ANTHROPOLOGICAL REPORT ON THE IDENTITY, TREATY STATUS AND FISHERIES OF THE PUYALLUP TRIBE OF INDIANS

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PUYALLUP IDENTITY

Since 1855 the name Puyallup has been used to designate an Indian reservation and the people assigned to that reservation pursuant to the Treaty of Medicine Creek, December 26, 1854.

Originally, the term referred to a single village or cluster of villages near the mouth of the Puyallup River. Consistent with usage throughout the Sound region, the name of a prominent saltwater or downriver group was then extended to refer to upriver villages on the same drainage system and also to neighboring groups who were closely related culturally, linguistically, and through intermarriage.

The people assigned to the Puyallup Reservation were drawn from villages along the Puyallup River, tributary creeks, and also from villages on Vashon Island. Prior to their removal to the reservation, these groups were known by several distinct names.

George Gibbs, who drafted the treaties in western Washington, used three names to subsume the peoples referred to above. Gibbs called all the people from the lower portion of the Puyallup River Pu-yallup-a-mish. The suffix -amish in this and other so-called tribal names translates as "people of" such and such place. Thus

Gibbs' Pu-yallup-a-mish refers to people of the Puyallup. He used a second term, T'Qua-qua-mish, to designate people from villages at and above the main forks of the river where it was joined by Carbon River. This term was used by Gibbs to refer to all of the upriver Puyallup. He referred to the people of Vashon Island as S'ho-ma-mish.

In January 1854 in preparation for the negotiation of treaties with the Indians, an estimate was made of the native population. Gibbs (1967:41) recorded the following figures. The first two are clearly labelled estimates while the third is evidently the result of a count, although not necessarily a complete one.

Estimate of Indian Tribes in the Western district of Washington Territory - January, 1854

Tribes and bands	Where located	Men	Women	Total	
Pu-yallup-a-mish	Mouth of Puyallup river, &c			50	estimate
T'Qua-qua-mish	Heads of Puyallup river, &c			50	estimate
S'ho-ma-mish	Vashon's island	18	15	33	

At the time that the Treaty of Medicine Creek was negotiated, Gibbs designated the Puyallup peoples by two names only -- Puyallup, evidently meant to encompass all the people of the river drainage, and S'Homamish, referring to those on Vashon Island.

In the census taken the following year, Gibbs entered the Puyallup census figures using the two-name system. It is of some interest that his count in 1855 is nearly three times that of the previous year's estimate. This appears to me to be strong indication

that Gibbs' change from a three-name system to a two-name system for designating the Puyallup peoples represents a streamlining of his system of nomenclature and not an omission of previously included groups.

The following population count is extracted from Gibbs' unpublished notebook titled Cascade Road-Indian Notes.

Census of Indian Tribes in Western District, Wash. Ty. 1855

	aged		adult				infants			
	men	women	men	women	boys	girls	male	female	absent	total
uyal & S'Ho	33	27	98	100	48	32	19	28	1	390

Shortly after this time, separate references to the Homamish group cease to appear and all residents of the Puyallup Reservation and people assigned to that jurisdiction are referred to simply as Puyallup.

The people known as Puyallup, using the term in its broadest and most inclusive sense, were closely allied in language and culture with Nisqually peoples to the southwest and Duwamish groups to the northeast as well as with peoples elsewhere on the Sound, such as the Hotlemamish of Carr Inlet.

Because of the topography of the prairie country in the upper Puyallup valley, communication between upriver Puyallup and Green River-White River-Stuck River peoples and upriver Nisqually was relatively easy. In addition, there was considerable intermarriage and trade contact with Sahaptin-speaking peoples from east of the Cascades.

The culture contacts of the Puyallup-Nisqually and a detailed discussion of individual Puyallup villages and their affiliations is

given in Smith (1940:8-11) included here as Appendix 1. Other information concerning Puyallup settlements both on the mainland and on Vashon Island is contained in T.T. Waterman's unpublished manuscript on Puget Sound geography. The relevant sections are attached to this report as Appendix 2.

TREATY STATUS

The Puyallup and S'Homamish bands of Indians are named in the preamble to the Treaty of Medicine Creek. From the foregoing discussion of band names, locations, and numbers it appears that the above two band names were used in the preamble to encompass all those groups of Indians living on the Puyallup River, its tributary creeks, and neighboring Vashon Island.

