were more frequent, 15 from April through September: specifically April (5), May (2), June (2), July (2), and August (4). During at least some of this open time-span, residents should have been in or near their "summer" camps (Ray 1936:141; 1974a:419-423) along the river banks. At least one of these summer settlements was a fishing--presumably salmon--camp (Ray 1974a:423). In the midst of the salmon time, some fishermen from this camp and other river bank camps should have been observed at the tribal fisheries, perhaps at the two rapids below the Chelan confluence termed by Symons (1882:maps 14, 15) Downing's Rapids and Bar Rapids and even at his three "ripples." Surely, especially in view of the important Chelan summer food resource region around Lake Chelan, open season camps would not have been maintained on the Columbia River unless salmon fishing and probably plant collecting afforded serious subsistence opportunities. Further, the people of these Columbia River winter and summer communities must have engaged year-round in other subsistence tasks and technological pursuits along the river terraces and facing hillsides: e.g., hunting and plant gathering in season, food drying and storage, mat and basket making, hide tanning.

- As reported above, one trader (Ross in August, 1814) rode on horseback round trip along the river trail through the entire Chelan territory, and one (Work in May, 1828) negotiated the northern end of the river path out of Chelan country aboard a horse. While stream voyagers might have been fully occupied in forcing as much water behind their craft as possible--as was certainly sometimes the case--or in otherwise managing their canoe or boat, thus missing Indians on the river and Indian encampments on the stream bank, these two land travelers must have had an unparalleled opportunity for seeing Chelan at or in the vicinity of their summer river camps. Yet neither so much as mentions catching sight of an Indian or any Indian sign while within Chelan borders.

On closer examination, however, the infrequency of historical references to Indians in the Chelan River sector becomes rather more comprehensible.

- With few exceptions, travelers were intent on making as expeditious a traverse as possible through the Chelan homeland and, in fact, through the entire Columbia Basin river reach. The nearest trading posts were at the Okanogan River mouth above and the Walla Walla confluence below, the two posts between which the watercraft were generally moving. The Chelan region offered nothing of commanding interest in terms either of native groups or of commerce: the Chelan were simply too culturally unspectacular and too poor in traders' terms to warrant breaking a journey.

- The Chelan were wholly inoffensive. Between the Okanogan and Priest Rapids only a single falls, that at Rock Island well downstream from the Chelan southern boundary, generally required landing and portaging, though under certain water conditions a few rapids caused small problems, including a bit of fast water just below the Chelan River confluence. When navigational difficulties occurred and moving impedimenta for a short distance along the river bank became a necessity, the Chelan, like their immediate neighbors, exhibited none of the annoying and often dangerous aggressive tendencies common among the native groups of the lower Columbia. There was no cause for a traveler in Chelan country to note Indian presence on such occasions.

- Relatively few Chelan maintained their residence either in winter or in summer along the Columbia. On ethnographic evidence (Ray 1936:141; 1974a:419, 423), only six residential sites were located on the riverside. For two of these the season of occupancy is undescribed; of the remaining four, one appears to have been used only in winter, one in summer, and the other two in both seasons. This compares with eight winter villages around Lake Chelan and 11 summer month camps (Smith 1983:264). Clearly the Chelan population was concentrated in the lake section (see demography unit below).

- Even the April clustering of journeys may help to explain the infrequent references to Indians on the river. Too early to begin activities at the Columbia River fisheries, the people were almost certainly scattered out on the early spring collecting and hunting grounds, following the seasonal activity pattern of the Sanpoil (Ray 1932:27) and Southern Okanagan (Spier 1938:11).

- The Chelan area attracted no early missionary interest of significance. Perhaps the tribe was first exposed to formal Christianity in 1838 when the Catholic priests Blanchet and Demers journeyed down the Columbia River and therefore necessarily passed through Chelan territory. From time to time while en route they stopped, as they did also in later years, to instruct briefly and baptize native groups residing on the river banks (Byrd in Durham 1972:11 fn. 20). Whether the Chelan received these ministries I do not know. At any rate, nothing like the early, extensive, and informative records of De Smet, Spalding, the Walkers, and others for the eastern Plateau exist for the Chelan--not even for the other Middle Columbia Salishan groups. Perhaps as early as 1858, however, Catholic services were held at Wapato Point, a bit of

land extending out into Lake Chelan near Manson (Byrd in Durham 1972:9 fn. 19, 11 fn. 20), but information concerning these religious contacts seems also to be wanting.

In sum, it may be concluded from these data, supported by additional information presented later, that:

(a) Early travelers on the Columbia in the Chelan homeland normally had no incentive or occasion to come ashore except to serve their own immediate purposes, as to take meals and encamp for the night;

(b) White boatmen traveling the river should have observed from their passing craft, even though they were moving in haste, some Indian villages and camps on the stream terraces and some Indians at their tasks;

(c) Travelers who kept journals evidently considered their sightings of Indians within the Chelan borders too trivial to record;

(d) Sightings were probably fewer than might be supposed because the Chelan population along the Columbia was not large, the tribal center being rather in the Lake Chelan region; and

(e) Sightings were less frequent than might be expected because salmon fishing was for the Chelan a less important Columbia River activity than it was for other nearby river tribes and because, as Teit (1928:114) observes for the Chelan and the Middle Columbia Salishan groups in general: "Much of the summer and fall season was spent on the higher grounds, hunting, root-digging, and berrying."

It is unclear, in short, how best to balance out haste and disinterest on the part of the early passersby on the one hand and, on the other, the relevant aspects of Chelan population distribution, seasonal movements, and other cultural factors as contributors to the general failure of the river travelers to note Chelan presence along the Columbia in the 1811-1850 time span.

To place these Chelan data in perspective it is instructive to view them within a slightly broader geographical context. In the records of only two of the 19 river journeys précised above--those of Thompson and Ross, both in 1811--are the Methow, above the Chelan, mentioned and in not one is the existence of Indians in the Entiat country, immediately downriver from the Chelan, attested to. Obviously, the Chelan were no more slighted by these early stream travelers than were their adjacent Salishan neighbors. Evidently the same complex of circumstances that was responsible for the 1811-1850 inattention to the Chelan operated in the case of all three of these neighboring, culturally resemblant tribelets.

For the Lake Chelan and Stehekin segment of Chelan traditional territory, I have uncovered only a single traveler's account for the entire 1800-1850 time span.

- In late July and August, 1814, Alexander Ross (1956:36-42) attempted to cross the Cascades to the coast, traveling on foot with an Indian guide

and two other Indian companions and following an old Indian traders' trail but by his time very obscure. He went down the Columbia to the Methow mouth and then ascended the Methow Valley. After a short distance, however, he was compelled to leave the river. From this point on, his route is difficult to follow, though he provides compass readings and mileage estimates. While not all who have attempted to define his route agree on its precise plotting, most bring him through Twisp Pass into the Upper Stehekin drainage well above Lake Chelan, to which he makes no reference though he learned of this body of water in 1811 from Indian informants (see above). From this northwestern corner of Chelan country, within the Park borders, most then take him over Cascade Pass and down the North Fork of the Cascade River in Skagit Indian territory to a point identified by Spaulding (in Ross 1956:41 fn. 25) as "just below the forks of the Cascade River" before abandoning his attempt and returning to his Okanogan post. But if he, in fact, crossed the Methow Mountains by way of Twisp Pass, he may well not have gone on to Cascade Pass but, reaching Bridge Creek, may have ascended that stream to Rainy Pass and proceeded down the west side of the divide to the headwaters of Granite Creek. Beckey (1981:280 fn. 24), whose firsthand knowledge of the North Cascades in general seems unparalleled, favors this Rainy Pass trail or, if Ross moved up the Early Winters Valley from the Methow River rather than the lower-down Twisp Valley, then a mountain saddle farther north than Rainy, which I take to mean Methow Pass as a possibility.

Evidently during his entire journey, both out and back, Ross encountered no Indians. If his turn-about point was on the Cascade River as noted above, only a few more miles would have brought him to Skagit summer settlements.

So far as known, this was the earliest Euroamerican penetration into the Stehekin and upper Cascades River regions, assuming that his path was in fact via this route.

In the years that followed, a few early fur trappers and voyageurs may have traveled into the Lake Chelan area and trapped around it. Remains of old cabins--described by early settlers as Hudson's Bay Company trapping shelters--existed near the mouth of Flat Creek, about 13 miles up the Stehekin Valley, and at Twentyfive Mile Creek, on the southwest side of the lake, approximately 17.5 canoe miles uplake from its southern end (see Byrd in Durham 1972:17 fn. 31). But for these early lakeside activities, I have as yet seen no solid documentation.

Although in the early 1850s George McClellan of the Stevens survey expedition investigated--and recommended against--the Methow Valley as a possible cross-Cascades railroad route, it appears that no field examination was made of the Lake Chelan and Stehekin Valley area to measure its potential. It was discovered that the short stretch up the Chelan River to the lake was too rugged, crooked, and canyon-like and the lake side was "shut in by high mountains, which . . . [left] no passage along its margin" (McClellan in Stevens 1855:196; Duncan in Stevens 1855:213). This was more than sufficient to demonstrate the impracticality of this route.

A few years later, however, "a large group of prospectors . . . [traveled the lake] as a short-cut from the Snake River to the Fraser River gold rush in 1857-1858" (Byrd in Durham 1972:17 fn. 31). This appears to be the first unquestioned use of the lake by Whites, though only as travelers en route over the Cascades.

The first historically documented exploration of the lake area--as opposed to casual travel across its waters--appears to have been that of D. C. Linsley and John A. Tennant in mid-July, 1870: they went the length of the lake and undertook railroad surveys in the river system at its head (Beckey 1981:215). Unfortunately, no record of this reconnaissance is in my hands.

In 1879-1880 Col. Merriam and Thomas Symons visited the lake in their search for a suitable site for a military post and, while there, investigated the lower 24 miles of the lake in a dugout canoe with two Chelan Indians from their village on the Columbia about one mile above the Chelan River mouth. Within a year or so Merriam canoed to the upper end of the lake. As a result of these Merriam-Symons surveys, Camp Chelan was established in 1880 at the southern tip of the lake, where, however, it remained for only a few months (Symons 1882:39-40, 123; Byrd in Durham 1972:12 fn. 22, 17 fn. 32). To my knowledge there is no published record of these explorations save for the few lines in Symons' account. In it, however, there is nothing to suggest a contemporary Chelan presence in the lake area, and it seems probable, because of Symons' obviously warm relationship with the Columbia River Chelan, that he would have reported Indians on or around the lake had he observed them.

Other early but post-1876 documents relating to the history and natural history of the lake and Stehekin sectors may be found reproduced in Stone's (1983) compilation, from which, unfortunately, I have not had time to extract data relevant to this report.

In the absence of specific ethnographic information for the Chelan in regard to fish varieties and fishing techniques, save as noted below, the Wenatchi data are summarized here in keeping with the procedural scheme already explained.

Among the Wenatchi, anadromous fish, especially salmon, of which the Chinook variety was most important, and steelhead trout, comprised staple foods. As already noted, migratory fish were certainly much less important among the Chelan, but of these fish that were taken by this group, either in their own section of the Columbia or at fisheries in the country of neighboring tribes, these two varieties were presumably the most significant. Eels were also taken by the Wenatchi as food, but whether this was likewise true of the Chelan is not entirely certain. They are said to have been considered inedible among the Flathead, Kutenai, Kalispel, Carrier, Chilcotin, Shuswap, Lillooet, and Klikitat (Ray 1942:104). On the other hand, they were eaten among the Coeur d'Alene, Sanpoil-Nespelem, Southern Okanagan, Thompson, Kittitas, Tenino, Umatilla, and Nez Perce as well as among the Wenatchi (Spinden 1908:206; Post in Spier 1938:18; Ray 1942:104). Inasmuch as these fish were widely eaten in the central and western Plateau, whatever may have been the situation elsewhere in the area, it may be presumed that they were also considered an appropriate food resource among the Chelan, but evidence on the point is lacking.

A catalog of nonanadromous fish caught by the Chelan for food is not available, nor for that matter by the Wenatchi. But, according to Post (in Spier 1938:11-18), the Southern Okanagan, a short distance up the Columbia from the Chelan, supplemented their salmon and steelhead, taken from June until October, with suckers, trout, whitefish, squawfish, lamprey eels, and ling. All of these fish were native to the Columbia Basin region (see Wydoski and Whitney 1979) and so presumably all or most were available to the Chelan in their lake area.

Several different fish are noted in the early historical records as occurring specifically in Lake Chelan and its feeders, including the Stehekin system. These include several varieties of trout: bull trout (Dolly Varden), rainbow trout, and cutthroat trout (Durham 1972:15; Byrd in Durham 1972:12 fn. 25, 15 fn. 26). This list could certainly be extended or at least further documented by a fuller search in the early local records.

Save for Ray's report, mentioned above, that fish were caught by Chelan living in the village at the southern end of the lake, we know nothing ethnographically about fishing localities in the lake sector. Historical accounts of the late nineteenth century, when White settlers were first moving into the region (Byrd in Durham 1972), provide some useful general and specific information.

- Large numbers of rainbow and brook trout were found in numerous streams putting into the lake, Fish Creek being especially notable for its brook type (Durham [1972:15] writing in 1891). (The true brook trout [Salvelinus fontinalis] is an introduced species in Washington [Wydoski and Whitney 1979:47]).

- The best fishing in the lake "at proper stages of the water," according to early White anglers, was where "a rill, a brook or a foaming torrent comes leaping over the cliffs, and is disolved in a mass of spray and foam before it strikes the blue-black waters of the lake" (Durham 1972:12). While these non-native fishermen were using pole, line, and hook--a technique not particularly favored by Plateau tribes--these data suggest the possibility of traditional tribal weirs, other types of traps, spear fishing, or still different fishing methods at at least certain of these locations.

- Around the mouths of the creeks where they enter the lake are the feeding grounds for the large lake trout that attain lengths of 2 to 2.5 feet (Lyman [1899:198] writing ca. 1898).

- Large trout were caught in considerable numbers at the very head of the lake where the swift current of Stehekin River flows into the lake (Durham 1972:23).

Mountain streams likewise had their fish. When in 1886, Wm. Sanders and Henry Domke made their difficult way over Sawtooth Ridge from the Methow country to the upper segment of Lake Chelan, they lived much of the time on fish taken in the small streams they encountered, Canoe and Prince among them (Durham 1972:19-20).

Evidently Lake Chelan was natively very rich in fish. In the 1890s, the hotel at Lakeside on the south shore of the lake near its outlet is reported to have had a standing order for 100 lbs. of fresh fish weekly (Byrd in Durham 1972:15 fn. 27). Moreover, commercial fishermen, quite active on the lake at this time, supplied the Waterville and Coulee City markets with fish (Durham 1972:15).

Introduction

Ethnonymy

The Chelan as a group have been treated in the historical and ethnographic literature in three ways:

(a) They have been regarded as a distinct tribe with their own designation, reflecting the view of the Chelan themselves. Thus:

- Writing of the Chelan River and the Indians whom he encountered on August 27, 1811, just up the Columbia from the mouth of the Chelan, Alexander Ross (1966:139-140, 290), the first White known to have seen these people, called both the Indians and their river the "Tsill-ane."

- In his journal of his voyage down the Columbia River in 1824 and return upstream in 1825, George Simpson (1931:168) lists the "Tsillani" among "the different Tribes inhabiting the Banks of the Columbia from the Cascades Portage to the Rocky Mountains," a roster obviously secured from local Hudson's Bay Company records.

- In recent years the ethnographers Ray (1936:103, 119, 122, 141-142, 1974a:419-423) and Spier (1936:15, 42-43) have regarded them as a separate tribe under the name "Chelan."

This view of the Chelan mirrors their sense of themselves, as a distinct people whom they term the tcʿtɬà'n (Ray 1936:122). Obviously derived from this term are the designations in the preceding roster. The separateness of the Chelan as a cultural and population entity was recognized by other nearby groups. The Klikitat, for example, called them the tcEla'lpam (Teit 1928:91), -pam being one of the Sahaptin suffixes denoting "people of" (Jacobs 1931:220).

(b) They have been considered a band or very small tribe distinct in a sense but properly comprising with other nearby groups on the west side of the Columbia a single large tribal unit. Thus:

- Ross' (1966:289-290) separation of the Chelan in to a distinct tribe has already been noted under (a) above. It should be observed, however, that he considers the Chelan but one "tribe" of a dozen that comprised the Oakinacken "nation," three of these others being the Piss-cows (Wenatchi), Inti-étook (Entiat), and Battle-le-mule-emauch or Meat-who (Methow).

- Whether based on his own field research or on that of his assistant W. E. Myers in 1907-1909 is uncertain, but Curtis (1911 7:xii, 65, 69) speaks of the "Sc̓ilámuh̓, at the mouth of the Tsilán, or Lake Chelan," as one of the small groups of tribes or bands that are sometimes lumped with the Methow as "Methow" and more often included with the Entiat and Wenatchi as "Wenatchee."

- Teit (1928:89, 90, 91, 93, 95) views the Chelan (Tselē'n, .stcElē'nEx) as a band or tribelet--like the Methow--of the large Wenatchi tribe, though differing slightly in dialect from the Methow and Wenatchi proper.

(c) They have been described as a small component of a single large tribe that aboriginally occupied territory between the middle Columbia River and the Cascades. The Chelan--like other member groups--are not said to have possessed separate linguistic, cultural, or political identities at even the band level. In light of the conviction of the Chelan themselves that they comprised a distinct cultural unit ([a] above), this treatment is surely only the consequence of seeing the tribal units of the area in terms of supratribal cultural and linguistic entities and makes no pretense of concerning itself with population groupings at a more local level and according to the Indians' own view of functional social groupings.

- Gibbs (1855a:412) includes within his "Pisquouse" tribe the Indians of the Chelan area as well as those of the Methow, Entiat, and Wenatchee drainages.

- Winans (1871:487, 489) writes only of the "Mithouies, into which he collapses, without naming them, the Methow, Chelan, and Entiat.

- Presumably following Winans, Mooney (1896:734, 736, plate 88) recognizes only a "Mitaui" tribe, which includes, as is evident from the territory it is said to have controlled, the Chelan as well as the Methow and Entiat.

- Hodge (1912:850), perhaps taking his lead from Winans and Mooney, places the Chelan--without naming them--within the Methow, whom he defines as "as Salishan tribe . . . formerly living about the Methow r. and Chelan lake."

- Evidently using Teit's field data though not in a very perceptive manner, Boas (1927:tribal distribution map) merges the Chelan with the Entiat and Wenatchi--and perhaps with the Methow also--as a single grouping under a "Wenatchi" designation.

A more extented discussion of the above data has been developed by Smith (1983:153-161).

It is of some historical interest that both the earliest references to the Chelan and the most recent ethnographic considerations of them have generally recognized the Chelan and their neighbors as local-- especially river basin--population entities as did the Indians themselves. In contrast,

the references of the second half of the nineteenth century and early 1900s tend to merge the Chelan with other nearby Salishan speakers, seeing cultural and linguistic similarities among them and extending the term for one large component of the cluster to designate the entire group.

This inclination to collapse the Chelan (as also the Entiat) within the Methow above them on the Columbia River or with the Wenatchi downriver reflects the erroneous notion that the Chelan were in traditional times a small and insignificant people, as were the Entiat between them and the Wenatchi certainly were. This concept of the Chelan may have been partly a consequence of the fact already commented upon that the tribe was primarily a Lake Chelan group with, according to Ray (1936:141-142; 1974a:419-423), a few summer camps and winter villages, all normally small, on the Columbia River (Smith 1983:278-281). As a result, most of the Chelan population could not have been seen by the early river travelers, and those who were observed on the riverside were doubtless engaged in pursuits very like those of their neighbors below and above them on the Columbia, in a sense atypical for the Chelan tribe as a whole.

Tribal Territory

The traditional territory of the Chelan included a short stretch of the Columbia River on both sides of the mouth of Chelan River, Lake Chelan, and, it must be presumed, the total watershed of the lake. The aboriginal village locational data of Ray (1936:141-142; 1974a:420-423) for the Chelan and for their Methow neighbors on the north and the Entiat on the south define with some precision the extent of the Columbia west bank held by the Chelan. Specifically, their territory extended from the mouth of Antoine Creek, or slightly up the Columbia from that point, downstream past the entrance of Chelan River and as far south as just below the mouth of Navarre Coulee (Smith 1983:166-168). The extent to which the tribe made use of the east side of the Columbia River is much less clear. Still, it is reported (Ray 1974a:423) that they collected roots in the Badger Mountain region, so it is safe to assume that to some degree they exploited the subsistence resources of the east side of the Columbia opposite their west bank country.

The limits of traditional Chelan country west of the Columbia plainly included the entire Lake Chelan area. Consistent with the general tribal land utilization pattern in this section of the Plateau, it may be reasonably concluded that the Chelan claimed as their own all streams--none, however, of any magnitude--that drained into Lake Chelan from the Sawtooth Ridge watershed on the northeast and the peaks of the Chelan Mountains on the southwest. On the northwest in aboriginal and early contact times their tribal lands embraced the entire Stehekin River drainage up to the crest of the Cascade Mountains. In terms of the special interests of this present report, these data mean that the entire Lake Chelan National Recreation Area and all of the adjacent southeast corner of the North Cascades National Park fall within the country claimed in traditional times by the Chelan (Figure 4-2).

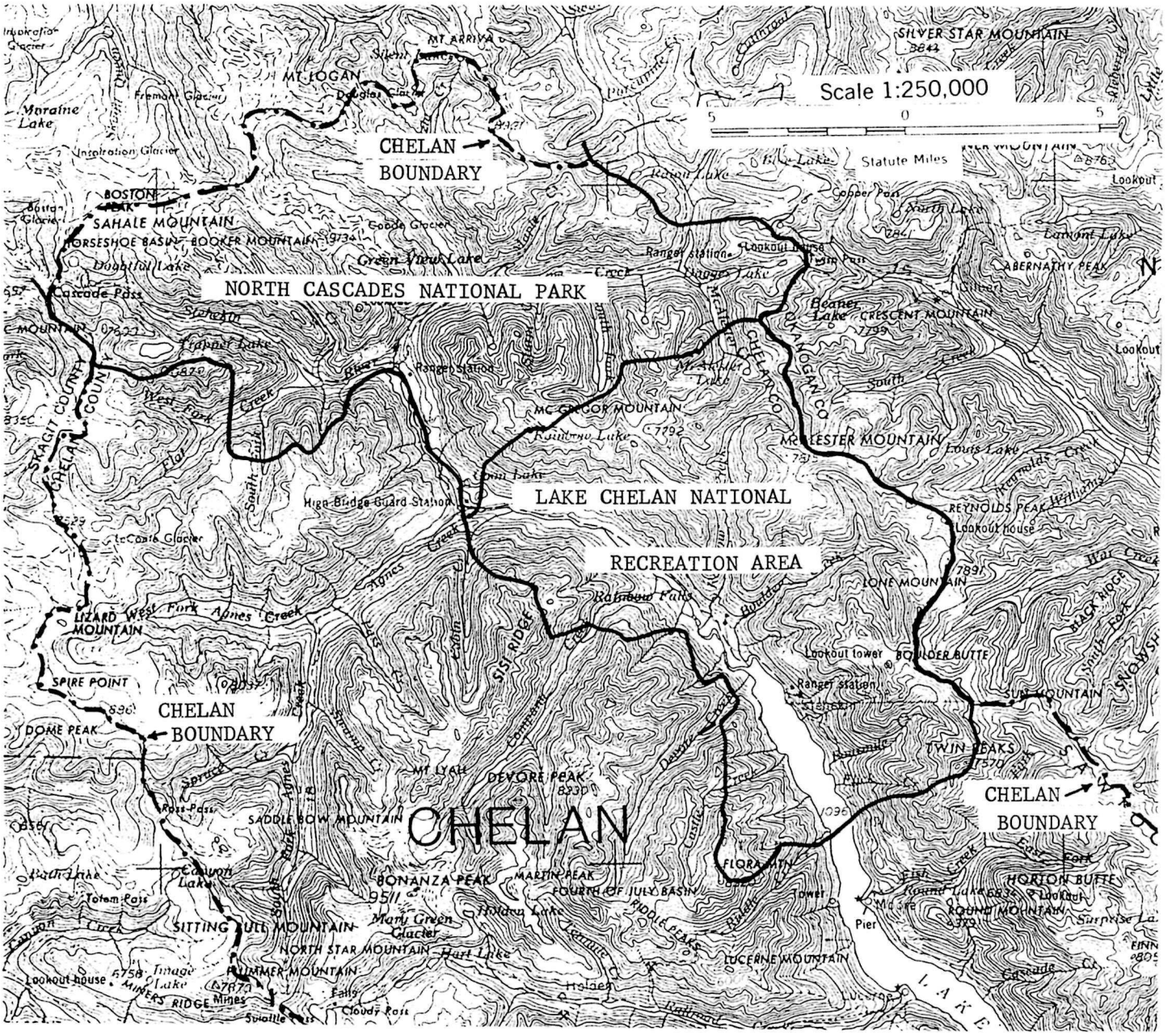


Figure 4-2. Limits of traditional Chelan territory in relation to boundaries of Lake Chelan National Recreation Area and southeast corner of North Cascades National Park. The lower part of the lake and the short Columbia River sector within Chelan country lie beyond the borders of the Park Complex and are not included in this map. Base map: USGS Concrete quadrangle 1955.

Cultural Affiliation

As two views of the Chelan in ethnic identify terms ([b] and [c] in above) suggest, the group has been considered by some ethnographers as comprising, in various combinations, a single cultural entity with the Methow upstream and the Entiat and Wenatchi downriver. Thus Teit (1928:89:93) regards these four groups as comprising a single "tribe" essentially uniform in life style, to which he applies, by extension, the term "Wenatchi." He further links this enlarged "Wenatchi tribe" culturally with the Columbia of the western Columbia Basin and adjacent Columbia River Valley, designating this larger, two-component entity the "Middle Columbia Salish."

Even those like Ray (1936:103, 108; 1939:149; 1974a:419-435) who regard the Chelan as a distinct tribal group ([a] above), reflecting the perspective of the Chelan themselves, assume a basic conformity in the traditional lifeways of the Chelan and Wenatchi as well as of the Methow and Entiat. Thus all four groups, though the Entiat are unnamed, make up Ray's "Central Interior Salish" cluster in his 1936 village study. Similarly, all four--again the Entiat remain unspecified--are coalesced for descriptive purposes in his 1939 general analysis of cultural relations among the native societies of the Plateau; here, as with Teit, he extends, for the sake of convenience, the more specific term "Wenatchi" to this larger, multi-unit entity. In his 1974 more extended native village catalog of this section of the Columbia Valley, Ray at last distinguishes the Entiat from the Chelan, Methow, Wenatchi proper, and Columbia as a separate "tribal" population. Nevertheless, he continues to recognize a fundamental similarity in the life modes of the first four of these groups, the Columbia being placed in a different cluster with the Southern Okanagan, Sanpoil, and other tribes to the north.

Of these four tribes, ethnographic information is available in some detail only for the Wenatchi.

It is of interest that observers as early as Parker (1842:313) sensed differences in cultural and tribal ethos between the Middle Columbia Salishans on the one hand and both the upriver Salish-speaking groups and the downstream Sahaptians on the other. He writes:

> Between Okanagan and the Long Rapids [Priest Rapids] are detachments of Indians, who appear poor, and wanting in that manly and active spirit, which characterizes the tribes . . . [like the Okanagan and Colville upstream]. South of the Long Rapids, to the confluence of Lewis' [Snake] river with the Columbia, are the Yookoomans [Yakima], a more active people.

Evidently the Chelan were included by Parker in this "poor" group cluster. At any rate, his characterization of these Middle Columbia tribes is basically perceptive. Their peaceable and unspectacular life mode stood in contrast to the life ways of the Okanagan, Spokan, and Colville in Parker's day. The Okanagan had had a trading post in their country for 25 years; the Spokan had had one for some 15 years before it was relocated to Colville; and the Colville had had a post for the previous 10 years, to say nothing of possessing their great intertribal salmon fishery at Kettle Falls. And the Middle Columbia life patterns contrasted likewise with the ways of the

horse-rich, buffalo-hunting Sahaptians with their post at the mouth of the Walla Walla, their great intertribal rendezvous, their fiercely hostile relations with the Shoshoneans to their south, and their vigorous, exciting life style in general.

Linguistic Affiliation

The Chelan were evidently not only very similar to the Wenatchi culturally, but the two spoke the same Interior Salishan language, though they differed slightly at the dialect level (Teit 1928:93). Together with the Entiat and the Columbia, they comprised the language unit now commonly termed "Columbian" by Plateau linguists (Thompson 1979:693-694). The speech affiliation of the Methow is somewhat less evident. Teit (1928:93), on the basis of his field research among the Columbia in 1908, and later Ray (1932:10), relying on Sanpoil information, place the Methow with the Columbian language tribes, though Teit recognizes some leanings toward the Okanagan language to the north and east. More recently, Kinkade (1967) and Thompson (1979:683-694) regard Methow as an out-and-out Okanagan dialect. Kinkade observes, however, that there is some evidence that Methow at an earlier date was part of the Columbian continuum but for some reason has shifted during fairly recent times toward Okanagan until it became wholly a dialect of the Okanagan language.

The relevance of these data to an attempt to describe--largely, unfortunately, to reconstruct--traditional Chelan culture is commented upon below.

Demography

No even roughly reliable head count of the 1811-1850 period exists for the Chelan. This is partly because their population center lay on Lake Chelan, well back from the Columbia River highway, the people of these lake winter villages and summer camps not being really seen until the 1850s. Partly because, as already noted, the Chelan were so frequently lumped with other groups in various ways and combinations; in these cases it is impossible to segregate the Chelan from the whole. Partly because of the inherent problems in making head tallies owing to the high mobility of the population and to variations in village and camp sizes by season and from year to year. And partly because of the effects of new waves of epidemics that passed through the middle Columbia region in the first half of the nineteenth century. For a more detailed discussion of these difficulties see Teit (1928:97-99), Ray (1932:21-22), and Smith (1983:137-138).

How unsatisfactory the earlier data are may be illustrated by the following estimates. According to Gibbs (1855a:417-418), Wilkes in 1841 approximates the "Okinakane" population at 300. If the Chelan--and the Methow, Entiat, Wenatchi, and perhaps the Columbia also--are included in his roster, they are presumably buried in this very small 300 estimate: Wilkes may be following Alexander Ross (1966:289-290) who, early in the 1800s, included the Chelan and the other native groups down the Columbia below the Okanogan Valley as far as Priest Rapids with the Okanagan as "tribes" of a single "nation," his "Oakinackens." Warre and Vavasour give a figure of 300

for the "Okanakane, several tribes" in 1849. Again the Chelan and their neighbors as noted above may be incorporated in this population approximation. Dart's data of 1851 give 300 to the Rock Island people (Columbia) and 320 to the "Okinakane" and in 1853 this same field investigator assigns 550 to the "Pisquouse [Wenatchi] and Okinakane" together. The difficulties inherent in sorting out these data in terms of the Chelan and the other tribal units of the Middle Columbia, if they are numbered in any of these figures, are more than obvious.

Similarly, Mooney's (1928:16) data of the early 1900s on this segment of the Columbia River are too confused to be helpful. No mention is made of the Chelan. Presumably they are included with the Methow, who, whatever the case for the Chelan (and Entiat), are explicitly entered in his list with the "Isle de Pierre [Rock Island] (Columbias, Moses' band)." This composite Methow-Columbia unit is estimated to have had a 1780 population of 800 and to have numbered 324 in 1907. Mooney also lists the "Piskwau, etc.," a group embracing not only the "Wenatchi" but also several Sahaptian tribes to their south. It is conceivable, though unlikely, that the Chelan are buried in this Piskwau cluster of linguistically dimorphous tribes, to which he attaches a 1780 figure of 1,400 persons. No separate 1907 census count is given even for this cluster: it is merged with still other tribal groupings before population estimates are presented.

According to Teit's (1928:97-99) Columbia and Wenatchi informants, the Middle Columbia groups were very numerous peoples in precontact times. By the mid-1800s, however, through disease and wars they had become mere remnants of their former size. While there may be some overstatement in these rememberances of former strengths, at least the effects of waves of pestilence, which Teit reports in some detail on informant recollection scourged them four times or more in the first half of the nineteenth century, were without doubt devastating. He concludes that "it may be safe to conjecture that the total population of the [Middle] Columbia group [the Chelan, Columbia, Wenatchi, Entiat, and Methow] at one time was at least about ten thousand." Surely the head-count figures of the preceding paragraph grossly underestimate the demographic strength of the Middle Columbia peoples in aboriginal days and even in the middle 1800s.

In this context it is instructive to note that the population of one Columbia village, that at Rock Island, was estimated by David Thompson (1914:53; Glover 1962:345-346) on July 7, 1811, at about 800. This figure was arrived at by pacing off the length and width of the two very long, tule dwellings of the camp, approximating the number of families at about 120 by using these dwelling measurements, and then multiplying this family number by an estimated average family size. In spite of the documented epidemics of the early 1800s, these data for this single 1811 community suggest that Wilkes' 1841 300-person estimate for the "Okinakane" tribe as a whole (if this was Wilkes' intention) was probably too low--perhaps substantially low--even for 1841.

For the Chelan proper the only genuinely informative demographic data known to me are the Chelan winter village and summer camp estimates of Ray (1936:141-142; 1974a:419-423) together with the somewhat arbitrary figures that I have assigned to those Chelan population aggregates of Ray for which he provides no head count approximations but only descriptive guides of the

"very large," "large," and "small" variety. The premises assumed and methods followed in translating Ray's adjectival estimates into numbers have been described elsewhere (Smith 1983:276-277). Ray's approximations, based on informant inquiry, are for the mid-1800s. It may be taken as a certainty that the Chelan population was somewhat greater in earlier times.

As I compute Ray's demographic data, I arrive at a winter Chelan person count of about 225 in the Columbia Valley villages and 1,185 in those villages occupied around Lake Chelan. The corresponding summer estimates are 230 persons for the river-side camps and 990 for those in the lake area (Smith 1983:278, 280, 318-320). Plainly these numbers, even if for some reason slightly skewed, underscore the lake population focus--and therefore subsistence resource area emphasis--of the Chelan.

Subsistence

The subsistence resources of the Chelan included fish, game, and plant foods, apparently in a relatively balanced supply. It is a shame that so little is known about this so basic a segment of Chelan culture and the details of the group's adaptation to its particular bioenvironment.

Fishing

Fish must have provided an important component to the food resources of the Chelan, though certainly a somewhat smaller share than among the Wenatchi. At least in protohistoric and postcontact times, salmon were unable to reach Lake Chelan and its feeders, the tumbling waters of Chelan River--"a roaring little stream" Symons (1882:42) calls it--between the lake and the Columbia being too difficult for them to ascend (Ray 1936:141; 1974a:420). Even on the Columbia the tribe appears to have maintained established villages and camps at only six sites, if the memory of Ray's (1936:141-142; 1974a:419-423) informants can be relied upon. Of this half-dozen, only three are stated to have been occupied in summer. And only one--that one mile north of Navarre Coulee--is specifically mentioned as a locality from which fishing was carried out in the Columbia and even this camp had no more than from three to 30 dwellings (Ray 1974a:423).

From these ethnographic data, fragmentary though they are, it is difficult not to conclude that Chelan territory was poor in suitable salmon fishing localities. This conclusion is to some degree supported by the historical records of David Thompson, Alexander Ross, and much later Thomas Symons. When descending the Columbia in early June, 1811, when the water was very high, to explore the river for the North West Company,
Thompson (1914:52) mentions only a single rough stretch of fast water in the river course that I define as lying within traditional Chelan boundaries, that about 2 miles, by his estimate, below the mouth of Chelan River. Here on July 6, 1811, he encountered a strong rapid and islands, which, however, caused his canoe no difficulty. Earlier, on July 3 and 4, Thompson 1914:44, 47, 49, 50, 52, 54; Glover 1962:340-346) had received presents of "2 half dried salmon" and five poor salmon from the Sanpoil, who were taking them at a small weir; on the 5th, gifts of "5 good roasted salmon" and "a good salmon" from the Nespelem; and at an earlier hour on the 6th, when he had

observed as he passed and briefly visited a Methow village at the Methow River confluence, a present of "3 roasted salmon." Later, from the Rock Island Columbia, the next people he came upon below the Chelan country, he obtained two salmon. Nevertheless, he makes no mention of seeing a single Indian at the swift water, noted above, in what we know to have been Chelan territory, nor, in fact, in the entire Chelan length of the Columbia.

Why were there on Thompson's passing no Chelan taking salmon and apparently no river camps, such as reported as summer settlements ethnographically? Perhaps the water was still running too deep over their main river fishing rapids, for Thompson (1914:48), as already noted, reports that the river was very high. Possible because the other groups were fishing at the time not in the Columbia itself but on lateral streams (as the Sanpoil certainly were), salmon streams that appear to have been lacking in the Chelan homeland. Whatever the reason, these Thompson data convincingly demonstrate that the Chelan were not at their river fisheries when his small party traveled by and so indirectly argue for the special importance of the Lake Chelan region as a major subsistence resource area for the tribe.

On July 26, 1811, Alexander Ross (1966:139-140) of the Pacific Fur Company, by dint of "a good deal of pulling and hauling," ascended a rapid which he terms "Whitehill rapid." Here he found the river making "several quick bends" and "almost barred across by a ledge of low flat rocks." This difficult stretch was either that which Thompson had passed and reported upon when heading downstream 20 days earlier, or, more probably, that about five miles farther downstream later described by Symons as a boulder and bar rapids. The precise location of Ross' barrier is, in any event, unimportant in this present context, for both possible rapids were within Chelan borders. Ross encamped for the night at the head of this swift water without seeing there a single Indian. The following day, after an early start, he passed about 10 a.m.:

> a small but rapid stream, called by the natives Tsill-ane [Chelan], which descended over the rocks in white broken sheets. The Indians told us it took its rise in a lake not far distant.

Not far upriver he met some Indians (presumably Chelan), put ashore, and spent the night. From these friendly natives he secured "some salmon, roots, and berries." On the following day but one, he reached the Methow River, which he calls the "Salmon-fall River," where the Indians presented him with an "abundance of salmon." As in the Thompson instance, to summarize, no natives were to be seen at the fast water below the Chelan River mouth, but those met above that mouth had some salmon, although, unless we squeeze too much from Ross' brief account, not nearly the rich supply possessed by the Methow.

Seventy years later Symons (1882:39, 42, Figures 13-15), passing down the Columbia in a bateau in early October, 1881, to assess the navigational possibilities of the river, notes nothing but an occasional "little ripple and sand-bar island" between the entrance of the Methow and the confluence of the Chelan River. Below the Chelan River, he passed "an occasional ripple . . . and came soon to some quite strong rapids." These, which he named "Downing's Rapids," are without any doubt those mentioned by Thompson and possibly also by Ross. About seven miles downstream from the mouth of the

Chelan, he came upon "a rapid, where the water flows over a bowlder and gravelly bar, on which there was a depth of from seven to eight feet." This location (Symons 1882:map 15) is just downriver from the point, precisely 7 miles below the Chelan River just as Symons estimates, where the Columbia bends sharply to the northwest for about 2 miles (USGS Wenatchee quadrangle 1957). Though not the rapid noted by Thompson on July 6, 1811, it may quite possibly be Ross' Whitehill Rapid. Symons evidently observed no Indian settlement at either his Downing's Rapids or this boulder-and-bar rapid and found no Indians fishing at either, although he had camped with the Chelan at their "principal village" 1 mile up the Columbia from the Chelan River entrance and later found several Indians spearing salmon from canoes at the Entiat River mouth slightly farther downstream.

These historical notes suggest, like the ethnographic data, that the Columbia River rapids in Chelan territory did not lend themselves to salmon fishing for some reason, either in the high water of July or in the lower water of early October. And further that there were in Chelan country no tributary streams that offered acceptable salmon fishing possibilities like the Methow and Entiat Rivers. These conclusions are supported by Ray's (1936:141; 1974a:419, 423) informant-derived data that in traditional times the Chelan gathered for salmon at the Entiat fishery, actually a relatively unproductive location, at the entrance of the Entiat River into the Columbia, and at least the people of the large Chelan winter village at the lower end of Lake Chelan journeyed to the Wenatchee River for salmon fishing. Further, after about 1870, members of the tribe were accustomed to fish for salmon at the important Methow fishing location at the Methow River mouth.

To focus these data on the special interests of this study, it appears that an important fraction of the fish in the Chelan diet must have been nonanadromous varieties, fish that were available in the small streams that fed Lake Chelan. Ray (1974a:420-423) lists 13 Chelan habitation sites around the edge of the lake. Of these, 11 were occupied in the summer season. Two of this number are said to have been at the mouth of creeks emptying into the lake, but Ray's data fail to mention fishing as a subsistence activity of these communities. On the other hand, some fish are reported to have been taken by people living at the large village at the lake outlet. These data surely understate the importance of nonanadromous fish taken around the lake shores.

In contrast to the salmon situation among the Chelan, the salmon resources of the Wenatchi were very substantial: in normal years fish were secured in great quantities at localities along the Columbia and even more importantly at sites on the Wenatchee River and certain of its laterals (Ray 1936:142-143; 1974a:424-426; Smith 1983). Indeed, the salmon yield where Icicle Creek flowed into the Wenatchee River was so renowned that the locality became during the season an intertribal fishery (Ray 1974a:425). It is obvious, in short, that salmon must have been of lesser significance to the traditional Chelan than among the Wenatchi, and that nonanadromous fish must have contributed more to the Chelan food supply.

In leaving this salmon issue, a bit of sheer speculation may not be wholly inappropriate. The Chelan area appears to lie in a geologically instable region. The early historical documents report that mild and strong

earthquakes were not uncommon. According to Byrd (in Durham 1972:11 fn. 20, 12 fn. 23, 20 fn. 43, 24 fn. 52), Ribbon Bluff (or Cliff)--along the western side of the Columbia River just downstream from the Chelan River mouth (see Symons 1882:42, map 15)--was thrown into the river by a quake in December, 1872. This same disturbance produced a huge geyser at Chelan Falls, which, after continuing for "a long time," gradually subsided. Throughout most of 1873 "the whole mountain range between Lake Wenatchee and Lake Chelan was shaken" by almost daily tremors. In 1887 a very early White settler at Entiat recorded "three days of severe earthquake" shocks. In September, 1899, a very large underwater land shift, possibly a large rockfall, produced huge waves on Lake Chelan.

Further, Lake Chelan was subject not only to a normal spring high water owing to the usual seasonal runoff but occasionally to true flooding when precipitation and temperature conditions were right. Thus in 1894 the lake area experienced a huge flood that inter alia

> . raised the lake level 11 feet over the 1892 low water mark, washing out all the old Stehekin River logjams, . . . changed the course of Fish Creek . . , washed out and caved in the Chelan River banks below [Chelan] town until it sounded like thunder and felt like earthquakes, [and] rechanneled a fourth of a mile of the mouth of the Chelan River; . . . (Byrd in Durham 1972:2 fn. 6; see also 1 fn. 2 and pp. 7, 8).

It seems theoretically possible that in prehistoric times either major, though local, earthquake activity or massive lake flooding with consequential outlet erosion could have significantly changed the drainage pattern of Lake Chelan. That the lake surface was higher even in late prehistoric days is suggested by the well-known pictographs on the sheer rock wall at the upper end of Lake Chelan, observed by Merriam about 1880 (Symons 1882:40). The highest of these are reported to have been at least 35 feet above the lake level in predam times and to have been reachable only from watercraft when the level was, say, 30 feet higher than in the early historic period (Cain 1950:15; Symons 1882:40; Byrd in Durham 1972:24 fn. 52). If these data are basically accurate, some quite recent--even in the historical time scale--shift in the outlet arrangement of the lake must have occurred to lower its southern rim. Earth movements or perhaps even massive flood action (or both) might have produced the barriers in Chelan River that in ethnographic times prevented salmonid ascent to the lake or possibly removed such barriers, allowing anadromous fish navigation to the lake, and later created them again. Or altered the outlet from some other course to today's tortuous, rocky Chelan River canyon. Two possible early outlets would appear to have been Knapp and Navarre Coulees, the first about five miles long and the latter approximately eight miles in length, as compared with Chelan River which today falls the about 375 feet from the lake surface to the Columbia River in only about three miles (Byrd in Durham 1972:7). In this connection it is of interest that in 1892 the sternwheeler Stehekin, cut in two, was hauled by wagon up Navarre Coulee from the Columbia to the lake: obviously this "road" is nothing like the twisting Chelan River canyon with its boulders and falls. And as already noted, the modern highway runs up Knapp Coulee from the Columbia to Lake Chelan. Either of these drainage streams, if such there was, might have been manageable to anadromous fish. A careful examination of the topographic and geological evidence would doubtless test

these highly speculative hypotheses, but its seems conceivable that salmonids were able to ascend to Lake Chelan and the Stehekin drainage during some periods in the prehistoric past.

In the absence of specific ethnographic information for the Chelan in regard to fish varieties and fishing techniques, save as noted below, the Wenatchi data are summarized here in keeping with the procedural scheme already explained.

Among the Wenatchi, anadromous fish, especially salmon, of which the Chinook variety was most important, and steelhead trout, comprised staple foods. As already noted, migratory fish were certainly much less important among the Chelan, but of these fish that were taken by this group, either in their own section of the Columbia or at fisheries in the country of neighboring tribes, these two varieties were presumably the most significant. Eels were also taken by the Wenatchi as a food, but whether this was likewise true of the Chelan is not entirely certain. They are said to have been considered inedible among the Flathead, Kutenai, Kalispel, Carrier, Chilcotin, Shuswap, Lillooet, and Klikitat (Ray 1942:104). On the other hand, they were eaten among the Couer d'Alene, Sanpoil-Nespelem, Southern Okanagan, Thompson, Kittitas, Tenino, Umatilla, and Nez Perce as well as among the Wenatchi (Spinden 1908:206; Post in Spier 1938:18; Ray 1942:104). Inasmuch as these fish were widely eaten in the central and western Plateau, whatever may have been the situation elsewhere in the area, it may be presumed that they were also considered an appropriate food resource among the Chelan, but evidence on the point is lacking.

A catalog of nonanadromous fish caught by the Chelan for food is not available, nor for that matter by the Wenatchi. But, according to Post (in Spier 1938:11-18), the Southern Okanagan, a short distance up the Columbia from the Chelan, supplemented their salmon and steelhead, taken from June until October, with suckers, trout, whitefish, squawfish, lamprey eels, and ling. All of these fish were native to the Columbia Basin region (see Wydoski and Whitney 1979) and so presumably all or most were available to the Chelan in their lake area.

Several different fish are noted in the early historical records as occurring specifically in Lake Chelan and its feeders, including the Stehekin system. These include several varieties of trout: bull trout (Dolly Varden), rainbow trout, and cutthroat trout (Durham 1972:15; Byrd in Durham 1972:12 fn. 25, 15 fn. 26). This list could certainly be extended or at least further documented by a fuller search in the early local records.

Save for Ray's report, mentioned above, that fish were caught by Chelan living in the village at the southern end of the lake, we know nothing ethnographically about fishing localities in the lake sector. Historical accounts of the late nineteenth century, when White settlers were first moving into the region (Byrd in Durham 1972), provide some useful general and specific information.

- Large numbers of rainbow and brook trout were found in numerous streams putting into the lake, Fish Creek being especially notable for its brook type (Durham [1972:15] writing in 1891). (The true brook trout

[Salvelinus fontinalis] is an introduced species in Washington [Wydoski and Whitney 1979:47].)

- The best fishing in the lake "at proper stages of the water," according to early White anglers, was where "a rill, a brook or a foaming torrent comes leaping over the cliffs, and is disolved in a mass of spray and foam before it strikes the blue-black waters of the lake" (Durham 1972:12). While these non-native fishermen were using pole, line, and hook--a technique not particularly favored by Plateau tribes--these date suggest the possibility of traditional tribal weirs, other types of traps, spear fishing, or still different fishing methods at at least certain of these locations.

- Around the mouths of the creeks where they enter the lake are the feeding grounds for the large lake trout that attain lengths of 2 to 2.5 feet (Lyman [1899:198] writing ca. 1898).

- Large trout were caught in considerable numbers at the very head of the lake where the swift current of Stehekin River flows into the lake (Durham 1972:23).

Mountain streams likewise had their fish. When in 1886, Wm. Sanders and Henry Domke made their difficult way over Sawtooth Ridge from the Methow country to the upper segment of Lake Chelan, they lived much of the time on fish taken in the small streams they encountered, Canoe and Prince among them (Durham 1972:19-20).

Evidently Lake Chelan was natively very rich in fish. In the early 1890s, the hotel at Lakeside on the south shore of the lake near its outlet is reported to have had a standing order for 100 lbs. of fresh fish weekly (Byrd in Durham 1972:15 fn. 27). Moreover, commercial fishermen, quite active on the lake at this time, supplied the Waterville and Coulee City markets with fish (Durham 1972:15).

The methods by which the Chelan took their fish are not described in the literature, but, as a Plateau people and neighbors of the Wenatchi, they presumably, like the Wenatchi, used weirs for both large and small fish. Among the Wenatchi these were constructed by lashing woven fencing against tripods placed straight across the stream. Single weirs were made to slant, the top inclined upstream, and were fitted with a semicircular trap on the upstream side close to the stream bank. Weirs were also built in pairs, the downstream barrier being lower and provided with an opening to allow the fish to pass into the area between the two weirs where a trap of some kind was fashioned. From the trap the fish were removed by being speared from a scaffold adjacent to the weir (Ray 1942:104-106, Figure 66).

The Wenatchi likewise built dams straight across streams to force small fish and eels to concentrate at a low point in the barrier, where a basket trap was placed (Ray 1942:106).

Two types of traps are described for the Wenatchi, both made generally of willow though sometimes of fir. One, surely set in weirs as described above though not so stated by Ray, was of the double funnel variety, either cone-shaped or of truncated cone shape, with a converging stick mouth and a

detachable end through which the fish were removed. This was a creek variety of trap (Ray 1942:107; Figures 162, 163). It may be supposed that it was in use among the Chelan no less than by the Wenatchi, and that the Chelan placed them at or close to the mouth of at least some of the small streams that emptied into Lake Chelan.

The second kind of Wenatchi fish trap was an open basket affair, set below falls where salmon, in attempting to ascend the fast water, fell back into the trap (Ray 1942:108). Since salmon, at least in protohistoric and postcontact times, were unable to negotiate the rushing torrent of Chelan River from the Columbia River to Lake Chelan, the Chelan could not have used a trap of this sort for salmon in the lake area. Perhaps, however, they may have placed such a trap on the Chelan River close to its entrance into the Columbia where the migrating fish would have been stopped by a falls, the existence of which is suggested by Alexander Ross' comment of 1811 noted above and by the very small community of Chelan Falls as shown on the USGS Ritzville quadrangle (1953). This assumes that anadromous fish in useful numbers would attempt to swim up a stream from which none could have come as fingerlings. It seems unlikely that the Chelan set basket traps on any of the very few, small streams--Chelan River possibly aside--that reach the Columbia in their territory. Ray (1974a:423) describes the summer camp at Navarre Coulee as, inter alia, a fishing settlement, but surely this was at or near a spearing site not a basket-trap-under-a-falls locality.

Among the Wenatchi netting was an important fishing adjunct, used in making both seines and bag nets. It was woven with a boat-shaped, wooden or deer-rib shuttle and a rectangular wooden or rib mesh-spacer, except when the mesh was large enough for the weaver's fingers alone to regular the mesh size (Ray 1942:110).

Wenatchi Indian-hemp seines were of the conical bag sort, fitting with stone sinkers, either encased in hide and attached to the net, or fashioned of a round or oblong stone, grooved either transversally or laterally and tied to the net around this groove. To the end of this bag seine was affixed a fish tail spinner (Ray 1942:109-111).

Dip nets of two varieties were part of the Wenatchi fishing gear. The scoop net, employed in taking salmon, consisted of a circular hoop and an A-frame handle (Ray 1942:109; cf. Figures 294, 295). The vertical-lift net was constructed with a handle of two parallel poles, between which was stretched a small net to warn the fisherman of the arrival of a fish above his net bag (Ray 1942:110; Figure 309).

Hooks, used among the Wenatchi both for salmon and for small fish, were of wood or deer bone and were two-piece, sharp-angled artifacts. They were baited with grasshoppers, crickets, and periwinkles or, when trout were angled for, with fish skin (Ray 1942:110-112; Figure 360).

Single-pronged harpoons were widely used by the Wenatchi. This device consisted of a point, round in cross section, and of a separate two-piece wooden, horn (antler?), or bone butt, to which the point was seized. In the butt was a wedge-shaped socket into which the long shaft was fitted and from which it separated when the point lodged in a fish (Ray 1942:112; see Figure 437). V-shaped or two-pronged spears with points of hardwood firmly fixed to

a foreshaft which was, in turn, bound to a shaft were also put to use in fishing (Ray 1942:112-113; Figure 470). Three-pronged spears--leisters--were employed in night fishing for small fish and sometimes even for salmon. The side elements were fitted with inside, retrograde barbs of bone or mountain goat horn; the center point was of hardwood or of deer, elk, or bear bone. This unit was lashed to a foreshaft into which the main shaft fitted (Ray 1942:113; Figure 490).

Fish were also shot with three-pronged arrows and sometimes were even caught in the hands from the shore or when wading. Occasionally trout were poisoned (Ray 1942:114). The active ingredient of the poison is not identified by Ray.

To improve a Wenatchi fisherman's chances of success, a shade was constructed on the bank to throw the fishing spot into shadow. Torches were used at night in canoe fishing and fires were sometimes kindled on the beach nearby (Ray 1942:113-114).

In addition to the fishing implements proper, other material culture objects were associated with Wenatchi fishing activities. Woven maple or willow bark baskets served as fish creels. Special rod-shaped clubs were used in dispatching fish; eels, however, were killed by being bitten (Ray 1942:114, 115).

The preparation of salmon among the Wenatchi involved cutting the sides off the fish with an unhafted stone knife and hanging the flesh, spread open with cross-sticks, from a pole to dry. Salmon eggs were dried and stored in salmon skin or hide containers (Ray 1942:134-135).

The first salmon ceremony was celebrated by the Wenatchi only for Chinook salmon. The fish were taken in a regular trap placed in a community weir. In anticipation of the coming salmon, two shamans prayed while watching the weir at night and with the arrival of the fish supervised the ceremony. In a ritual manner, the stomachs were removed and discarded; the heads, tails, and backbones were separated; the backbones were broken, not cut; and the fish were roasted. Finally, the fish were eaten by the chief and the young and old men (Ray 1942:115-116).

Among the Wenatchi, the bones of salmon as a class had to be thrown back into water (Ray 1942:129). River water was ritually drunk as "salmon soup." Eels were cut open under water (Ray 1942:140), which I assume was a ritual requirement rather than a response to some more prosaic and practical consideration.

Freshwater clams were eaten by the Wenatchi, either boiled or cooked in an earth oven. The meat, strung on a circular string or kept on a stick, was dried for later consumption (Ray 1942:135-136).

Hunting

Game contributed importantly to the Wenatchi food supply. Skillful hunters sometimes gained special esteem and to some degree men specialized in hunting particular animals (Ray 1942:123).

Although there are no ethnographic data that address the point head-on, hunting would appear on all available evidence to have been even more significant as a subsistence activity among the Chelan than among the Wenatchi, precisely because fish, especially anadromous types, plainly contributed considerably less to their food resources. To some degree it must have been a year-round Chelan pursuit, both near the lake and especially up in the surrounding mountains. Ray's (1974a:419-423) village/camp catalog for the Chelan (see below) mentions that certain specific settlements were considered excellent spring hunting bases (e.g., village #10) and others especially fine summer hunting centers (e.g., villages #11, #12). Even one village-camp location on the Columbia River just north of Navarre Coulee was close to mountains where hunting was good.

Large game included deer as the most important animal to the Wenatchi, but also elk, antelope, mountain goat, bighorn sheep, and brown and grizzly bear (Ray 1942:116-117). For the Chelan more specifically we have the following ethnographic and historical notes regarding the animals native to their territorial ecosystems:

- Natively and still in the early 1890s, "an astounding amount of game" was to be found in the Lake Chelan area. "Grouse, deer, mountain goat, [black] bear, and even cougar were often seen." Grizzly bear and bighorn sheep also lived around the lake. (Durham 1972:18; Byrd in Durham 1972:18 fn. 33, quoting early sources.) A few specifics are recorded in the following paragraphs.

- Beside the Columbia River, several deer were observed by Ross (1966:139) in late August, 1811, at his evening camp located below the Chelan River mouth at the head of the rapids which I provisionally equate with Symons' boulder and bar rapids (see above).

- In the Lake Chelan sector, informant data indicate that some deer were hunted by the Chelan on the unwooded peninsula and in the adjacent shore areas in the vicinity of the Chelan village near the present town of Manson (village #5 in the roster below) (Ray 1974a:421).

- The lake region was evidently marvelous mountain goat country. They are mentioned ethnographically in a way that implies that they comprised a particularly significant resource of the Chelan (Teit 1928:113). The large village at the foot of Lake Chelan (#1 in the village-camp roster below) was "an important goat hunting base" (Ray 1936:141). Teit (1928:113, 116) reports the Chelan use of goat wool in weaving robes.

- Mountain goats are among the figures represented at the prehistoric pictograph site at the head of Lake Chelan (Cain 1950:15; Durham 1972:24; Byrd in Durham 1972:24 fn. 52; Lyman 1899:195).

- Mountain goats were still so numerous in the early 1890s that "they seemed inexhaustible" (Byrd in Durham 1972:18 fn. 35). In 1891 Durham (1972:18-19) wrote after a steamer trip up the lake:

> Far up the mountain sides are beheld numerous bands of . . . goats [looking] down upon us from their dizzy heights . . . . When the first settlers went upon the lake, one could row all day long

without losing sight of large bands. It was no uncommon occurrence to count 100 of these goats in a single band, and large numbers of them were shot from row boats, often falling over the cliffs into the water.

A settler . . , who has taken a place at Fish Creek Point, 50 miles up the lake, killed 50 during this past winter . . . . The meat of the kids is considered a delicacy, but . . . [not so] a piece of salt billy-goat. . . . .

[Between] the lake and the Methow, . . . they are occasionally seen . . . in bands of 300 and 400.

- On the northeast side of the lake at about the halfway point are two mountains bearing the official names of Little Goat Mountain and Big Goat Mountain (USGS Concrete quadrangle 1955). In the late 1890s, Lyman (1899:198) observed, a great many goats still lived on their crags. From these heights their paths, quite like cattle trails, descended to the lake water.

- Bighorn sheep are confirmed ethnohistorically for Chelan territory by David Thompson's (1914:42; Glover 1962:345) journal entry of July 7, 1811: canoeing down the Columbia, he sighted his first bighorn sheep since leaving Kettle Falls, as it looked down upon him from a riverside cliff, when he reached the Beebe sector just upstream from the Chelan River mouth (see Smith 1983:26). Significant or not, he mentions no other sheep downriver while he was still in the Plateau.

- Bighorn sheep appear to be attested to likewise by Ross' (1966:139) observation, on August 26, 1811, of an "ibex, the white musk goat" while nighting at the rapids referred to in the deer item above. Although mountain goat were common in traditional Chelan territory (see above), I regard this sighting as probably that of a sheep, presumably female, rather than a goat, primarily because the latter were typically animals of the lofty, craggy mountains (e.g., Dalquest 1948:407).

- Bighorn sheep are reported to be depicted in the pictographs at the upper end of Lake Chelan referred to in the mountain goat section above (Cain 1950:15; Byrd in Durham 1972:18 fn. 33, 24 fn. 52).

- These native sheep were often mentioned by the very early travelers and settlers in the Lake Chelan region. They must, however, "have been very quickly wiped out" (Byrd in Durham 1972:18 fn. 33, quoting 1892 and 1893 records).

- Bear--black, I assume--were taken by the Chelan living in their village near the site of Manson (village #5) (Ray 1974a:421).

- Grizzly bear, according to Byrd (in Durham 1972:18 fn. 33) were "fairly common" in the Lake Chelan region, specimens weighing as much as 800 pounds were not unusual.

- Cougars were to be found back in the mountains (Durham 1972:18). Byrd (in Durham 1972:22) reproduces a photograph of a large animal killed in 1907 in the upper Lake Chelan country.

- Lynx occurred in the Lake Chelan country (Byrd in Durham 1972:27).

Given the hunting patterns of the Plateau in general and of the eastern Cascades tribes in particular, it must be assumed that all of the preceding animals were considered fair game by the Chelan. Caribou and moose were reported to have been absent in traditional times in Wenatchi country (Ray 1942:116). The nonoccurrence of these two animals in the Wenatchee drainage--as well as in Chelan country--as native species is confirmed by Dalquest (1948:403, 404).

Rabbits were the most significant of the smaller animals from the Wenatchi point of view; raccoons, beaver, and ground hogs were also hunted to some extent (Ray 1942:117, 118, 123, 166). For the Chelan explicitly we have only the following ethnographic notes:

- Small game was taken near the outlet of Lake Chelan and near Manson on the lake shore, and muskrats and other small animals were caught at Wapato Lake (Ray 1974a:420-421). It would be surprising if they were not hunted or trapped throughout Chelan country, but the fragmentary ethnographic data fail to so state.

- Marmots were hunted by the Chelan. From their skins robes were fashioned. (Teit 1928:116)

The above few references to game animals in Chelan country are largely random and anecdotal, only secondarily ethnographic. In any case they obviously present a very superficial, incomplete, and sometimes only inferential listing of the native mammalian fauna. It is informative, therefore, to check and extend these observations by comparing them with the zoological assessment of the indigenous mammalian forms of the Chelan homeland to be found in the final Park-use section of this Chelan summary.

Waterfowl--ducks and sometimes geese--were taken by the Wenatchi, but apparently played a minor role in the subsistence resources of the tribe (Ray 1942:116-117). Grouse were secured and surely eaten, though the bird is mentioned in the ethnographic literature, to my knowledge, only as a source of feathers used in stuffing pillows (Ray 1942:179). The Chelan use of water and other birds is unknown.

Certain animals and birds were avoided as food by both sexes among the Wenatchi. This list includes the coyote, wolf, mink, and land otter, though foxes were eaten. Among the birds, the buzzard, raven, crow, and eagle were regarded as inedible. Reptiles, frogs, and grasshoppers--as well as insects in general--were considered noncomestibles. Children were expected to avoid eating mammal fetuses, fawns, blood, the meat near the kidneys, and deer heads (Ray 1942:130-131).

Among the Wenatchi, animals were hunted both by group methods and by men hunting individually. Group hunts, directed by a leader, included

surrounding the game, driving it into natural enclosures, and forcing it through narrow passes where it could be easily shot (Ray 1942:117).

Individual Wenatchi hunters stalked animals with bow and arrow or club, ran game down in brush or, wearing snowshoes, in snow, and drove them into pitfalls. Hibernating bear, skunks, and raccoons were smoked out of their dens. Grizzly bears were killed by thrusting in their open mouth a bone with the two ends sharpened. Beavers were clubbed or snared by their feet. Ground hogs were occasionally hunted with the aid of dogs (Ray 1942:117, 118, 119, 123).

Deadfalls were used for smaller game; pitfalls for larger animals and sometimes also for smaller species. Deer head disguises were not in use among the Wenatchi, but white fur was employed in some manner (not explained by Ray) to attract mountain goats (Ray 1942:121, 122).

Grouse and quail were caught by the Wenatchi with spring pole snares set on logs. Land fowl were shot from blinds and were killed with slings. Eagles were taken from their nest, plucked of the feathers desired, and returned to their nest to be taken again later (Ray 1942:121-122, 123).

We know little about secondary or ancillary hunting procedures followed by the Wenatchi for particular animals. It is reported, however, that in bear hunting, the man dropped dust to test the wind and, when after beaver, the hunter "spoke to" the animal or "called it out" (Ray 1942:123).

In view of the importance of hunting among the Wenatchi, it is not surprising that certain tabus and ritual mandates associated with hunting activities were observed and a number of simple ceremonial practices were followed. Those cited in the ethnographic literature surely represent only a small fraction of the total number, particularly since many must have been observed at no more than the individual hunter, family, or small group level. Further, these cultural prescriptions and proscriptions were without question to a degree dynamic: some old practices disappeared as new ones were developed or borrowed and as rituals practiced by a few gained in favor while others lost their following. But concerning such changes through time among the Wenatchi we know little or nothing. The following are the general tabus, prescriptions, and ceremonial observances listed by Ray (1942:127-130) for the tribe.

A Wenatchi man sweated in his sweat lodge before departing on a hunt and remained continent both before and during the hunt. While the hunt was underway, the activities of his wife were restricted, though in precisely what ways is not described by Ray.

The pursuit of deer, bear, and mountain goat especially called for ritual observances.

(a) Before leaving on a deer hunt, a man was expected to announce his intention and to seek success by securing a lucky piece of some sort from some old man. On the other hand, the animal, once killed, received little special treatment, except that its eyes were broken "to prevent revivification," and the meat was brought into the dwelling through the back. Unlike the practice in other Plateau tribes, the meat could be

given away while the game was being brought back to camp, the fresh meat was allowed to touch the ground and to be stepped over, the cooked meat could be taken out of the dwelling, and the heart could be eaten by the hunter (Ray 1942:128-129).

(b) Before departing to hunt the black bear, the hunter prepared ceremonially by being continent, sweating, and perhaps announcing his hunting plans. While hunting he sang to the bear. After a kill, he sang or talked to the dead animal and wept for it, calling it his brother. At the place of the kill, he removed the eyes and sinew below the tongue, to be given later to an old person, lest the "dead animal . . . lick all [the] fat off." The head was eaten by the hunter, who invited friends to join him. Finally, the skull was set up, although precisely how and where are not described (Ray 1942:129).

(c) The head of a mountain goat had to be sprinkled with down and cooked by roasting. No one could step over it (Ray 1942:127).

Plant Collecting

Vegetable foods played an important role in the Wenatchi diet. The details, however, are scandalously thin.

Roots were extensively used among the Wenatchi as a food resource, in particular camas and bitterroot. To some extent, wild onions were also dug and eaten. (Ray 1942:131, 137, 138, 139)

For the Chelan specifically I have identified the following meager data:

- When on August 27, 1811, Alexander Ross (1966:139-140) visited the Chelan group on the Columbia a short distance above the Chelan River entrance, he received from them some roots to eat.

- Root gathering grounds were located on the unforested peninsula and in the adjacent shore areas near the Chelan camp in the Monson sector and apparently on the south side of the lake opposite Green's Landing (camps #5 and #12 in the village/camp inventory). The root collecting country on Badger Mountain east of the Columbia River was visited for roots by the Chelan from the river village near Navarre Coulee. Doubtless there were other root gathering areas in Chelan country, but these are the only ones mentioned by Ray (1974a:421-423) in his Chelan settlement roster.

- Apparently bitterroot was either particularly abundant in Chelan country or of exceptional quality, for one of the Sanpoil-Nespelem terms for the Chelan was "bitterroot people" (Ray 1932:11). This is much as the Kalispel were designated by the Nez Perce "camas people" (Curtis 1911 8:163) and as the Spokan division of the Little Spokane River were called by other Salishan groups "steelhead trout people" (Ray 1936:122) and the Lakes of the Arrow Lakes region "(a small speckled fish of the lakes) people" (Ray 1936:11).

Digging sticks of the Wenatchi were of serviceberry wood with a cross-wise handle of wood, deer antler, or mountain goat horn (Ray 1942:145).

Because berries contributed importantly to the subsistence base of Plateau peoples in general, it must be assumed that this was equally true of the Wenatchi--and Chelan--but, except for the mention of chokecherries, Ray (1942:132, 136, 138, 139, 161) provides no specific Wenatchi data on the fruit gathered and the nature of their use. That they were significant, however, as a food resource is indirectly indicated by the Wenatchi practice of first-fruit ceremonies for berries (Ray 1942:133).

That the Chelan gathered berries as a food resource is clear enough, but beyond this unexceptional fact little relevant information has yet been found in the ethnographic and historical sources.

- In late August, 1811, Ross (1966:139-140) received some berries--as well as salmon and roots--from the Chelan group, a few miles upstream from the Chelan River confluence, with which he spent the afternoon and night.

- On October 5, 1881, while visiting the area at the foot of Lake Chelan, Symons (1882:41) observed an old Indian woman, "who had been to some point up the lake," now returning home with a large basket of elderberries on her head. Unquestionably she was from some Chelan camp in the neighborhood, though Symons saw none where he was at the lake outlet, quite probably because the "beautiful bunch-grass-covered plateau" where the lake narrowed into the Chelan River had been wholly taken over by government troops in the spring of 1880 (Symons 1882:40).

- According to Ray's (1974a:421) Chelan informant, abundantly yielding berry grounds existed in traditional times in the vicinity of Willow Point on the north side of Lake Chelan.

Stems were widely used by the Wenatchi, as was the cambium layer of the lodgepole pine. This "sap" was removed with a deer-rib scraper or one of a curved, slat-like piece of wood and was then cleaned with grass.

Seeds--specifically those secured from pine cones and sunflowers--were eaten by the Wenatchi to some extent. The seeds were struck from the plants with beaters made of rawhide on a willow frame. The pits of chokecherries, as well as the pulp itself, and occasionally acorns were likewise consumed. (Ray 1942:131-132, 161)

- In Chelan country sunflowers--like berries--grew especially prolifically in the vicinity of Willow Point, giving their name to the year-round village located there (Ray 1974a:421). Ray is not explicit on the matter, yet implies that these plants were a source of food, undoubtedly their seeds. If the plants were, as I suspect, balsamroot (Balsamorhiza sagittata), their roots, young shoots, and bud-stems as well as seeds may well have been eaten as was common among the Indian groups of the southern interior and drier parts of British Columbia (Turner 1978:115-116).

Among the Wenatchi, pine nuts and tree lichen were also a part of the food supply (Ray 1942:137, 138, 139).

Food Preparation and Meal Patterns

Food among the Wenatchi was boiled with hot stones in a woven basket or a dugout wooden vessel, steamed in an earth oven, or roasted on sticks inclined toward the fire (Ray 1942:136-137).

The earth oven was used for bear, deer meat, for wild onions and especially camas, for pine nuts, and for lichen. In this steaming process, a layer of skunk cabbage leaves was placed under the food to be cooked and layers of these same leaves and rye grass were spread above the food. Water was poured inside the pile to generate additional steam and a fire was kindled on top. (Ray 1942:137-138)

Pulverized meat was mixed with camas and with salmon eggs and chokecherries. Animal bones were boiled to make soup. Blood was boiled in tripe with berries and then dried and stored for subsequent eating. (Ray 1942:136, 138, 139)

Sunflower seeds were parched on hot rocks. Whole chokecherries and pine nuts were mascerated. Before being prepared as food, acorns, which as noted above, were not much eaten, were buried in mud to leach them. And certain foods (surely plant foods like seeds) were processed with flat, eliptical basketry sifters. (Ray 1942:136, 137, 139, 161)

Bark baskets were used by the Wenatchi to carry water. Spoons with rounded bowls were fashioned of mountain goat (not bighorn sheep) horn and others, with a short handle, were made of maple or alder. Spatulas of willow wood and clamshell spoons with wooden handles were used as eating utensils. Woven basketry ladles, paddle-shaped food stirrers of wood or an animal rib, basketry dishes and dishes of cedar or alder, and folded cedar-bark bowls also served as cooking and eating implements. Meals were served on mats spread on the ground. Cedar bark was used as napkins. (Ray 1942:140-142, 176)

Food Ceremonialism

Consistent with the degree to which vagaries of the weather and more subtle factors affected the availability of game and the abundance of fish and plant foods, the Wenatchi possessed a body of ceremonials designed to soften these influences or even turn them to their advantage.

Rituals were held for the first berries and roots to be harvested during the growing season. Similar rites were carried out for deer, although at what times and under what conditions are not stated. (Ray 1942:133)

Wenatchi ceremonials for plant products are described by Ray (1942:133) as follows, if I understand his synoptic trait list entries. The rite for a particular plant was initiated by the ritual leaders, two or three in number, collecting the edible plant parts when they first appeared in their proper

stage of development. These specially gathered materials were prepared and eaten in a feast, the shamans eating first. Before the celebration of this ritual each season, these plant parts were strictly tabued as food (Ray 1942:133-134).

In addition to these seasonal rites, special ceremonial recognition was given to the first animal killed by a boy and the first fish caught by him. Similarly with the first roots gathered by a girl. The ritual was a simple one, consisting of a feast held in the child's home. The food obtained by the child was not eaten by the child but only by older people. (Ray 1942:134)

Technology

A number of general manufacturing techniques not associated among the Wenatchi with a single class of objects and also several multipurpose tools and utensils can best be described in this general technology section.

Wood working was accomplished among the Wenatchi with the aid of a number of comparatively specialized tools. Straight wedges, of mountain goat horn with a unilateral bevel or of cherrywood, were used in splitting wood. Both straight chisels and curved ones of horn were in use. Spool-shaped mauls, one-piece elk antler hammers, and elbow adzes consisting of a stone blade attached to a handle fashioned of a natural fork of a tree were other common Wenatchi tools. All-purpose knives of obsidian and carving knives of wood or stone were also among the implements in the Wenatchi kit (Ray 1942:145-147).

Mortars were of wood and were oblong in shape, running either parallel with or across the grain. Stone mortars are reported to have been unknown. On the other hand, pestles, tapered in shape, were of stone, wooden devices to serve this purpose not having been employed by the Wenatchi. (Ray 1942:142-143)

In Wenatchi country, matting was twined with tules as the stiff element. It was also fabricated by sewing rushes together into a single layer surface and providing it with a "willow twined edge." The sewing was accomplished with a curved, 18-inch, hardwood needle with an eye in the distal end. Mats were also woven in a checkerboard pattern. (Ray 1942:160, 163) Matting was fashioned by the Chelan from tules and cattails (Ray 1974a:421).

Cordage was made by the Wenatchi of willow, Indian hemp, animal hair, and sinew. The fibers were first scraped with a bone tool and drawn through a split stick to remove the excess and unwanted material. They were then rolled into cord by the women, using their thighs as the stationary surface. Indian hemp was also braided into cordage. (Ray 1942:161-163)

Coiled, twined, and twilled baskets were woven by the Wenatchi, the first of these types being the most extensively used. Coiled baskets were made on a bundle foundation and were ornamented with imbrication with buffalo grass, bear grass, cedar bark, or cherry bark. The design elements applied to the exterior surface of the basket in the imbrication process were colored

with dyes obtained from alder and Oregon grape roots and by placing the elements in mud (Ray 1942:159-160).

Twined baskets, constructed of Indian hemp, included an openwork type and a flexible, round bottom variety. Other twined baskets fashioned of willow strands or rushes were used by the Wenatchi to store articles (and also food?). Details of the twilled baskets are unreported. Cedar split baskets and baskets of rushes were woven in checkerboard patterns. (Ray 1942:160, 161) Among the Chelan, baskets were made of tules and cattails (Ray 1974a:421). Surely other materials were used as well, but these are not mentioned in the casual references in the fragmentary ethnographic literature.

Wenatchi fire drills were of a single piece of wood and were fitted into a hearth consisting of a piece of cottonwood, pine root, or willow root. Fire was also kindled by percussion with a piece of flint. Tongs were made of two pieces of wood, perhaps bound together at the handle end (Ray 1942:143-144).

Weapons

Weapons among the Wenatchi consisted of bows and arrows and of clubs. Spears, daggers, and shields and armor are reported to have been unknown. (Ray 1942:148-154)

Three types of bows were in use: the self bow (the wooden bow alone), the sinew-backed bow (with sinew glued to its back to increase its strength), and the compound bow. The first two types were made of syringa wood taken from the protected side of the tree. They were about 4 feet long, were narrow and eliptical in cross section, and had recurved ends. The grip, sometimes constricted, was wrapped with buckskin. They were provided with a string shock absorber. The compound bow was constructed by splicing together pieces of bighorn sheep horn; concerning this bow variety little is known. The Wenatchi bowstring was of two-ply sinew (Ray 1942:148-149).

Among the Wenatchi, the wooden arrow shaft was straightened with hands and teeth and perhaps sometimes with a perforated wooden straightener used as a wrench. It was polished with sand or with a sandstone abrader, and customarily painted or charred spirally. Its butt end was notched to receive the bow string. The shaft was fletched with three half-feathers from an eagle, placed with the back of each quill against the arrow wood, and fixed in place with a wrapping of pitched sinew. The feathers were trimmed, evenly for short arrows and longer at the butt end for longer shafts. The point varied in material and form depending on the use to which the arrow was to be put. That of the basic hunting arrow was of flint or obsidian; bone and shell heads were unknown. Untipped but sharpened shafts were used for birds and rabbits. Arrows with a blunt or occasionally knobbed head also served as bird arrows. Three-headed arrows were fishing devices. Compound arrows, constructed of two pieces, perhaps of wood and stiff grass though this is not clear, were used in shooting birds and rabbits. (Ray 1942:149-151)

Poison is reported to have been applied to the point for grizzly bears alone (Ray 1942:151). Whether this substance, whatever its nature, was in fact physiologically active or merely magically effective may, in my view, be questioned.

In shooting, the bow was held diagonally by the Wenatchi and drawn with the "primary release" (Ray 1942:149, 151): i.e., the string was pinched between thumb and forefinger, the remaining fingers held free of the string.

The quiver, carried on the back not at the side, was fashioned of an uncut raccoon, coyote, or otter hide or of a cut and sewed bear skin (Ray 1942:151-152).