Prior to the Treaty of Medicine Creek, George Gibbs used two local names to refer to people living in the Puyallup watershed and a third name for the people living on Vashon Island. On the Treaty itself, he entered only one name for the people of the Puyallup drainage system and a second name for the Vashon Island people. After the Treaty, all these people as well as any others who removed to the Puyallup Reservation were all subsumed under the single name Puyallup.

None of the signatories to the Treaty of Medicine Creek is identified on that document as to band affiliation. The names of sixty-two Indians are listed at the end of the document with X marks to represent signatures. According to the official record of the treaty proceedings, there were 630 Indians present. As only nine

bands are named in the preamble, including the Puyallup and Homamish, it seems reasonable to assume that at least some of the sixty-two names were intended to represent members of those two bands. One of the names, that of Sah-le-tatl, can be identified as Puyallup through Indian Department correspondence in 1856.

Evidence that the treaty commission considered that the Vashon Island people were signatories may be adduced from a letter that George Gibbs wrote to Governor Stevens January 6, 1855, eleven days after the Treaty was negotiated.

> The S'Komanish came over & commenced a talk about the reservation -- wanted another in their country. We shut them up by telling them it was too late to talk about that. They should have mentioned it before signing the paper. (sic)

Indication that upper Puyallup river groups were also considered to be signatories appears in the following extract from a report on the Puyallup Reservation forwarded by Agent Michael T. Simmons to Governor Stevens under date of December 30, 1855.

> A few of the old men expressed their disapprobation of the late treaty, they desired a different reservation with prairie land. I told them that they had been present at the treaty, had fully understood it, and had signed it, and now they must obey all its provisions, unless changed by the President according to its articles.

I draw the conclusion that upriver Puyallup had reportedly signed because of the demand for prairie land. The horse-owning upriver Puyallup were the groups requiring grazing land for their stock. It was they who eventually resorted to armed resistance in order to avoid removal to the saltwater reserve.

Having cited the foregoing passage from Simmons' report to illustrate the basis for my conclusion that upriver Puyallup were considered to have signed the treaty, I feel obliged to comment on a separate issue arising from my inclusion of the above passage. Simmons' statement that the Indians fully understood the provisions of the treaty requires some amplification.

With respect to the location, size, and nature of the Nisqually and Puyallup reservations, the official record of the treaty proceedings makes it clear that the lands subsequently chosen were not quite what had been envisaged at the time of the treaty signing. The actual reservation sites had neither been precisely located, examined or surveyed at the time that the treaty was negotiated. It was six days later before the location of the Puyallup reservation was decided and its character understood by the surveyor, Mr. Gibbs. The survey of the Puyallup reservation was commenced but not concluded due to the difficult terrain, the inclement weather, and the opinion of George Gibbs that the only part of the reservation which would be used by the Indians was the shore line. The relevant section of the treaty proceedings record follows

> Monday January 1st. The Surveyor commenced the examination of the reserve on Commencement bay, beginning on the west line of Swan Ridley's claim & running thence along the beach for a mile and a half in a southeasterly direction. It was found that the shore line, here, as in the first case, precluded the laying off of the reserve in a square form as contemplated by the treaty, and a settler having taken a claim on the west side of Point Harmon, the line was not extended further.

> This reservation affords a good site for a village with ground for potato patches & a small stream at which the Indians take their winter salmon. A high bluff, say of 150 feet, rises a short distance back from the water at the western extremity, but approaches nearer the water & ranges along it at its eastern end. The woods being very thick & filled with underbrush, it was found necessary to employ Indians to cut in advance of the Surveyor. The next day, Jany 2d, therefore a party was set to work, and a trail cut for half a mile through the woods on both the eastern and western sides. As the Indians will require the shore only, this tribe being exclusively fishing Indians, it was not deemed advisable at this time to continue it around the whole tract. The form of the reservation will appear from the diagram. The weather during all this time was very stormy with squalls of snow and heavy rain & work in the woods was next to impracticable.

The foregoing selection makes two things clear. First, the Indians could not have "fully understood" the location and character of the Puyallup Reservation at the time of the treaty signing as the site had not yet been determined. Second, Gibbs clearly considered fishing to be the main subsistence activity of the Puyallup.

Returning to a consideration of treaty status, one final observation is in order. It is clear from the record that actual presence on the treaty ground at the time of signing was not deemed necessary to bind Indians as parties to the land cession and other treaty provisions. On December 26, 1854 the Treaty of Medicine Creek was read to the Indians, signed, and presents had already been distributed to the 630 Indians assembled before some of the Puyallup arrived at the treaty ground. The relevant portion of the official record reads

> Dec 26th Treaty Ground ....Towards evening Mr. Swan arrived with 29 Indians of the Puyallup Tribe and reported 20 more on the way who starting three days ago had been detained by bad weather. These 49 Indians not having received any presents; the

> Commissioner decided on sending them presents from Olympia in the ratio of 1/12th of the goods given at the Treaty.

and in a later entry sometime between January 1 and 4, 1855

> Some of the Puyallup Indians having been prevented by stress of weather from reaching the treaty ground, Gov. Stevens had directed a proportionate quantity of goods to be sent down & distributed to them. This was accordingly done at this place on Wednesday Jany 3d. and the party having concluded its business embarked again and proceeded to Seattle.

Although Stevens knew on the day that the treaty was signed that there were 49 Puyallup Indians not present at the signing, no action was recorded relative to adding their signatures to the original document nor to procuring their endorsement of an adhesion to the Treaty.

At the time that the Treaty of Medicine Creek was negotiated, it was thought by the commission that the Puyallup (excluding the Homamish) numbered about 100 persons. The absence of 49 Puyallup from the treaty signing amounted to one-half of that number. Clearly Stevens deemed the signing by the "chiefs" that he had appointed sufficient to bind all Indians subsumed under the same band name.

THE ROLE OF FISHING IN PUYALLUP CULTURE

The importance to the Puyallup Indians of fishing in general and salmon and steelhead in particular both prior to and after the Treaty of Medicine Creek is documented by the observations of early settlers and others.

We have just noted that Gibbs considered the Puyallup to be "exclusively fishing Indians." Gibbs was reflecting here the central role that fishing played in the economic and social life of all Puyallup. He was quite aware that the upriver groups owned stock as evidenced

by his recommendation elsewhere (1877:179) that when a treaty is concluded with the Chehalis, a reservation with suitable grazing land be set aside for the common use of Chehalis, Nisqually, and Puyallup who own stock. Our concern is to note his evaluation, corroborated by susequent ethnographic work, that the Puyallup were primarily a fishing people.

Early accounts attest to both the abundance of fish in Puyallup waters and to the variety of techniques employed by the Indians in taking fish. One of the earliest white settlers of the Puyallup valley, Ezra Meeker, has left graphic descriptions of his first trip to the mouth of the Puyallup River in June of 1853.

> As we drew off on the tide from the mouth of the Puyallup River, numerous parties of Indians were in sight, some trolling for salmon, with a lone Indian in the bow of his canoe, others with a pole with barbs on two sides fishing for smelt, and used in place of a paddle, while again, others with nets, all leisurely pursuing their calling, or more accurately speaking, seemed waiting for a fisherman's luck. (Meeker 1905:64)

Referring to that same first visit to the mouth of the Puyallup, Meeker elsewhere tentatively identified the species of fish procured from one of the Indians fishing in the bay.

> The year following, in June of 1853, when I procured a fat, fine specimen, probably a Chinook or steelhead, just caught by an Indian trolling in the deep sea-water of Commencement Bay -- now waterfront of the great city of Tacoma, then a solitude, except for the native tribes -- and put it in the pan and soon compelled to empty part of the fat and afterwards ate it, I thought it was the most delectable morsel of food I had ever tasted. I think so yet. The salmon, to my mind, is the "King of Fish." (Meeker 1921:278)

Later in the same work, Meeker commented on the abundance of salmon in a tributary creek of the Puyallup River.

> At the headwaters of a short creek emptying into the Puyallup River, which in turn in a few miles poured its accumulated water into the tide water of Puget Sound, I have seen the salmon so numerous on the shoal water of the channel as to literally touch each other. It was utterly impossible to wade across without touching the fish. At certain seasons I have sent my team, accompanied by two men armed with pitchforks, to load up from the riffle for fertilizing the hop fields, where brick blocks of the City of Puyallup now occupy the space. (Meeker 1921:280)

Meeker first planted a few hops as an experiment in the spring of 1865 so that his remarks about using salmon for fertilizer must refer to a date subsequent to that year.