Wenatchi clubs, their only other weapon, were of stone, apparently unshaped, or of hemlock wood with a knobbed head (Ray 1942:152).

Clothing

The dressing of skins among the Wenatchi was an important women's task. When a hide was to be prepared without the hair, it was first soaked in a pool to loosen the hair and then, placed over a slanting log, was scraped to remove the dark outer layer of skin and the hair. The tool used in this operation was a deer leg bone instrument or a stone scraper fashioned of a piece of schist. The skin was cured with animal brains. Then, stretched over a frame if it were large, it was rubbed with a hafted stone instrument to stretch it. Finally it was hung from a pole over a small fire, its edges weighted down with small stones, and smoked to render it waterproof. Skins were colored with the aid of pulverized roots. Bear, coyote, and wolf skins were tanned by the Wenatchi with their hair left intact (Ray 1942:124-126).

Wenatchi men wore a breechclout and shirt, leggings, a headband and cap, and mittens, in part according to the season.

The breechclout, a year-round item of clothing, was of buckskin or of skin with the fur left intact. The shirt was fashioned of two deer skins, one for the front and one for the back, tied at the sides, and cut so as to provide short sleeves. Leggings, of thigh length, were worn with the fur outside and only in winter. The fur headband is not described; in some manner, however, it symbolized the man's guardian spirit. Coyote or badger caps and caps made of eagle or duck skins were part of the male garb. Mittens, fashioned with the thumb separate from the rest of the hand, were constructed so the fur was worn inside. (Ray 1942:164-168)

Women among the Wenatchi wore a skirt and dress, leggings, and a basketry hat. The skirt, a one-piece garment, was of shredded bark or sagebrush fiber. The dress, a two-buckskin gown as with the men's shirt, had short, unsewed sleeves and was adorned with applique ornamentation. Leggings of buckskin were either of half-knee length or of knee length. Basket hats with a chin strap were fabricated by the wrapped twining technique. (Ray 1942:164-167)

Some items of Wenatchi clothing were worn by both sexes. This was the case with the cape, robe, and moccasins. The cape was of unsquared fur,

fastened over the shoulder, or was a square garment woven of shredded bark or occasionally of rushes, fastened around the neck and over the shoulders. The robe consisted of raccoon skins sewed together, of rabbit skins woven together by hand, or of mountain goat wool woven on the fixed loom.

In regard to robes, we have two specific Chelan references. First, the Chelan, most particularly among the Middle Columbia Salish, wore blankets of mountain goat wool. Their special use of this garment is explained by the fact that the tribe "lived near the habitat of the goat." And second, "Marmot robes, woven goat's-wool robes, and woven rabbit-skin robes, were much used by the . . . Chelan" as well as by the Wenatchi. (Teit 1928:113, 116)

The moccasins, worn daily throughout the year, were of one piece with a side seam, fashioned of tanned deer or sometimes bison skin or made of bison skin with the hair left on. They were fitted to the foot with a front drawstring. (Ray 1942:167-168)

Body Care and Ornamentation

Men plucked the hair of the forehead to raise and square-off the hairline. Although sometimes allowing the hair to fall loosely, men generally plaited it into three braids, one in back and one on each side. Women wore only the two side plaits, tying the lower ends with a thong. Both sexes spread bear oil over the hair and, according to Ray, plastered it with white clay, although I would be surprised if this was a daily treatment. The hair was dressed with a hardwood comb. The eyebrows were also plucked to improve their appearance (Ray 1942:169-170).

The sweatbath, described elsewhere, was considered among the Wenatchi as a means for caring for the body properly (Ray 1942:170).

Among the cosmetics in use among the Wenatchi was tallow obtained from deer, mountain goat, and bear. This substance was, in fact, not only employed in this way, but also as a protective covering for the face and body. Whether marrow was likewise applied as a cosmetic is uncertain, for Ray's data are contradictory. At one point he unambiguously states that marrow was extracted by the Wenatchi from animal bones and used as a cosmetic and hair oil (Ray 1942:136) and at another place in this same culture element survey he (Ray 1942:172) indicates that "marrow (buffalo, deer)" was not employed as a cosmetic by the Wenatchi.

Intentional flattening of the forehead was not a Wenatchi practice, according to Ray (1942:171), nor was the nasal septum pierced. On the first of these points, I believe Ray to be correct: the Wenatchi were just to the north of the uprivermost Plateau groups of the Middle Columbia that practiced head deformation--a lower Columbia Valley trait--in protohistoric times and even then to a most minor degree. In the case of the septum perforation, on the other hand, the memory of Ray's Wenatchi informants seems faulty. When on July 7, 1811, David Thompson (1914:54), the first Euroamerican known to have traveled through the Middle Columbia area, stopped to smoke with the Indians at Rock Island, he reported in his diary entry of that day that "many

of these people, like the others, have shells in their noses." For whatever reason, he had not encountered native groups in the Chelan and Wenatchi sectors (Smith 1983), but he had just visited both Sanpoil-Nespelem and Methow Indians on the Columbia upriver (Thompson 1914:44-52). Evidently he was referring to these groups when he wrote "like the others." If these people both above and below the Chelan and Wenatchi wore nasal septum ornaments, it is reasonable to assume that they were likewise a custom among the Chelan and Wenatchi. Apparently this form of adornment lost favor very quickly--not only in the Wenatchi area but certainly among the Nez Perce (Smith 1985) and Kalispel (Smith 1936-1938)--after the beginning of the nineteenth century and the appearance of the first Whites in the region.

The ear lobe among the Wenatchi was pierced to receive decorative shell pendants. Ornaments also included necklaces and bracelets. The former were of bone beads and just possibly of dentalia and of claws or animal teeth; others of trade beads were also in fashion. Bracelets, worn by women around their wrist, consisted of strings of shells, bend rib bones, and trade beads. (Ray 1942:171-173)

Facial painting was a Wenatchi form of decoration (Ray 1942:172).

The Settlement

In this section are described the residential and associated structures of the Wenatchi and of the Chelan where data are available, the traditional villages and camps of the Chelan in terms of their location and other details, and the structural components of the customary settlement.

Dwellings and Associated Structures

Wenatchi dwelling types and their furnishings and the ancillary sweat lodge are detailed in the following pages, with notes relating specifically to the Chelan where these exist. Unfortunately, information on other structural forms--e.g., food drying racks, caches, menstrual lodges, and ceremonial structures--that must have stood with the living units in the typical Wenatchi (and Chelan) community is lacking.

Dwellings

The Wenatchi long, winter dwelling, set in a pit about 1 foot deep, was constructed with parallel sides and rounded ends. It varied from about 18 to as much as 80 feet in length and from 14 to 20 feet in width. In cross section it was shaped like an inverted V, the two sides sloping straight from the ridge to the ground. The frame consisted of pairs of inclined pole-rafters set into the ground, the tops of each pair crossed and bound to the two ridge poles that ran the length of the structure. Down the sides the rafter pairs were also united by several longitudinal poles, to which they were lashed with willow cordage. This frame was covered with overlapping courses of mats of sewn tules, each mat tied to the poles. Against the outside surface of the lowest mat course, grass was piled to a height of about 3 feet and then covered with earth. The space between the two ridge

poles was left open along the entire length of the structure. Directly under it ran a center aisle of bare earth, on each side of which were the living areas with floors covered with rush mats. Along this middle walkway strip were placed the fires, each in a shallow pit; each fire served two families, one on either side of the dwelling. Storage for food and various articles was provided in the rounded ends of the structure; for personal belongings between the walls and rafters; and for firewood alone on the floor. The interior space was entirely without partitions. Entrance to the house was through a door at one end or one at each end, or occasionally one on one side. The bottom of this entrance was raised about 6 inches above the ground; the opening was closed with a hanging tule mat. Immediately inside this doorway was a short aisle, with walls of some sort, leading to an interior door which opened into the dwelling area proper and the end of the center, unmatted walkway. The end storage areas already noted were on the two sides of the end aisle partitions. This structure among the Wenatchi was exclusively a winter shelter: with the end of the cold season, it was generally dismantled and the poles and tule mats were stored until late in the following autumn. (Ray 1942:174-176)

In addition to the long mat lodge, the Wenatchi lived in semisubterranean lodges during the winter season. This dwelling, reported to have been an "old-type" structure, was constructed over a pit about 4 feet deep and 15 to 20 feet in diameter. The roof, conical or pyramidal in form, was framed with radiating poles with a pitch of 20 degrees or more. Over these poles was spread brush and mats and sometimes planks and over these materials a layer of earth. The dwelling entrance was at the side of the roof, sometimes at ground level but generally by way of a tunnel provided with steps. The floor was covered with grass and mats. (Ray 1942:177-178)

This semisubterranean structure was sometimes erected over a square pit, in which case the roof assumed a square shape at the ground level. Otherwise its construction was identical to that of the circular type, including the tunnel entrance. (Ray 1942:177-178)

Chelan use of these winter dwellings is substantially confirmed by Teit (1928:114):

> The underground house or semi-underground earth-covered lodge was used by nearly all the Columbia Salish [presumably including the Chelan] in the winter-time, because it was considered warm and very economical of firewood. It seems that they were constructed in the same way as among the Thompson, only the great majority had the entrance on one side, generally the south or sunny side, or the side towards the river or the water. Ascent and descent were by a short ladder or notched log. A few had entrance only through the smoke-hole, and a long ladder like the common kind among the Thompson.

It seems that these were used chiefly in the north among the Wenatchi. This final statement is ambiguous, inasmuch as Teit employs "Wenatchi" both for the Methow, Chelan, Entiat, and Wenatchi as a group and for the Wenatchi proper. Because of his locational qualifier--"in the north"--I assume that in this instance the term is used in the broader sense and that the statement applies to--particularly to--the Chelan and Methow.

All but one of the traditional Chelan winter villages in the Lake Chelan area listed by Ray (see below) are specifically described as having included semisubterranean dwellings. For the three Chelan villages along the Columbia explicitly designated as winter communities no data regarding house form are recorded; this is, however, probably nothing more than a field inquiry oversight, the bulk of the information on these Columbia River settlements having been collected in the 1930s before the Lake Chelan data were acquired.

As a mobile shelter, the Wenatchi made use of the conical mat lodge, about 14 feet in diameter (Ray 1942:179).

A flat-topped structure with a roof of willow matting served as a temporary shelter (Ray 1942:179). Presumably it was erected at warm weather fishing sites, if we can extrapolate from the pattern among the Sanpoil-Nespelem (Ray 1932:34-35), Southern Okanogan (Post and Commons in Spier 1938:41), and other nearby groups.

Among the Chelan cattails and tules saw service in "house-building" (Ray 1974a:421). Presumably this was at least in the mats used as structure covers and in various ways as interior furnishings, but these details are not reported.

Concerning the objects within the Wenatchi dwelling to take care of daily chores and to make life comfortable, we have only the following scraps of information.

Drying racks were hung from the house framework (Ray 1942:180), but whether to dry food, wet objects like clothing, or something still different is not reported.

Pillows were bags, sometimes of buckskin, filled with grass or grouse feathers. Blankets were made of mountain goat wool, rolled into cordage on the thigh, and woven with a spindle on a simple fixed loom. Other blankets were fashioned of strips of rabbit skin, but the fabrication process is not described. (Ray 1942:163-164, 179)

Sweat Lodge

The Wenatchi sweat lodge was of the "Plains type." A frame of willow branches, hemispherical in shape, was constructed over a circular pit about 1 foot deep. This frame was covered with mats or grass and then completely with earth. A square entrance was provided and closed with a hanging mat. The floor was grass-covered except for a round pit to receive the hot rocks, when the lodge was in use, at the right side of the entrance or in the center in large lodges. Outside was the fire pit in which the rocks were heated.

The lodge was occupied by one person at a time, Ray reports. Still, it seems that this cannot have been invariably true, for, as stated above, there were larger lodges among the Wenatchi--those with the fire rock pit in their center--which must surely have been used by more than one person at the same time. In use, water was thrown on the rocks to generate the hot steam. While sweating, a person prayed to the sweat lodge, addressing it has "grandfather" and regarding it sometimes as a deity, and sang his sweat house

songs. One could sweat at any time during the day, but invariably visited the lodge before hunting or gambling. A period of sweating was always followed by a cold plunge, for which reason the lodge was always located near fresh water.

Women never used the men's sweat lodges, but had their own structures built identically to those of the men.

All sweating structures were owned by the entire camp or village and were communally used for curing and purification, as well as a means of maintaining body cleanliness. (Ray 1942:170, 180-182)

Mud baths of some sort were also used by the Wenatchi (Ray 1942:182).

Parturition and Menstrual Shelters

In both summer and winter, Wenatchi women gave birth in structures erected for this specific purpose (Ray 1942:193). Though not described in the ethnographic literature, they were presumably unsubstantial shelters of some sort, located in a semi-secluded area close to the village or camp.

A special hut was also constructed away from the community for a girl at the time of her first menses. Menstrual structures were also sometimes used during subsequent periods in preference to seclusion within the family dwelling. (Ray 1942:202, 206)

Residential and Task Sites

A roster of traditional Chelan villages and camps was secured from native informants by Ray (1974a:420-423), apparently in the late 1940s. This supplements and greatly extends the brief list obtained by him in the early 1930s (Ray 1936:141-142). In the mid-1800s George Gibbs (1860) compiled a limited settlement inventory, unfortunately not available to me. From this register, however, Ray extracts a few ethnographic data to add to his own field settlement records.

To my knowledge, no integrated description of the various biogeoclimatic features considered desirable by the Chelan in selecting their winter village and summer camp sites--as opposed to their short occupancy task-oriented sites--is to be found in the ethnographic literature. Nevertheless, from the rather casual and certainly incomplete comments of Ray's informants concerning the merits and disadvantages of certain of the residential localities listed in his roster, it is possible to arrive at some of these features. How they would have been ranked by the Chelan in terms of their individual importance, is, unfortunately, uncertain.

(a) Criteria for winter villages:

- A level surface.
- A south-facing exposure for warmth.

- Protection from cold winds that blew up the lake in winter.
- An open point or headland. (This appears to be in some conflict with the preceding.)
- A nearby beach that collected large amounts of driftwood which "originated in the heavily wooded areas up the lake." From these sources came firewood without having to cut it up and carry it far.
- Grazing areas for horses.
- Early snow melting in the spring, allowing favorable spring hunting to replenish food stores depleted during the winter.

(b) Criteria for summer camps:

- Nearby hunting areas for large game and small animals.
- Fishing sites in the vicinity.
- Productive root grounds, berry patches, and sunflower areas nearby.
- Nearby sources of various technological materials: e.g., cattails and tules for baskets, matting, etc.
- Large open meadows where horses could graze and athletic contests could take place.

In the list reproduced below, Chelan villages and camps on the Columbia River are excluded as probably too distant from the Park Complex and too oriented toward the river and its vicinity to be of material relevance. However, the 13 settlements known to Ray to have been situated on the Lake Chelan shores are all included and their data summarized in the list below. It is reasonable to suggest that people from all of these made use to a greater or lesser extent of the subsistence and other resources of the upper end of the lake and its bordering mountains, the area within the limits of Lake Chelan National Recreation Area. In fact, even the most distant of these villages--that at the foot of the lake (#1 below)--was no more than about 46 lake miles from where the Park line now crosses the lake.

Ray (1974a:419) refers to a map on which he locates these settlement sites in his Indian Claims Commission document; unfortunately this map was not printed in 1974 with his descriptive report. Further, only one Lake Chelan village is located on his earlier native villages and groupings map (Ray 1936:119 Figure 5); this is the first village in the list below. I have attempted, however, to place Ray's camps and villages as accurately as possible from his locational data (Figure 4-3).

It should be noted that the locations provided by Ray in terms of highways, town sites, and other cultural features of Western life are as of the 1950s, when Ray conducted his village field research among the Chelan. And further, that by "summer settlement" or "summer camp" in the following camp and village series I mean a population group that occupied a particular

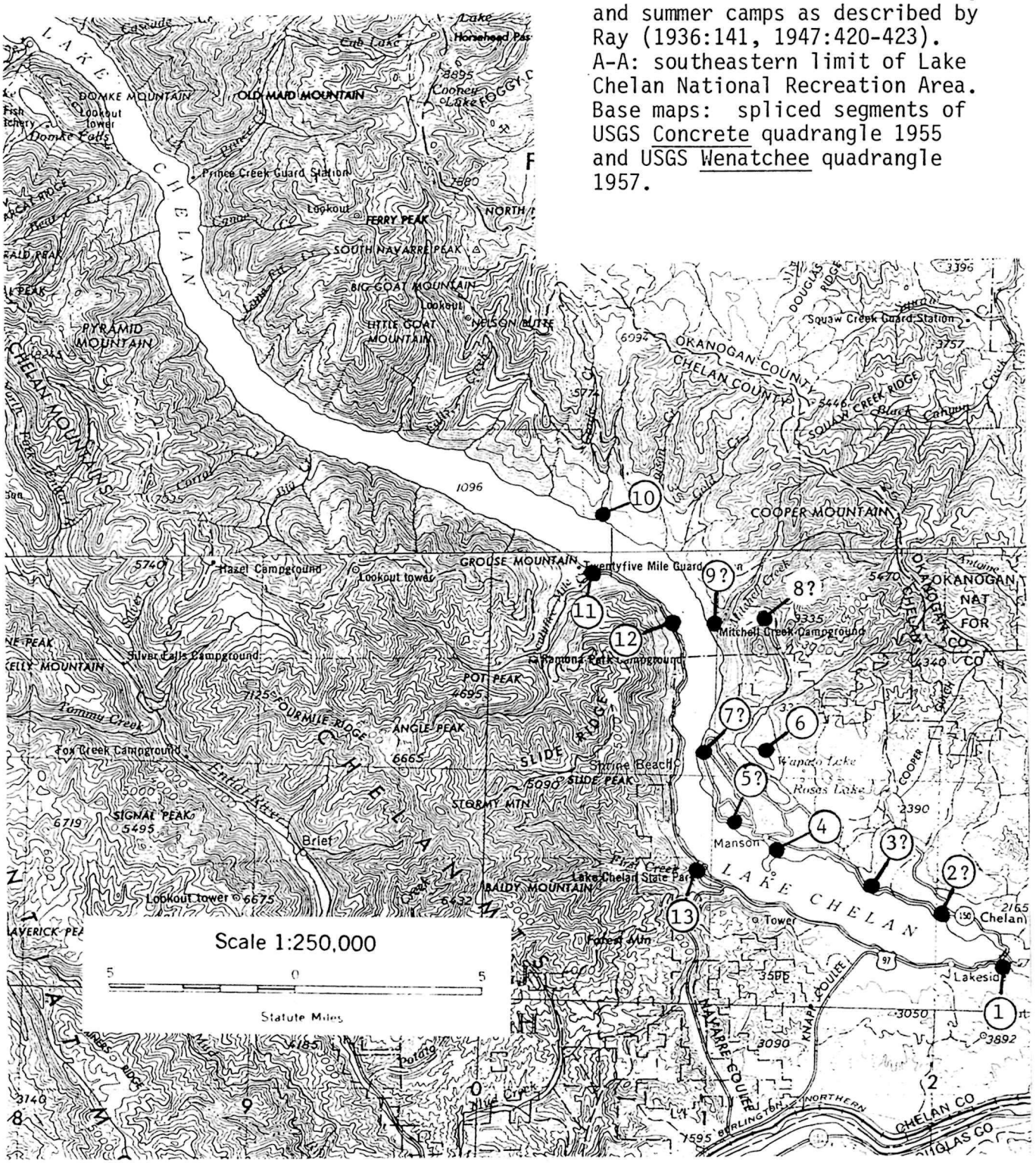


Figure 4-3. Approximate location of traditional Chelan winter villages and summer camps as described by Ray (1936:141, 1947:420-423). A-A: southeastern limit of Lake Chelan National Recreation Area. Base maps: spliced segments of USGS Concrete quadrangle 1955 and USGS Wenatchee quadrangle 1957.

site during the summer or, by extension, some other part or even all of the warmer seasons.

The 13 ethnographically reported Lake Chelan communities are the following. Further details regarding some of them can be found in Ray's (1936:141-142; 1974a:420-423) roster.

1. yɛnmusi'tsà

   (a) At lower end of Lake Chelan. Shown on Ray's (1936:119 Figure 5) site map to have been located on the lake shore just south of the outlet through Chelan River.

   (b) Winter village: one of largest of the Chelan with many semisubterranean dwellings. Population c. 100 persons.

   (c) Summer camp: larger population than in winter; a popular sports area because of large and open meadows.

   (d) Horses were pastured in vicinity. Some fish--but no salmon--and smaller game were taken here. An important mountain goat hunting base according to Ray's (1936:141) early data, a fact, however, not repeated in his 1974 summary.

2. ?

   (a) On open point extending out into lake, 3/10 mile NW of junction of highway 10C, on N side of Lake Chelan, and Gold Creek road.

   (b) Small winter village consisting of a few semisubterranean dwellings.

3. stcho'pas (Gibbs' name)

   (a) On open headland on N side of Lake Chelan, 7/10 mile NW of junction of highway 10C and Gold Creek road. Gibbs appears to list this same village.

   (b) Large winter village with many semisubterranean dwellings, the remains of which were largely under water in late 1940s owing to elevation of lake level in 1928. Population c. 100 persons.

   (c) Large summer camp. Ray implies population about same as in winter.

4. ?

   (a) On N side of Lake Chelan at lower end of town of Manson.

   (b) Small winter village of three or four semisubterranean dwellings.

5. qɛ'sɛ'm

   (a) On neck of peninsula known as Wapato Point, adjacent to town of Manson.

(b) Winter village of dozens of underground dwellings, some quite large. Population was considerable. Well protected from cold winds which blew up the lake in winter and well provided with beach driftwood for firewood.

(c) Summer camp.

(d) Nearby grazing areas for horses, small root grounds, and a hunting area for small game and some deer and bear.

6. naqwa'st, "deep lake"

(a) At Wapato Lake on NE side of Lake Chelan.

(c) Summer settlement of c. 50 persons.

(d) Tules and cattails profuse, gathered for basketry, matting, and dwelling-building. Muskrats were trapped and other small game taken.

7. pi`pi'k̓u'lu

(a) On Willow Point on N side of lake.

(b) Very large winter village with many semisubterranean dwellings. Population probably reached c. 500 persons.

(c) Very large summer settlement.

(d) Advantages similar to those of #5 above. Also sunflowers and berries grew profusely nearby.

8. qatq̓a't

(a) At Dry Lakes NW of Willow Point.

(c) Small summer settlement averaging c. 40 people.

9. qwatcɑ'n

(a) At Green's Landing on N side of Lake Chelan.

(b) Winter village with semisubterranean dwellings. Population c. 60 to 80 persons.

(c) Summer settlement.

10. loqtcɩ'n

(a) Mouth of Grade Creek, N side of Lake Chelan.

(c) Several dwellings occupied through spring, summer, and autumn; average population c. 40-60 persons. A popular location for spring

hunting since the snow melted early here and driftwood was abundant.

(d) The small area of level land occupied by the settlement was all underwater in the later 1940s.

11. squatnaɬi'ɬu (=Gibbs' "skwutnatliilwhu")

(a) At mouth of Twentyfive Mile Creek, S side of Lake Chelan, the largest stream flowing into lower half of lake on either side. Gibbs mistakenly locates this camp on N side of lake.

(c) Summer settlement with varying population. Base for excellent hunting in adjacent mountains.

12. loq̓*ɛ'nq (* indicates a handwritten phonetic character than I cannot read)

(a) Below a granite slide on S side of Lake Chelan, opposite Green's Landing.

(c) Small summer hunting and gathering camp.

13. ?

(a) At mouth of First Creek on Indian Point, a peninsula occupied by a state park.

(b) Only winter village on S side of Lake Chelan, this north slope being generally too cold in winter. Population c. 50 persons.

(c) Summer settlement. Population c. 50 people.

To the above settlement roster may be appended a few notes of particular interest:

- In 1880 the military established its Camp Chelan on the lake shore "just where the lake narrows into the creek [Chelan River], on a beautiful bunch-grass-covered plateau on the north bank." Though dwellings, a sawmill, and other facilities were constructed there, the post was abandoned prior to October of 1881, an action taken primarily because of the "terrible road getting down to the [Columbia] river from the Great Plain on the east, . . ; the crossing of the [Columbia] river where there was quite a swift current; and the ascent of the hill to the lake. (Symons 1882:40; see also Byrd in Durham 1972:1 fn. 4, 3, 5 fn. 10, 17). In 1899 the Chelan townsite was laid out where the Camp had been located (Byrd in Durham 1972:1 fn. 4). It would be of interest to discover why the Chelan chose the <u>south</u> side of the outlet for their winter quarters (village #1 above), assuming that Ray has it correctly plotted, not the north side selected by the first Whites for their settlements.

- When, prior to 1886, the Indians were given an opportunity to secure allotments of one section each on the lake, thirteen families--called Wapato Indians in the early literature from Joe (or Jack) Wapato, their

headman--they chose to settle in the area described by Durham (1972:9) thus:

> Ten or 12 miles from its mouth the lake boldly bends to the north, and laying in the elbow thus encircled upon the north shore of the lake, and extending from a point nearly opposite Chelan to the shore of the lake after it bends northward, lies the extensive lands of the Wapato Indians, . . . [T]hey have managed to acquire the cream of the lands upon the north shore of the lake."

Evidently this area included the sites of the aboriginal villages #2-5 and perhaps #6 in the preceding listing. Durham's envious characterization of the qualities of this piece of land tells us something about the Chelan selection of village locations. So also does the fact that, if village #1 (just outside the area described by Durham) and camp #6 are included in the tabulation, then about one-half of the ethnographically reported, aboriginal Chelan settlements on the lake were located on this small segment of the lake borders and approximately one-half of the Chelan population at the lake occupied these communities (Smith 1983:320).

These allotment Indians appear to have been of mixed Chelan and Entiat affiliation. At least Byrd (in Durham 1972:9 fn. 19, 10, 11 fns. 20 and 21) describes these thirteen families as a "group of Okanogan Indians . . . [and] a more or less separate settled faming branch of the Chelan-Entiat Indians." And he adds that Joe Wapato, the chief of this "Chelan (Entiat) branch of the Okanogan Indians," was born "in the Entiat Valley" about 1826.

- Some of the properties of the area at the entrance of First Creek that made it suitable for Chelan village and camp location #13 are suggested by the fact that on the low bench by the creek mouth J. W. Stevenson, from Ohio, settled about 1888. By 1892 he had a thriving farm of 160 acres, irrigated from the creek, in fine vegetables and fruit trees. (Brett in Stone 1983:62)

From these settlement data it is apparent that, so far as the informants of Ray (and evidently of Gibbs also) were concerned, no Chelan winter villages or even summer camps of any extended use were located on the shores of Lake Chelan above the winter villages on Grade Creek on the north side (village #10 above) and on Twentyfive Mile Creek on the south side (village #11 above). Thus the nearest ethnographically established communities to the southern limits of the Lake Chelan National Recreation Area were about 28 miles down the lake. From this point downward to the lake foot, especially along the north shore, winter and summer settlements clustered rather thickly.

Settlement population estimates are, of course, nothing more than memory approximations, doubtless more important for suggesting the relative size of communities than their actual average occupant numbers. But working with these rough figures, we find that the population of the winter villages totals about 1,185 persons. Thus in the third quarter of the nineteenth century a substantial number of Chelan considered the Lake Chelan region

their homeland, perhaps five times as many as wintered along the Columbia River (Smith 1983:319-320).

In contrast to the winter population of approximately 1,185 people, the "summer" population around the lake shores during the 1950 period computes, from Ray's (1974a:420-423) individual community estimates, to about 990 persons. Assuming that a difference of this magnitude is fundamentally real, what happened to the Lake Chelan village folk when the snow left the ground and the country opened up? As noted in the subsistence section above, they surely scattered into the hills around the lake--presumably to some extent even its upper regions--to hunt game and secure early roots and other seasonal vegetable resources. In summer, some clearly occupied the summer camps reported in the above roster. But others (like some from the village of yɛnmusi'tsà [#1 above] to which Ray [1936:141] makes specific reference) went down to the Columbia to fish for salmon; yet not many could have moved in this direction--unless there was largely countervailing movement of river folk up to the lake--for the summer population of the Chelan settlements on the Columbia seems to have been only about 230 persons, about five more than in the winter villages. Still others presumably continued in small groups to utilize the stream and mountain subsistence resources of the lake slopes away from the established summer communities, not excluding the resources far up the lake. Fall evidently saw the same kind of population dispersion that characterized the spring season, then to exploit the food sources available at that period.

In short, though the evidence is largely circumstantial, resting on relevant comparative ethnographic data for better-known nearby Plateau tribes, it appears that, at least during the last 150 years, the Park region was unoccupied by Chelan in winter but surely was utilized to some unknown extent as subsistence grounds during the warmer seasons. Quite possibly, if appropriate sites exist along the lake shores above Grade and Twentyfive Mile Creeks, winter villages were maintained at some of these localities in earlier times and an even greater exploitation of the food and other resources of the upper lake flanks occurred. For it can hardly be doubted that the Chelan population in, say, 1850 was smaller by some significant measure than in the precontact and perhaps even early postcontact times. The terrible epidemics of smallpox and other Western diseases that are widely reported in the early historic documents of the Northwest (beginning with the journals of Lewis and Clark [e.g., Thwaites 1969 4:241]) and in the ethnographic studies of the Plateau and contiguous regions (see, e.g., Teit 1928:97-98; Ray 1932:21-22; Walters in Spier 1938:73-74) attest to their devastating effects on the native groups of the area.

Whatever the case for winter villages, there were certainly a number of localities along the lake, even at and near the upper end where the rocky cliffs generally rise steeply from the lake side, where temporary, warmer season camps could be made. About 1890 Isaac Tillinghast (in Stone 1983:50-51, 54-57) reported that outdoorsmen were then accustomed to take the steamer from the foot of Lake Chelan to the lake head, with their boats towed behind, and then rowed "their way back, about ten miles per day, camping along the shore, usually at the mouth of some one of the numerous creeks which are frequently found coming down from the mountains." He himself encamped for several days at the mouth of Fish Creek, living on deer and grouse killed in the area and on large trout taken in the lake. This must

have been in the immediate vicinity of where J. R. Moore settled in 1889 or 1890 on what came to be known as Moore's Point (Byrd in Durham 1972:13, 18 fn. 34; see community of "Moore" on USGS Concrete quadrangle 1955). In the late 1890s Lyman (1899:198) stated that Railroad Creek was then one of the finest locations on the lake for hunting, fishing, and camping. If in his day Whites pitched camp in the immediate creek vicinity and found game and fish resources nearby, it can be considered a certainty that the traditional Chelan had done likewise.

Village and Camp Arrangement

Little is known concerning the typical physical arrangement of the Wenatchi village and camp and the spatial positioning of their structural components. The ethnographic data reveal only that the long, mat-covered winter dwellings were constructed in a line with one end of each house facing the prevailing wind. And that special birthing and menstrual shelters were positioned in secluded areas outside but near the villages and camps. (Ray 1942:176, 193, 202, 206).

Relevant information is wholly lacking for the Chelan.

Domestic and Tamed Animals

Domestic animals were limited among the Wenatchi to native dogs, which were numerous. They are said to have been large and to have had heavy hair. Beyond the fact that they were named and were sometimes used in hunting ground hogs, we know little about how they were cared for and used. They were not eaten, as, in fact, they were not so far as is known among any tribes of the American Columbian Plateau. (Ray 1942:123-124)

Horses reached the Wenatchi about the middle of the eighteenth century or possibly a trifle earlier (Haines 1938:430). Two localities in Chelan territory are reported, on informant testimony, as having been horse grazing areas: one at the large village near the outlet of Lake Chelan and the other at Wapato Point on the north shore of the lake near the town of Manson (villages #1 and #5 in my Chelan village/camp listing; see above) (Ray 1974a:421). The first of Ray's two localities is evidently that described by Symons (1882:40): ". . . just where the lake [Chelan] narrows into the creek [Chelan River] . . . [is] a beautiful bunch-grass-covered plateau on the north bank, stretching back about a mile to the rocky and timbered hills." It was on this surface, as reported above, that the military constructed Camp Chelan in 1880.

Certain of the wild animals of the Wenatchi area were sometimes kept as pets. Specifically reported are bears while young, raccoons, and birds, these last kept inside the dwelling. (Ray 1942:124)

Travel, Transportation, and Intertribal Relations

In fully traditional times goods in Wenatchi territory were transported on foot or with the aid of canoes.

Objects were carried in squares of deerskin or matting, in conical rawhide bags with wooden hoops, and possibly lashed to a snowshoe as a pack frame. When burdens were borne on the back, packstraps were put to use. Some were of buckskin with a fur headpiece and others were twined of small tules or Indian hemp. These straps were worn around the head or the chest depending on the circumstance, and were used by both men and women. (Ray 1942:147-148)

The Wenatchi canoe was a pine or cedar dugout, a watercraft extensively used by the tribe; the bark canoe was not in use. The tree from which the craft was to be fashioned was felled by burning and then hollowed out by burning with hot rocks and chiseling. The shape of the canoe is not described. Within the tribe some men were specialist canoe makers who sold the products of their labors. The canoe was propelled by paddles and poles. Paddles were fashioned of a single piece of cedar and shaped with a long handle with a plain, unenlarged butt and a pointed blade. They were sometimes oiled and occasionally charred. Where circumstances dictated, the canoe was pushed ahead with a small fir pole with a charred point. Canoes were rid of unwanted water with a paddle or with a flat, coiled basket or hafted alder bark bailer. Stones answered the purpose of an anchor. (Ray 1942:154-158)

Dugout canoes were also a Chelan watercraft to judge from what is known of their distribution in the central western Plateau--among the Klikitat, Tenino, Umatilla, Kittitas, Wenatchi, Southern Okanagan, and Sanpoil-Nespelem (Teit 1928:120; Ray 1936:118-119; 1942:154; Post and Commons in Spier 1938:56)--and from the following data fragment.

- In the summer of 1879, Symons (1882:39-40) was paddled up Lake Chelan by the old Chelan chief and his son, who, I gather, were then living at the principal village of the tribe, situated on the Columbia River about one mile upstream from the Chelan River mouth. The trip, which took him up the lake for a distance of about 24 miles, was made in a Chelan dugout canoe.

Evidently canoes were of limited winter use on Lake Chelan--at least in some winters and in some sections of the lake. In a discussion of early dam-building efforts in the area, it is incidentally observed that in January, 1893, "the lake . . . [was] frozen over a foot thick above Wapato Point for six miles for over a month" (Byrd in Durham 1972:2 fn. 6).

Rafts of logs lashed together with willow bindings were used by the Wenatchi on lakes (Ray 1942:156).

Wenatchi snowshoes consisted of a maple frame bent into what is described as a "comet shape." The netting, woven with a loop mesh, was of willow withe, Indian hemp, or deer rawhide. Oval shaped snowshoes were used only by children. Toboggans were employed in winter for hauling loads. (Ray 1942:158-159)

Trails

Markings of some sort were placed by the Wenatchi along trails (Ray 1942:190), presumably to identify the route, although this is not explicitly stated. Possibly some signs were intended to convey to following groups immediately relevant, specific information: e.g., the direction taken, the presence of friends nearby, the location of meat hung-up closeby for the use of those coming behind, the occurrence of a recent death, or some such news. Such marks were widely used in the Plateau.

Trails between the Chelan country and the territories of their neighbors are on occasion alluded to in the ethnographic and historical literature, but usually only in terms so general that their courses cannot be followed in detail. Barring those that led from the left bank of the Columbia more or less eastward into the Basin area--like that or those to Badger Mountain--four principal trail patterns out of the Chelan homeland can be discerned.

(1) A trail ran from the Chelan River mouth north along the west side of the Columbia to the Methow Valley and south following the Columbia to the Entiat and Wenatchi countries.

- This was the path followed by Alexander Ross (1956:21-31) on horseback in April, 1814, en route from the confluence of the Okanogan to the Kittitas area of the upper Yakima Valley. He returned northward by this same route. (See ethnohistorical section above.)

- In April, 1827, Edward Ermatinger (1912:74), in a Hudson's Bay brigade, passed up the Columbia River (see earlier section). The group's single boat was inadequate to transport the full party, forcing some members to walk along the Columbia riverside. On the fourth, they trekked upstream to the brigade's evening camp "a league" above the Chelan River confluence, finding during the day "a good deal of snow on the hills." The following day these walkers continued up the trail to Fort Okanagan. Assuming the camp of the fourth was on the west side of the Columbia as Ermatinger's Chelan River statement implies, the foot travelers surely proceeded up this right bank trail. In any event, they certainly walked through the entire Chelan country along a river path.

- The northern segment of this trail, from just upstream from the Chelan River entrance, was traveled, also on horseback, by John Work in August, 1828 (see above).

- It was likewise the route taken in late September of 1853 by the McClellan party of the Stevens (1855) railroad survey, when it rode up the Columbia from the Wenatchee country to the Okanogan. This group, however, leaving the riverbank route, ascended what I believe to have been Knapp Coulee to Lake Chelan and then, after following the lake shore for a short distance, passed in a generally easterly or northeasterly direction back to the Columbia Valley.

The most detailed early descriptions of this riverside trail are provided by George McClellan (in Stevens 1855:196) and two of his staff, J. K. Duncan (in Stevens 1855:212-213) and especially J. F. Minter (in Stevens 1855:382-383), when they followed the Columbia northward in 1853, as noted in the preceding paragraph. Coaslescing these three accounts and deriving rough topographic details from the 1881 field sketch map of Symons (1882:map 14) and the USGS Wenatchee (1957) and USGS Ritzville (1853) quadrangles for the trail segments immediately above and below the Chelan River mouth, around which the survey team detoured, one emerges with the following picture.

- Upstream from the Chelan River confluence, the trail led along a level terrace, climbed to a very high, bunch-grass plateau, and then descended by a steep sandy slope to the Columbia bottom, which it followed for about eight miles to the Methow River. Evidently there were no notable trail hindrances on this route.

- The trail to the south was substantially more troublesome. For much of the distance from the Chelan mouth to Knapp Coulee, the maps suggest, it hugged the river with precipitous cliffs on the right. From the mouth of a ravine which I equate with Knapp Coulee, however, the McClellan party provides topographic details, which I summarize in reverse order, since these travelers came up the Columbia. From this coulee to the Entiat River the trial ran along relatively level terraces, at times very close to the water and now and again interrupted by mountain spurs, where the path became very narrow, tortuous and dangerous. One of these spurs was just downstream from the coulee; the other, a particularly threatening elevated mass where the party lost four mules, two killed and two seriously injured, was about three miles above the confluence of the Entiat River. From the Entiat to the Wenatchee, the trail was again generally on a level terrace, broken by occasional rocky spurs, one near the Wenatchee River being especially hazardous.