Despite the early success of agriculture on the Puyallup Reservation, it seems clear from the record that the Indians there continued to rely on salmon for winter stores. The following extract is from the report of Byron Barlow, Farmer in charge of the Puyallup Indian Reservation, to General T. J. McKenny, Superintendent of Indian Affairs for Washington Territory. The report is dated September 18, 1871.

> ....This being the fishing season for the Indians, there are many of them temporarily absent procuring their winter supply of salmon; consequently I am unable to take the annual census correctly, but the number will not vary materially from last year. There are residing on the reservation at this time three hundred; absent from the reserve, fishing and working for the whites, about one hundred and fifty.
> ...
> There will be a large catch of salmon this year, probably over 400 barrels. (Barlow 1871:290)

It is no doubt significant that when Waterman collected Indian place names in the Puget Sound region during 1917-1920 many of the Vashon Island and Puyallup watershed village sites were described in terms of the fish that could be taken at those locales.

A clear indication of the central role that fishing played in Puyallup culture is to be found in the description of gear and taking techniques, sophistication of preservation technology, and variety of recipes collected by Smith in 1935-36. The ethnographic data attest to the concern and attention lavished on salmon by the Puyallup. Smith's data are presented in Appendix 3 and will be only briefly summarized here.

Major taking techniques included long lining, trolling, raking, spearing, harpooning, and seining in the saltwater. In the rivers the bulk of the salmon and steelhead were taken in lift nets associated with weirs, but other important taking techniques included gaffing, falls traps, river seines, and spearing.

Smith's data included as Appendix 3 contain detailed discussion of both the large Sound seine (a beach seine) and the river seine (operated by men in two canoes) as well as the weirs used by the Puyallup. In this connection, we must take note of Governor Stevens' assertion at the time of the Treaty of Medicine Creek that the Indians did not employ either seines or weirs. It is abundantly clear from the historical record that both seines and weirs were used by the Puyallup-Nisqually prior to the Treaty. Smith's data undoubtedly refer to aboriginal gear and techniques, Governor Stevens' statement notwithstanding.

The Treaty of Medicine Creek contains the following section regarding rights to fish.

> Article III. The right of taking fish, at all usual and accustomed grounds and stations, is further secured to said Indians, in common with all citizens of the Territory, and of erecting temporary houses for the purpose of curing, together with the privilege of hunting....

In his letter of December 30, 1854 to George W. Manypenny, Commissioner of Indian Affairs, transmitting the Treaty of Medicine Creek, Governor Stevens commented on the above treaty provision as follows

> It may be here observed that their mode of taking fish differs so essentially from that of the whites that it will not interfere with the latter. They catch the salmon with spears in deep water and not with seines or weirs.

The Indians who were parties to the Treaty of Medicine Creek were using both seines and weirs at the time that Governor Stevens wrote and had been doing so for an undetermined number of years before then. Meeker (1905:64) mentioned net fishing in Commencement Bay in 1853. Suckley (1860:329) noted net fishing for steelhead in the rivers of Puget Sound in 1853-55. Gibbs mentioned weirs on the Nisqually River (NAA ms.#714) in 1853 and (Diary) in 1854. Writing in 1856 about his observations over the period 1853-55, Gibbs commented

> The nets and seines, manufactured from the grass imported from beyond the Cascade Mountains, deserve mention as very well made, the twine being perfectly even and well twisted. (Gibbs 1877:220)

and again,

> The spring salmon are taken on the rivers with the seine; at the rapids and in the small streams either with the scoop-net or with a gig. The latter is usually forked, the points or barbs attached loosely by a thong so as to give play to the fish. On some of the rivers where the depth permits, weirs are built to stop their ascent. (Gibbs 1877:195)

In the light of the above, it is clear that Stevens was incorrect in his assertion that the Indians did not use seines or weirs.

In the light of the foregoing, I am unable to account for Stevens' assertion that the Indians did not use seines or weirs. I suppose it is possible that Governor Stevens was ignorant of the facts, although it is hard to credit this.

Of the other members of the treaty commission, we have documentary evidence that Gibbs was familiar with the use of seines and weirs by the Indians. Simmons and Shaw, as long-term residents of Puget Sound, could scarcely avoid being aware of them.

According to the official record of the treaty proceedings, there was considerable discussion of Indian fishing before the Treaty of Medicine Creek was drafted. On the day that the Treaty was negotiated, the record reads

> It was also thought necessary to allow them to fish at all accustomed places, since this would not in any manner interfere with the rights of citizens, and was necessary for the Indians to obtain a subsistence.