To how great an extent this north-south riverbank trail was used by the Chelan in prehorse days when heading upriver to visit Methow and Southern Okanogan and when journeying southward to the Entiat and Wenatchi country is unknown: parties may well have gone largely by canoe particularly when heading southward, in preference to undertaking the trip on foot. It may be presumed that at least after the horse was acquired, this land trail saw more extensive use.

Similarly, how often this riverside route was followed in preequine times by groups to the north of the Chelan--again primarily the Methow and Southern Okanagan--when descending the Columbia to the Chelan River and perhaps also the lower Lake Chelan areas or when passing through the Chelan sector to the Entiat and Wenatchi regions downriver is unclear. The same may be said of the Entiat and Wenatchi when heading north on the river bank. For what it is worth, however, we are told that long ago the Middle Columbia Salish had few canoes (Teit 1928:120) and the same for the Southern Okanagan (Post and Commons in Spier 1938:56). Whether this represents a reduction in canoe use following the appearance of the horse or is equally descriptive of the preequine

period is not certain. But if approximately correct, it can only signify that much of what north-south movement occurred along the Columbia was by foot. To the degree that these journeys involved the Chelan territory, this river bank trail must have been the one followed.

(2) At least one and probably more trails led northeasterly from Lake Chelan across the Methow Mountains to the upper and middle Methow Valley.

- One of these old Indian trails was followed--or attempted to be followed--by Alexander Ross (1956:36-42) in August, 1814, when making his futile attempt to discover a route from the Okanogan Valley to Puget Sound. As mentioned above, his path was so winding and difficult that, in spite of his efforts to describe it in detail, it cannot be traced with certainty after leaving the lower Methow River line. Most who have tried to identify his path, it appears, have him ascending the Twisp River, crossing the watershed via Twisp Pass, and so, with great travail, reaching the upper Stehekin region. While his Okanagan guide described the route as that used frequently in the past by Okanagan in traveling to the Skagit country, he was plainly not familiar with its precise course. There is also the suggestion that in recent years it had fallen into disuse and so had already become in Ross' day poorly marked, assisting his guide in going astray.

- In late September and early October, 1853, McClellan (in Stevens 1855:197), Minter (in Stevens 1855:383-384), and others in a party left Fort Okanagan to explore a possible Methow River railroad route, having been informed by the fort personnel that "there was a good foot trail leading up . . . [the Methow] valley and over to the sound." No mention is made of guides, although it appears that he must have had some Indian assistance. According to the McClellan-Minter accounts, the party went over very high hills, first sandy and bunch-grass covered and then pine forested, to the Methow at a point about four miles below the Twisp mouth. It ascended this short section of the Methow and turned up the Twisp for about 11.5 miles to a point where "the stream forked, the north rising a few miles farther on in a high, bare ridge of granitic mountains; the south fork, Nahai-el-ix-on, coming down a narrow and precipitous ravine." Riding up this ravine, the party discovered that the route soon became impassable for animals, forcing it to proceed on foot, an effort that was soon abandoned. "The trail," McClellan remarks, "is said to pass from this ravine, over a very difficult country, to the stream emptying into the head of Lake Chelan, then to cross very steep and lofty mountains at the head of the stream, and finally to reach the Skagitt river on the western slope." In view of this remark, which has the appearance of being guide-derived, it is a shame that I cannot yet identify the "Nahai-el-ix-on."

  For this ravine side stream there seem to be two plausible identifications:

  (a) Minter underestimated his distance of 11.5 miles and his party actually ascended the Twisp some 14 miles to the mouth of War Creek and then proceeded up that stream, as Pierce appears to have 30 years later (see next item). McClellan's statement

that the Nahai-el-ix-on gave access to the river [surely the Stehekin] at the upper end of Lake Chelan and with the mountain pass at its head suggests a lateral creek at least as far up the Twisp as War Creek. That this Nahai-el-ix-on or South Fork was, in fact, War Creek--a possibility occurring to me on the basis of a close reading of McClellan's field record--seems to be accepted by Beckey (1981:280 fn. 25) as an established fact. McClellan appears to have found his cross-montane trail more difficult in its lowest reaches than Pierce later did his War Creek transit. Perhaps during the intervening three decades the route improved to some degree. On the other hand, McClellan was obviously one who went up into the mountains reluctantly, remained there the shortest time possible, avoided snow at every opportunity, and in general magnified the difficulties of his travel (cf. Overmeyer 1941:36 fn. 129, 57, 59, 60).

(b) McClellan misidentified this major forking of the Twisp. Believing himself higher in the Twisp drainage than in fact he was, he broke away from the river at about 11.5 miles at or in the neighborhood of Eagle Creek. If this was the case, he would have found, had he managed to follow his Eagle Creek route over what seems to be relatively gentle higher slopes to an open, 7,000 foot saddle in the Sawtooth Range, that his path did not lead to the Stehekin. Rather it descended the comparatively gradual inclines of the North Fork of Fish Creek to Lake Chelan some 7 miles below its head, in the neighborhood of the community of Moore (USGS Concrete quadrangle 1955). Perhaps there would have been serious problems with such a route beyond McClellan's turning point that are not apparent from my topographic maps (e.g., like a dense forest cover or flinty stones that damage horses' feet), but Pierce's trail was likewise not without its difficulties (see below). At the moment a Fish Creek-Eagle Creek path, to reverse the travel direction and place it in a Chelan perspective, seems like a possible Lake Chelan-Methow Valley trail, although leaving the lake shore somewhat below the Stehekin mouth and hence perhaps a rather uncommon point of departure for Chelan heading northeast to the Methow. If this was in fact McClellan's trail, both the extreme difficulties he experienced in horse travel and the apparent non-Stehekin destination of the route (not McClellan's intended objective) raise questions about the trail knowledge of McClellan's assumed Indian guide.

- In August, 1882, Lt. Henry Pierce (1973:13-18, map; Stone 1983; 12-17) traveled from the Okanogan Valley over the mountains to Lake Chelan. Because he was guided along the latter part of his journey by a Chelan Indian and because he describes his route as an old Indian trail, the path followed by his party is of particular interest.

  As I plot his line of progress from his careful descriptive statements and his fine sketch map and match these data against those of the USGS Concrete (1955) and Okanogan (1954) quadrangles, he ascended the small creek--his Kate Creek but unnamed on the Okanogan quadrangle--that reaches the Okanogan River near Malott. Riding over his Morrow Pass, he reached Downing (Chiliwist) Creek and, following "a well-worn trail westward," crossed the mountains to Baldwin (Benson) Creek. Along a route "free from obstructions, broad, well-defined, and shorter" than

anticipated, he proceeded along the north side of this stream to near its confluence with the Methow River, there cutting off across the hills to the mouth of Backus (Beaver) Creek. Here he was visited by a Chelan woman and three men of the tribe. To take the place of the Okanogan guide who had led him thus far, he engaged the services of one of these Chelan men to point the way to Lake Chelan.

Moving up the Methow to the Twisp, a distance of some 5 miles by his estimate, and then, by "a good trail," up the north side of the latter, he reached a point where the Twisp divided into a North Fork (still the Twisp today) and a West Fork, which I identify with War Creek on the basis of his map and approximate mileage data. Here the western fork path deteriorated at once into:

> an exceedingly obscure, difficult trail, over recent windfalls, huge moss-grown logs, masses of broken rocks from the adjacent cliffs, through marshes and jungles of trailing alders . . . [of seventeen miles] to near the summit of a high divide. Without the Indian our journey would have been scarcely possible. . . . The tents were pitched [for the night] near the crest of the divide, . . . The last mile of our march was by a badly defined zigzag path up a steep, grassy declivity, where the animals found great trouble in securing a foothold. (Pierce 1973:16-17)

Here, at the source of the West Fork, the trail was lost. Nevertheless, he crossed two divides close upon one another and then descended the steep mountain on a serpentine path, some 9 miles long, "along the back of a narrow, rugged spur," which must have been in the Boulder Creek area, and then down an almost perpendicular slope, knee-deep in a mixture of ashes and sharp rock fragments and "constantly threatened by bowlders tumbling from above." He reached the Stehekin just above its mouth. The continuation of Pierce's travels up the Stehekin to the crest of the Cascades is summarized in section (4) below.

On Pierce's testimony and considering the Chelan guide under whose direction he moved, this must have been a major Chelan trail from the upper end of Lake Chelan to the middle Methow and, beyond, to the Okanogan country. Surely the higher segment of the route was less obscure to the guide than to Pierce: high altitude paths in this area are characteristically ill-defined. Evidently also its difficulties to which Pierce alludes failed to prevent Chelan movement over it. That the Chelan guide and the three women with him were encountered on the Methow River just below the Twisp confluence suggests--but far from proves--that this group had themselves come over this same trail from Lake Chelan.

It is of particular comparative interest that Pierce--like McClellan earlier--makes no mention of the traditional Methow villages and camps which Ray (1974b:map facing 450) reports to have existed in the Methow-Twisp area and even on the lower Twisp itself upriver to the War Creek sector. Evidently such Methow as survived into the early 1880s were no longer occupying this segment of their aboriginal country which was earlier important to their tribal life, any more than the Chelan,

with the exception of the small "John Wapato" group, were still in the 1880s in their ethnographically known villages around the southern shores of Lake Chelan.

- When the mining potential of the Stehekin Valley was discovered and the news spread, miners came into the upper Lake Chelan country and then the Stehekin area "with pack animals via the Methow Valley" (Byrd in Durham 1972:23 fn. 51). The pass or passes over the Sawtooth Ridge followed by these men are not identified in my source, but it may be assumed that one or more of the old Indian routes were made use of.

(3) Routes must have led in a southwesterly direction from the Lake Chelan country over the Chelan Mountains to the Entiat Valley and on to the Wenatchee region. Yet for these I as yet have no data, ethnographic or historical.

(4) Trails ran over the Cascades, linking the Lake Chelan region and the Skagit River area. Evidently these were widely used in traditional times both by the Chelan and their nearby Plateau groups heading westward and by the Skagit and perhaps, to some extent, their neighboring tribes in journeying to the Plateau. The following are traditional instances of and general statements concerning such cross-mountain treks between the Chelan country and the Skagit by groups other than the Chelan, data that fail to specify the passes traversed:

- The second husband of the grandmother of one of Collins' (1974a:85) Upper Skagit informants in the 1940s had an Entiat cousin with two wives. When visiting in Skagit country, this man died. "The distance and traveling conditions were such that the two widows could not travel alone over the Cascades to their Plateau home." So the second husband married these two women as cowives of the informant's grandmother. Because between the upper part of the Entiat drainage and the Cascades crests lies a complex tangle of forests and very high mountains (USGS Wenatchee quadrangle 1957) with no obvious through routes, it appears probable that Entiat cross-mountain treks were undertaken either via the Railroad Creek to Suiattle Pass route (see below) or via the Upper Chelan area.

- The term "Stehekin," according to Byrd (in Durham 1972:16 fn. 30) who fails to cite his source, is said to be a Skagit word signifying roughly "the way we crossed through (the mountains)," and was a generic term for various cross-Cascades routes. Whether this derivation and translation rests on solid linguistic evidence or on folk etymology and is therefore of questionable validity, I do not yet know. A cursory review of Hess' (1976) massive Skagit dictionary has not been helpful on this point. But assuming a substantially accurate etymology, the term testifies to trails from Chelan over the Cascades to the upper Skagit sector.

- The grandfather of one of Collins' (1974a:152) Upper Skagit informants had learned a song at Lake Chelan. While the point is not made by Collins, one may assume that this occurred on a cross-mountain visit.

Evidently several trails led over the Cascades from Lake Chelan to the Skagit source streams. These appear to have included at least the following:

(a) A trail that crossed the mountains through Rainy Pass. I have not seen the approach from Lake Chelan outlined nor the descent from the saddle. But I presume that the path led from the upper Stehekin River up Bridge Creek to the mountain break and then down the Porcupine, Granite, and Ruby Creeks to the Skagit River at what is now the lower end of Ross Lake. For reasons cited in the Cascade Pass section below, Byrd (in Durham 1972:16 fn. 30) believes that this route was less frequently followed from the Lake Chelan region than the Ross and Suiattle Pass trails (see below).

(b) The trail via the Stehekin headwaters, Cascade Pass, and the North Fork of the Cascade River to the Cascade River proper and then to the Skagit. Whether the aboriginal route ran up the southwest side of the Stehekin or the northeast or varied from side to side depending on conditions, which may have shifted from season to season and year to year, I do not know. Perhaps there were well-used paths up both flanks of the river, at least in some localities. According to Byrd (in Durham 1972:9 fn. 18, 22 fn. 49), in the early 1890s the principal trail "began at the [Stehekin] mouth . . . near the Indian paintings and continued up the south side" for about 6.5 miles where it crossed to the north bank. Earlier, however, it had run from the lake up the north side, but this road became too difficult to travel above Rainbow Falls owing to large rock slides created by the river altering its course to the north flank of the valley.

The following either involved or appear to have involved this particular trail.

- In a tradition recorded by Collins (1974a:13-14) from an Upper Skagit informant, several persons, after a misunderstanding concerning a duck, fled "from Methow, from the eastern end of Lake Chelan," and traveled west to the head of Cascade River. Whether this tradition has any historical validity is irrelevant: it obviously reports as a non-central element travel over a very real trail. Also whether the group departed from the Methow River (and was Methow in affiliation) or from Lake Chelan (and was a Chelan party)--Collins appears not to be aware of the difference--is likewise of little significance here. What is of interest is the indication that a traditional intertribal route ran up Lake Chelan and the Stehekin Valley and then over a mountain break--seemingly Cascade Pass--to the headwaters of Cascade River.

- According to the Southern Okanagan (Walters in Spier 1938:78), the Chelan were friendly with the Skagit and made "annual visits across the mountains by way of Cascade Pass."

- In late August, 1882, after climbing over the Sawtooths from the Methow country (see section [2] above), Lt. Pierce (1973:18-22; Stone 1983:17-21) leading a small party and a pack train, crossed the Cascades watershed via Cascade Pass. According to Byrd (in Durham 1972:16 fn. 30), Pierce was one of the first Whites known to have made this Cascade Pass journey.

The left side of the Stehekin about a mile above its mouth proved to be "a dense jungle of cottonwoods, willows, firs, and underbrush" with lagoons "of rush grass, ferns, and other marshy vegetation." Presumably still guided by the Chelan man whom he had recruited on the Methow though this is not made explicit, he left this "jungle" and moved up this northeastern side of the river along "a most imperfect trail" through dense underbrush, fallen trees, thickets, rock masses, and watery sloughs. He crossed a number of small streams and passed in sight of Rainbow Falls. As he approached Agnes Creek, still following the same river bank, the trail began to become indistinct, a condition that grew continually worse above the creek "by reason of rocky spaces and dense undergrowth where it hugged the stream." His night's camp of August 23 was made near "the junction of Backus and Symon's Forks," i.e., where Bridge Creek enters the Stehekin. The following day he forded Bridge Creek, characterizing it as "a strong, turbulent stream," the crossing of which "would be dangerous, if not impossible," earlier or later in the season. "Just above the ford" on Backus Creek, he writes, "was a rude bridge of drift-logs, joined with strips of cedar-bark, and ballasted with stones, built by the Indians, and doubtless often used by them instead of risking the formidable current." During this day's march of 12 miles up Symon's Fork (Stehekin River), Pierce moved along "a wretched foot-path," toiling and floundering through "almost impenetrable underbrush and swampy areas" as the trail grew constantly more troublesome. Fallen logs and other obstructions forced him at times to take to the creek bed. At the foot of the final ascent of the Cascades, he made an "indifferent camp" without grass for his animals. The path up to the pass was a "tiresome, zigzag trail," on which he met an old White miner, descending, who informed him that "the ascent [above] was impossible for packs" and that he had lost his best horse to the cliffs, its body joining "two others probably lost by Indians." The boggy, slippery slope caused several of Pierce's own mules to roll over with their cargoes some distance below his camp of this night, close under the summit. Two miserable days later (August 27) Pierce reached the mountain crest, but only after sending back most of his party and the animals whose progress had been blocked below. The final approach to the mountain saddle proved to be "comparatively easy" and the pass itself, in "a snow bank one-fourth of a mile in width," was discovered to be low.

Pierce's descent to the west is summarized in the Skagit section of this report.

Obviously this careful account and accompanying excellent sketch map describe well and in detail the traditional Chelan trail from Lake Chelan to Cascade Pass as it existed in late summer of 1882 and as seen from the perspective of an Army officer, aided (and encumbered) by a support party and pack train. Of special interest is the bridge over Bridge Creek near its mouth. As Pierce observes, it would seem almost certainly to have been an Indian--presumably Chelan--bridge, partly because of its construction details, though modeled, I suspect, after White-built bridges seen outside of Chelan country perhaps in the Skagit River system, and partly because in Pierce's time there were still very few Westerners traveling this trail. It seems to imply a considerable amount of Indian travel over this route, while the conditions of the trail itself, as described so vividly by Pierce, might

argue for relatively little Indian journeying at the time. The truth, I suggest, is, at least in part, that Indians customarily made do with a trail that Whites, with their pack trains, regarded as marginal to impassable.

- Seemingly Cascade Pass was negotiable on foot even when snow lay on the ground, though whether in full winter is another matter. During the ore boom in the Stehekin Valley in the early 1890s, some miners, wearing snowshoes, are said to have crossed over the mountains via this break in the high range. (Byrd in Durham 1972:23 fn. 51)

Because Bryd (in Durham 1972:16 fn. 30) in the early 1970s knew of no prehistoric artifact discoveries in the Stehekin Valley above High Bridge but "quite a few" there and downriver and also on the two cross-montane paths mentioned immediately below, he concluded that Cascade Pass, like Rainy Pass, though used in prehistoric times, was probably not the most important trail. (For more data, see Ross and Suiattle Pass entries immediately below.)

(c) A trail through Ross Pass. This ran up Stehekin River and then branched off up Agnes Creek, the South Fork of Agnes, and Spruce Creek to the mountain saddle. Thence down Sulphur Creek and the Suiattle River to the Sauk and at last the Skagit. (Cf. Byrd in Durham 1972:16 fn. 30). This is reported to have been much the shortest route from Lake Chelan to Puget Sound, and to have been the route recommended by "the 1870 railroad reconnaissance party of D. C. Linsley." In Byrd's (in Durham 1972:16 fn. 30) opinion, Ross Pass was apparently of greater importance in the prehistoric period than either Cascade Pass or Rainy Pass. This conclusion rests on the fact that, to his knowledge in the early 1970s, unlike the Stehekin Valley upstream from High Bridge, "quite a few" Indian artifacts had been found in the immediate vicinity of the Bridge and "in the natural campground area just down valley from there, and some had been found along the Agnes Creek trail approach to Ross and Suiattle Passes." Whether more recent archaeological investigation of the upper Stehekin area has altered this picture, I do not know.

(d) A route through Suiattle Pass. There were evidently two approaches to this mountain crest crossing, one from the middle Stehekin River area and the other directly from Lake Chelan. The former was identical to that to Ross Pass, except that it followed the South Fork of Agnes Creek to its source below Suiattle Pass instead of turning off on Spruce Creek. The latter path ran from the west side of Lake Chelan up Railroad Creek to its headwaters at Suiattle Pass (cf. Byrd in Durham 1972:16 fn. 30). On the west face of the Cascades it apparently descended the Miners Creek Valley to the Suiattle River and on downstream as the route from Ross Pass. For reasons noted above, Byrd believes this "road" to have been, together with that through Ross Pass, a considerably more frequently used trail in prehistoric days than the more northern Rainy and Cascades routes.

In considering the extent to which these intertribal mountain routes were used in aboriginal times, the major population reductions suffered by the Plateau and coastal tribes--undoubtedly affecting the Chelan on the east and the Skagit on the west--must be remembered. Cross-montane travel must have been diminished, quite possibly greatly so. There were far fewer people to make the treks and to desire the products of other areas. Some level of

social disorganization must have attended the loss of whole families and the disappearance of entire villages, elsewhere in the Northwest of virtually entire bands and tribes. About 1835 "only nine survivors remained of the Okanogan trading Indians" at Fort Okanagan and by 1883 "all that remained of the once fairly dense Indian population of the upper Methow Valley were the heaps of human bones in the open mass graves. No living Indian remained in the valley." (Byrd in Durham 1972:16 fn. 30) An understanding of the importance of limiting intergroup contacts to avoid contagion must have further discouraged travel and social intercourse. Data exist from other sectors of the Plateau that attest to the degree to which intertribal routes fell into disuse in the immediate precontact and early postcontact periods (see comments appended to my summary above of Alexander Ross' effort to cross the Cascades in 1814; also Smith [1986] for the Kalispel).

In addition to the above trails that, having their initial segments within Chelan territory, continued beyond to knit the Chelan into a larger geographical network of neighboring tribes, other trails must have existed in some numbers wholly within the Chelan boundaries: e.g., to take people to other Chelan communities on the lake shore, up the lake and flanking mountains to hunting regions, and to root and berry grounds. Perhaps most of those were relatively short, either because they followed the lake shore over comparatively level areas until they came to a precipitous lakeside cliff where a mountain spur reached the water, or they led from the lake shore up into the mountains nearby. The forbidding physical characteristics of the lake shores, especially in their middle and upper sectors, are briefly described in the following early comments:

- In 1853 McClellan (in Stevens 1855:196) described the lake as "shut in by high mountains, which leave no passage along its margin."

- In 1879 Symons (1882:40), who with a Colonel Merriam and two Chelan Indians paddled some 24 miles up the lake, observed: "The shores are in places exceedingly steep, the granite walls rising smooth and shiny, without a tree or blade of grass, for a thousand feet or more from the water's edge. . . . Merriam afterward went further up the lake, . . . At the extreme upper end he found solid vertical walls of rock, . . ."

Save under unusual conditions, it appears probable that, as with Symons' 1879 up-the-lake journey, canoe travel was less onerous and more convenient than foot travel along the lake margins. This hypothesis is supported by a remark made to George McClellan in 1883 by an Indian--Louis or Quiltanee, a Spokan according to McClellan--when they were on the Columbia River in the Chelan area: ". . . after paddling to the [upper] end of the lake [Chelan] the Indians used a 'steep & bad foot-trail' to the summit [of the Cascades] and . . . 1/2 days travelling more brings them to the Scatchet River'" (quoted by Overmeier [1941:41] from McClellan's unpublished journal; see also Beckey [1981:280 fn. 25] who spells the Indian name "Quiltanese"). Given the awesome topographic characteristics of much of the lake shore, it seems probable that canoes were significantly more important to the Chelan than to the Southern Okanagan and to the other Middle Columbia Salish tribes.

Beyond these putative lake trails, several routes tied the lake sector of Chelan country to its Columbia River area. Uprive from the head of Chelan River there were at least two paths:

- Leaving the lake side just north of the lake outlet, Minter (in Stevens [1855:383] of the 1853 McClellan party writes, a trail passed "over a high, rolling country, and . . . [descended] a very steep hill into the Columbia valley, [a total distance of about 3 miles]. This descent is not rocky." This same path, it appears, is shown by Symons (1882:map 14) as running from the head of Chelan River in a generally northeasterly direction to the Columbia where it makes its sharp bend just upstream from Beebe (USGS Ritzville quadrangle 1953).

- A second route, according to Symons (1882:map 14) led almost due east from the north side of the lake outlet to reach the Columbia roughly a mile downriver from Beebe. Here in the early 1880s was an important river crossing to the road that ran up the east bank of the river via McNeil Canyon.

On the southern side of Chelan River, at least two short trails linked Lake Chelan and with Columbia Valley:

- Breaking away from the lake shore just below the Chelan River source, this route circled the back side of the mountain on which the lookout tower is shown on the USGS Wenatchee quadrangle (1957) to strike the Columbia approximately a mile upstream from the sharp river bend in T.26N, R.22E.

- A separate route seems to be that followed by the McClellan party in 1853. Departing from the lake south of the head of Chelan River, this trail descended a valley to a steep ravine and then moved down this ravine to the Columbia (Minter in Stevens 1855:383). This route, reported to have been approximately 3.75 miles long, seem to have been down Knapp Coulee; the estimated mileage is too low for the valley to have been that of Navarre Coulee and the point of departure from the lakeside is much too near the lake outlet.

Why did the McClellan party make this detour up the southern trail to the lake, which in his unpublished Journal he terms the "Apq" (Overmeyer 1941:41 fn. 150), and then down the northern route back to the Columbia Valley? Doubtless they desired to inspect the lake shores as a possible railroad right-of-way into the Cascades to some pass over the mountains. But it may likewise be because they wished to avoid those traveling difficulties that appear to lie along the river between the Chelan River mouth and Knapp Coulee (see above). In this context it appears significant that the present highway (US 97) similarly by-passes this riverside segment by also swinging up to Lake Chelan.

Trade

Formal media of exchange were not part of the Wenatchi culture base. On the other hand, informal media were recognized: i.e., clamshell beads and occasionally dentalia. Typical measurements of strings of these objects were a fathom, half-fathom, and necklace. (Ray 1942:190)

As everywhere in the Plateau for which Ray (1942:190) reports data, the Wenatchi numerical system was of the decimal type.

To some extent the Chelan participated in trade with members of other tribes. The data in this regard are, however, very slender.

(a) Evidently no important intertribal rendezvous center existed within Chelan country: no localities like the fine fisheries of Kettle Falls and of the Wenatchee River mouth, both of which attracted during the salmon season large numbers of people from other tribes (Ray 1932:116), or like the highly productive root grounds in the Calispell Valley (Teit 1930:341; Smith 1936-1938) and in the Kittitas Valley (Ross 1956:22). Moreover, all of these areas provided camping sites for large groups. Nor was there in Chelan county any crossing or forking of important trails or other travel routes--like that at the mouth of the Okanogan River--which would have brought travelers in numbers into and out of their territory. It is not surprising, then, that we appear to have no data--e.g., general ethnographic or historical statements or case-like examples--to bring to bear on this question. Nevertheless, it is known that parties from tribes near the Chelan passed up and down the Columbia through Chelan country. For example, small parties of Sanpoil-Nespelem went downriver in their canoes in June to the Wenatchi fishery already referred to (Ray 1932:116), obviously moving through the Chelan area. The same may be said of the "small parties travelling up and down the river that . . . [were] responsible for the existence of . . . [the intertribal trading center at the Okanogan River mouth]. It formed a natural meeting point and a base of operations for those from the valley of the Okanogan and those from the upper Columbia" (Ray 1932:116). All travelers that approached this river center from down the Columbia--save for the Methow upstream from the Chelan and the more northern Columbia bands that lived across the Columbia just south of the Okanagan--surely used the water route in prehorse times through Chelan country. Because the Chelan were at peace with all these nearby peoples, it must be supposed that the travelers, on occasion, stopped, at least overnight, at Chelan river villages or camps, such as those enumerated by Ray (1936:141-142; 1974a:420-423). Yet, however reasonable in light of central Plateau cultural patterns, this remains conjectural.

(b) On the other hand, there are a few ethnographic notes reporting Chelan trade with other tribal peoples outside the Chelan borders, demonstrating that in this way the group was tied into the intertribal bartering network that linked the tribes of the central and southern Plateau and even brought them into direct or indirect contact with coastal groups.

- Each summer Chelan in some numbers traveled to Kettle Falls, on the border between Colville and Lakes territory. Because of visitors from many tribes, this gave the Chelan fine opportunities for trading parfleches and bison robes from the Spokan and tanned buckskins and dried roots from the Sanpoil. In return, the Chelan traded shells and beads of coastal origin. (Ray 1932:116)

- At the Wenatchi River mouth, where an early summer weir was constructed, members of various tribal groups gathered to gamble

and trade. There the Chelan met families from the Sanpoil, Columbia, Yakima, and other Plateau groups, even some parties from coastal tribes. Here the Chelan could secure buckskins, dried camas and bitterroots, hanks of hemp cord, and baskets from the Sanpoil visitors, and clamshell beads, dentalia, dried salmon and salmon eggs, and dried huckleberries from members of other tribes. (Ray 1932:116)

- Small trading parties from several neighboring tribes often encountered one another at the confluence of the Okanogan and exchanged news and traded as they passed up and down the river (Ray 1932:116). Although I know of no ethnographic data that detail Chelan participation in these activities, it would be unreasonable to suppose that they did not, given the proximity of their country to that locality and Ray's testimony (see above) that they journeyed to Kettle Falls to trade, a trip that carried their canoes by the Okanogan mouth.

Intertribal Relations

Concerning the relations of the Chelan with other Plateau tribes there are very few specific data. Because they were so similar culturally and linguistically to the Methow upriver, to the Entiat and Wenatchi down the Columbia below them, and even to a slightly lesser degree to the Columbia on the east side of the big river, and because, as far as is known, their relations with these neighboring peoples were invariably amicable (Teit 1928:123; Walters in Spier 1938:74), it must be presumed that the Chelan frequently saw and more or less closely interacted with persons of these groups. As already stated, Chelan families met parties from other tribes in early summer at the Wenatchi tribal fishery and intertribal center at the mouth of the Wenatchee River (Ray 1932:116).

While Chelan social links were probably chiefly with their fellow Middle Columbia Salishans, they nevertheless encountered people from other Interior Salish-speaking groups. They engaged in "a great deal of trade and intercourse with the Spokane" and even intermarried with them to some slight extent (Teit 1928:110). As noted above, during the salmon season some Chelan parties journeyed to the great fishery at Kettle Falls to share in the daily distribution of salmon (Ray 1932:116) and surely to trade and participate in the social activities of the occasion.

Little intermarriage appears to have taken place with "Palous, Wallawalla, and Nez Perce, none with the Tenino, Tyighpam, and Upper Chinook [three tribal entities on the lower Columbia], and, at least in later times, none with Klikitat" (Teit 1928:110)..

"In earlier times," Teit (1928:110) reports, "there was also a good deal of intercourse" between the Middle Columbia Salishan peoples and Coast Salish groups. The Chelan evidently sometimes traveled through the Cascades into Upper Skagit country.

- An Upper Skagit tradition (already noted above) purports to relate a special case that may have involved a Chelan group and that is said to

have occurred in the nineteenth century (Collins 1974a:13-14). A small party, following a "duck quarrel," broke away and journeyed "from Methow, the eastern end of Lake Chelan" to the source of the Cascade River. There they found in "August and September . . . spring salmon spawning in the creeks." They remained to catch and smoke these fish. An Upper Skagit man, who "understood Eastern Washington language," came by in a canoe and invited the group to settle at basq̓i'x^{w}ix^{w} (village #7 in the Skagit settlement list) and one of the party to marry a village woman. Collins (1974a:13-14) speculates that this marriage union was encouraged by the fact that the two men, tracing their genealogies, found relatives at least by marriage as common ancestors. This account calls for two comments:

(a) Geography was not Collins' forte, as other data likewise demonstrate. Here it is an open question where the misunderstanding and so the start of the journey of the disaffected occurred. If in the Methow area, the people involved were surely Methow; if at Lake Chelan, they were certainly Chelan. Because the account may have some historical substance and the group in question may have been of Chelan affinity, this Skagit tradition is reported here.

(b) The term "spring salmon" is used by Collins (1974a:45) for the King, spring, or chinook salmon. According to Wydoski and Whitney (1979:59), "the principal spawning months [of these fish in the coastal streams of Washington] are July through September. Fish from the early run [in late May and early June] are referred to as spring chinook and spawn in late summer." In the Fraser River just to the north, they ran from May through September (Schalk 1977:220). So Collins' spawning of "spring salmon" in August or September is not off the mark, save to the extent that the term, for which she bears no responsibility, is misleading.

Ray's (1942:224-228) inquiries concerning warfare as a Wenatchi practice led essentially to uniform negative responses, except for the comment that prisoners were occasionally taken and slaves also. This suggests that hostilities were not quite as infrequent as his other data would indicate.

Social Structure

Formalized social classes were entirely lacking among the Wenatchi. There were, however, among the general populace loose distinctions based on wealth. And there were a few slaves. These were owned principally by rich men, who acquired them by purchase, not by capture. They were permitted to marry other slaves and their children were considered to be free. (Ray 1942:228-229)

Property

Among the Wenatchi the village claimed the rights to fishing sites in its neighborhood and to some degree to their hunting land. Large weirs were community property and the fish taken in them were distributed communally.

Root and berry grounds, goat-hunting localities, and house sites were not owned by individuals, but whether they were considered village owned, as opposed to areas claimed at the tribal level, Ray's data do not reveal. In the case of smaller weir sites, people held title to these by right of use alone. Individuals, however, owned pitfalls, deadfalls, snares, and traps. (Ray 1942:231)

The formal potlatch and ceremonial gift exchange of coastal groups was unknown among the Wenatchi. Gift giving occurred, however, in a more loosely structured context where it was always secondary to the ceremonial objectives. (Ray 1942:231)

Cycle of Life

Birth

The prenatal period in Wenatchi society was one in which both the mother and father were expected to modify their behavior in various ways to effect an uncomplicated delivery and improve the health of the infant. The mother, for instance, slept on one side to avoid twins. To insure an easy or at least normal delivery, she bathed frequently, exercised vigorously if this was her first child, and took care not to turn her back on anyone. For the child's welfare, she avoided looking at anything crippled, "clumsy," suffering, or dead, as well as at young animals and herons. She consumed no trout lest the infant cry excessively. On the other hand, she ate meadowlark eggs to aid in the development of her child's speech. For the sake of the child, her husband, for his part, was forbidden to hunt for a period; if he broke this tabu, he was expected to rub his bow and arrows with rotten wood. For the sake of both his wife and child, he choked no game and snared no animals. (Ray 1942:191-193)

In immediate preparation for the birth process, otter skins were removed from the house lest the child be afflicted with convulsions. The husband was not permitted to travel, for this would cause a storm. The mother was secluded in a special parturition hut in both summer and winter. A midwife--a relative--or more than one if the birth was foreseen as a difficult one was arranged for; she assisted in the delivery preparations by stroking and sprinkling the woman and predicting the sex of the unborn child. Similarly, a shaman was arranged for in case the birth turned out to be hard. (Ray 1942:193-194)

In delivering, the woman grasped an upright post or stick and held a blanket in her mouth to stifle her cries. In the face of complications, the shaman was called upon to diagnose the problem and presumably either take measures to counteract it or recommend such, although Ray's data are silent on this point. During the parturition, the woman drank herb tea concocted from the "thornbrush" (which I take to mean the hawthorn [Crataegus]). The infant was born onto a mat spread on the ground. (Ray 1942:194)

The afterbirth among the Wenatchi was carefully buried by a woman in a far distant badger hole. The mother's abdomen was bound, here breasts were steamed, and her milk "doctored" in some manner. For some time she remained near the fire. The infant was bathed in warm water in a special shallow

woven basket and rubbed with herbs or vegetable coloring material. After one day it was nursed and given broth and tea brewed from "rosewood bark" or cherry bark. An orphan was given to a wet nurse. (Ray 1942:195-196, 202)

For some time after the birth, the mother was confined to the parturition hut. After 7 days she was permitted to sit up and after 30 days began to work again. Unlike many nearby tribes if Ray's Wenatchi informant was correct, food and activity restrictions on the mother were not numerous, but for ten days she ate no fresh berries. The father, however, could not hunt or fish for some days following the birth. Because of his "weakness" in the Wenatchi view, cohabitation was denied him for two or three months. Both mother and father were released from their restrictions by bathing. (Ray 1942:197-198)

Abortion was practiced by the Wenatchi, using cottonwood ashes or pine needles as abortifacients (Ray 1942:202).

Infancy and Childhood

For 30 days the Wenatchi infant was placed in a bag cradle or wrapped in a blanket at night and from time to time temporarily during the day. At the end of this month, it was wrapped in a fur blanket and padded with fur and feathers and put in a cradleboard. This was a flat back-board of cottonwood, trapezoidal in shape with the greater width at the top. A small trapezoidal handle projected from the top of the board. Attached to the front to hold the infant was a buckskin bag, bound in place by thongs slipped through perforations in the board. A folding buckskin hood, supported by a willow hoop, shielded the infant's face. Quillwork decorated this skin bag. A buckskin flap provided drainage for male infants. Sometimes the naval string was tied on the cradle at the edge of the board and sometimes simply discarded and burned. The board was furnished with straps so that it could be borne on the mother's back. Although it was kept when outgrown, a new cradle was fashioned for each child. (Ray 1942:199-201).

The infant was bathed, probably in a basket. Twins were the subject of special beliefs and practices, though these were apparently not well developed among the Wenatchi. It was believed for example, that if one twin died, the other was sure to follow; that twins probably possessed supernature power--from the same spirit--by virtue of their twin status; and that twins of opposite sexes were sometimes the product of incestuous unions.

Very little is known concerning childhood among the Wenatchi. Children were expected, under penalty of whipping, to engage in morning plunges to develop their hardihood. The first teeth were placed in feces and buried. In regard to toys we are told only that slings--not a weapon among the Wenatchi--were such, used by children in their contests. Games played by children are described elsewhere in this chapter. At some time before puberty, the ears of boys were pierced. (Ray 1942:153, 171, 207)

Naming

An Wenatchi infant was given a family name by its grandfather, an event that was accompanied by a feast and distribution of gifts. At some time later in life, another family name was given to a person by paternal or material relatives, or, on rare occasions, was purchased; these names were assumed during the winter dance. In addition, family names were at times self-assumed and legitimized with a feast. Family names of deceased kinsmen were taken only after the mourning period; others were the names of parents or more distant relatives who chose to pass them on while they were still living. (Ray 1942:223-224)

Puberty

The arrival of puberty was given ceremonial recognition among the Wenatchi. The girl was isolated in both summer and winter in a special menstrual hut away from the village or camp. During the period of isolation she was under the care of her mother and an old woman proctor. She observed a complete fast for five days, the entire period of her seclusion. Her movements were severely restricted: she was allowed to leave her hut only late in the evening when she sometimes searched for a spiritual helper. If, while away from the hut, she chanced to see anyone, that person might be harmed. She used a one-prong wooden head scratcher, the use of her fingers for this purpose being strictly tabued. Her eyebrows were trimmed. Her period of scrupulous isolation was terminated by her bathing in a river or lake before returning to the village or camp. (Ray 1942:202-205)

During subsequent menstrual periods, the girl or woman was isolated for five days in a menstrual hut or a screened corner of the house. She ate in this secluded space, where she might spend her time in making baskets. She had, however, to avoid all persons, especially males, since any sight of her in this condition "contaminated" them. Consequently, she ventured out of her hut or confining corner only when others were asleep or absent. At the end of this period of seclusion, she purified herself by bathing or sweating in the sweat lodge. While his wife was confined for this reason, a man was apparently not subject to activity restrictions: at least he fished and hunted as usual. (Ray 1942:206)

For boys the change in status was less well marked. When their voice changed, they observed a five-day period of ceremonial activity. They were sent out on vision quests, engaged in periods of strenuous exercise coupled with intense vision seeking, sweat in the sweat lodge, rubbed their body with roots and mud, used the head scratcher, and apparently were sometimes tattooed. (Ray 1942:206-207)

Marriage

From puberty to marriage some girls were restricted in their activities to prevent them from meeting suitors. In this courtship context young men played love songs on their flutes and sought supernatural assistance through prayers to the sweat lodge and to bears that they had killed. There was also some use of love magic, though whether by only one or both sexes is

uncertain. The precise materials employed in these magical actions are not described, but by some means the substances were rubbed on the object of the person's affection. If the magic failed in its mission, insanity or death or suicide or promiscuity was the result--evidently on the part of the instigator of the magic, though this point is not made explicit in the data. (Ray 1942:207-208)

In determining marriage partners, the wishes of the boy and girl were considered to some slight extent. The typical scenario involved the boy making his decision known to his father who, in turn, informed his mother, but apparently the girl and her family sometimes initiated the arrangements. An intermediary or the parents themselves went to the girl's family--or to that of the boy if the girl had made the first formal move--to discuss the proposition. Gifts were given and others were promised. The date of the marriage ceremony was set by the girl's parents in the normal course of events. (Ray 1942:208-209)

The marriage ceremony took place in the dwelling of the girl. Relatives and friends were present, those of the boy bringing the promised gifts. The boy and girl were likewise in attendance. Sometimes the village or camp headman made a speech. A feast, furnished by the boy's family or occasionally by the girl's family, took place. The ceremony was sometimes followed by a return visit on the part of the bride's family, one that took place seven days later. Again, the bride and groom were present. Return gifts equivalent in value to those they had received were brought and a feast supplied by the hosts was held. (Ray 1942:209-210)

The initial residence of the couple was with the family or at least in the village/camp of the girl. Their final residence was with the groom's relatives. For the few years further reciprocal visits were carried out annually. (Ray 1942:210-211)

Child betrothal, accompanied by good-will gifts, occurred among the Wenatchi, but this was an infrequent practice. Elopement likewise took place; if consummated, it was allowed and legitimized by gifts and feasts. If a girl was discovered to have been unchaste, her parents could, if they chose, force the marriage. Occasionally a girl was given to a shaman in payment for some service performed to become, if I read Ray aright, the wife of the shaman's son.. (Ray 1942:211-212)

A second marriage was accompanied by a ceremony less elaborate than for the first union. The levirate--marriage of a widow with one of her deceased husband's brothers--was observed following the customary mourning period, with permission of the husband's family, and involved additional gifts between the families. Apparently, however, a levirate remarriage was to some extent discretionary to both the woman and the man. Similarly, the sororate--marriage of a man with one of his deceased wife's sisters-- was also a Wenatchi practice. This, too, occurred after the mourning period and was cemented by the exchange of presents between the parents. Seemingly, the sororate was, in fact, obligatory on the woman--Ray's data seem somewhat contradictory--with violation of the custom being punished by the man. Polygyny, including simultaneous marriage with two or more sisters, was permitted and practiced by prominent men. Marriage among the Wenatchi was allowed between distant kin. (Ray 1942:212-213)

Divorce among the Wenatchi could be instigated by either the husband or the wife; barrenness, incompatibility, and mistreatment were regarded as adequate grounds. Children--both sons and daughters--remained with the mother. (Ray 1942:214)

Adultery on the part of the woman resulted at times in the killing of her paramour. (Ray 1942:214)

Death

As death approached, a person sometimes "confessed" to several old men, a custom which the Wenatchi assert was a pre-White custom. Whether women likewise "confessed" to old men is left unclear by Ray. The corpse was allowed to remain within the dwelling, placed away from the wall and surrounded by rose branches, until the burial ceremony. Children were allowed within the house. From time to time during the morning hours, those in attendance wept, in some instances using special "weeping songs," washing their faces following each weeping session. Words and actions of the deceased were recounted by those in attendance, who, however, at times broke for a smoke. During the night, "watchers" maintained a vigil near the body. The body was washed inside the dwelling, dressed in new clothing, wrapped in an extended position, with arms at the sides and hands open, in new tule matting or sometimes in a deer hide, and tightly bound. (Ray 1942:214-216)

The interment occurred in one to three days under the charge of a relative. A grave was prepared near the village or camp by relatives and friends, the latter sometimes paid for their services. It was dug into the ground, riverbanks being a favorite location, or arranged in rocks, talus slopes, or rockshelters. The corpse in its wrappings was removed from the dwelling head first and carried to the burial site. The pallbearers, relatives and friends who occasionally received payment, were followed by other relatives and friends. A shaman, acting as ritualist, invariably accompanied the procession which formed a circle around the grave. A speech, eulogizing the dead person, was made by an old man. The grave was exorcised by the shaman. The body was placed in the grave on its back with the head oriented toward the east. Valuables were positioned with the body. While the shaman stood at the head of the grave, the corpse was ceremonially covered with earth. The mourners made a counterclockwise circuit, each throwing into the grave from its foot a handful of earth picked up on the northern side. When the grave had been filled in to form a rounded mound, the site was marked by several split sticks placed vertically in the ground. The burial was occasionally followed by speeches of consolation. (Ray 1942:215-218).

Shamans, suicides, and twins among the Wenatchi received the same form of burial as other people (Ray 1942:219).

A postburial feast was held immediately following the interment, the mourners being the guests. For it, a large quantity of food had been prepared by relatives of the deceased. Much of the dead person's property was distributed by the nearest blood kinsman, a woman's personal property going to her daughters. Clothing, however, was burned or buried and useless property was likewise destroyed. (Ray 1942:219-220)

Because of their involvement in the burial, the chief mourners and all who had touched the corpse underwent a period of purification. This lasted sometimes as long as 10 days for the former group and about five days for others. The purification process called for sweating in the sweat lodge, bathing, and drinking a decoction or infusion derived from the rosebush. The dwelling of the deceased, if of the "permanent" type, was exorcised by a shaman who burned rosebushes and, singing, called on his spirit power for assistance. Moreover, the structure was vacated temporarily. The purification went beyond this point, however, for the dwelling into which the family moved and its surroundings were also exorcised. (Ray 1942:220-221)

The chief mourners grieved for two years. The husband of a dead woman could not hunt or fish during this period; the wife of a deceased man was not permitted to gather berries or dig roots for three or four months. A surviving wife painted her face. Spouses of both sexes cut their hair to shoulder length and left it uncombed; the cut fragments of hair were saved but how they were disposed of is not reported by Ray. During the mourning months, mourners wore old clothing and no ornaments, ate no fresh meat or fresh roots and fruit and, indeed, avoided all fresh foods, and engaged in no singing. In addition, the chief mourners slept on fur-bough bedding. The name of the dead person and words phonetically similar were not used by others within the hearing of the mourners. It was considered unpropitious to dream of the dead, a threat which had to be counteracted by bathing and sweating. (Ray 1942:221-222)

Political Organization

The Wenatchi were entirely without a political structure that embraced their entire group. Indeed, each village was politically autonomous. There were, however, named nonpolitical units within the tribe, each consisting of more than one village and thus comprising what might be termed bands.

The affairs of each village were directed by community leaders--"chiefs" or headmen--usually two in number but more in a large village. Of these two, one was recognized as the higher in rank, generally the wealthiest man in the community, and was known by a definite title. The other served as an assistant or secondary chief. Although among Plateau tribes in general the chief was widely served by a "spokesman," who, as in public meetings, repeated his words in a loud and commanding voice, the Wenatchi appear not to have had this official. The powers and duties of the chief and assistant chief are not spelled out in the literature, but it is possible that the chief could actually command his followers and even appropriate from his villagers whatever he wanted. (Ray 1942:229-230)

Each village possessed its advisory assembly, of which the women of the community were members. (Ray 1942:229)

Concerning offenses against property and the person we have very little information for traditional Wenatchi society. We are told only that a murderer fled his community temporarily, sometimes traveling only at night, a fact which implies that pursuing parties bent on revenge were not unknown. Ultimately his obligation was settled by a payment of property to the

aggrieved family, the amount depending on the extent of his own possessions. (Ray 1942:230)

Religious Beliefs and Practices

Each adult among the Wenatchi possessed a soul that animated the body and was sometimes visible to shamans but to them alone (Ray 1942:232).

The ghost, whose proper place was in the land of the dead, was held on earth because the corpse had somehow been improperly treated and sometimes suffered for this reason. It was evidently thought to vary from invisibility to visibility at least to shamans. Feared, it lingered in certain localities and tormented living people, as by throwing water on them. Ghosts were repulsed by the living with branches of rose bushes. Regarding the Wenatchi view of the land of the dead no information is available. (Ray 1942:232-233)

Guardian Spirits

According to the Wenatchi conception of the supernatural world, virtually every living and even inanimate thing was capable of becoming a special spirit helper--"guardian spirit"--of a living person. While true of any animal, certain animals were much more common as guardian spirits than others: these included snakes, the spider web, flies, grasshoppers, and ducks. Others, however, were the most powerful, specifically the grizzly bear (considered a dangerous spirit), wolf, spider, and eagle. The rabbit, and, interestingly to us, the rattlesnake were thought to be consistently weak spirits. Inanimate objects also became supernatural helpers--rocks, lakes, mountains--but these were uncommon. Unusual also were plants and trees. More frequent were the spirits of natural phenomena: the Chinook wind, thunder, fire, and snow. Finally, heavenly bodies, fabricated objects, and mythological characters (particularly dwarfs) likewise on occasion developed guardian spirit relationships with specific individuals. Most spirits were considered to be generic in the sense that they possessed the property of serving as guardians simultaneously to more than one person. (Ray 1942:234, 239)

Any spirit was thought to be able to convey any type of power to a person: there was no one-to-one relationship between spirit and particular power. Among the specific powers granted to ordinary people were those of controlling the weather and of locating drowned persons and to shamans, in addition to shamanistic skills per se, was clairvoyant power. (Ray 1942:234-235)

Virtually all boys and some girls from the age of eight were sent out alone during the summer to attempt to acquire a guardian spirit; even slaves were permitted the search. They were sent out by a shaman, paid for his service, to a specific destination, sometimes with an object to leave at the locality so it could later be checked if thought desirable. A destination in the mountains was a favorite locality, but some body of water or general spirit locale was also occasionally given to the child as his objective. These vigils were limited to a single night, but were repeated as considered necessary. (Ray 1942:235-237)

The child on these quests was not instructed or expected to seek a specific spirit. It was told to remain alert while awake--it was permitted to sleep from time to time--and to engage in certain specific acts such as pushing boulders. The constructing of rock piles, a common task in the southern Plateau, was not a Wenatchi custom. If the quest was successful, the spirit appeared to the child in a vision--not a dream--in human guise and explained the nature of the power being conferred and gave the child a special song and sometimes a particular dance. As the spirit disappeared, it assumed its true animal form. Sometimes an old man dispatched his own guardian spirit to appear before the child to become the latter's guardian helper. (Ray 1942:236-238)

Upon his return to the village or camp, the child, if successful, was expected to sleep many hours. Customarily he informed no one of his spirit acquisition. Without being told, the shaman, however, recognized that the quest had been successful. On the other hand, if the power that had been obtained was strong shamanistic power, its acquisition might be revealed. In the usual course of events, however, the spirit's identity was not made known until years later at a midwinter dance when the person's actions allowed spectators to identify the spirit. And only then was the song that had been given the person during his vision quest and then forgotten remembered by him. (Ray 1942:237-238)

Sometimes--but infrequently--a spirit came to a person unsought as his tutelary. It appeared only when the person was alone. At times the circumstances were such that the person was compelled to accept the spirit as his guardian. (Ray 1942:238)

The guardian spirit was thought to "die" with its owner, perhaps returning to its original locale. Shamanistic spirits, to the contrary, occasionally became "spirit ghosts" on the death of its shaman owner. Spirits of this genesis were unusual in that they demanded to be recognized as a guardian spirit by appearing in a dream to a living relative of the dead person, entering the person, and causing serious illness if refused. In such cases, a shaman might be summoned to effect a cure for a huge fee. At the request of the person being occupied by the spirit, the shaman might extract and dispose of the spirit-ghost by some means not detailed by Ray, might withdraw the spirit and spirit song and then return them to the person now "under control," or might, in lieu of his fee, take the spirit as his own. (Ray 1942:238-240)

Shamanism

The Wenatchi shaman acquired his power in precisely the same manner as one who received lay supernatural helpers: the same kind of vision and the same spirits. However, he usually obtained more spirit assistants than laymen. And because of his special and important powers, he was distinguished from lay persons by a special term and by his particular functions. The midwinter spirit initiation dance in which the shaman's spirit returned to him was identical to that performed by the laymen. More men than women became shamans, but female shamans were considered as powerful as the males. (Ray 1942:240)

Shamanistic powers were thought to be transferable, resulting in illness in both shamans involved. Recovery, which was believed to be always slow, was achieved by removing the migrant spirit from its new "possessor" and returning it to its former and proper "owner," using the usual techniques of spirit recovery and replacement. (Ray 1942:248)

Shamans occasionally possessed specifically malignant powers, but in general their powers could be used, at the will of the shaman himself, for good or evil. Normally beneficient shamans sometimes employed their powers in irresponsible ways for personal gain or revenge. At times they received special powers for special functions. (Ray 1942:240)

Of the several roles played by Wenatchi shamans, curing by supernatural intervention was certainly one of the most important, although spirit-assisted curing was not their exclusive domain: laymen could cure diseases related in some manner to their own spirits. Shamans began to practice formally only when they were quite mature. For their first few curing cases, shamans were not paid; they had first to acquire a positive reputation. Once established, however, they received compensation for their curing services, the amount in each instance being determined by a kind of bargaining before they began the cure. The size of the fee depended on the nature of the case. The amount agreed upon was received whether or not a cure was affected; in fact, gifts or partial payments were sometimes made when the curing treatment began. (Ray 1942:240-241)

Beyond this important curing function, the shaman on occasion, as an uncompensated community service, supervised weir fishing and was expected to sponsor the winter guardian spirit dance from time to time. Malignant shamans were compelled to treat their victims and, if their evils were sufficiently great, were killed without recourse. (Ray 1942:241)

Wenatchi shamans, to some degree, tested their powers and immunities against those of other shamans. At least one occasion when this sometimes occurred was during the midwinter spirit ceremonial. The procedures followed are not described by Ray (1942:248-251).

Shamans were accorded certain signs of deference. Laymen, for example, were not allowed to pass in front of them. And they were at times permitted to dance first in the winter guardian spirit dance. (Ray 1942:241, 250)

Illness Causation

The Wenatchi recognized five causes of illness: those resulting from spirit intrusion, from the entrance of a foreign, illness-causing object, from an action of one's guardian spirit, from the departure of the soul, and from what might be termed "natural causes." The curing of these five illness types is considered separately in the paragraphs that follow.

The intrusive spirit, which was invisible, was either sent by a malignant shaman specifically to enter the person or a "lost" spirit that accidently entered the person and brought about the illness. Its entrance at times caused delirium and even insanity. It could be removed either by the shaman who had sent it or by a more powerful shaman. Once removed by the

procedure described below, it might be released unharmed, be blown back to its owner, or be destroyed. In this latter process, it was sometimes "cut in two," as it was held in the shaman's hands, by one of the shaman's assistants. Blood was seen to drip out, the spirit was heard to cry out, and its owner soon died. Or the spirit was thrown into the fire. Or sometimes thrown into water, causing its owner soon to drown. Or buried, with the result that the sender died the same day. (Ray 1942:245-246)

The intrusive-object illness was apparently always caused by a hostile shaman. How it was disposed of once removed from the patient is not described in the ethnographic accounts. Possibly the procedure differed immaterially from that followed with an intrusive spirit. (Ray 1942:246)

Several types of guardian spirit illnesses were recognized among the Wenatchi:

(a) Spirit loss. A person's spirit--his supernatural helper--might wander and be lost through being buried accidently with a corpse or by being stolen by an evilly-disposed shaman who desired to add the spirit to his own guardian spirit family. If not retrieved and restored to the person by a more powerful shaman, the person died. (Ray 1942:246)

(b) Spirit return. This variety of illness relating to one's own guardian spirit was that produced by the return of the spirit when the person reached the age of 20 years or older, after having been "forgotten" since it was acquired in the vision as a child. It returned to the person in a dream, somehow associated with his hearing a special song--perhaps his guardian spirit song though this is unclear from Ray's notes. He became ill and the illness was diagnosed by a shaman as of this etiology. The spirit had to be removed by the shaman, who "listened" for the new song and then returned it to the ill person. With his guardian spirit tamed, the person now sang his song with his friends, probably for a day or more, and then again in the forthcoming midwinter dance initiation. Occasionally the person experienced spirit sickness on a few following winters, but with his now firmer relationship with his spirit helper he managed to overcome his illness without the ministrations of a shaman. (Ray 1942:246-247)

(c) Spirit hostility. When a person acquired a spirit-ghost, his own supernatural helper sometimes "fought" with this newly secured supernatural causing illness and even occasionally death. (Ray 1942:247).

The loss of a person's soul among the Wenatchi--as also among several nearby tribes--was considered untreatable both by shamans and through herbal and other home medications and so inevitably to result in death. Among groups slightly farther to the north, however, it was regarded as treatable and curable by shamans through a ritual journey of recovery to the land of the dead. (Ray 1942:247-248)

Natural illnesses were ailments and health problems that were free of supernatural causation. Such, for example, were tuberculosis and withering-desiccation. Since they fell outside the domain of the shamans, they were cured or at least treated by "household remedies." (Ray 1942:247)

Curing Procedures

Among the Wenatchi the shaman's assistance was solicited by a kinsman of the ill person who brought gifts to the shaman and promised others. The call was sometimes refused in prospect of a larger fee offer later. On the other hand, a shaman at times volunteered his services. On occasion, more than one shaman, all compensated, worked on the same case, either independently or in collaboration. (Ray 1942:242, 248)

Once an attempt at a cure was agreed upon, the shaman visited the sick person immediately at the latter's dwelling. Present were the patient's friends and relatives, who urged the shaman to affect a cure. The curing process began without delay. Sitting beside the patient, the shaman washed his hands in water brought for this purpose and smoked, sometimes speaking to the spirits meanwhile. He selected assistants, including a spokesman. The initial step in the actual curing treatment consisted of the diagnosis, a correct one being essential for a successful treatment. While he sang, the shaman placed his hands on the ill person's body and by the feel was able to identify the cause of the illness, sometimes naming a hostile shaman who was responsible, and sometimes predicting the success or failure of the treatment. (Ray 1942:242-243)

The Wenatchi shaman continued this procedure by singing, accompanied by the audience, which also drummed on a plank or occasionally log drum with short sticks held horizontally, and by dancing. He sprinkled the patient with water on which he had first blown, and he rubbed and massaged him. Passing his hands up and down over the sick man's body, he removed the "sickness" through the head or feet, sometimes only part by part. With the "sickness" in his hands, he found it so difficult to control this dangerous, foreign substance that his associates were forced to grasp his hands and force them to and into the water that had been provided, thus taming the power. Occasionally blood was drawn from the patient, it was thought, in this hands-on procedure (Ray 1942:243-244)

An alternative curing process involved the shaman sucking the intrusive spirit or object from the ill person, his lips actually touching the person--not with the use of a tube as among some Plateau tribes. While held by his assistants, he beat himself to eject the "sickness" from his mouth to his hands. At this point, owing to the supernatural potency of the "sickness" in the blood, he lost control of himself and became temporarily unconscious. Recovering, he, aided by his assistants, plunged his hands into water to calm or at least control the intrusive spirit or supernatural object. The disposition of the illness-causing agent is described above.

Abnormal physical states among the Wenatchi that were regarded as having a natural, non-spiritual causation--e.g., wounds, bone fractures, aches, colds--were treated with what must have been a large number of purely physical cures (cf. Steedman 1930:455-477 for the Thompson Indians). Concerning these, however, little is said in the ethnographic literature: only that many roots were used by the Wenatchi for their medicinal properties (Ray 1942:131). Our meager knowledge in these matters is partly the consequence of the secrecy that surrounded the native pharmacopoeia in at least much of the traditional Plateau. Knowledge of the curative properties of a great variety of plant and other substances, their proper preparation

and application, and the particular ailments for which they were specifics was considered valuable personal and family property, not to be freely shared with others.

Religious Ceremonies

In Wenatchi country the most important religious ceremonial was the winter spirit dance when guardian spirits returned for the first time to certain persons, the "novices." These dances occurred through the various villages of the tribe during a two-month period roughly coincident with the winter solstice, taking place, however, for only five days in each community. Though essentially alike, the dances were sponsored in a variety of ways: by a shaman with assistants and a spokesman, by a layman at the command of his guardian spirit, or by other individuals with a shaman in charge. (Ray 1942:248-249)

The dance was held in a large ordinary dwelling, not in a specially built structure. A fir pole, sometimes with its upper limbs intact, was erected by a shaman in the center of the lodge before the ceremony began. An elevated horizontal pole or rope was prepared for presents to be given and later distributed. And a shaman swept the floor ritually. (Ray 1942:249)

The novice to be initiated took his place near the center pole and danced in its vicinity, encircled by the audience dancing in a counter-clockwise circle. Although a time when a person strengthened his bonds with his tutelary and so an important period in his life, it was likewise a period of some danger to him. For example, the shaman might, if he chose and was evilly inclined, steal the novice's spirit and substitute for it a weaker spirit of his own. If this occurred, the novice's own spirit could only be recovered for him by a shaman with greater powers than those of the thieving shaman. The novice's shaman was well paid for his assistance. Each winter for the next four years the novice had to repeat this ceremony before his relationship with his "helper" became firmly cemented. This initiation performance was followed by spirit dances on the part of others of the group. (Ray 1942:249-250)

In this more general spirit dancing, each person with a guardian spirit participated, singing his individual songs and performing his own dances. He was allowed one turn a night, unless the gathering was small in which instance he was permitted additional turns. In these individual performances shamans were sometimes given precedence. The person leading at the moment positioned himself near the center pole, wearing a headdress and clothing ornaments symbolic of his supernatural guardian and carrying symbolic objects. Each sex sat on its own side of the dwelling. (Ray 1942:250)

Another important part of this midwinter ceremony was the shamanistic performances. One involved a shaman having a vision of a spirit approaching the dance, that of a man who was himself nearing the dance lodge. After a conference of the shamans in attendance, the spirit was enticed with beckoning arm motions to proceed at once to the dance dwelling. If the spirit of a malignant shaman, it was stripped of its power; or it was "washed" and kept; or it was returned to its "owner" when he arrived. The

disposition accorded a particular spirit was actually at the option of the dancers. (Ray 1942:250-251)

Other shamanistic performances involved a testing of the powers of two shamans, one stealing the spirit of the other; or the capturing of a spirit that might be ritually presented by the shaman to his son or sold to another shaman; or the performance of slight of hand tricks. These tricks took the form of swallowing fire or boiling water or of handling red-hot rocks. Another trick consisted of thrusting a stick lightly into the ground, offering a reward for its removal, and then, with all others failing to pull it out, removing it with ease. (Ray 1942:251)

A special dance--a weather dance led by those with weather power--also accompanied the winter spirit ceremonial. While the routine was identical to that of the guardian spirit dance, this performance was intended to bring the warm Chinook wind. (Ray 1942:252)

It has been mentioned that, as a part of the preparation for the midwinter dance, a horizontal pole or rope was placed within the dance house for gifts. These were contributed by both the shamans and the ordinary dancers while each person danced, a contribution being considered more or less compulsory. On the final morning of the dance, these gifts were distributed usually by the leading shaman's assistant or, less commonly, by the officiating shaman himself. The actual carrying of the objects to the recipients, however, was attended to by two aides. Gifts were presented to all dancers and to the children present, the best objects to the most skillful dancers. This distribution was followed by a short dance. (Ray 1942:252-253)

Magic

Both inimical and innocuous, positive magic was practiced by the Wenatchi, though the data are most meager.

Hostile magic was employed to cause illness in others, a power, unassociated with the guardian spirit world, which anyone could exercise. It was carried out by securing bits of clothing of the person to be harmed and then, presumably, destroying them in some manner not described by Ray. Or by throwing some object, not directly associated with the person to be damaged, on a refuse heap or a grave, causing him "sympathetically" to wither or rot away as the object itself disintegrated. (Ray 1942:254)

Love magic was also known and made use of by the Wenatchi, but details are lacking. (Ray 1942:254)

Miscellaneous Beliefs

The Wenatchi believed that awesome serpents inhabited lakes and that strange horned snakes made furrows in the ground with their horns, trails that could not be crossed under penalty of experiencing painful swelling. They avoided portentous localities in lakes lest they be harmed. And they were convinced that there were "still spots in the river," but whether these

were considered dangerous or merely odd is not stated in Ray's data. (Ray 1942:255-256)

Diversions

Here are summarized such meager information as is available for the Wenatchi and Chelan on their arts, athletic and other games, and smoking patterns. None were wholly devoid of associations with the practical aspects of life and entirely without religious and ceremonial significance. Yet all clearly possessed a salient pleasurable content that must be recognized.

The Arts

Although hard data are scanty, the arts--visual arts, the dance, and music--as esthetic expressions devoid of association with objects of practical utility and activities with purposeful goals received little attention among the Wenatchi, a characteristic of Plateau cultures in general. In this context, it is not difficult to comprehend why no separate section in Ray's (1942) cultural element study, from which most of the Wenatchi data are derived, is devoted to the arts. Such information from his report as is noted below appears scattered through his publication.

Graphic and plastic artistic representations were uncommon in Wenatchi life even as accompaniments of utilitarian objects and of behavioral patterns with purposeful goals. Wooden spoons, mortars, bows, paddles, and combs were unornamented and so were stone pestles (Ray 1942:141, 142, 143, 149, 157, 170). Arrows, however, were painted, sometimes for decoration (Ray 1942:150). Coiled baskets were adorned with imbricated designs, contrived with buffalo grass, bear grass, cedar bark, or cherry bark (Ray 1942:159, 160): in imbrication the pattern is created on the exterior surface of the basket by laying a colored strip along the outside of the coil, by tucking a fold of it under each sewing stitch as this is taken, and then by bringing its loose end over the stitch, to be folded under the next stitch and so on (Figure 2-4). Alder, Oregon grape roots, and mud were used as imbrication dyes (Ray 1942:160). Most clothing--e.g., buckskin shirts, capes, and leggings--were neither painted nor ornamented with applique patterns, perhaps not even with shells or porcupine quills (Ray 1942:165, 166, 167). Skin gowns were an exception, for some received applique ornamentation of some kind (Ray 1972:165). This is not the place to discuss at length the complex issue of the motivation underlying such "art" work as is mentioned above, largely because such discussion is unproductive without crucial informant-derived ethnographic data. But it would be rash to assume that Wenatchi women--at least some women on some occasions--failed to derive some measure of esthetic satisfaction in weaving a basket and, in particular, in ornamenting a basket or an article of clothing. Or a man similarly in fashioning a fish net or harpoon point, even considering that these objects, to our eyes, were without obvious "artistic" components.

Shells were suspended from the ears as ornaments; bead necklaces and shell and bone bracelets were worn by Wenatchi women (Ray 1942:171, 172, 173). On occasion, the face was decorated with paint, but the patterns in favor are not described (Ray 1942:172). Whether the Wenatchi tattooed is

unclear (Ray 1942:171, 207), but if this was practiced, the designs were surely nothing more than simple geometric patterns.

The only examples of the visual arts for the Chelan for which I have evidence are the representations at four pictograph sites.

- The best known and most fully described is that "directly across the lake from the dock at Stehikin, on the north end of Lake Chelan" (Cain 1950:15). These, on the rock cliffs, were first reported, it would seem, by Symons, who implies that they were first discovered by Merriam about 1880:

> At the extreme upper end [of the lake] he found solid vertical walls of rock, and on these, several hundred feet above the water's edge, were a large number of hieroglyphics written on a horizontal line, evidently by people in boats when the waters were at this higher level. Above the first line were others at varying altitudes, but always in a horizontal line. The present Chelan Indians could tell nothing about them, but said that they must have been made by people who lived there long before they came there to reside. (Symons 1882:40)

Later accounts of these figures by others reveal that their elevation above the lake surface is notably exaggerated in Symons' second-person description. On the basis of his field research of 1945, Cain (1950:1, 15) outlines the principal characteristics of the designs thus:

> The figures are painted on the smooth granite surface of a high cliff running directly into the lake. The escarpment is perpendicular . . . [so the artists must have worked] from a canoe or raft. . . . [When a dam was built at the lower end of Chelan River,] the lake level [rose] over twenty feet, to inundate some of the pictographs. (A few may still be seen under the water, down to a depth of five feet or so. . . .)
>
> [A row] of eight figures representing fish, human, and anthropomorphic figures is six feet above the present [1945] lake level, while the series of eight vertical bands . . . is now fifteen feet above water level. Thus the topmost figures were at least thirty-five feet above the lake level before the erection of the dam in 1921.

Among these designs Cain (1950:15 Figure 14) recognized mountain goats, bighorn sheep, and humans. Assuming his sketches are reasonably accurate, I have no trouble with these identifications, but his "fish" and "anthropomorphic" figures appear less certain.

Problems inherent in identifying pictograph--and petroglyph--designs are not inconsiderable. These same cliff representations were observed in 1891 by Durham (1972:24) who writes that they were "in red, brown and blue paint--figures of war parties with bows and spears, of horses and wild goats, and other great animals resembling buffalo." Examining Cain's sketches, Byrd (in Durham 1972:24 fn. 52) discerns the goats and sheep, but is doubtful about "the other great animals," and sees--no

more than I from the published drawings--the armed warriors, weapons, horses, and bison. He notes that, while "the colors were 80 years fresher and plainer" than in 1971 when he himself viewed the cliff, still with the lake level 21 feet lower than in the 1970s, one wonders how well Durham could have seen the designs. Byrd himself detected what appeared "to be one or two higher rows of paintings so completely faded and washed out as to be indecipherable," and wonders whether these could have been clearer in the 1890s and the figures to which Durham alludes.

- Many pictographs existed at one time at Meadow Creek on the northeast side of Lake Chelan opposite the mouth of Railroad Creek (Byrd in Durham 1972:9 fn. 16, 16 fn. 30).

- Many pictographs were once visible near Domke Falls on the southwest side of Lake Chelan (Byrd in Durham 1972:16 fn. 30).

- "About half-way up the lake," where the Christy Ranch was located in the late 1890s, were what Lyman (1899:195) describes as the first of the painted rocks as one ascended the lake. This ranch was evidently just downlake from Goat Mountain (see Lyman 1899:198) and so presumably on the northeastern side of the lake. The pictographs, executed in red on the smooth white walls that projected here and there into the water, included, according to Lyman's eye, men, tents, goats, bear, and other animals. Except that they had already been partially destroyed by gunners firing from the lake surface, they were "wonderfully well preserved" when he viewed them, in spite of wave action in high water, the beating of rain, and frost action. According to Lyman, the Chelan knew "nothing of their origin," information which, while quite possibly accurate, one may suspect he received from non-Indian sources.

Data on primarily secular dancing among the Wenatchi are entirely lacking and details for even the dancing with strong religious or ceremonial overtones are scanty. Dancing, however, was an element in the shamanistic curing process, the curer himself performing. It was especially important in the midwinter guardian spirit ceremonial. In this ritual the novice, while being "reintroduced" to his spirit helper, danced in a straight line, as the audience danced in a counter-clockwise circle around that person. Older people who were being revisited by their tutelaries danced individually as they sang their spirit songs. During this ceremony, dances were also led by persons with "weather power" with the aim of bringing milder weather. The sun dance of the Plains Indians failed to reach the Wenatchi. (Ray 1942:243, 248, 250, 252, 253)

The Wenatchi instruments were very simple: only one, in fact, was clearly multitonal. The drum, used in the curing rites of shamans and in other ceremonial contexts, was a log or plank placed on the floor, not the hand-held drum with a hide head. The rattle was fashioned of deer hoofs; it served to accompany dances and was thought to symbolize the guardian spirits. The tubular whistle, known among nearby tribes, was said by Ray's informant not to have been a Wenatchi device. The tribe, however, had a six-hole, end-blown, deer-bone flute that was played by men in courting and that, being heavy, likewise answered as a club on occasion. (Ray 1942:185-187, 243, 248)

Games

The Wenatchi enjoyed a number of adult games of athletic skill. Shinney was played in the spring with a hardwood ball covered with buckskin; both men and women played but separately. Arrows were shot at rolling hoops, and poles were thrown at wrapped fiber hoops rolled down a bare strip of ground; both were wagering games. Wrestling, tug-of-war pulling on a hair rope, wagering canoe and foot races, horse races, and dodging games were also the custom. (Ray 1942:182-185)

Games of dexterity were also played by adults. Among these were ball-and-pin and ring-and-pin games, played in winter to pass the time. Both ball and ring were of fiber; the pin was a salmon vertebra. The objective was to toss the ball or ring and then pierce it in the air with the pin. These were played as contests, the loser's fingers being struck smartly as a penalty. (Ray 1942:183)

Games of chance included one, played by women, in which four dice of beaver teeth were tossed onto a buckskin or occasionally a blanket (Ray 1942:183-184).

Wenatchi children played a game with duck feather shuttlecocks in which wagering was a feature. To pass the time they spun tops made of bark with a wooden pin. Children were sometimes asked by their elders in winter to swing bullroarers of cedar or a deer rib to bring the warm Chinook wind: these were flattish pieces, with a stout string attached to one end, swung around the head to produce a mild roaring sound. They also played hide and seek. (Ray 1942:184-185)

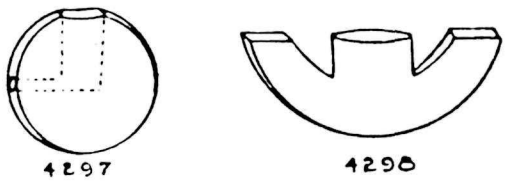
Games were played both by people of the same village and also in intervillage contests. Wagers were made only in the latter instance. Women as well as men gambled. (Ray 1942:185)

Smoking

Kinnikinnick--botanical identity unspecified--was smoked by the Wenatchi, perhaps occasionally mixed with true native tobacco. It was pulverized in a mortar with a pestle in preparation for smoking, which, typically, took place at bedtime and in the company of visitors or friends and involved taking only a few puffs.

Pipes were of three varieties. Two were tubular: one was of the same diameter end-to-end and generally of stone though sometimes of wood; the other, also generally of stone but occasionally of wood, was "trumpet-shaped," i.e., tubular for its greater length but enlarged conically close to the tobacco end. The third type was the elbow pipe. This generally had a soapstone bowl, either disk-shaped (Figure 4-4 A) or W-shaped (Figure 4-4 B) and was ornamented by being painted, carved or incised. Some elbow pipes, however, had a wooden bowl set crosswise of the stem and others were fashioned of deer antler with its natural curve. (Ray 1942:187-188)

Pipes were kept in tubular bags of buckskin or the skin of a small animal (Ray 1942:188).



A. B.

Figure 4-4. Two types of tobacco pipe bowls. A. Disk-shaped. B. W-shaped. (Ray 1942: culture elements #4297, 4298)

Cognitive Culture

Here are assembled a few notes concerning Wenatchi cognitive patterns that seem too unrelated to matters discussed in the previous sections to be placed with them. They, for example, have no obvious, primary, and particular associations with hunting or fishing, material culture, phases in the cycle of life, or religious beliefs and ceremonial life.

The Wenatchi calendar was lunar in nature, each month beginning with the new moon and each year consisting of 12 moons though some periodic adjustments were required. The moons were named descriptively. The year was considered to begin when the salmon disappeared and the snow began to fall. The solstices were recognized and a few constellations were named. In some way not indicated by Ray, the position of the moon served to indicate time to the Wenatchi. The light and dark areas of the moon's surface were thought to depict a frog, an interpretation shared by several neighboring groups. (Ray 1942:189)

Apparently the Wenatchi recognized terminologically only two of the cardinal directions, those of sunrise and sunset (Ray 1942:189).

A knotted string was used by the Wenatchi as a mnemonic (Ray 1942:190).

Use of the Park Complex

The entire Lake Chelan National Recreation Area and that part of the North Cascades National Park extending east of the Cascades crest into the upper Stehekin drainage fell within the aboriginal boundaries of the Chelan. To the tribe this entire region must have been in the nature of "back country," for it was geographically rather removed from their traditional population centers and presumably, therefore, to a lesser but still uncertain extent distant from their principal activity focus. Both their winter and warm season communities were concentrated along the Columbia River and especially around the lower section of Lake Chelan, the nearest settlement being their camp at Grade Creek, some 27 miles below the lake-crossing boundary of the Recreation Area. Accordingly, one must conclude on energy-minimization grounds that the tribe made its greatest utilization of the terrain around the southwestern shores of the lake and of the nearby mountains.

Nevertheless, the area within the Park Complex was surely not without importance to the Chelan. As abundantly demonstrated above, the ethnographic and ethnohistorical data relating to every aspect of the traditional Chelan life-mode and to every segment of their native country are singularly meager. This is particularly the case for the group's utilization of the uppermost lake shores and feeder creeks, the Stehekin stream network, and the flanking mountains within today's Recreation Area and Park perimeters. Yet by sifting out from the preceding pages such information as is plainly or probably relevant, a tentative picture of Chelan use of this northwestern sector emerges. The following summary, necessarily highly provisional and obviously scandalously incomplete, considers Chelan use of the subsistence, occupation site, trail, and other resources of that sector. But it should be understood that, unless otherwise qualified, the data apply also to the small stream and

high mountain area within the Chelan homeland immediately to the south of the borders of the Park Complex.

Subsistence Use

In late prehistoric and early postcontact times, the principal Chelan use of the Park Complex area seems to have been as a subsistence resource region. There is nothing to suggest that any other tribal groups claimed and made use of the country in their customary food quest, though their parties certainly lived off the land to some degree when traveling through it on the intertribal trails (see below).

To this point no data have been found that specifically describe even in general terms the ways in which the Chelan turned the natural resources of the area of the Park Complex to their economic advantage. Nevertheless, all of the few animals identified in the hunting section above as occurring in Chelan territory--deer, bighorn sheep, mountain goat, black bear, grizzly bear, cougar, lynx, muskrat, and marmot--are supported as indigenous fauna of the Chelan segment of the Park Complex in the zoological distribution plottings of Dalquest (1948; see below). Moreover, every animal reported ethnographically to have been hunted by the Wenatchi--deer, elk, antelope, bighorn sheep, mountain goat, brown (black) bear, grizzly bear, rabbit, raccoon, beaver, and ground hog (=yellow-bellied marmot [Dalquest 1948:263-265])--with the exception of the antelope and the unimportant rabbit, raccoon, and ground hog--occurred in the mountains around the upper segment of Lake Chelan and in the Stehekin drainage. Accordingly, it is reasonable to assume that Chelan hunting parties visited, from time to time, this uplake and high river country on a seasonal basis in search of these animals. The various hunting techniques reported for the Wenatchi would have been equally effective in the Recreation Area and Park Complex area.