The foregoing statement, recorded by Gibbs as Acting Secretary, does no violence to the ethnographic record. Stevens' letter to Manypenny, dated four days later, is at variance not only with the ethnographic reali s, but also with the knowledge of Indian fishing technology held by the commission at that time.

Before leaving the subject of Puyallup fishing gear and taking techniques, several social and economic aspects should be noted. Certain types of gear required cooperative effort in their construction and/or handling. Ownership, control, and use rights varied according to the nature of the gear.

According to Smith (1940:145-6) weirs were classed as cooperative property, but the component fishing stations on the weir were individually owned.

> The number of family groups which participated in building it [the fish trap] could not exceed the number of fishing stations it would accomodate, except by special arrangement among them. Since fish traps were washed out at the end of the season, there was no problem of disposal involved.

The above passage occurred in the context of a discussion of property rights. The problem of disposal refers to disposal of property.

The large seine used in the Sound was about two hundred feet long and six to seven feet wide with a five to six inch mesh. Because of the labor and material that went into its construction, as well as the cooperative effort required in its successful operation, it was used only by important men.

Other types of gear, such as spears and gaff hooks which were individually owned and used, were not subject to control by other than their users.

Smith described a variety of foods -- meat, fish, and shell fish that were cured or preserved by the Puyallup and concluded that

> Salmon was the most important single food.
> (Smith 1940:235)

Four species of salmon (Coho, Chinook, Chum, and Humpback) were taken in local waters, in addition to steelhead. All were eaten in both fresh and cured forms. In addition, salmon eggs were eaten both in preserved and fresh state.

Cured salmon was an important item of diet. Smith described eight kinds of cured salmon, each technique having a separate native name and resulting in a distinctly flavored product. Curing techniques varied according to the state of the weather at the time of taking, the richness of the fish, the part of the fish being cured, and the expertise of the food handler. Details of the various processes are included in Appendix 3.

Dried salmon were cured for fairly immediate use and were not prepared particularly for storage or transport. In contrast, smoked salmon could be cured until they were stiff and could be stored and/or transported in compact form. These smoked salmon, along with cured clams, formed an important item of trade to Sahaptin-speaking peoples from east of the mountains. They were also an important item of exchange among people on the Sound.

Smith (1940:238) describes the role of smoked Chum and smoked steelhead among the Puyallup as a form of currency.

> Smoked salmon was prepared from the dog salmon and from the steelhead when it could be caught in quantity. It was said that this type was not made by the peoples who lived east of the mountains, that, indeed, the only type known to them was the dried salmon described above. It was the smoked salmon which was more important along the Sound and the coastal plain in its neighborhood. This was apparently because the smoked flavor was desired but, also, because smoking preserved the salmon indefinitely. Thus, smoked salmon became not only a food but an economic unit, accumulated by the wealthy and employed as a medium of exchange.

In addition to its importance as food, as a trade commodity, and as a medium of exchange, salmon products were crucial to other parts of the native economy. As an example, we may cite the manu-

facture of dog salmon skin glue. The glue was prepared by chewing the inner skin of the dog salmon. When it was chewed fine, it was heated in a large clam shell and applied warm. Glue prepared in this fashion was apparently very strong and was used to join wood surfaces. A very important use of dog salmon skin glue was in the manufacture of sinew-backed bows. The glue was used not only to cause the sinew to adhere to the wood, but also the entire surface might be coated with glue (Smith 1940:294).

The strength of the adhesive quality as well as its resistance to damage from humidity or dessication greatly impressed Vancouver, who described the local sinew-backed bow in 1792.

> Their bows were of a superior construction; these, in general, were from two and a half to three feet in length; the broadest part in the middle was about an inch and a half and about three-quarters of an inch thick, neatly made, gradually tapering to each end, which terminated in a shoulder and hook for the security of the bow-string. They were all made of yew, and chosen with a naturally-inverted curve suited to the method of using them. From end to end of the concave side, which when strung became the convex part, a very strong strip of an elastic hide is attached to some, and the skins of serpents to others, exactly the shape and length of the bow, neatly and firmly affixed to the wood by means of a cement, the adhesive property of which I never saw or heard of being equaled. It is not to be affected by either dry or damp weather, and forms so strong a connection with the wood as to prevent a separation without destroying the component parts of both.
> (Gibbs 1877:229)

FISHING SITES

Meeker's accounts, as well as those of other pioneers in the Puyallup valley, make it clear that salmon and steelhead abounded in Commencement Bay, the Puyallup River, and the various tributary rivers and streams. Waterman notes that the Homamish village on Quartermaster Harbor, Vashon Island was noted as a fine place to catch "winter" or silver salmon.

With their varied repertoire of taking techniques and specialized gear for different water conditions, the Puyallup were able to take fish almost anywhere in the waters of their territory. Specialized canoes of differing types were used by upriver and saltwater Puyallup as part of their fishing gear.

Richard Lane, in charge of the Puyallup Reservation, under date of January 6, 1861 reported to the Superintendent of Indian Affairs regarding a false alarm among the settlers in the Puyallup valley. His report is of interest in that it records a usual and accustomed fishing site of the Puyallup Indians.

> ...The alarm originated in the following manner - a number of the Upper Puyallup Indians came down to the forks of the Puyallup river to fish salmon, as has been their custom hitherto at this season of the year -- ...these Indians had been fishing about five or six days with success...

Judging from the survey map of the Puyallup and Muckleshoot reservations approved by Stevens December 5, 1856 and other historical sources, it is almost certain that the forks mentioned in the foregoing account refer to the confluence of the Puyallup and Stuck rivers.

The same 1856 map records the usual and accustomed Indian fishery described by Meeker as he observed it in June 1853 (see page 9 of this report). The words "Salmon Fishery" are printed on the map on the north and south sides of Commencement Bay.

Many of the fishing sites used by the Puyallup Indians in 1854 are no longer extant due to man-made alterations of the water system. Urban sprawl has resulted in land-fill operations and the drying up of many creeks in the Tacoma area. Engineering projects related to flood control have straightened the course of the Puyallup River. Use of water from the river system for agricultural and industrial purposes has altered the flow, temperature, and depth of the water thereby affecting the fish population and the use of traditional sites for fishing purposes. Similarly, the development of the port of Tacoma has materially affected the traditional salmon and steelhead fisheries in Commencement Bay.

For these, and related reasons, some of which are discussed in The Anthropological Report on the Traditional Fisheries of the Muckleshoot Indians (see pages 1 - 4 of that report), it is no longer possible to document and pinpoint all of the usual and accustomed fishing places of the Puyallup Indians. It is, however, realistic to assume that they used all feasible sites in their territory. For the mainland portion of their holdings, this would include fisheries in Commencement Bay right up the Puyallup river system to and including the farthest reaches of the tributary streams and creeks.

The usual and accustomed fishing places of the Puyallup Indians were located partly on land ceded by these Indians under the Treaty of

Medicine Creek and partly on land reserved to them under the same treaty. The Treaty of Medicine Creek, like all of the Stevens treaties negotiated in western Washington, secured to the Indians who were parties to that treaty the right of taking fish at their usual and accustomed fishing places in common with the citizens of the territory. In addition, the treaty provided for the reservation of certain areas that were to be set aside for the exclusive use of the Indians. The treaty contained no mention of the types of use which these reservations were intended to serve or criteria for selecting the area. However, correspondence and other records contemporaneous with the selection and later enlargement of the reservations clearly show that the inclusion of desirable fishing areas was one of the major factors in selecting the reservation locations and boundaries.

The original Puyallup Reservation was located so as to provide access to the traditional fishery on Commencement Bay and also included a usual and accustomed freshwater fishing site. The location was selected by George Gibbs, secretary of the treaty commission who also served as surveyor. The relevant section of the official record of the treaty proceedings appears on pages 6 and 7 of this report in another context. For purposes of the present discussion, we refer to two statements contained therein.

> ...This reservation affords a good site for a village with ground for potato patches & a small stream at which the Indians take their winter salmon. ...As the Indians will require the shore only, this tribe being exclusively fishing Indians....

Later, when an enlarged Puyallup Reservation was provided, the inclusion of traditional freshwater fishing locations and access to

the salmon fishery on Commencement Bay were important considerations. The new reservation was located so as to include the main portion of the Puyallup River below its confluence with the Stuck as well as extensive shoreline on Commencement Bay.

Indian agent Wesley B. Gosnell, in his annual report dated December 31, 1859 to Superintendent Nesmith mentioned as one of the advantages of the Puyallup Reservation "its abundant resources in fish and game...".