On the other hand, the highest elevations of the mountainous areas offered very little in the way of hunting opportunities. Above the 7,000 foot level, a lack of vegetation (other than lichen and mosses), the rigorous, cold climate, and extensive rock outcrops and talus slopes discouraged "most large animals from occupying the higher terrain. Smaller animals such as marmots, squirrels, mice and pica, as well as hawks and some other birds, find adequate protection and food to survive the austere habitat" (Beckey 1981:279 fn. 21). But these were surely unimportant game for the Chelan. It seems curious the mountain goats are not specifically remarked upon as a high-mountain large animal, for its "habitat is the bare-rock cliffs and rock-strewn slopes of the Arctic-alpine and Hudsonian life-zones" (Dalquest 1948:407). But it may be doubted that even goats were widely pursued by Chelan hunters in these towering elevations above tree-line, except when parties chanced to be high up for other reasons, because of the difficulties of attaining these areas and getting the game back to lower camps.

It seems probable that the fish varieties--bull trout (Dolly Varden), cutthroat trout, "rainbow trout"--identified in the early historical documents as available in the lower and middle segments of Lake Chelan and the small feeder streams of this area were likewise to be caught farther uplake and in the Stehekin country within the boundaries of the Park Complex.

And, while this is less certain, that most, if not all, of the edible plant products--in particular roots and especially berries--native to the lower lake country grew as well in suitable locations around the upper lake peripheries, at least at lesser altitudes in the lower Stehekin Valley, and on the lower mountain slopes. It seems unlikely, on the other hand, that all food plants found in the Columbia River segment of Chelan territory were also available in the Park Complex, but most of these were probably also either nonoccurring or very rare in the middle and lower reaches of the lake.

In considering the aboriginal use of the Recreation Area and adjacent Park land, the question, then, seems not to be what animals, fish, and plant resources useful as Chelan foods were native to the Lake Chelan and Stehekin drainage sections of the Park Complex, for evidently essentially all found downlake were available. It is rather the extent to which, owing to their remoteness from the Chelan population centers and to the particularly rugged and difficult mountainous terrain, the products of the area could have been "harvested" with an energy expenditure commensurate with the food return. Other things equal, it seems probable, for example, that in the routine food quest the resources of lower elevations were sought before those of higher altitudes, that terrain easier of access, especially along the lake shores and well-used trails, were visited by subsistence-searching parties before that more difficult to reach and more distant from traveling routes, and that productive regions nearer the population clusters were more widely and consistently exploited than areas more remote. If these propositions come close to the truth, the uplake and Stehekin country was, in general, less well scoured for game, fish, and plant products than the downstream country.

Nevertheless, because of periodic overhunting, particularly with the larger population in pre-epidemic days, or because of abnormal bioclimatic conditions or natural cyclic patterns, resources doubtless varied in abundance from year to year and decade to decade in those tribal areas closer to the villages and camps, forcing the subsistence quest to extend into the less accessable regions from time to time. It is unrealistic to regard out-of-hand most segments of the upper Lake Chelan and Stehekin drainage as having been beyond the exploitative reach of the Chelan in their food supply questing, even from parties with their base villages and camps in the lower lake region as reported for the 1850s.

Still although the region offered hunters and trappers no mammalian forms not also occurring in the middle and lower Lake Chelan area, if the data of Table 4-1 are accurate, it is possible that it may have nourished some plants, perhaps, for example, some of medicinal or special technological values, not found downlake or occurring there only at higher and so less reachable altitudes.

Village/Camp Use

There are no ethnographic or ethnohistorical data indicating Chelan winter settlements in these upper lake, Stehekin Valley, and neighboring mountain areas. The nearest winter village remembered in the 1930s was at Green's Landing (between Wapato Lake and Grade Creek) and the closest warm season camp was at Grade Creek, both only a few miles above the southern end of the lake. These informant-recalled communities, however, are as of the

mid-1800s. One may well wonder whether, a century earlier, in times antecedent to the first of the terrible epidemics, both winter villages and warmer month camps may not have existed uplake of these 1850 sites and even in the lower Stehekin Valley. The existence of the pictograph localities at and near the inlet of the lake, with both faint and relatively fresh representations, suggest Chelan residential sites--at least camps in the open season when rock art would almost certainly have been executed--not far distant in comparatively late precontact and perhaps early postcontact times.

It would be expected that as the illness struck and the Chelan population decreased, such northwesternmost occupation localities as may have existed would have been the first to be abandoned, the survivors concentrating in those more favorable areas downlake and on the Columbia River. For evidently these latter sectors were considered generally superior as residential sites by the Chelan, since these were the locations still occupied in the 1850s.

On the other hand, if the data and speculations of the previous subsistence section are essentially sound, temporary food quest and other task-oriented camps must surely have been occupied by the Chelan in favorable locations within the Park Complex, both on and off the primary trails, as bases for seasonal resource exploitation. Unarguably, very short-term traveling camps must have been numerous along the important intertribal routes used both by Chelan parties journeying to the Methow or Skagit territory and by groups of nearby peoples--Methow, Skagit, and others--entering Chelan territory to visit and trade with the Chelan or merely passing through Chelan country with the principal aim of meeting with neighbors of the Chelan. Presumably at least some of these same sites, owing to their favorable properties along generally hard trails in difficult back country, were likewise in occasional, longer-term use by Chelan when exploiting, perhaps for days at a time, neighborhood subsistence and other resources.

A very partial listing of mammalian types, primarily game animals, native to Chelan territory, as reported in the ethnographic and early historical records, has been included in the hunting section above. It is helpful at this point in assessing the relative importance of the Recreation Area and Park country east of the Cascades to examine a more comprehensive roster of indigenous mammals, extracted from an exhaustive and detailed distribution study prepared from a zoological perspective. Table 4-1 lists those mammals plotted by Dalquest (1948), on his many distribution maps for the State of Washington, so as to indicate their native presence in the country considered ethnographically the Chelan homeland. Several small forms--e.g., shrews, bats, mice, and rats--not known to have been generally secured and utilized as food or used in other ways by Plateau peoples are excluded from this tabulation as irrelevant. Genus and species identifications of the listed mammals can be found in Dalquest (1948) as referenced in the table.

In some cases different species occurred in different sectors of the Chelan country. This situation is illustrated by Marmota flaviventris avara along the Columbia and around the lowest portion of Lake Chelan and M. caligata cascadensis in the upper part of the lake and the Stehekin region (Dalquest 1948:266). In one instance one species (red squirrel) is plotted

to show it on the northeast side of Lake Chelan and of Stehekin River while a different one (Douglas squirrel) is placed on the southwestern side of the lake and of Stehekin River (Dalquest 1948:289). Other distributional differences at a grosser level within Chelan territory are reported in the table. Where Dalquest provides for mammalian types no distribution maps but offers broad descriptive statements, his data often appear too general and impressionistic to permit certain conclusions regarding their presence or absence in the Chelan home country, much less conclusions concerning their occurrence or otherwise in each of the four subareas into which I have subdivided the Chelan region: e.g., porcupines are said to have been not uncommon in "the more open areas on the Cascade Mountains, especially on the eastern slopes" (Dalquest 1948:374). These very broadly painted data are not incorporated into Table 4-1. Unfortunately only such general statements are made for certain of the larger and more important game animals: i.e., various deer species. These rather sweeping descriptive comments suggest, however, that at least mule deer, bighorn sheep, mountain goats, and probably elk occurred in Chelan country (Dalquest 1948:391-393, 399-400, 405, 407); for the sheep and goats abundant independent ethnohistorical and ethnographic testimony exists as noted above. Dalquest's (1948:403, 404) data appear to rule out both caribou and moose as Chelan country mammals, confirming Ray's (1942:116) ethnographic findings for the Wenatchi country.

The data of Table 4-1 reveal several facts of importance in the present village/camp context:

(a) The aboriginal Chelan homeland was rich in mammals customarily secured by Plateau Indians for food and skins and as sources of materials used technologically.

(b) Of the four subareas plotted, the largest number of mammalian forms were native to the lower and middle Lake Chelan area. Of the 33 forms tallied, only three relatively insignificant animals (Washington ground squirrel, jack rabbit, and cottontail) were not to be found in this region, though all three occurred along the Columbia River.

(c) The upper Lake Chelan-lower Stehekin area and the middle and upper Stehekin drainage sector were virtually identical in the mammals they harbored, so far as the information of the table reveals. Only the pocket gopher was found in the former region and not in the latter. The Lake Chelan National Recreational Area and that segment of the North Cascades National Park that lay east of the Cascades were in effect homogeneous in their mammalian life.

(d) The lower-middle Lake Chelan sector southwest of the Park borders was only minimally richer in mammalian types than the Park Complex. Only five mammals of those surveyed in Table 4-1--raccoon, badger, yellow-bellied marmot, Western gray squirrel, and muskrat--lived in the former area and not the latter, none important as food animals.

(e) Every animals in the tabulation that was found north of Riddle Creek in the Park Complex also occurred downlake. Apparently under normal circumstances there was no great incentive for the Chelan in hunting to journey up into the difficult high Stehekin country, for all mammals there could be hunted and trapped closer to their occupation centers.

Table 4-1. Mammalian Distribution within Aboriginal Chelan Territory.

Animal Form	Chelan Country below Park Complex		Chelan Country within Park Complex	
	Columbia River	Lake Chelan below Riddle Creek	Lake Chelan above Riddle Creek and Lower Stehekin Valley	Middle and Upper Stehekin Valley
Black bear (175)[a]	x	x	x	x
Grizzly bear (177)		x	x	x
Western marten (185)		x	x	x
Fisher (188)		x	x	x
Wolverine (204)		x	x	x
Raccoon (181)	x	x		
Ermine (192)	x	x	x	x
Long-tailed weasel (196)	x	x	x	x
Badger (221)	x	x		
Red fox (225)	x	x	x	x
Coyote (230)	x	x	x	x
Wolf (232)	x	x	x	x
Cougar (236)		x	x	x
Canadian lynx (240)		x	x	x
Bobcat (243)	x	x	x	x
Yellow pine chipmunk (256)	x	x	x	x
Townsend chipmunk (261)		x	x	x
Yellow-bellied marmot (266)	x	x		
Hoary marmot (266)		x	x	x
Washington ground squirrel (268)	x			
Golden mantled ground squirrel (280)	x	x	x	x
Western gray squirrel (284)	x	x		
Red squirrel (289)	x	x	x	x
Douglas Squirrel (289)		x	x	x
Flying squirrel (294)		x	x	x
Pocket gopher (308)	x	x	x	
Beaver (321)	x	x	x	x
Mountain beaver (368)		x	x	x
Muskrat (362)	x	x		
Pica (378)		x	x	x
Snowshoe hare (383)		x	x	x
Black-tailed jack rabbit (386)	x			
Nuttall cottontail (388)	x			

[a]Numbers within parentheses are page references to Dalquest (1948).

(f) The Columbia River sector had the smallest number of resident mammalian types: 20 from the total of 33. While we do not know the relative abundance of animals of each species found in two or more subareas, these data suggest that the appeal of the Columbia River sector to those Chelan residents along its banks (about one-fourth or one-fifth as many as lived at Lake Chelan in the 1850 period) was not the range of animals obtainable closeby, though rabbits and cottontails in their vicinity and presumably antelope on the nearby prairies east of the Columbia were unique to their sector of Chelan territory and probably were not without their importance in their diet. Rather the advantages of the river stretch lay in the anadromous fish that could be taken in traditional times only along this major stream, however small their numbers within the Chelan borders. Probably, also edible roots existed in somewhat greater variety and abundance along the Columbia's banks, terraces, and sidehills than in the Lake Chelan and Stehekin sectors, though for this I as yet have no hard evidence. In any event, these comparative mammalian distribution data may help to explain why the traditional Chelan population concentration was not along the Columbia River but in the Lake Chelan region.

The information of the preceding six entries (a-f) fail to demonstrate why the remaining three-quarters or four-fifths of the tribe resided in the middle of the nineteenth century around the lower and lower-middle shores of Lake Chelan, well below the borders of today's Park Complex. Because the mammalian forms of the lower and middle lake country and that of the Park region were very nearly identical, something other than these minimal differences must explain the concentration of villages and camps in the former area. The reason would appear to lie, at least in part, in the topography of the immediate lake shore. The essential shore features were recorded by Dowling (in Stone 1983:36-37) in 1889 when he rode up the lake in the "Belle of Chelan":

> For the first ten miles or so [above the lake outlet] the timber was scattering and the shores bounded by low, bunch-grass hills. These gradually merged into steep, mountain slopes, and these in turn to abrupt and almost perpendicular walls of rock. From the tops of these towering bluffs a fine growth of timber rose from either shore to a height of from 4,000 to 5,000 feet . . . . The few spots on the shores of the lake large enough for ranching on a small scale have already been taken up and cabins built, but they are few and far between.

The few level areas to which Dowling alludes must certainly have been sites of hunting and other task-oriented camps as well as traveling camps, even if they were not at times the location of more permanent winter villages in pre-epidemic days.

The data outlined above in (a)-(f) also suggest the probability that the uppermost about 5 miles of Lake Chelan (the segment above Riddle Creek) and the Stehekin Valley immediately above the lake were used by Chelan hunting and trapping parties mainly as a backup source of game and technologically useful animals when for some reason the mammalian population in the lower elevations around the lake became limited. The pursuit of game at the head of the lake and in the lower Stehekin drainage was probably less energy

demanding, even though additional canoe and land travel was required, than in the high, steep mountains fronting all but the lower reaches of the lake.

Trail Use

The upper Lake Chelan area above Riddle Creek served, with canoe watercraft, as a lacustrine highway to the various points on the northwestern terminus of the lake--like the mouths of small lake-feeder creeks--of which the Chelan made subsistence and other use, and particularly to the mouth of the Stehekin River. In addition, as previously observed, various land trails, following the creek valleys or interstream ridges, left these lake shores leading over the Sawtooth Ridge east and northeast to the Methow headwaters, and in northerly and northwesterly directions over the Cascades. The most important of these routes within the Park Complex ran up the Stehekin Valley to cross the divide to the Skagit country. These paths were also followed on occasion by Plateau neighbors of the Chelan heading west and by coastal peoples, primarily the Skagit it seems, journeying to the east. These trails and their branching small side paths, it must be assumed as already observed, also provided the Chelan access to the resources, subsistence and otherwise, of the high areas laced by the Stehekin river network.

Other Uses

The ethnographic and early ethnohistorical information concerning the Chelan and their aboriginal lifeways is so very scanty that nothing of substance can be said regarding additional uses of the Park Complex within the Chelan tribal borders. One can only hazard the speculation that to some unknown degree the region served as the source of materials of technological importance: of horns, antlers, and mammal bones; of skins of marmots for robes and of other small animals for clothing trimming; of mountain goat wool for woven robes; perhaps of workable stone and textile fibers like beargrass; possibly of medicinal plants and mineral paints; and the like.

EPILOGUE: A LOOK TO THE FUTURE

The four chapters that precede summarize the available information relating to the traditional cultural patterns of the four Indian groups that regarded segments of the North Cascades National Park and the Ross Lake and Lake Chelan National Recreation Areas as within their "tribal" borders. Because of the particular interests of this present study, each chapter concludes with a section in which are brought together whatever data have been found that relate to the tribes' utilization of the mountainous sectors of their traditional tribal territory. Plainly all four exploited to a substantial degree the natural resources of these elevated regions.

In some considerable measure each of these four groups was culturally unique. The Upper Skagit were a western "foothills" tribe on the middle Skagit River with linguistic and cultural affiliations to the coastally oriented Puget Sound tribelets to the west and south. The Chilliwack were a back-country people on a tributary of the Fraser River west of the Cascades crest with their principal dialectal and cultural ties to nearby Fraser Valley groups and with a highly dilute Northwest Coast life style. The Lower Thompson were a main Fraser River tribal division in the heart of the Cascade Mountains, tied in language and basic lifeways to their Upper Thompson kinsmen on the eastern slopes of the Cascades and in the adjacent Fraser Plateau, yet with extraordinarily productive salmon fisheries and revealing clear life-patterning influences from their strongly riverine and weakly coast-oriented downriver neighbors. The Chelan, on the other hand, were a Columbia River and especially lake and mountain Plateau people, related in speech and culture most closely to the tribes immediately north and south of them in the Columbia Valley. Owing to these environmental and cultural contrasts, the four groups seem to provide an ideal, small and so workable sample of distinct tribal traditions, on the two faces of a major mountain mass, for an examination of certain questions of special theoretical interest.

These issues focus in particular upon:

(1) The essential features of the biogeoclimatic mountain environments of the four tribes and the degree to which they were substantially similar or different in terms of the general cultural requirements of the Indian tribes of the Pacific Northwest.

(2) The nature of the use made by each tribe in subsistence and other ways of their respective high terrain homeland and the life patterns, interpreted most broadly, followed by each when in its mountainous environment, and the ways in which among the four tribes these were substantially similar or significantly different.

(3) The ways in which environmental factors appear, on the one hand, to have made cultural similarities possible and, on the other, seem to explain differences in the mountain adaptations of these four tribes both in their resource use patterns and in their total life mode while resident in the higher elevations.

(4) The ways in which tribal cultural backgrounds, orientations, and interests seem to explain similarities and differences in the mountain utilization of the four tribes and, more generally, their higher elevation lifeways: the Upper Skagit and Chilliwack with their somewhat different coastal tilt, the Lower Thompson with their coastal-tinged but basic Plateau affiliation, and the Chelan with their out-and-out Plateau cultural life style.

Before this study was undertaken, it was recognized that the data descriptive of the high-country use by each of the four tribes and of their mountain life more generally were nowhere assembled into cohesive statements and subjected to thoughtful analyses. Yet it was hoped that the published, highly scattered ethnographic and ethnohistorical materials relevant to the subject would prove sufficiently rich and precise to allow at least a preliminary description and comparison of the four groups in the preceding four areas of research. Unfortunately, the available information was discovered to be both remarkably scanty and deficient in detail. Why in their field research ethnographers in the Pacific Northwest have been remiss in inquiring into how high-altitude land masses have contributed to the traditional material, social, and religious existence of native American groups need not be speculated upon here: the situation is hardly worse than it is for the remainder of western North America. It became apparent, at any rate, that even a first-cut endeavor to approach the above four central questions in relation to the North Cascades Complex and adjacent regions should be postponed until a period of limited field study could be undertaken with members of the four tribes who might be able to contribute meaningful, relevant data.

Because total-culture ethnographic summaries of the four tribes that traditionally claimed country within the perimeters of today's North Cascades Complex were required as major segments of this present study, too little time was available for two areas of further inquiry that might well contribute appreciably to the comprehensiveness and completeness of this report:

(a) The brief, aforementioned period of field work with the more elderly and best informed members of the four tribes, designed specifically to secure additional information regarding their traditional tribal life in the more elevated sectors of their territory. Present plans call for this to be soon carried out. If meaningful fresh and focused data are secured, these new findings will be integrated with the mountain cultural information in the preceding four chapters as a supplement to this present study.

(b) A further, systematic canvassing of peripheral and ephemeral data sources, both published and archival, for information relating to the traditional high-altitude lifeways of the four tribes. While not a segment of this present project, it is hoped that at some later time this necessarily slow research program can be undertaken and that the resulting extending information can be integrated with profit into the mountain cultural data of the preceding chapters and the projected supplementary summary.

With a full complement of the available data as compiled for this present literature survey and as broadened and deepened through the additional research specified under (a) and (b) immediately above, it is reasonable to hope that the more theoretical analyses specified under the four-pronged approach above may become possible. If this is the case, we shall then understand more fully not only the traditional hunting, fishing, and plant gathering life mode of the Upper Skagit, Chilliwack, Lower Thompson, and Chelan in the mountainous sectors of their Park and neighboring home territory, an intriguing and hitherto neglected segment of their total lifeways during the protohistoric and early postcontact period. We should also comprehend some of the natural and cultural factors that influenced the shape of their individual tribal life patterns. Further, this understanding would possess a much wider geographical relevance: it would contribute in some measure to our current meager knowledge of Native American cultural adaptation to the high elevation regions of all mid-latitude Western North America.

REFERENCES CITED

BCGTB (British Columbia Government Travel Bureau)
1957 British Columbia Road Map and Campsite Locations.

Beckey, Fred
1981 Cascade Alpine Guide: Climbing and High Routes, Rainy Pass to Fraser River. The Mountaineers, Seattle.

A masterful, detailed guide--much based on personal experience--to the mountains of the North Cascades country, including the Lake Chelan, Skagit River, and Chilliwack River areas, describing in text, diagrams, maps, and photographs hundreds of trails and climbing routes. Each of the three sections into which the region is divided includes a compressed but highly informative summary of the geography (with climatic and biotic data), geology, and history of the country and a bibliography of selected references. Most of the volume is devoted to precise and exhaustive information on countless individual ranges, mountains, peaks, ridges, pinnacles, buttes, glaciers, and the like to provide hikers and climbers with an incomparable vade mecum.

Boas, Franz
1890 First General Report on the Indians of British Columbia. In Fifth Report of the Committee . . . [to Investigate] the Physical Characters, Languages, and Industrial and Social Conditions of the North-Western Tribes of . . . Canada. In Report of the 59th Meeting of the British Association for the Advancement of Science, Newcastle-upon-Tyne, 1889, pp. 801-893.

Except for a few, brief comments on the Interior Salish and Kutenai, the ethnographic section of this report is devoted exclusively to the coastal tribes of British Columbia, especially the more northern ones. The physical anthropological portion also focuses largely on the more northern coastal groups; a short series of measurements is given for seven Upper Thompson skulls. The linguistic section includes a summary for Kutenai as well as summaries for Tlingit, Haida, and Tsimshian.

Boas, Franz
1892 Physical Characteristics of the Tribes of the North Pacific Coast. In Third Report on the Indians of British Columbia. In Seventh Report of the Committee . . . to Investigate the Physical Characters . . . of the North-Western Tribes of . . . Canada. Report of the 61st Meeting of the British Association for the Advancement of Science, Cardiff, 1891, pp. 424-449.

A summary of the results of Boas' anthropometric research among the native population from northern coastal British Columbia south to northern California and inland along the eastern face of the Cascades. The principal data include a short series of 16 measurements and a set of five indices. The basic information for each person measured, identified as to tribal affiliation, is presented in tabular form. Other tables compare these mensurational and index data for the different tribal constellations. The

significance of the findings in terms of eleven regional biotypes is briefly discussed.

Boas, Franz
1894 The Indian Tribes of the Lower Fraser River. In On the North-Western Tribes of Canada. Ninth Report of the Committee . . . . Report of the 64th Meeting of the British Association for the Advancement of Science, Oxford, 1894, pp. 454-463.

A short, generalized ethnographic summary of the Halkomelem tribes of the lower Fraser from the Tait to those at the Fraser mouth, based on field work among the Chehalis in the summer of 1890. The principal villages are located and intertribal relationships are outlined. Described in particular are their life patterns relating to hunting and fishing, marriage and death, and religion. A few notes regarding the Chilliwack specifically are included.

Boas, Franz
1895 Fifth Report on the Indians of British Columbia. In The North-Western Tribes of Canada. Tenth Report of the Committee . . . . In Report of the 65th Meeting of the British Association for the Advancement of Science, Ipswich, 1895, pp. 524-551.

A second report presenting anthropometric data collected by Boas and his associates among the tribes of southern British Columbia and the Nass River and Kwakiutl of the coastal region. The most detailed information covers, for both sexes, head length and width, facial height and breadth, and nasal height and breadth. The significance of these data and of other measurements and observations of lesser importance in regional terms is discussed. Many tables record his field measurements, allowing further analyses by others who may wish to undertake supplemental studies.

Boas, Franz
1898 Introduction. In Traditions of the Thompson River Indians of British Columbia, by James A. Teit, pp. 1-18. American Folk-Lore Society, Memoir 6.

An analytic and comparative commentary on certain aspects of the Upper Thompson myths collected by Teit in the 1890s. Certain developmental, evolutionary, and diffusional theories regarding the prehistoric growth of these myths are presented. These data are preceded by a brief summary of the traditional lifeways of the tribe as background for a fuller understanding of the cultural content of the myths. The mythic corpus of Teit is followed by an extensive body of explanatory and comparative notes and a set of abstracts of the individual myths, the first prepared by Teit and Boas and the second by Boas alone.

Boas, Franz
1900 Art; Conclusion. In The Thompson Indians of British Columbia, by James A. Teit, pp. 376-390. American Museum of Natural History, Memoir 2.

A brief survey of the decorative art, music, and dance of the Thompson Indians and an attempt to see the Thompson in relation to the Salishan groups as a whole largely in culture history terms.

Boas, Franz (editor)
1975 Ethnographic Album of the North Pacific Coasts of America and Asia. Jesup North Pacific Expedition. AMS Press, New York. Originally published 1900, American Museum of Natural History, New York.

A small portfolio of face and shoulders photographs of Thompson, Shuswap, and Lillooet men and women to illustrate the range of physical types. Also nine photographs of Thompson-Nicola countryside and of dwelling and sweat house structures. All were taken by Harlan Smith during the Jesup Expedition in the 1890s. They are introduced by two pages of background and explanatory notes.

Boas, Franz and Herman Haeberlin
1927 Sound Shifts in Salishan Dialects. International Journal of American Linguistics 4:117-136.

A pioneering study of phonetic similarities and differences in cognate terms in Salishan coastal and interior languages and dialects, and an analysis of the patterned consonental and vocalic sound changes that have occurred through time.

British Columbia (Province)
1974 Beautiful British Columbia: Road Map, Campground & Angling Guide.

1983 Tourism British Columbia Road Map.

1984 Road Map and Parks Guide.

Brown, William C.
1914 Old Fort Okanogan and the Okanogan Trail. Oregon Historical Quarterly 15:1-38.

An early, informative summary of the history of the fort, its role in the evolution of the Northwest and Hudson's Bay Company fur trade in the Okanogan Valley area, and its important function as a major supply-distribution and fur-collection center for the widely dispersed fur trading posts in the northern and eastern Plateau.

Cain, H. Thomas
1950 Petroglyphs of Central Washington. University of Washington Press, Seattle.

A comprehensive survey of the pictographs and petroglyphs of Washington from the Snake River mouth up the Columbia and its principal tributaries to the Grand Coulee area. Each site is located and its representations described. The figures are analyzed in terms of major and minor design elements and the spatial distribution of these elements within the geographical area investigated is discussed and charted.

Chapman, J. D. and D. B. Turner (editors)
1956 British Columbia Atlas of Resources. British Columbia Natural Resources Conference, 1956.

A useful data synthesis and plotting of resource distribution within the province. Since, however, its orientation is toward our contemporary Western culture and its resource requirements, it must be consulted with caution where precontact and early postcontact conditions regarding the bioenvironment are the issue. Its map of salmon spawning streams, for example, shows the Columbia as such only as far upriver as Grand Coulee Dam.

Clark, Lewis J.
1973 Wild Flowers of British Columbia. Gray's Publishing Limited, Sidney, British Columbia.

Unlike the Clark volume of 1976, this earlier one focuses entirely on the plants of the province and their distribution within the area. Nevertheless, the habitat data for the province are identical or nearly so for every plant of concern in this study. Where trivial differences occur, it is uncertain whether the information of this volume is being corrected in the 1976 publication or merely being slightly contracted or extended.

Clark, Lewis J.
1976 Wild Flowers of the Pacific Northwest from Alaska to Northern California. Edited by John G. Trelawny. Gray's Publishing Limited, Sidney, British Columbia.

Although far less technical and much less complete than the Hitchcock and Cronquist (1981) encyclopedic treatment, this magnificent, oversized volume of 604 pages covers a much broader geographic area, summarizes the essential data for a large number of genera and species adequately and understandably, and provides splendid color illustrations for many hundreds of varieties. Altogether a superb volume for a technically half-informed but curious amateur.

Codere, H.
1948 The Swai'xwe Myth of the Middle Fraser River: The Integration of two Northwest Coast Cultural Ideas. Journal of American Folklore 61:1-18.

Analyzing three versions of the Swai'xwe myth accounting for the origin of the Swai'xwe mask, Codere contends that the Middle Fraser variant differs from and combines the "crest idea" of the Kwakiutl well north of the Fraser and the "power idea" of the Salishan peoples of southern Puget Sound. This is believed to support the thesis of a particular Middle Fraser Culture distinct from the cultural configurations of the surrounding coastal and near-coastal groups. These interpretations of the myths have been properly attacked by Suttles (1957:161-162) as resting on arbitrary misreadings of the published data and so as not favoring the existence in an earlier period of a unique Middle Fraser cultural mode.

Codere, Helen
1949 The Harrison Lake Physical Type. In Indians of the Urban Northwest, edited by Marian W. Smith, pp. 175-183. Columbia University Press, N.Y.

A reexamination of Boas' 1891 very limited anthropometric and observational data concerning his Harrison Lake Type. It is concluded that

this unquestionably unique physical type, characterized by very short stature and other bio-traits, was also the basic type of the Chilliwack and other Middle Fraser groups. Interestingly, the Harrison Lake people do not overtly recognize their small stature: apparently it is with them an insignificant and irrelevant fact of life. This stature disinterest may be the consequence of seeing personal importance in the light of guardian spirit power strength or of inherited position and privileges, but this is yet unknown.

Collins, June McCormick
1949 John Fornsby: The Personal Document of a Coast Salish Indian. In Indians of the Urban Northwest, edited by Marian W. Smith, pp. 287-341. Columbia University Press, New York.

Fornsby's account of many episodes of his life, interspersed with myths and folktales as he thought relevant, recorded by Collins in the 1940s, edited, and rearranged roughly chronologically. Generalizations are relatively few, since Fornsby found these difficult.

Fornsby was born in 1855 in an Upper Skagit village near Lyman. However, his orientation was primarily downriver and with the salt-water people, and his account deals almost exclusively with the coastal area and its people. The few references to the Upper Skagit and their country are incorporated in the Upper Skagit section of this present report.

Collins, June McCormick
1974a Valley of the Spirits, the Upper Skagit Indians of Western Washington. American Ethnological Society, Monograph 56. University of Washington Press.

The basic general ethnography for the Upper Skagit. Although some subsistence and settlement data are provided, the emphasis is upon social structure, religion, and life cycle patterns. Early history and post-White changes in the traditional life style are also summarized. The material of this volume is extensively used in my summary of the traditional Upper Skagit lifeways.

Collins, June McCormick
1974b A Study of Religious Change among the Skagit Indians, Western Washington. In Coast Salish and Western Washington Indians 4:619-759. Garland Publishing Inc, New York.

An analysis and explanation of the rejection of Roman Catholicism by many Skagit and the gradual acceptance of the Shaker cult in its place. The thesis is that Shakerism corresponded closely in many respects to the traditional guardian spirit religion and incorporated ethical elements that had become important to the Skagit.

Collins, June McCormick
1974c Aboriginal Habits [Habitat] of Upper Skagit, Suiattle-Sauk, Skykomish and Snoqualmie, Petitioner's Exhibit No. 1, Docket Nos. 92 and 93. In Coastal Salish and Western Washington Indians 5:facing 760. Garland Publishing, N.Y.

This map plots the aboriginal territory of the Upper Skagit and Suiattle-Sauk, the location of their village sites, and the location of their major subsistence areas.

Collins, June McCormick
1977 The Upper Skagit Indians and the Skagit River. In Of Man, Time,and a River: the Skagit River, How should it be Used? edited by Roland L. De Lorme, pp. 1-5. Occasional Paper #10, Center for Pacific Northwest Studies, Western Washington State College. Bellingham, Washington.

For the most part this is a very brief, popular summary of some of the information in Collins 1974a, but with special attention to the relation of traditional Upper Skagit life to the Skagit River.

Commission Findings
1974 The Confederated Tribes of the Colville Reservation, et al. . . . Docket No. 181. In Interior Salish and Eastern Washington Indians IV, pp. 437-474. Garland Publishing Inc., New York.

The Findings of Fact section contains ethnographic and historical data, developed in the course of the court testimony, on the Lakes, Colville, Sanpoil, Nespelem, Okanagan, and Methow. The Chelan are not considered.

Cox, Ross
1957 The Columbia River. Edited by Edgar I. Stewart and Jane R. Stewart. University of Oklahoma Press, Norman. Originally published as Adventures on the Columbia River 1831, Henry Colburn and Richard Bentley, London.

An account of Cox's 1812-1817 period in the Plateau fur trade, with observations regarding the various Indian groups which he met and with which he traded. Includes a unique chapter describing in detail the dress, habits, typical personality traits, etc., of the Canadian voyageur, half-breed, and Iroquois Indian, all common trade company employees at his time. A useful document but the narrative sections must be evaluated with care, since, as the Stewarts caution, Cox wrote largely from memory, failed on occasion to distinguish between heresay and personal knowledge, confused date sequences, and tended to romanticize and exaggerate his own role in events.

Curtis, Edward S.
1911 Salishan Tribes of the Interior. In The North American Indian 7:43-114, 162-166, 179-189. Norwood.

A survey of the traditional culture and Indian-White history of these native groups, based on data collected in 1907 and the following year or two by W. E. Myers, Curtis' field assistant. Useful summaries but poorly balanced: some groups receive extensive attention and others very little; some topics are well considered while others are very superficially treated. Excellent photography, but the subjects are not always as traditional as they might seem. What little Chelan information is presented is merged with other Interior Salishan data in this present report.

Dalquest, Walter W.
1948 Mammals of Washington. University of Kansas Publications, Museum of Natural History, 2:1-444.

A basic, comprehensive reference volume on the mammals of Washington both east and west of the Cascades. Detailed for each form are its physical characteristics, measurements, and areal distribution within the State. For a great many species extensive notes on behavioral characteristics and photographs of typical specimens are included.

DEMR (Department of Energy, Mines and Resources), Surveys and Mapping Branch, Canada.

1969 Vancouver NM-9/10, Internation Map of the World. 1:1,000,000. Edition 1.

1970 Hope quadrangle, 92H, Edition 2. 1:250,000.

1973 British Columbia. 1:2,000,000.

1975 Skagit River quadrangle, 92 H/3, Edition 3. 1:50,000.

1980 Chilliwack quadrangle, 92 H/4, Edition 7. 1:50,000.

1984 National Topographic System Maps of Canada, Index #2.

Diebold, A. Richard, Jr.
1960 Determining the Centers of Dispersal of Language Groups. International Journal of American Linguistics 26:1-10.

A detailed summary of Dyen's method for inferring from language distributions language centers of development and subsequent migrations, and an attempt to apply this methodology to the Mayan and Salishan language families. Swadesh's 1960 subgroupings of Salishan are accepted as the basis for the Salishan reconstruction.

Douglas, David
1972 The Oregon Journals of David Douglas, . . . 1825, 1826 & 1827. 2 vols. Edited by David Lavender. Oregon Book Society, Ashland.

In March and April Douglas canoed up the Columbia from The Dalles to Fort Colvile. Thence he traveled overland to the Spokane River and back, collecting plants en route. In June he returned down the Columbia by boat to Walla Walla, from which base he mounted a collecting trip to the Blue Mountains and Wallowas. This was followed by a late July-early August journey up the Snake to Nez Perce country and then overland to the Spokane River and Kettle Falls. From Colville he rode on horseback back to the Spokane River and down the Columbia to Fort Okanagan. There he secured a canoe and traveled down the Columbia to The Dalles and out of the Plateau. A substantial amount of miscellaneous ethnographic and natural history data is incorporated into these narratives, though nothing relating directly to the Chelan.

Duff, Wilson
1952 The Upper Stalo Indians of the Fraser Valley, British Columbia. Anthropology in British Columbia, Memoir No. 1. British Columbia Provincial Museum, Victoria, B.C.

A general ethnography of the Halkomelem-speaking groups that aboriginally held the country along the Fraser River from the Sumas Lake area upstream to the lower end of Fraser Canyon just above Yale, B.C. The study is a compilation of Duff's informants' data, collected in 1949 and 1950 and concerned principally with the upriver Tait tribelet and to a lesser degree with the Chilliwack. These informant data are merged with information extracted from earlier fragmentary ethnographies and uncovered in the early historical accounts of the area. There are many gaps in the data, as Duff acknowledges. Moreover, the study is difficult to use, because it is often unclear how much of general Upper Stalo statements and data relating to the Tait group are known to be descriptive of the traditional Chilliwack cultural situation. Still this study is the best and fullest ethnography available both for the Upper Stalo as a whole and for the Chilliwack in particular.

Duff, Wilson
1964 The Indian History of British Columbia. The Impact of the White Man, vol. I, Anthropology in British Columbia, Memoir No. 5. Provincial Museum of British Columbia, Victoria, B.C.

Following a summary of the major ethnic "divisions," language groupings, and tribes and bands of the province, Duff turns his attention to the demographic and especially cultural impact of Whites on the native groups. Postcontact times are divided into the fur trade (1774-1849), colonial (1849-1871), and postcolonial periods. For the first of these time levels, special notice is directed to trade, changes in the native potlatch and art, and the influence of guns. The colonial period is disposed of in two pages. The third period falls beyond the interest scope of this study. As might be expected, the coast and its native peoples receive particular emphasis.

D[urham], N. W.
1972 [Lake Chelan in the 1890s: 1891 Steamboat Trip to Stehekin on Lake Chelan's First Steamer.] Edited and annotated by Robert Byrd. The World Publishing Co., Wenatchee, Washington.

A slender volume republishing a newspaper account of a pleasure trip in May, 1891, apparently authored by Durham. To this narrative the editor has appended many explanatory notes and a collection of early photographs of the area. The nature and extent of his editing are unclear.

Dyen, Isadore
1962 The Lexicostatistically Determined Relationship of a Language Group. International Journal of American Linguistics 28:153-161.

An effort to introduce further mathematical rigor into Swadesh's lexicostatistical methodology and its use in subdividing language families into component units of comparable magnitude. The procedure is applied to the Salishan languages following Swadesh's lead and employing his data base.

Eells, Myron
1985 The Indians of Puget Sound: the Notebooks of Myron Eells. Edited by George Pierre Castile. University of Washington Press, Seattle.

A useful description of the traditional culture of the Indians of northern Puget Sound and of the culture change then in progress by a missionary who lived among the Twana beginning in 1874. The data were compiled by Eells in notebook form and brought to their final version in 1894. The total range of native life is covered, in varying degrees of depth, from material culture to art and religion. The work has clear biases and misunderstandings as one would expect of one laboring for culture change and religious conversion, and the interpretations are not always sound and without prejudice. But it includes a good deal of informative ethnography and culture change data and many fine material culture plates.

Elmendorf, William W.
1952 Soul loss illness in Western North America. In Indian Tribes of Aboriginal America, Selected Papers of the XXIXth International Congress of Americanists, edited by Sol Tax, pp. 104-114. University of Chicago Press, Chicago.

This study (1) defines the areas of occurrence and absence of the soul loss concept in western North America; (2) analyzes the soul loss data for component traits and groupings of traits; (3) examines the distribution of these traits and their associations with each other and with other features of native culture; and (4) considers these findings as they bear on the theory of unitary origin of the concept, on the theory of Asiatic origin of North American soul loss, and on the possible courses of development of soul loss theories and practices in Western North America.