CONCLUSIONS

1. The Puyallup Indian Tribe is composed of descendants of the 1854 Puyallup of the Puyallup of the Puyallup River, the Homamish of Vashon Island, and other neighboring Indians.
2. The population of the Puyallup River villages and the Vashon Island Puyallup at the time of the Treaty of Medicine Creek was estimated to be about 150 people, but the actual number was probably between two and three times greater.
3. The Puyallup and the Homamish are named in the preamble to the Treaty of Medicine Creek, December 26, 1854. None of the signatories to that treaty is identified as to tribe, band, or village affiliation, but other evidence indicates that all Puyallup groups were considered to be parties to the Treaty.
4. Fishing constituted the principal economic activity of the Puyallup. Salmon and steelhead served as the principal food, as an important item of trade, and as a medium of exchange. Cured salmon and steelhead could be converted into wealth in the

native economic system.

5. Four species of salmon as well as steelhead were taken by the Puyallup in their saltwater and freshwater fisheries. The fish, as well as their eggs, were eaten in both fresh and cured state.

6. Salmon were taken in the saltwater by trolling, spearing, and with a seine. In the rivers the principal methods were weirs, traps, spearing, gaffing and netting either with lift nets or with river seines.

7. The principal fisheries of the Puyallup were around Vashon Island and adjacent portions of Puget Sound, Commencement Bay, the Puyallup River and tributary rivers and creeks. In addition, smaller creeks adjacent to but not tributaries of the Puyallup River were used.

8. The land reserved for the exclusive use of the Puyallup Indians was selected in order to include usual and accustomed freshwater fishing sites and to provide access to traditional fisheries in Commencement Bay.

9. At treaty time salmon constituted the single most important food item to the Puyallup in addition to having other economic and manufacturing uses.

10. Dependence on salmon for winter stores continued well after treaty times. Salmon continue to be important to the Puyallup as evidenced by the history of fishing controversy and litigation in more recent years.

APPENDIX 1. SMITH'S LIST OF PUYALLUP VILLAGES

1. spwiyä́'lœphœbc (Gibbs: Puyallupahmish; Eells: Puyallups; Curtis: Spuyallapabsh).[1]

Located at the mouth of the Puyallup River, now Gallaghers Gulch, the house sites at 15 Street and Pacific Avenue, Tacoma. Derived from pwiyä́'lœp, the name of the Puyallup River from its mouth to the point at which the Carbon River flows into it.

People of this village were called "real" Puyallup.

In accord with the extended drainage system concept, the term was extended to include the three villages immediately contiguous to it and the contacts between the four (1-4) were so close that the reduplicated or plural form of the term was the one in common use and only the place names of the other three villages were employed. The name recorded by Gibbs is evidently this reduplicated form. It is this group, strictly speaking, which may be called Puyallup.

By further extension of the term, the name applied to all the villages (1-11) of the drainage of the Puyallup River. With this meaning the term was not reduplicated.

After the coming of the whites and the establishment of the reservation in the region above and around Commencement Bay, the term was still further extended to include all those peoples who took up land on the Puyallup reservation. Villages 1-20, with the probable exceptions of the staxábc (8) and the South Prairie (11) came in to this section. These peoples, together with their spouses, whether Indians from other villages more or less distant, or whites, formed the reorganized spwiyä́'lœphœbc or "Puyallup".

2. twádɛbcœb

Located where a creek, no longer existent, emptied into Commencement Bay, the house sites at 24 Street and Pacific Avenue, Tacoma.

3. cátcqœd ("main village": Haeberlin and Gunther: Indians of Puget Sound, p. 9).

Located where Clay Creek empties into the Puyallup River not far from Cushman School.

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1. These, and similar renditions of native terms which follow, appear in:
Gibbs: Tribes of Western Washington, pp. 178-9.
Eells: Indians of Puget Sound, Paper 1, p. 9.
Curtis: North American Indian, p. 173.

4. kalkálɑq

At the mouth of Wappato Creek, just above the grass lands.

5. sháxtl'ɑbc

Located on Hylebos Waterway. Derived from haxtl', the name of Hylebos Waterway, in which silver salmon were plentiful.

6. tsɑqweqwɑbc

Located where Clarks Creek emptied into the Puyallup River. Derived from sɑqwéqʷ, the name of Clarks Creek. In addition to contacts up and down the Puyallup River this village had strong connections with that of Clover Creek (19).