The theory of curable soul loss disease was everywhere present, so far as available data indicate, among the tribes of the Northwest Coast and the northern (but not central and southern) Plateau areas. Though ethnographic data are lacking, it is presumed to have occurred in the Middle Fraser.

Elmendorf, William W.
1961a Skokomish and Other Coast Salish Tales. Research Studies 29:1-37, 84-117, 119-150. Washington State University.

A collection of 38 tales gathered in 1939-1940. Most are of Skokomish origin, although a few are from nearby tribes (Klallam, Snoqualmie). One takes place at the Skagit River mouth and Skagit Indians are involved, but it is described as a Skokomish myth. The tales are introduced by a description of Elmendorf's informants, and by fine sections on style and provenience and a classification of the myths into types, a discussion of the tale characters, and a short but excellent analysis of the ethnographic content of the myths. Two appendices provide a list of characters appearing in the corpus and a useful index to the ethnographic content of the tales.

Elmendorf, William W.
1961b System Change in Salish Kinship Terminologies, Southwestern Journal of Anthropology 17:365-382.

It is hypothesized that the Proto-Salish language community possessed a single kinship system and terminology which, through time, changed to yield the two distinctly different Salish systems of the postcontact period: one among the coastal Salish from Bella Coola to Tillamook and the other among Interior Salish groups. The question addressed from both ethnological and linguistic perspectives is whether, given certain comparative evidence from recent Salish societies, the nature and direction of these changes can be inferred. To test this question the grandparent/grandchild and uncle-aunt/nephew-niece term sets are examined under three different, mutually exclusive explanatory hypotheses. It is concluded that the Interior groups have retained most closely the prototype, from which the Bella Coola, Coast Salish, and Tillamook have diverged most sharply.

Elmendorf, William W.
1962a Lexical Innovation and Persistence in Four Salish Dialects, International Journal of American Linguistics 28:85-96.

An analysis of the lexical relations of Musqueam and Cowichan, two Halkomelem dialects of southern Vancouver Island, with Songish and Twana, two Salish languages of northwest Washington, to carry our understanding of Salish internal relationships beyond Swadesh's sweeping study of 1950. The Salish subgroups represented in the four tribes are defined and the different degrees of lexical innovation among these are determined. Swadesh's figures on lexical persistence through time are tested and found to fail to accord with the lexical retention or replacement data for these four Salish tribes.

Elmendorf, William W.
1962b Lexical Relation Models as a Possible Check on Lexicostatistic Inferences. American Anthropologist 64:760-770.

A test of the Swadesh hypotheses that equivalent lexical relationships, measured by lexicostatistic techniques, indicate equivalent rates of change. The emperical and logical bases of this proposition are examined; the possibility that a particular set of synchronic lexical relations does not necessarily imply one and only one diachronic process is tested by reference to a set of theoretical models among three related Salish languages; and the evidence is brought forward that indicate the applicability of one particular model.

Elmendorf, William W.
1963 Linguistic and Geographic Relations in the Northern Plateau Area. Southwestern Journal of Anthropology 21:63-78.

A refined, thoughtful, seminal examination of Swadesh's 1950 lexicostatistical data concerning the Interior Salish speech groups to determine their implications for the culture history of these groups. The linguistic and geographic relations of these groups are investigated; a relative chronology of their gradual separation is proposed; the sequences of their probable territorial movements in specific directions are catalogued; and the likely linkage of these separations and movements with the changing environment is described. A valuable ethnolinguistic study for Plateau prehistory.

Elmendorf, William W., and Wayne Suttles
1960 Pattern and Change in Halkomelem Salish Dialects. Anthropological Linguistics 2 (7):1-32.

An excellent technical treatment of certain aspects of the Halkomelem language including internal dialect divisions and the phonologic and morphologic differences between three representative dialects: Chilliwack, Musqueam, and Cowichan. Certain lexicostatistic propositions are tested with important conclusions regarding differences in rate of linguistic change among semantic classes.

Ermatinger, Edward
1912 Edward Ermatinger's York Factory Express Journal, . . . of Journeys made between Fort Vancouver and Hudson Bay in the Years 1827-1828. Royal Society of Canada, Transactions, 3rd Series, 6:67-132.

Ermatinger's day-by-day account of his boat journey of March-April, 1827, from Fort Vancouver to Fort Colvile and the Boat Encampment and then on snowshoes over Athabasca Pass. Also his journal of his return in October, 1827, over the mountain defile and down the Columbia to Vancouver. On both occasions he rode the river through Chelan country. Likewise his boat travel of late March and April, 1828, up the Columbia from Fort Vancouver to the Boat Encampment, once more passing through Chelan territory.

Franklin, Jerry F., and C. T. Dyrness
1973 Natural Vegetation of Oregon and Washington, USDA Forest Service General Technical Report PNW-8.

A splendid study in depth of the various environmental and plant regions of the two states. The 15 physiographic provinces and particularly the major vegetational areas of both the forested and the steppe regions are described in detail with many diagrams, tables, and superbly informative illustrations. A landmark compilation and synthesis of bioenvironmental data, highly useful as a reference source.

Franchere, Gabriel
1854 Narrative of a Voyage to the Northwest Coast of America in the Years 1811, 1812, 1813, and 1814. Translated and edited by J. V. Huntington. Redfield, N.Y. Originally published as Relation d'un Voyage a la Côte du Nord-Ouest. . . . 1820, edited by Michel Bibaud, published by Pasteur, Montreal.

The first French edition took gross liberties with Franchers's Ms. Apparently this 1854 English translation follows the Ms. much more closely. An account of Franchere's four years as an Astorian, including his sea journey to the mouth of the Columbia River. An excellent contemporary record of fur traders' activities in the Plateau and the establishing of the posts at the mouth of the Okanogan and on the Spokane. Useful in checking material presented by Cox, Ross, and other early nineteenth century trade personnel.

Fraser, Simon
1889 Journal of a Voyage from the Rocky Mountains to the Pacific Coast, 1808. In R.A. Masson, Récits de Voyages, Lettres et Rapports inédits Relatifs au Nord-Ouest Canadien, Première Série, vol. 1, no. 3: 155-221. In L. R. Masson, Les Bourgeois de la Compagnie du Nord-Ouest. A. Coté et Cie, Québec.

The first printing of Fraser's journal of exploration of the Fraser Valley. His record has been rather extensively edited by Masson, mostly through minor wording changes and expansions to make it more clear or more literary. In general, none of the original sense has been lost. In carefully comparing this version with Lamb's edition, however, I noted in the Upper Stalo sections a few substantive differences: e.g., "proceed on foot with our baggage" (Masson's, p. 192) vs. "proceed on foot without our baggage" (Lamb's, p. 98) where the context makes it plain that Masson's is correct; "pine trees" (Masson's, p. 194) vs. "fine trees" (Lamb's, p. 100), in which case the correct version is uncertain. Other differences of this class are noted in the text of this present report. Curiously, Masson blacked out some sentences and sentence parts in Fraser's original field account so heavily that Lamb was unable to read the words: one wonders what information Masson chose to conceal. This version should be read side-by-side with Lamb's by anyone concerned with historical details.

Fraser, Simon
1960 The Letters and Journals of Simon Fraser, 1806-1808. Edited by W. Kaye Lamb. Macmillan Company of Canada, Toronto.

Edited versions of several of Fraser's journals, that of 1808 reporting his descent from Fort George to the Gulf and return being of special interest to this present study. His travels through the Lower Thompson and Upper Stalo (including Chilliwack) country are described in cursory fashion but with some perceptive Indian details. Unfortunately, few precise geographic facts are provided, making very difficult the precise locating of many of his observations. While no great problem for the Lower Thompson area, it becomes such in the Upper Stalo country. For this reason only the most certain Upper Stalo data are incorporated into this present report.

In this publication Fraser's "transcripts have been considerably revised" to make Fraser's "meaning clear." Capitalization and punctuation, for example, have been altered to render the text "more intelligible and more readable." Different spellings of the names of the French-Canadian voyageurs and of the names of Indian tribes have been standardized. All this is really too bad. Editorial clarifications should be offered--and welcomed--in my judgment only when achieved by techniques that do not destroy the original manuscript in any manner. Otherwise, as in this case, the reader is wholly at the mercy of the editor.

Gibbs, George
1855a Indian Tribes of the Territory of Washington. In I. I. Stevens 1855, pp. 402-436.

An informative description of the tribes between the Cascades and the Rockies as Gibbs, a member of Steven's party, saw and learned about them in the early 1850s. Particular attention is given to those groups along his route from the Klickitat and Yakima country to that of the Wenatchi, Southern Okanagan, and Colville and on east. Discussed are tribal locations, population estimates, and certain segments of material and social culture. Appended are demographic tables from earlier sources and sections on trading posts, missionary activities, and the treaty situation. The Chelan are mentioned only in passing and as a part of the Pisquouse (Wenatchi) group (p.

412). Basic data on the coastal groups from the lower Columbia to the Canadian line are also provided.

Gibbs, George
1855b Reconnaissance of the Country Lying upon Shoalwater Bay and Puget Sound. In I. I. Stevens 1855, pp. 465-473.

A summary of what was known in 1854 of the geography of the areas noted in the title, much of it the result of the survey referred to.

Gibbs, George
1860 Sketch of the Country between the Skagit and Okinakane and Columbia Rivers. National Archives Record Group 76.

Said to include a listing of Chelan villages and camps. Its ethnographic content beyond this point is unknown to me. (See Ray 1974:419 fn.)

Gibbs, George
1877 Tribes of Western Washington and Northwestern Oregon. Contributions to North American Ethnology 1:163-241. Department of the Interior, Washington.

A general ethnographic overview of the Indian groups between the Cascades and the Pacific from the lower Columbia to the Canadian line. Minimal attention is given to the inland groups against the Cascades. Most of the data are in the form of brief summaries of cultural categories with occasional references to specific groups by way of illustration: e.g., subsistence, material culture, property, slavery, warfare, diseases and curing, gambling, feasts, and cycle of life.

Glover, Richard (editor)
1962 David Thompson's Narrative, 1784-1812. The Champlain Society, Toronto.

Written by Thompson many years after his activities as a field fur trader, using his journals and his recollections of things and events as his guide. The volume summarizes in narrative style his rich trading experiences in Canada east of the Rockies, in the upper Missouri country, and in the intermontane plateau region west of the Divide. It provides much explanatory and generally descriptive material not to be found in his printed day-by-day records and covers time periods for which his daily journals remain unpublished. In some instances these narrative data differ somewhat from the facts as reported in his on-the-spot records. In such cases I routinely follow these latter records, unless convincing reasons exist to the contrary.

Green Trails
n.d. Marblemount, Wa-No 47. 15 minute series.

One of a series of maps showing roads and trails in the North Cascades Park complex. These cultural features, derived from U.S. Park Service data and of particular interest in this present study since they suggest possible old Indian trail routes, are superimposed on USGS base maps.

n.d. Mt. Challenger, Wa-No 15. 15 minute series.

n.d. Ross Lake, Wa-No 16. 15 minute series.

Haeberlin, Hermann
1924 Mythology of Puget Sound. Journal of American Folk-Lore 37:371-438.

Myths collected in English by Haeberlin and prepared posthumously for publication by Gunther from his field notes. The collection includes a group of transformer tales and another relating to five Wolf brothers. A set of tales has Fox as an important personage, taking the place of the Plateau Coyote. Of the 41 tales, 13 are credited to the Skagit; the remainder are reported to have been Snoqualmie, Snohomish, or Skykomish.

Haeberlin, Hermann and Erna Gunther
1930 The Indians of Puget Sound. University of Washington Publications in Anthropology, 4:1-84.

A general ethnographic survey of the Indian tribes of the Puget Sound area with special attention to the Snohomish, Snoqualmie, and Nisqually. Some data are included on neighboring groups, including the Skagit. This field information was collected in 1916-1917 by Haeberlin and slightly revised and extended by Gunther in preparing Haeberlin's original report for this republication.

Haines, Francis
1938 The Northward Spread of Horses among the Plains Indians. American Anthropologist 40:429-437.

A detailed study, coupling ethnographic and historical information, of the diffusion of the horse northward from the Sante Fe area in the Southwest. While the emphasis in on the Plains data, a few final paragraphs are devoted to its spread through the Great Basin into the Plateau.

Heizer, Robert F.
1942 A Decorated Mortar in Columbia Valley Art Style. American Anthropologist 44:534-537.

A brief discussion of the artistic aspects of a prehistoric ornamented basalt mortar found on the lower Columbia River. Design parallels are noted with Northwest Coast art, but these characteristics are distant enough to point to a local, specialized Columbia Valley style, which Heizer believes is in part ancestral to that of the Northwest Coast.

Henry, Joseph Kaye
1915 Flora of Southern British Columbia and Vancouver Island. W. J. Gage and Co., Toronto.

Useful because of its special geographical focus and particularly in providing early twentieth century taxonomic nomenclature roughly contemporaneous with the botanical binomials used by early ethnographers reporting ethnobotanical data. Many taxonomic plant names, like those of other western botanists of early years, are "obvious misidentifications based on eastern North American floras" (Taylor and MacBryde 1977:xvi). Plant distribution information is very limited.

Herzog, George
1949 Salish Music. In Indians of the Urban Northwest, edited by Marian W. Smith, pp. 93-109. Columbia University Press, N.Y.

A review of the music of the British Columbia Plateau, the middle and lower Fraser, and the nearby Northwest Coast areas, based on published data available in the late 1940s. The data corpus includes ten melodies from the Chilliwack and eight from the Lower Thompson, all recorded by Frances Densmore in 1926. From information at Herzog's disposal generalizations are made concerning the music of the Fraser country and these are compared with the characteristics of American Indian music over a much wider geographical area, with particular attention to the music of the classic groups of the Coast farther north. Certain technical traits of Salish music are detailed.

Hess, Tom
1976 Dictionary of Puget Salish. University of Washington Press, Seattle.

An impressively large and well analyzed collection of lexical information on Puget Sound Salish (Skagit and closely related dialects) gathered from native informants between 1962 and 1974 by a fully professional linguist.

Hilbert, Vi
1985 Haboo: Native American Stories from Puget Sound. University of Washington Press, Seattle

English translations of 33 traditional myths of the Skagit and other Lushootseed-speaking groups of Puget Sound. Most were collected by Hilbert, a linguistically-trained Skagit and a native speaker of the language; others were developed from tapes or written texts recorded earlier by others. The terse oral myths as told in the past and to Hilbert have been expanded considerably with "additions appropriate to English prose and essential for the Western reader's understanding," background material taken for granted by old-time native listeners. Twenty-seven of the myths were told by Upper Skagit or part-Upper Skagit raconteurs; two were told by Sauk-Suiattle persons.

Hill-Tout, Charles
1900 Notes on the N'tlaka'pamuQ of British Columbia, a Branch of the great Salish Stock of North America. In Report of the 69th Meeting of the British Association for the Advancement of Science, Dover, 1899, pp. 500-584. Edited by Ralph Maud and republished as "Notes on the Ntlakapamuq . . ." in The Salish People (1978) 1:41-130, Talonbooks, Vancouver.

A general summary of the Thompson Indians. The ethnographic section briefly discusses their subsistence base: certain areas of material culture (utensils, canoes, weapons, sweathouses, clothing, tattooing, and painting); birth, naming, marriage, and mortuary customs; social organization; and various aspects of religion (guardian spirit quest, shamanism, taboos, and magical practices). Short sections deal with the archaeology of the Thompson country, the physical anthropology of the people, and their language, analyzed after the Latin model popular in Hill-Tout's period. An English-to

Thompson vocabulary is provided. The final 50 pages are devoted to Thompson mythology in English translation.

Hill-Tout, Charles
1903 Ethnological Studies of the Mainland Halkome'lEm, a Division of the Salish of British Columbia. In Ethnological Survey of Canada--Report of the Committee, Report of the British Association for the Advancement of Science, 72nd Meeting, Belfast, 1902, pp. 355-490.

A summary of Hill-Tout's several periods of cultural and linguistic research among the various tribelets of the lower Fraser. Included in the Chilliwack section are data relating to demography, dwellings, social organization, shamanism, the cycle of life, and mythology. Some 32 pages are devoted to language analysis and a vocabulary listing.

Hill-Tout, Charles
1904 (See Hill-Tout 1978c.)

Hill-Tout, Charles
1978a The Tcilqeuk. In The Salish People, vol. III, The Mainland Halkomelem. Edited by Ralph Maud. Talonbooks, Vancouver, B.C. Originally published 1903 in Ethnological Studies of the Mainland Halkome'lEm, a Division of the Salish of British Columbia (q.v.).

The text of the 1903 report remains virtually unchanged--though lengthy paragraphs have been divided--except in two notable respects. First, Hill-Tout's phonetics are simplified: e.g., Q and E become "q" and "e" respectively; glottal and stress marks are dropped; macron, cedilla, dieresis, and circumflex are lost. As a consequence, native sound distinctions are blurred through the merging of two separate sounds into a single English letter. In some cases, the results are misleading. On the basis of Hill-Tout's phonological descriptions, ç should be represented by the English "th" (θ), not a "c" and his c should be converted to "sh" ($\check{s}$), not left as a "c." His Q has nothing in common with the English "q" but represents something like "wh" (x^w). Native terms for population groupings, localities, and cultural items are converted to contemporary equivalents or simple English letter sequences: e.g., Sūwā'le to "Soowahlie"; Tcil'Qē'uk to Chilliwack; N'tlaka'pamuQ to "Thompson [the tribe]." A few explanatory notes have been added. Second, essentially all of the linguistic data have been eliminated: most of the descriptive material and all of the illustrative data and vocabulary.

Hill-Tout, Charles
1978b Report on the Ethnology of the Okanaken [Okanagan] of British Columbia, an Interior Division of the Salish Stock. In The Salish People, vol. I, The Thompson and the Okanagan, pp. 131-163. Edited by Ralph Maud. Talonbooks, Vancouver, B.C. Originally published 1911 in the Journal of the Royal Anthropological Institute 41:130-161.

A superficial summary of research among the Northern Okanagan, probably in 1905-1906. Facts are meager and his anthropological theories are sometimes wildly improbable: e.g., Proto-Salishan was genetically related to Malayo-Polynesian and brought to the West Coast by an obscure transpacific movement. Most of the paper is directed to Northern Okanagan mythology. The

editor has "normalized Hill-Tout's phonetic spelling to the nearest English [letter] equivalent" by the simple but absurd expedient of omitting all diacriticals with highly misleading results. (For more on this, see commentary with Hill-Tout 1978a.) What few references to North Cascades Park groups are included are to be found in this present report.

Hill-Tout, Charles

1978c Ethnological Report on the Stseelis [Chehalis] and Skaulits [Scowlitz] Tribes of the Halkomelem Division of the Salish of British Columbia. In The Salish People, vol. III, The Mainland Halkomelem, pp. 95-148. Edited by Ralph Maud. Talonbooks, Vancouver, B.C. Originally published 1904 in the Journal of the Royal Anthropological Institute 34:311-376.

A short ethnographic survey, based on Hill-Tout's field research, of the traditional culture of the Chehalis of the Harrison River and of the Scowlitz of the nearby Fraser. As narrated in a Chehalis tradition, the tribe is considered by Hill-Tout to have been formed in the remote past through the joining of a Halkomelem group and an interior mountain people. Brief descriptive sections are devoted to utensils, dress, and dwellings; social structure and hereditary totems; the life cycle; religious beliefs, shamanism, and dances; and concepts of the cardinal points, winds, and divisions of the year. Much of the report consists of a body of myths and traditions. The entire study is marred by a naivete and superficiality, even considering its early date, and in some areas by a viewing of the lifeways of these two groups from an ill-balanced Northwest Coast perspective.

Hitchcock, C. Leo and Arthur Cronquist

1981 Flora of the Pacific Northwest. 5th printing. University of Washington Press.

The standard manual of northwestern flora. While a one volume condensation of the enormous five volume work of the authors and others, Vascular Plants of the Pacific Northwest, it is still an extraordinarily detailed and complete compendium of botanical data.

Hodge, Frederick Webb (editor)

1910 Handbook of American Indians North of Mexico. Bureau of American Ethnology, Bulletin 30, part 2.

1912 Handbook of American Indians North of Mexico. Bureau of American Ethnology, Bulletin 30, part 1. Originally published 1907.

A two-volume compendium of native Indian groupings north of the Mexican border--e.g., confederations, tribes, bands, important villages--noted historically or ethnographically, of important Indian leaders in both native and Euroamerican contexts, and of foods, artifact types, and other Indian data, with brief descriptive summaries for each item. Literature references are furnished for each entry, providing an especially useful lead to early and no largely forgotten data sources.

Hymes, D.H.

1960 Lexicostatistics So Far. Current Anthropology 1:3-44

A broad description and balanced appraisal of the theory, methods, and applications of lexicostatistics, the statistical analysis of language phenomena for historical inference. Particular attention is given by Hymes to glottochronology, one important component of the field and one which has received much praise and much criticism: i.e., the study of rate of change in basic vocabulary and the use of carefully derived formulas especially in estimating time depth and other relationships of languages within a family. An excellent encompassing survey of the field for its time by a first class ethnolinguist with a great breadth of knowledge and an innovative turn of mind.

Imperial Oil Limited (Esso)
1958 British Columbia [Highway Map].

Indian Claims Commission
1974 The Upper Skagit Tribe of Indians v. the United States of America. In Coastal Salish and Western Washington Indians 5:315-343. Garland Publishing, N.Y.

The findings of fact and decision in this litigation.

Jacobs, Melville
1931 A Sketch of Northern Sahaptin Grammar. University of Washington Publications in Anthropology 4:85-292.

An early but basic reference grammar for the Sahaptin dialect group closest geographically to the Chelan and Middle Columbia Salish peoples in general.

Jenness, Diamond
n.d. The Faith of a Katzie Indian. Unpublished manuscript, National Museum of Canada, unpaged.

Referred to by Duff 1952:28, 135. Unavailable to me.

Kinkade, M. Dale
1967 On the Identification of the Methows (Salish). International Journal of American Linguistics 33:193-197.

A thoughtful and well documented argument for the linguistic reclassification of Methow with the Okanagan, Sanpoil-Nespelem, Colville, and Lakes as a member of the Okanagan language rather than with the Chelan, Entiat, Wenatchi, and Columbia as a dialect of the Columbia language. This represents a departure from the accepted position of linguists and ethnographers. Historical and ethnographic references to the Methow in a language context are reviewed and fresh field data are offered as they relate to the question. Kinkade concludes that for some now unclear reason the Methow probably "simply changed languages," either in the precontact period as he believes the more likely or after White contact.

Krajina, V. J.
1969 Ecology of Forest Trees in British Columbia. Ecology of Western North America 2(1):1-146. Department of Botany, University of British Columbia.

A detailed, technical study of the biogeoclimatic zones of the province. Of particular interest in the context of this present study because it describes the floristic components, particularly the trees, characteristic of these various zones.

Langen, T. C. S.
1984 Four Upper Skagit Versions of "Starchild." Nineteenth Conference on Salish and Neighboring Languages, Victoria.

This publication is not available to me.

Lempfrit, Honore-Timothee, O.M.I.
1985 His Oregon Trail Journal and Letters from the Pacific Northwest, 1848-1853. Edited by Patricia Meyer. Ye Galleon Press, Fairfield, Washington.

A diary of an overland journey from St. Louis to Fort Vancouver and on to the Mission on the shore of Puget Sound north of Olympia, April 10 to October 18, 1848. This journal is without major relevance to the present report. Published with this document are nine mostly short letters written at "Fort Victoria" on Vancouver Island, describing primarily religious and housekeeping matters. The interest in this volume lies in the single reference to Lempfrit's missioning in the Fort Langley area in 1852.

Lewis, William S. and Jacob A. Meyers
1920 Journal of a Trip from Fort Colvile to Fort Vancouver and Return in 1828. Washington Historical Quarterly 11:104-114.

A fragment of a manuscript journal of John Work. This section covers his journey by boat between Forts Colvile and Vancouver from May 20 to June 11 and, on his return, from July 23 to August 15, 1828. For many days, the account consists of no more than very brief diary-like comments. Yet it includes some informative observations on certain of the Indian groups along the Columbia.

Lyman, W. D.
1899 Lake Chelan, the Leman of the West. Overland Monthly 33 (195):195-201. Civil War Reconstruction, A.P.S. III, Reel 41, Xerox University Microfilms, Ann Arbor.

A popular account of a trip up the lake about 1898.

Masson, L.R.
1889 Esquisse Historique. In L. R. Masson, Les Bourgeois de la Compagnie du Nord-Ouest, Récits de Voyages, Lettres et Rapports inédits Relatifs au Nord-Ouest Canadien, 1:1-154. A Coté et Cie, Quebec.

A brief sketch (in French) by Masson (pp. 97-108) of Fraser's 1808 exploration of the Fraser River, a small part of Masson's general survey of the North West Company and its fur trade. Perhaps sufficient for some readers, it is of little value as a historical statement: events are altered, reordered, and compacted, and entire sequences of days are not even mentioned. Some direct quotes (in English) from Fraser's journal differ from the Lamb edition. Details, including most of Fraser's observations relating

to Indians, are omitted. Fraser's entire journey through Upper Stalo country from Spuzzum to the "Stremotch" sector is telescoped into two short paragraphs. A few tributaries and other locations are identified as Fraser passed them, not all, it seems, accurately.

Maud, Ralph
1982 A Guide to B.C. Indian Myth and Legend: A Short History of Myth-Collecting and a Survey of Published Texts. Talonbooks, Vancouver, BC.

A survey and evaluation of the ethnographic--especially mythic--contributions of Hill-Tout, Boas, Teit, Chamberlain, Swanton, and Sapir, of several ethnographers associated later with the National Museum of Canada (notably Barbeau, Beynon, Jenness, and McIlwraith), and briefly of a number of other, more recent British Columbia myth collectors. Appended is a useful checklist of ethnographic field trips within British Columbia and the publications resulting from these field experiences.

Mayne, Commander R. C.
1862 Four Years in British Columbia and Vancouver Island. John Murray, London.

An account of Mayne's part in demarcating the Canadian-U.S. boundary. It includes many fine, perceptive observations concerning the Fraser River Indians, as well as those on the Coast and in the western Canadian Plateau. A valuable, early eye-witness source of natural history, geographical, and ethnographic information.

Merk, Frederick (editor)
1931 Fur Trade and Empire, George Simpson's Journal. Harvard University Press, Cambridge.

Account of Simpson's journey of inspection from York Factory to Fort George at the mouth of the Columbia River and return, together with comments on the Hudson's Bay Company posts, the status of the fur trade west of the Rockies, his plans for reorganizing the trade, and on the Indian groups he met, especially those of the lower Columbia. With his party he descended the Columbia River from the Boat Encampment in 1825 and returned upriver the following year, passing through the Chelan segment of the Columbia on November 2, 1825, and again on April 3, 1826.

Mooney, James
1896 The Ghost-Dance Religion and the Sioux Outbreak of 1890. Bureau of American Ethnology, 14th Annual Report, 1892-93, pp. 641-1136.

A massive, broad-ranging study of the dance and related matters in the Southeast, Plains, Plateau, and Coast areas. The study is of special interest in connection with the present report for its section titled "Tribes of the Columbia region." This consists of brief summaries for many Plateau tribes, giving for each where the data were available the various names used for the group, language affiliation, geographic location, a sentence or two by way of general culture statement, a précis of the tribal postcontact history, and recent demographic figures. It includes also a map of the reservations in the United States in 1890 and a tribal distribution map, dated 1894, for the "upper Columbia region in Washington, Oregon and Idaho."

Mooney, James
1928 The aboriginal population of America North of Mexico. Smithsonian Miscellaneous Collections 80 (7):1-40.

A pioneering attempt of the early 1900s to assemble population figures from various early sources. It includes a section on "the Columbia Region," in which an effort is made to identify the Lewis and Clark tribal units and to use their informant-derived population approximations, as well as figures reported by later authors. With attention to the depopulation effects of the late precontact and early postcontact epidemics, an attempt is also made to estimate the population of groups as of 1780. Because of the way in which he lumps tribal units, his data are not useful in the present study.

NARN (Northwest Anthropological Research Notes)
1974 Reprint of Report of the Committee for Investigating and Publishing Reports on the Physical Characters, Languages, and Industrial and Social Conditions of the North-Western Tribes of the Dominion of Canada, from the Report of the Meeting of the British Association for the Advancement of Science, 1886-1889 [1899], 8 (1/2):1-384.

A convenient source of these early but valuable reports that in the originals are out of reach to many. Included are several by Franz Boas detailing the results of his field studies.

Nelson, Denys
1927 Fort Langley, 1827-1927: A Century of Settlement in the Valley of the Lower Fraser River. Art, Historical and Scientific Association, Vancouver, B.C.

A historical summary of the establishment of Fort Langley and its role in the happenings in the Fraser Valley from the Fraser Canyon downstream during the century indicated. Its data are commendably detailed, much of it derived from oral interviews and ephemeral local publications not widely circulated.

Overmeyer, Philip Henry
1941 George McClellan and the Pacific Northwest. Pacific Northwest Quarterly 32:3-60.

A summary and review of McClellan's 1853 exploration of the Cascades area with special reference to its passes, as a part of the I.I. Stevens' railroad survey. The historical background of the survey and biographical information on McClellan are provided. Two maps show parts of the routes followed, but neither carries the parties into the North Cascades National Park Region. Overmeyer is critical of McClellan both as an administrator and as a field explorer.

Parker, Samuel
1842 Journal of an Exploring Tour beyond the Rocky Mountains... in the Years 1835, '36, and '37. 3rd ed. Ithaca, N.Y.

In diary form, Parker relates his crossing of the Plains and southeastern Idaho, and his descent of the Clearwater, Snake, and Columbia to Astoria. Fort Vancouver is well described. Considerable attention is given to the culture and conditions of the Indians of the lower Columbia and of the

southern and central Plateau. His final journey back up the Columbia to Fort Colvile and return to Vancouver is recounted in narrative diary style.

Phillips, Paul Chrisler [and J. W. Smurr]
1961 The Fur Trade. 2 vols. University of Oklahoma Press, Norman.

An extensive survey of the fur trade in the United States through its full time-period. Chapters 40-43 and 47 (vol. 2) are especially relevant to its history in the Plateau and to Indian-trader relations in the region. In securing his working data, Phillips visited many libraries and consulted much primary archival material in the U.S., Canada, and western Europe. An informative and useful study. However, to judge from his information relating to the early explorers and traders in the Pacific Northwest, the area with which I am most familiar, he generally accepts uncritically the historical conclusions, the geographical locations of events, and other data of previous historical writers and trader-narrative editors. This procedure leads to enough clear errors of fact and shaky assumptions in matters of anthropological interest to argue for careful specialist use of these volumes.

Pierce, Henry H.
1973 Report of an Expedition from Fort Colville to Puget Sound, Washington Territory, by Way of Lake Chelan and Skagit River, . . . August and September, 1882. Reprinted. Ye Galleon Press, Fairfield, Wash. Originally published 1883, Government Printing Office, Washington D.C.

A day-by-day record of his journey. Excellent in its detailed geographic description of the route followed and in its impressive sketch map showing the trail, major streams encountered, and the location of each night's encampment, permitting a close interlocking of the narrative and map. In the Galleon reprint, the original is photocopied (commendable since errors made in resetting in type are avoided) and repaginated (regrettable since the pagination of the original is omitted). The Chelan section and parts involving adjacent Methow and Skagit areas have been retyped and reprinted by Stone (1983:12-24).

Piper, C. V., and R. Kent Beattie
1914 Flora of Southeastern Washington and Adjacent Idaho. New Era Printing Co., Lancaster, Pa.

An exhaustive, professional compendium of the varied flora of the southeastern corner of Washington and neighboring Idaho, where Upper Sonoran, Arid Transition, Canadian, and Hudsonian zones all occur. The data are taxonomically ordered and provide botanical terms, common English names, and brief botanical descriptions for the individual families, genera, and species. Geographical distribution and ecological provenience are indicated for each species. An outdated study but valuable for determining the plants recorded and botanically identified in early ethnographic and ethnohistorical studies of the region.

Piper, C. V., and R. Kent Beattie
1915 The Flora of the Northwest Coast. New Era Printing Co., Lancaster, PA.

Discusses in technical detail the flora of the area between the summit of the Cascades and the Pacific Ocean from the 59th parallel south to the headwaters of the Willamette River. Like the Henry volume, this work serves principally to identify plant binomials used by earlier ethnographers but no longer current and to place plants in their geographical location and elevational range.

Ray, Verne F.
1932 The Sanpoil and Nespelem: Salishan Peoples of Northeastern Washington. University of Washington Publications in Anthropology, 5:1-237.

The standard, comprehensive ethnography for the central Plateau, compiled from field data secured in the 1928-1930 period. It includes a few references to the Chelan; these are incorporated into the Chelan section of this present report.

Ray, Verne F.
1936 Native Villages and Groupings of the Columbia Basin. Pacific Northwest Quarterly 27:99-152.

Brief discussions of the biogeoclimatic characteristics of the Basin and mountains immediately to the east and of the linguistic relationships, cultural subdivisions, and political structures of the native groups. Difficulties in arriving at precise tribal boundaries are noted. The final half of the study presents a catalog of the traditional villages and village locations of many of the groups, including a brief Chelan list, based on his own field investigations.

Ray, Verne F.
1939 Cultural Relations in the Plateau of Northwestern America. Publications of the Frederik Webb Hodge Anniversity Publication Fund, vol. III. pp. 1-154. The Southwest Museum, Los Angeles.

A broad, pioneering, comparative study of similarities and variations among the Plateau tribes in a number of cultural domains. Covered are aspects of political organization, social stratification, warfare and pacifism, girl's puberty rites, disposal of the dead, the guardian spirit quest, concepts of disease, the winter spirit dance, and dwellings and watercraft types. Data are drawn largely from Ray's own field research.

Ray, Verne F.
1942 Culture Element Distributions: XXII Plateau. Anthropological Records 8 (2):99-262.

A survey of the distribution of thousands of culture traits in a representative sample of 15 native groups in the Plateau, including the Kittitas, Wenatchi, and Sanpoil, all three occupying territory not far from that of the Chelan, and the Lower Thompson of the Fraser Canyon. The data are derived from Ray's field research of the 1930s.

Ray, Verne F.
1974a Ethnohistorical Notes on the Columbia, Chelan, Entiat, and Wenatchee Tribes. In Interior Salish and Eastern Washington Indians, vol. 4, pp. 377-435. Garland Publishing, Inc., New York.

Summarizes White-Indian relations for the four tribes, with attention almost entirely to the period after 1850. Appended to this summary is a brief section recounting the early years and describing the character of Chief Moses and, based on his own field research, a valuable roster of traditional villages and their locations for the four tribes.

Ray, Verne F.
1974b Petitioner's Exhibit No. 532, Indian Claims Commission--Docket No. 181, Colville et al. v. U.S. In Commission Findings, Interior Salish and Eastern Washington Indians IV; facing 450. Garland Publishing Inc., New York.

Map of tribal boundaries and village/camp locations of the Lakes, Colville, Sanpoil-Nespelem, Southern Okanogan, and Methow. Unfortunately, the descriptive material prepared by Ray to accompany and explain this map, including a key to the numbered settlements marked, has not been published.

Rich, E. E.
1967 The Fur Trade and the Northwest to 1857. McClelland and Stewart, Toronto.

An excellent historical summary though little attention is paid to specific data sources and to matters of special anthropological interest. Still, it provides a fine historical framework into which primary narratives and field journals can be fitted.

Chapter 14 summarizes the principal events of the fur period in the Plateau and on the Northwest Coast. The relations among the various fur companies active in the region and among the British, American, and Russian interests are explored. Little attention is paid, however, to the Indian groups of the region: to their relationships with the individual companies and specific traders and to the ways in which the traders' presence influenced their life style.

Rivera, Trinita
1949 Diet of a Food-Gathering People with Chemical Analysis of Salmon and Saskatoons. In Indians of the Urban Northwest, edited by Marian W. Smith, pp. 19-36. Columbia University Press, New York.

An early study of two important foods of the Indians of the Washington and British Columbia coast and lower Fraser River. Attention is paid to the nutritional properties not only of fresh foods (in the case of salmon, of different species and of different parts of the fish) but also of foods prepared in different traditional ways for storage (e.g., smoking vs. drying). Smith provides a valuable introduction and concluding section discussing the broader aboriginal subsistence patterns of the area.

Ross, Alexander
1956 The Fur Hunters of the Far West. Edited by Kenneth A. Spaulding. University of Oklahoma Press, Norman. Originally published 1855.

Ross' account of his life as a fur trader in the Plateau and northern Great Basin in the period from 1814 to 1825, when he left the Northwest for the last time. The 1855 edition was substantially altered from Ross' manuscript to delete what was considered "prolix, earthy, or potentially offensive to someone." This 1956 edition returns to Ross' original Ms., but omits several final chapters, including data of ethnographic importance.

Ross, Alexander
1966 Adventures of the First Settlers on the Columbia River. Reprinted. Readex Microprint. Originally published 1849 as Adventures of the First Settlers on the Oregon or Columbia River . . . with an Account of Some Indian Tribes on the Coast of the Pacific, Smith, Elder and Co., London.

A circumstantial account of Ross' journeys, trading posts, and life as a trader with the Pacific Fur Company in 1811-1813, conveying much of the flavor of the very early fur trade and of the Indians the traders encountered. Ascending the Columbia River in August, 1811, Ross and his small party appear to have been the first Whites to have met the Chelan in their own country. The final four chapters describe the lifeways of the Okanagan as Ross observed them during the months he passed in their homeland. A highly informative account in spite of the biases of the time.

Schaeffer, Claude E.
1940 The Subsistence Quest of the Kutenai: A Study of the Interaction of Culture and Environment. Ph.D. Dissertation, University of Pennsylvania.

The focus and scope of this study are adequately described by its title. It is of peripheral interest to this present report, but still useful for certain comparative data.

Schalk, Randall F.
1977 The Structure of Anadromous Fish Resources. In For Theory Building in Archaeology, edited by Lewis R. Binford, pp. 207-249. Academic Press, San Francisco.

A detailed, technical survey of the anadromous fish types of the Northwest, their behavioral--especially spawning--characteristics, and their complex relationships with the varying biogeoclimatic environments of the area and the different life patterns of the native peoples of the region. It includes excellent, quantified information on fish productivity among the native groups and the importance of fish storage in the prehistoric development of their lifeways.

Simpson, Sir George
1847 Narrative of a Journey Round the World, during the Years 1841 and 1842. 2 vols. Henry Colburn, London.

Only a small part of volume 1 (pp. 119-167) is relevant to Plateau concerns. These pages recount his journey of July, 1841, over the Rockies to the Kootenay headwaters and down that river on horseback to the Bonners Ferry area and across to Lake Pend Oreille. From there he traveled by boat downstream to the Calispell Valley, from which, again astride his horse, he

crossed the mountains to Fort Colville. Finally, in August he canoed at headlong speed down the Columbia to Fort Vancouver. Some useful ethnographic observations are included in this narrative, though no mention is made of the Chelan.

Simpson, Sir George
1931 see Merk 1931.

1947 Part of a Dispatch from George Simpson Esqr . . . to the Governor Committee of the Hudson's Bay Company, London, March 1, 1829. In Part of a Dispatch . . ., edited by E. E. Rich, pp. 1-119. In The Publications of the Champlain Society, Simpson's 1828 Journey to the Columbia, vol. 10. Toronto.

A comprehensive overview and evaluation of the state of the Company's affairs in the western region visited by Simpson in his journey of inspection in 1828 and a description of the managerial changes undertaken to improve the efficiency and profitability of the trading operation. Brief mention is made of the Athabaska and Mackenzie River Districts, but the principal attention is devoted to the Company's business in British Columbia and Washington.

Smith, Allan H.
1936-1938 Kalispel Ethnography. Ms. field notes, pp. 1-1,716, in possession of the author.

Smith, Allan H.
1983 Ethnohistory 1811-1855; the Native Peoples. In Cultural Resources of the Rocky Reach of the Columbia River, Project Report no. 1, vol. 1. Edited by Randall F. Schalk and Robert R. Mierendorf, pp. 25-354. Center for Northwest Anthropology, Washington State University, Pullman.

Two lengthy ethnohistorical and ethnographic chapters relating to the Columbia, Wenatchi, Entiat, and Chelan with particular reference to (a) early historic contact and the ethnographic insights these documents provide, and (b) population estimates, linguistic affiliations, socio-political entities, subsistence resources, food acquisition strategies, and dwellings and secondary structures of these four groups. A limited, tentative culture-historical reconstruction is attempted.

Smith, Allan H.
1984 Kutenai Indian Subsistence and Settlement Patterns. Project Report No. 2, Vol. 2 (BF 286 18 08F U 0000), Center for Northwest Anthropology, Washington State University, Pullman, Washington, pp. 1-291.

Of interest in this North Cascades study primarily for its broad survey of Upper Kutenai subsistence, compiled from the ethnographic and historical literature. Because of litigation affecting the Kutenai in progress while this information were being assembled, field research among the group to complement these data proved impossible.

Smith, Allan H.
1985a Medicinal Plants of the Thompson Indians and Aboriginal Land Use Patterns. Ms. in possession of author.

A detailed study of traditional Thompson medicinal plants as documented by Teit (1900) and their occurrence in relation to the plant community zones of the plant ecologists. The focus is upon what such ethnobotanical data can tell about land use patterns of native groups, in this case of high altitude regions of the tribal territory.

Smith, Allan H.
1985b The Traditional Culture of the Nez Perce, 1700-1835. Ms. in progress in possession of the author.

Smith, Allan H.
1986 Kalispel Ethnography and Ethnohistory. In Calispell Valley Archaeological Interim Report for 1984 and 1985 Field Seasons, edited by Alston V. Thoms and Greg C. Burtchard, pp. 139-286. Center for Northwest Anthropology, Contributions in Cultural Resource Management No. 10, Washington State University, Pullman.

A summary of five segments of Kalispel culture and ethnohistory of immediate relevance to the archaeological finds of the Usk project: traditional methods of gathering, preparing, and storing root foods with particular emphasis on the ground oven; dwellings and attendant structures and their spatial arrangements in the village and camp; the effect of epidemics on the Kalispel life mode; the role of the horse after its introduction about 1760-1770; and the influence of the early fur traders and their Euroamerican goods on traditional Kalispel cultural patterns.

Smith, Harlan Ingersoll
1907 Archaeology of the Gulf of Georgia and Puget Sound, American Museum of Natural History, Memoir 2, Part 6. E.J. Brill, Leiden.

A summary of the archaeology of the Gulf of Georgia and Puget Sound areas, as known in the early 1900s, with some attention to sites and artifacts of the lower Columbia Valley. Surveyed area by area are the cairns, shell mounds, and petroglyphs and the artifacts discovered in these sites. Treated in separate sections are the stone clubs, stone axes, seated human figures holding a dish, and stone sculptures. A short section, contributed by Franz Boas, deals with the whale-bone clubs of the area between Vancouver Island and the Columbia River and up the Fraser to Kamloops. Included are a few site photographs and many detailed artifact drawings.

Smith, Marian W.
1940 The Puyallup-Nisqually. Columbia University Press, N.Y.

A full-scale general ethnography, presenting field data collected in 1935-1936 and covering in detail material, social, and cognitive segments of culture. The basic source of information regarding the traditional lifeways of these two groups.

Smith, Marian W.
1941 The Coast Salish of Puget Sound. American Anthropologist 43:197-211.

A brief overview of this cluster of Salishan coastal tribes. Discussed are the nature of group boundaries, village distribution patterns and characteristics, distinctions between "salt water" peoples and "inland" groups, and cultural differences in village structure and social patterns between Puget Sound groups and tribal entities on coastal British Columbia and the Fraser River. The cultural affiliations of the Nooksack, Lummi, and Songish, located geographically between the British Columbia and Puget Sound areas, are examined in relation to the groups to the north and those to the south. Four clusters of Puget Sound tribes are posited--Puyallup-Nisqually and the Central, Northern, and Inland Puget Sound groups--and their individual, distinctive cultural traits are briefly outlined. Lists of the native villages and extended villages are given by name and location for the Sahehwamish, Squakson, Puyallup, Nisqually, Duwamish, Suquamish, Snohomish, Swinhomish, Muckleshoot, Snoqualmie, Skagit, and Samish, in itself a highly useful contribution to the ethnography of the area.

Smith, Marian W.
1943 Columbia Valley Art Style. American Anthropologist 45:158-160.

A brief comparison of the decorative art style of a stone mortar, discovered archaeologically on the Columbia River at the mouth of the Deschutes River, with classic Northwest Coast art and with basketry designs of the Salishan groups of the southern Washington coast. Significant parallels are noted.

Smith, Marian W.
1946 Petroglyph Complexes in the History of the Columbia-Fraser Region. Southwestern Journal of Anthropology 2:306-322.

A survey of the artistic styles of the few petroglyphs and pictographs known in the 1940s in the middle Fraser, Puget Sound, and The Dalles areas. Considered also are the ornamented ethnographic objects from the region showing design parallels Three complexes are distinguished, based respectively on (a) a non-religious dot-and-circle motif, (b) semi-realistic representations of animal figures, one subtype with religious meaning and the other without, and (c) anthropomorphic designs, mainly in single outline form, with very strong religious associations. Possible links of these styles with the Northwest Coast and the Oregon-Nevada-Utah area are discussed.

Smith, Marian W.
1947 House Types of the Middle Fraser River. American Antiquity 12:255-267.

Ethnographically, plank houses and semisubterranean dwellings have generally been considered to be separated in their distribution by the Cascades and Coast Ranges, the former being characteristic of the Northwest Coast groups west of the mountains and the latter occurring among the Plateau tribes to the east. On the Fraser River, however, Smith contends that this is not the case. Pit houses were found aboriginally as far downstream as Harrison Lake and the upper Chilliwack and upper Nooksack Rivers, all areas west of the mountain heights and with primary coastal cultural affiliations. Smith's archaeological investigations in 1945 near Agassiz in "Harrison" [her term for the easternmost Upper Stalo groups] country [Pilalt territory

according to Duff 1952:21, 35] west of the Coast Mountains uncovered evidences of semisubterranean structures of the very early historic period. These excavation findings are briefly reported. The structural characteristics of the Middle Fraser pit habitations are compared with those of the nearby Plateau semisubterranean dwellings. She concludes that the Harrison Lake to Nooksack River distribution was separated from the Plateau occurrence by a Fraser River area in which no such depression dwellings were used aboriginally.

Smith, Marian W.
1950a The Nooksack, the Chilliwack, and the Middle Fraser. Pacific Northwest Quarterly 41:330-341.

A study, based largely on her own 1938 field research concerned with the relationships between the language and culture of the Nooksack and the Chilliwack and with their affinities with closeby coastal peoples and the Fraser River tribes from Yale downstream to below the Harrison River mouth: i.e., her Middle Fraser. Emphasis is on linguistic change in late aboriginal and very early historic times, resulting in language flow and little actual population movement. It is contended that Nooksack was spoken in the Middle Fraser before the appearance of Halkomelem. The protohistoric culture of the area differed in important respects from the life patterns of both the peoples near the Fraser mouth and those groups upriver from Yale. Early historic Nooksack culture represented the last stand of the special Middle Fraser life style, a form that blended both riverine and coastal traits. Both pit dwellings and flaked and ground stone tools were characteristic of the Middle Fraser region. A list of Nooksack and of Chilliwack villages is appended to the descriptive summary.

Smith, Marian W.
1950b Archaeology of the Columbia-Fraser Region. Memoirs of the Society for American Archaeology No. 6.

Artifact collections from the Suquamish area and a site near Agassiz (ethnographic Upper Stalo Pilalt country immediately north of Chilliwack territory) are described. Agassiz artifact styles are compared with those reported from the other Columbia-Fraser sites. Archaeological recoveries from the broad Columbia-Fraser region are summarized with attention to their ethnographic associations and possible diffusion routes. Postulated cultural entities termed Late Bone, Early Bone, Eastern Stone, and Coastal Stone are described in terms of their geographic distribution, age, and artifact complements. The prehistory of her Middle Fraser area in relation to the Columbia-Fraser and larger Northwest Coast and Plateau regions is reconstructed as seen by Smith in 1950.

Smith, Marian W.
1952 Culture Area and Culture Depth: with Data from the Northwest Coast. In Indian Tribes of Aboriginal America, Selected Papers of the XXIXth International Congress of Americanists, edited by Sol Tax, pp. 80-96. University of Chicago Press, Chicago.

An effort to dissect the Plateau and Northwest Coast ethnographic data through an analysis of trait distribution, and to hypothesize regional culture areas and subareas on a time scale. Discussed is her postulated old,

unique interior or inland culture type of the Cascades foothills extending from the Carrier to the Klamath. Also her hypothesized later, derivative, more geographically restricted Middle Fraser culture. Earlier ethnographic attempts to differentiate the basic culture types of the Northwest are reviewed. The cultural position of the Bella Coola is discussed with the conclusion that their basic affiliation was with the Middle Fraser rather than the classic Northwest Coast. The principles underlying the ethnographic reconstructive process in diffusional terms are outlined. Marginal, survival, peripheral, and intermediate area types as well as cultural climaxes and culture areas are defined and the processes resulting in these developments are summarized.

Smith, Marian W.
1955 Continuity in Culture Contact, Examples from Southern British Columbia. Man no. 115:100-105.

Identified are several culture traits that occurred in traditional times among the Salishan tribes of southern coastal British Columbia and northwestern Washington but not farther north on the Coast. Recent postcontact inventions and new applications of old technological processes are discussed, including new fishing gear, home spinning devices, and the making of long, sleek racing dugout canoes. Details of old cedar canoe varieties and their geographical distribution are reported, leading to the conclusion that the Middle Fraser peoples possessed a larger number of these varieties than did the more northern "tribes of the classical Northwest Coast," though fewer types than among the Puget Sound groups. Attention is given to the degree to which certain elements of Middle Fraser Indian life in the 1950s represented deteriorated retentions of the traditional as contrasted with retentions with variations and even improvements.

Smith, Marian W.
1956 The Cultural Development of the Northwest Coast. Southwestern Journal of Anthropology 12:272-294.

An extended exposition of her thesis that a "Foothills Culture" once existed from The Dalles region of the Columbia northward along both flanks of the Cascades to the Fraser River in the Lytton, B.C., area, and that a later "Middle Fraser Culture" elaboration on the foothills base appeared on the upper Nooksack River and Fraser River from Yale downstream to Mission. Ethnographic and archaeological data, unfortunately very limited in extent, are assembled to support these hypotheses. Upon this reconstruction, enlarged to include the entire northern Pacific rim and extended back in time to an ancient cultural substratum, is fabricated a more complex series of hypothetical cultural configurations to explain the development of classic Northwest Coast culture. The Upper Skagit, Chilliwack, Lower Thompson, and Chelan are all considered to have been among the groups with the "Foothills Culture"; the Chilliwack to have been one of the much smaller number of tribes with the later "Middle Fraser Culture."

Smith, Marian W. and Dorothy Leadbeater
1949 Salish Coiled Baskets. In Indians of the Urban Northwest, edited by Marian W. Smith, pp. 111-132. Columbia University Press, New York.

This report consists of three sections. The first, by Smith, is general in nature, discussing the importance of basketry studies, similarities between Salish and California basketry, attitudes of Fraser drainage Salish weavers toward their design elements, and recent changes in native basket weaving. The second, authored by Leadbeater, describes the procedures she developed for recording in detail the technical characteristics of imbricated coiled basketry and their ornamental designs. The third part, by Smith, analyzes further various aspects of typical design continuity around the total basket and the question of whether apparent design errors are truly thus.

Spier, Leslie
1936 Tribal Distribution in Washington. General Series in Anthropology, No. 3. George Banta Publishing Co., Menasha, Wisconsin.

A basic compilation of ethnohistorical and ethnographic data on the various aboriginal tribes of the State by an early, respected ethnographer. A tribal distribution map is included.

Spier, Leslie (editor)
1938 The Sinkaietk or Southern Okanagon of Washington. General Series in Anthropology, No. 6. George Banta Publishing Co., Menasha, Wisconsin.

A comprehensive, detailed ethnographic study carried out in 1930 by a graduate-student field party under the immediate supervision of Spier. The field data were sorted by Spier into general subject categories and the writing of the chapter drafts was assigned to the various field participants. These manuscripts were carefully edited and widely rewritten (with great profit) by Spier, resulting in a final publication uniform in style and with full content coverage. Consequently my credits--e.g., "Walters writes" and "According to Walters' informants"--indicate the author of the original chapter manuscript, who was responsible neither for all of the field notes incorporated into the section nor for the final chapter product. The present tense--the "ethnographic present"--is used in describing the Sinkaietk traditional culture, even though the customs and beliefs had long since disappeared in the 1930s, a style that may be misleading to nonanthropological readers. A few references are made to the Chelan, Skagit, and Thompson; these are noted in this present North Cascades study.

Spinden, Herbert Joseph
1908 The Nez Perce Indians. Memoirs of the American Anthropological Association, vol. 2, part 3, pp. 165-274.

A pioneering attempt at a general ethnography of the tribe, based on short periods of field research in 1907 and 1908. Brief attention is given to the history and natural environment of the tribe and to the archaeology of their country as known at the time. The ethnographic section covers the traditional material culture in some detail and the social, political, and religious domains more superficially. Nez Perce culture is largely seen as a peripheral Plains life-mode with historically late, posthorse Plains borrowings. A particular shortcoming of the study is Spinden's mixing of data from various sources without explanation: artifacts apparently discovered archaeologically are mingled with ethnographic specimens; museum

items are described with his own informants' data; and data from the Lewis and Clark journals are integrated with his field information often without credit to the explorers. A useful volume, but one that must be used with special care.

Steedman, Elsie Viault (editor)
1930 Ethnobotany of the Thompson Indians of British Columbia. Bureau of American Ethnology, 45th Annual Report, 1927-1928, pp. 447-522.

A fine ethnobotanical study of the native plants used in traditional times by the Thompson: a supplement to and refining of the data presented in Teit's (1900) Thompson ethnography. The descriptive data are drawn from Teit's field notes; the botanical identifications are presumably based on an ethnographically notated plant collection made by Teit around the turn of the century. Steedman's introduction summarizes the Thompson scheme of plant nomenclature and other general data relating to their plant gathering and use. The report itself lists the specific plants by use category, each identified by its Thompson name and botanical binomial, and presents Teit's cultural use information. The categories recognized by Steedman are medicines (many), food (many), masticatories, drinks, smoking plants, plants used technologically, dyes and paints, scents, plants used in purification, and others used in special ways and belief contexts.

Stevens, I. I.
1855 Report of Explorations for a Route for the Pacific Railroad, near the Forty-seventh and Forty-ninth Parallels of North Latitude from St. Paul to Puget Sound. 36th Cong., 1st Sess., House Exec. Doc. no. 56, XII, Book I.

A splendid collection of field reports of various surveying teams. A landmark in its time.

Standard Oil of California
1962 Road Map of Washington [State].

Stern, Bernhard J.
1934 The Lummi Indians of Northwest Washington. Columbia University Press, New York.

A relatively brief report of Stern's field findings of 1928-1929. The subsistence quest receives scant attention and, in material culture, only weaving and woodworking and the objects made by these processes are discussed. The report focus is on the cycle of life, social matters (e.g., "festivities," the secret society, conflict), religion, and "legend and lore."

Stone, Carol M. (compiler)
1983 Stehekin: Glimpses of the Past. Long House Printcrafters and Publishers, Friday Harbor, Washington.

A very informative collection of articles, some published in various, often obscure early sources and others existing only in manuscript status, relating to the early White history of Lake Chelan and the Stehekin country. These selections are reproduced as written by their authors with brief

prefatory remarks but without editorial tinkering of the articles themselves, for which Stone deserves commendation.

Suttles, Wayne
1951 The Early Diffusion of the Potato among the Coast Salish. Southwestern Journal of Anthropology 7:272-288.

An excellent, carefully researched survey of the early years of the white potato among the native groups of Georgia Strait, the lower Fraser, and Puget Sound. Discussed are its introduction through White contact as reconstructed from historical, ethnographic, and linguistic evidence, the role soon played by the potato as a subsistence resource in tribal life, and the cultural background of the groups that facilitated its ready reception and fostered its rapid diffusion.

Suttles, Wayne
1957 The "Middle Fraser" and "Foothills" Cultures: A Criticism. Southwestern Journal of Anthropology 13:156-183.

A scholarly, detailed, and valuable critique, largely negative, of Marian Smith's proposed distinctive "Foothills Culture" and later derivative and geographically more restricted "Middle Fraser" culture. Very serious questions are raised concerning her basic assumptions and hypotheses, methodology, control of the basic ethnographic and archaeological data, and conclusions. (For these two culture formulations, see Smith's bibliographic references.)

Suttles, Wayne
1965 Linguistic Means for Anthropological Ends on the Northwest Coast. The Canadian Journal of Linguistics 10:156-167.

A perceptive analysis of a large corpus of Musqueam texts collected by Suttles in terms of the kinship terms employed and their usages to illustrate how such linguistic material can contribute to understanding certain inner aspects of the culture of a group not readily uncovered by usual ethnographic field techniques.

Suttles, Wayne
1985 Native Languages of the Northwest Coast. Oregon Historical Society Press. Map scale 1:3,000,000; map size ca. 31.5 x 44 inches.

A new synthesis and handsome, clear plotting of language distribution data by one of our most knowledgeable Plateau and Northwest Coast ethnographers and linguists. The entire Pacific coast east to the Rockies is covered from Kodiak Island south to northern California, together with the northwestern corner of the Great Basin. Language boundaries are mapped and major dialect units within them are identified and their general location shown. All boundaries and locations are as of first White contact.

Suttles, Wayne and William W. Elmendorf
1963 Linguistic Evidence for Salish Prehistory. American Ethnological Society, Proceedings of the 1962 Annual Spring Meeting. Symposium on Language and Culture.

Swadesh's Salish glottochronological data are reanalyzed to detect chain relationships between languages, yielding the conclusion that the "original divergence of protobranch languages [occurred] in river valleys along the western slopes of the Cascade Mountains, perhaps from the southern end of Puget Sound north to the Fraser River, with the earliest offshoot just east of the Cascades" (p. 45). A few grammatical features appearing in various Salishan languages are examined to suggest relationship links. Possible or probable relationships between Salish and other nearby stocks are proposed and their implications for early Salishan prehistory are suggested. The influence of ecological conditions on the spread of Salish into the Plateau is considered in an innovative and persuasive way.

Swadesh, Morris
1950 Salish Internal Relationships. International Journal of American Linguistics 16:157-167.

A very early effort to apply the lexicostatistical approach to the Salishan language family with the aim of separating it into its component language units, of establishing the degree of kinship between these units and between dialect groups within individual languages on the basis of shared vocabulary items, and of estimating linguistic distance of languages and dialect groups from a reconstructed early Salish vocabulary.

Swadesh, Morris
1952 Salish Phonologic Geography. Language 28:232-248.

A study of phonologic similarities and differences among Salishan languages, with particular reference to the genetic and geographic relations of the languages, and to some extent between Salishan and other closeby language stocks. Discussed are phonetic and phonemic elements common among Salishan languages and those distinctive of separate language clusters; the phonemic system of Proto-Salish and the shifts that have occurred through time in the member languages; the approximate timing of these changes; the problem of differentiating linguistic similarities owing to genetic kinship from those resulting from borrowing; and the effects on sound systems of phonetic devices to express concepts (e.g., smallness) and of sound imitative words.

Swanton, John R.
1952 The Indian Tribes of North America. Bureau of American Ethnology, Bulletin 145.

An impressive compendium of data on the location, demographics, major subdivisions and villages, and in some cases history of a huge number of American Indian tribes, organized by geographical region: Canada, the United States (by state), the West Indies, Mexico, and Middle America.

Symons, Thomas W.
1882 The Upper Columbia River and the Great Plains of the Columbia. Senate Exec. Doc. 186, 47th Cong., 1st Sess.

In the early fall of 1881, Symons carried out a detailed survey of the Columbia River from Kettle Falls to the mouth of the Snake River, mapping the river from his bateau in all its twists, ripples, and bars with special

attention to possible navigational hazards at different water levels. He provides excellent information concerning the terraces, cliffs, and other land forms flanking the river and regarding the various Indian groups and early White settlers encountered.

Taylor, Herbert C., Jr.
1963 Aboriginal Populations of the Lower Northwest Coast. Pacific Northwest Quarterly 54:158-165.

A study that traces briefly earlier population estimates of coastal tribes from the Kwakiutl south to the lower Columbia, that examines these estimates in light of unpublished Hudson's Bay Company censuses, historical documents, and archaeological surveys, and that suggests more reliable population approximations.

Taylor, Roy L., and Bruce MacBryde
1977 Vascular Plants of British Columbia, a Descriptive Resource Inventory. University of British Columbia Press.

This detailed, precise, complete, and carefully researched plant compendium presents the most specific and useful data on subjects of botanical interest in this present study. A particular advantage of this huge resource volume is its record of plant distribution data according to Krajina's twelve biogeoclimatic zones. Another merit is that it includes a multicolored adaptation of Krajina's zonal map, taken from A. L. Farley's Atlas of British Columbia, which permits the various zones to be distinguished from one another with far greater confidence than in the case of Krajina's monochromatic map. Where data differences exist between earlier British Columbia vegetative surveys, the information of this compendium is accepted as the arbiter.

Teit, James
1898 Traditions of the Thompson River Indians of British Columbia. American Folk-Lore Society, Memoir 4:1-137.

An extensive body of Upper Thompson myths collected by Teit, including transformer tales (some with Coyote as the central figure); others recounting the origin of animals, astronomical bodies, and meterological and natural phenomena; and many telling of episodes in the life of animal-human beings of the mythic period. Two Lillooet tales are appended to the Thompson collection. Boas provides an introduction, adds comparative notes to Teit's explanatory notes, and furnishes abstracts for all the myths. Unfortunately, owing to time constraints, it was not possible to extract from this corpus and introduce into the present study the considerable amount of ethnographic data imbedded in this mythic compilation.

Teit, James
1900 The Thompson Indians of British Columbia. American Museum of Natural History, Memoir 2 (Jesup North Pacific Expedition, vol 1, part 4), edited by Franz Boas, pp. 163-392. New York.

The basic ethnographic study of the Thompson. The data were secured by Teit, a non-anthropologist but intelligent, Boas-trained resident in the Thompson country, in the 1890s. Teit was married to a Thompson woman, spoke

the Thompson language fluently and apparently other Salishan languages as well, observed the last vestiges of traditional Thompson material and social culture in practice, and secured enriching ethnographic details, particularly regarding earlier time levels, from Thompson informants. The study suffers somewhat from the kinds of ethnographic subject lacunae and narrow theoretical vision typical of its period, from certain weaknesses in phonetic transcription, and doubtless in unclear ways from the fact that Boas assembled and edited Teit's field information. Nevertheless, this is a splendidly detailed, absolutely essential contribution to our ethnographic knowledge of Canadian Interior Salishan groups.

Teit, James
1912 Mythology of the Thompson Indians. American Museum of Natural History, Memoir 12 (Jesup North Pacific Expedition, vol. 8, part 2), pp. 197-416. New York.

Teit's second collection of Thompson myths and traditions. Fifty-two were collected from the Lower Thompson: these include (as classified by Boas) coyote, transformer, and origin myths; animal, hero, and ancestor tales; and a few tales of a semi-historical nature, borrowed from coast tribes, or based on European folklore. The second collection in this publication comprises 115 items obtained by Teit from the Upper Thompson of the Nicola Valley and that part of the Fraser Valley occupied by these Upper People. The tales in this second series are classified into the essentially the same types as the first set. These oral narratives contain many ethnographic details and insights which could not be incorporated into this present study because of time limitations.

Teit, James A.
1917 Thompson Tales. In Folk-Tales of Salishan and Sahaptin Tribes. American Folk-Lore Society, Memoir 11:1-64.

Sixty-six tales of the Thompson Indians, of which 28 recount Coyote escapades. The majority were collected by Teit, between 1906 and 1916; a few were secured by Boas in 1888. Most are from the Upper Thompson Division. The final item represents recollections of the Fraser party's journey through the Thompson country in 1808. A valuable compilation of native oral literature. Owing to time pressures, the ethnographic data to be found in these tales could not be extracted and meshed with the materials of the Thompson chapter of this present report.

Teit, James A. [erroneously given as H.]
1928 The Middle Columbia Salish. University of Washington Publications in Anthropology, 2:83-128.

A general but brief ethnographic summary of the Columbia, Wenatchi, Chelan, and Methow, based on incidental notes taken by Teit in 1908 on the Colville Reservation and assembled and edited by Franz Boas. Special emphasis is placed on protohistoric and early historic tribal movements in the region, giving rise to what became a highly controversial contention that Salishan peoples once occupied the Columbia River country downstream to The Dalles. The Chelan are considered a subgroup of the large Wenatchi tribe and are specifically referred to only incidentally. These notes are included in this present study.

Teit, James A.
1930a The Salishan Tribes of the Western Plateaus. Edited by Franz Boas. Bureau of American Ethnology, 45th Annual Report, 1927-1928, pp. 23-396.

Ethnographic summaries, based on field inquiry in 1904-1909, of the aboriginal and early historic culture of the Coeur d'Alene, the "Flathead Group" (Spokan, Kalispel, Pend Oreille, Flathead), and the "Okanagon Group" (Lakes, Colville, Sanpoil-Nespelem, Okanagan). A very important data source, though attention is not given equally to these cultural-linguistic units.

Teit, James A.
1930b The Okanagon. In Teit, 1930a:198-294.

A basic culture-wide ethnography of the traditional Okanagan, Sanpoil-Nespelem, Colville, and Lakes lifeways, assembled by Boas from Teit's extensive, very detailed field notes of the first decade of the 1900s. Especially important since it presents much information collected by Teit, under Boas' guidance, from personal observation supplemented by intensive field inquiry. Teit was married to a Thompson woman, spoke the Thompson language (Maud 1982:63), and lived with the last generation to have participated extensively in the precontact native life and to have made use of much of the old material culture. Many of the latter items Teit himself examined and describes, giving this segment of his ethnographic description a richness not found in later, more professional ethnographic accounts. Apparently Teit's Okanagan-specific information was derived from persons of Northern Okanagan affiliation (Spier 1938:3).

Teit, James A.
1930c Tattooing and Face and Body Painting of the Thompson Indians[,] British Columbia. Edited by Franz Boas. Bureau of American Ethnology, 45th Annual Report, 1927-1928, pp. 397-439.

A compilation of detailed information collected after the preparation of his The Thompson Indians (1900) monograph. Although a few of the elderly still bore tattoo marks when Teit entered their region in the mid-1800s, the practice of tattooing was rapidly abandoned after 1858 when White influence first became strong. The practice of facial and body painting was practically gone in the 1890s. Consequently most of Teit's data were informant-derived. These two studies represent a focused effort to secure all possible information regarding these two traditional cultural expressions.

Teit, James A.
1937 More Thompson Indian Tales. Journal of American Folk-Lore 50:173-190.

Seven additional tales collected by Teit, edited by Lucy Kramer. Two are old-style myths involving coyote. One is a tradition of a hunter's buffalo journey to the Plains and of the traitorous actions of his wife. The remaining four, at root, embody elements and events from European folklore but typically modify, extend, and restructure them in various new ways. Even these narratives of European genesis are of ethnographic interest, for in some measure they are recast into a Thompson cultural context.

Texaco
1969 Washington [State Highway Map].

Thompson, David
1914 Journal of David Thompson, Oregon Historical Quarterly 15:39-63, 104-125.

The daily journal kept by Thompson of the North West Company on his canoe journey of exploration down the Columbia River from Kettle Falls to Astoria in July, 1811. Also his record of his return in July and August via canoe to the Snake River mouth and then on horseback to the confluence of the Palouse River and overland to the Spokane River. The importance of this detailed record for the Chelan section of his present study is that, in passing through the Chelan country on July 6, 1811, Thompson saw no Indians on the river.

Thompson, Laurence C.
1976 The Northwest. In Native Languages of the Americas, edited by Thomas A. Sebeok, vol. 1, pp. 359-426. Plenum Press, New York.

Includes a brief general introduction to the language families of the North Pacific area, summarizing their geographical distribution, their possible linkages into larger genetic groupings, and their internal language-level subdivisions. Most of the report is devoted to a valuable, detailed state-of-the-art survey of the Penutian, Wakashan, Chimakuan, Salishan, Kutenai, and Athapaskan families, cataloging the growth of knowledge for each and the specific contributions of individual linguists. A number of areal studies of supra-language-family phenomena are reviewed.

Thompson, Laurence C.
1979 Salishan and the Northwest. In The Languages of Native America: Historical and Comparative Assessment, edited by Lyle Campbell and Marianne Mithun, pp. 692-765. University of Texas Press, Austin.

An up-to-date survey of the Salishan language family, both coastal and interior divisions. Discussed are such subjects as comparative phonology, comparative grammar, possible genetic relationships with other Indian language stocks, and research in progress.

Thwaites, Reuben Gold (editor)
1969 Original Journals of the Lewis and Clark Expedition, 1804-1806. Reprinted. Arno Press, New York. Originally published 1904-1905 as The Original Journals of the Lewis and Clark Expedition, 1804-1806. Dodd, Mead and Co., New York. 8 volumes.

A verbatim transcription of the voluminous field journals of Lewis and Clark and of the briefer records of two members of their expedition. This is a model of what publications of this sort should be. When both expedition leaders kept entries for the same day, both are reproduced in their entirety, even when largely duplicative. Idiosyncratic and variant spellings, unorthodox punctuation, grammatical lapses, field sketches and maps, and the like are all here, without editorial tinkering, though explanatory footnotes are provided. A splendid and indispensable publication for an understanding of the history of the Pacific Northwest and especially the geography, natural

history, and ethnography of the Bitterroot, Clearwater, Snake, and lower Columbia Valleys when first seen by Whites. Especially noteworthy is the collection of expedition maps that comprises volume 8.

Turner, Nancy J.
1978 Food Plants of British Columbia Indians, Part 2: Interior Peoples. British Columbia Provincial Museum, Handbook No. 36, Victoria.

A carefully prepared compendium of data by a botanist drawn from her own field inquiries and incorporating relevant ethnobotanical information from earlier ethnographic reports. It includes brief introductory summaries of the physical environment, the dietary characteristics of the aboriginal Indian foods, the gathering and preparation of the food plants, their seasonal procession, and the nature of traditional trade in plant foods. Most of the volume is concerned with individual food plants: their technical taxonomic and common name identifications, a botanical description, habitat data, their distribution in British Columbia, and especially the food uses to which the various Indian groups put the plants. The volume is very well illustrated, with many plates in color.

Turner, Nancy J.
1979 Plants in British Columbia Indian Technology. British Columbia Provincial Museum, Handbook No. 38, Victoria.

This volume is patterned after the preceding food plant study, but focuses on ways in which indigenous plants were used in the traditional technology of the various Indian tribes of the province. All illustrations are, however, in black-and-white.

Turney-High, Harry Holbert
1937 The Flathead Indians of Montana. Memoirs of the American Anthropological Association, no. 48.

A general and not everywhere fully competent ethnographic survey of the Flathead of the Bitterroot Valley, based on field research. Save in a comparative sense, it provides no information of direct relevance to the particular interests of this North Cascades study.

Turney-High, Harry Holbert
1941 Ethnography of the Kutenai. Memoirs of the American Anthropological Association, no. 56.

A general survey of the traditional culture of the Kutenai, with special attention to the Upper division. While the only study of Kutenai ethnography of broad coverage, its value is somewhat restricted by the author's limited understanding of native Plateau lifeways. Of interest for a few items of comparative information.

Underhill, Ruth
1945 Indians of the Pacific Northwest. Indian Life and Customs, vol. V. United States Office of Indian Affairs, Education Division. Sherman Institute Press, Riverside, California.

A fine, comprehensive, popular summary of the traditional life mode of the coastal groups with occasional references to interior Indian tribes. It includes an unusually rich and informative collection of photographs and museum dioramas and of diagrams and descriptions of material culture objects, the processes of their manufacture, and their uses.

USGS (United States Geological Survey)
1953 (rev. 1965) Ritzville quadrangle, NL 11-1. 1-250,000.

1954 (rev. 1963) Okanogan quadrangle, NM 11-10. 1-250,000.

1955 (rev. 1962) Concrete quadrangle, NM 10-12. 1-250,000.

1957 (rev. 1971) Wenatchee quadrangle, NL 10-3. 1-250,000.

1974 North Cascades National Park, N4815-W12030/45x75.

Whitney, Stephen R.
1983 A Field Guide to the Cascades & Olympics. The Mountaineers, Seattle.

An excellent popular summary of the physical aspects of the Cascades and Olympic areas--geology, climate, and plant and animal distributions. Includes summaries of the ferns, flowering plants, butterflies, fish, amphibians, reptiles, birds, and mammals of these two regions, with black and white drawings of many forms and color reproductions of many plants, butterflies, and birds. For the biozones and their dominant plant forms heavy reliance is placed on the data of Krajina and of Franklin and Dyrness.

Wilkes, Charles
1841 [Tribal Population] Estimate--1841. In I. I. Stevens 1855:p. 435.

A short table estimating the 1841 population of various tribes from the lower Columbia to Juan de Fuca Strait.

Wilson, Charles
1866 Report on the Indian Tribes Inhabiting the Country in the Vicinity of the 49th Parallel of North Latitude. Transactions of the Ethnological Society of London 4:275-332.

Includes a section on the Cowichan in general from Vancouver Island to Fort Yale on the Fraser River, with occasional specific reference to the Chilliwack. Admirably detailed for its time, especially from one whose professional interests lay elsewhere, this report, presenting his own first-hand observations as a member of the British Boundary Commission in 1858-1860, provides some considerable information on a wide range of ethnographic subjects. Incorporated into the Chilliwack unit of my study are only such data as are explicitly linked with this tribe and those tribally unidentified data that are consistent with Duff's Chilliwack information and that expand upon it in meaningful ways.

Wilson, Charles
1970 Mapping the Frontier, Charles Wilson's Diary of the Survey of the 49th Parallel, 1858-1862, while Secretary of the British Boundary Commission, edited by George F. G. Stanley. Macmillan of Canada, Toronto.

An important journal--not a diary in the strict sense since many days and even weeks are skipped in the record--in terms of understanding the geobioenvironment and traditional culture of the Chilliwack. Not an ethnography but a chronicle of his many weeks in 1858-1860 in the Chilliwack country--on the lower and middle Chilliwack River, at Chilliwack Lake, and in the Cultus Lake region. The information concerning the Chilliwack and their homeland appears largely as occasional, brief comments peripheral to the Commission's principal surveying interest. But keen, low-key, factual, on-the-spot observations and experiences, they are all the more useful.

Winans, William P.
1871 [Report for 1870 on the Indians to the East of the Cascades.] In Report of the Secretary of the Interior for 1870, pp. 486-491. Exec. Doc., 3rd Sess., 41st Congress.

A report by the "farmer in charge" on the conditions in 1870 of the Indian groups of Washington east of the Cascades, including recommendations for improvements. The Chelan are lumped with the Entiat and Methow proper as subgroups of the "Mithouie." No observations are made on the Chelan in particular.

Wingert, Paul S.
1949a Coast Salish Painting. In Indians of the Urban Northwest, edited by Marian W. Smith, pp. 77-91. Columbia University Press, New York.

Primarily a detailed description and analysis of the unique painted power objects--especially "power boards" and small anthropomorphic figures--of the Puget Sound Salish and of their use in shamanistic spirit-curing ceremonies. Some consideration is given to the descriptive, representational, and monochromatic styles of painting wooden sculptures among the peoples of the Strait of Georgia, Vancouver Island, and the Lower and Middle Fraser areas.

Wingert, Paul S.
1949b American Indian Sculpture, A Study of the Northwest Coast. J. J. Augustin, New York.

An impressively intensive study of the wood carving art of the coastal Salishan groups from Vancouver Island and adjacent shores south to the Columbia River and in the Fraser drainage. All known sculptures from the region at the time in museum and other collections are described and many are illustrated. Through the use of published ethnographic information, their cultural contexts are examined in detail, but at a general level for the entire geographical area. Styles are classified and analyzed for figurines, large figures, house posts, post figures, figure reliefs, and masks. Tribal and regional distributions of these styles are described. Summary sections are provided on style centers, major traditions, marginal styles, and historical development. Data for the Upper Stalo specifically are, however, non-existent, save for one footnote: Wingert evidently located no carvings definitely attributable to these groups.

Wingert, Paul S.
1952 Prehistoric Stone Sculpture of the Pacific Northwest. Portland Art Museum, Portland, Oregon.

A survey of the precontact stone and bone art of the Columbia Valley from Vantage to the river mouth, divided into three regional styles. Both sculptures associated with utilitarian objects (e.g., bowls, pestles) and those without such apparent connections are described. A shorter section is devoted to the Fraser River and Puget Sound areas. Fine photographs of 42 sculptures are reproduced.

World Aeronautical Chart, Lake Louise (216), 14th edition October 7, 1951. US Air Force edition. 1:1,000,000.

Wydoski, Richard S. and Richard R. Whitney
1979 Inland Fishes of Washington. University of Washington Press, Seattle.

An illustrated guide to the riverine and lacustrine fish of Washington. Of relevance to this present study are the short sections describing the major drainages of the region and of Washington in particular, and outlining the general distribution of Washington fishes. Of special interest are the lengthy and detailed life history accounts of the various native and introduced species in the rivers and lakes of the State.