7. sq'wádɑbc

Located above the Wappato Creek village, where a creek entered Wappato Creek. Derived from q'wɑd, the name of the creek, Simons Creek (?).

8. stáxabc (Curtis: Stukabsh)

Located where the Stuck River enters the Puyallup. Derived from stax, "that which has been cut through"; the name of Stuck River. This river (see page 15) at one time flowed down the present Wappato Creek bed, forming a very considerable stream. It changed its course southward, however, and the village moved with it to its new junction with the Puyallup River. Mythologically this event was connected with the movement of an immense animal, whale, according to the groups near the salt water, beaver, according to more inland groups, which "cut through" the land in an effort to reach the Sound, leaving the new channel behind it. This village had strong White River or Duwamish contacts.

9. ts'uwádiabc

Located on what is now the Puyallup River above the junction with the Carbon, just below the present site of the Soldier's Home. Derived from ts'uwa', the name of the Puyallup River above the point at which the Carbon River flows into it. The name was said to have originated from the cry uttered by an insane woman who left her people and was later seen at various times along the banks of the stream.

This village and the one above it (10) had strong contacts with the Nisqually villages to the south of them. Both were situated on an almost treeless prairie which stretched on either side of the present town of Orting, a fact which tied them topographically to the prairie peoples of the Nisqually.

It was said that there was a log house at this village at the time of the treaty with the whites. Surprise was expressed that such direct evidence of white influence existed so early.

10. tuwháq'hʷbc (Gibbs: T'kawkwamish; Eells: T"kaw-kwa-mish).

Located above Orting where Vogt Creek enters the Carbon River. Derived from tuwháq', the name of the Carbon River from its upper reaches to its junction with the Puyallup. The name of this village was applied by Gibbs, and after him by Eells, to all the peoples of the Upper Puyallup drainage, as opposed to the salt water groups around Commencement Bay.

11. do'ɬiuqᵘ (?)

Located at South Prairie below where Cole Creek enters South Prairie Creek. This village had strong ties with Green River, and families came from Auburn every year to South Prairie Creek for salmon. There seem also to have been contacts between this group and the Snoqualmie. At the time of concentration this village moved in to the Muckleshoot reservation and its affiliations were so definitely to the north that it is considered almost outside of the scope of this inquiry.

12. sqwəqpábc or sqopábc (Gibbs: S'Homamish; Eells: S'ho-ma-mish; Curtis: Sqababsh).

Peoples of villages 12-14. This, the main village, located at the mouth of a stream at Gig Harbor: twáwəlkax. This village was said to have been founded many generations before by Puyallup from Commencement Bay. If we were to believe this tradition and to consider that the contacts with the Hylebos Waterway village were of long standing, we might suppose that the settlement was from that group. Gibbs places this people in the same group with the Sound and River Puyallup. It is also clear that there were additional contacts with the Shotlemamish.

In connection with the aboriginal importance of the Puyallup peoples, it is worth noting that they, with this Gig Harbor group, commanded the only water entrance to the entire southern section of Puget Sound.

13. sxwlótsid

Located at the head of Wollochet Bay. This village was described as an overflow from Gig Harbor, the closest contacts between the two being maintained.

14. tsugwálƛl

Located at Quartermaster Harbor. This village consisted originally of a fortification built by a single man and populated by him through wives from neighboring groups. There is reason to believe that he may have been a Skagit wanderer and it is certain that at least one of the village later brought in a Skagit wife. Because of his activities against the Duwamish he was in constant danger of their retaliatory measures and, consequently, when its founder became old this village moved over to Gig Harbor. The movement took place not long before the treaty.

APPENDIX 2. WATERMAN'S LIST OF PUYALLUP PLACE NAMES AND SITES

Names of places in the Puyallup area

The term Puyallup is exactly comparable to the similar terms already employed. I use it because it occurs in the literature, as descriptive of a group living south of the Duwamish, on Tacoma harbor (Commencement bay) and along the Puyallup river. This is also the name of a reservation, lying just beside the city of Tacoma, on which is also the Cushman Indian school. In actual fact, the Puyallupamish or Spuyallupabsh were the people of one small village, on the south side of the river's mouth. The fact that this name has come to be applied to all the groups living along the river is a matter purely of luck.

The principal points of interest in this area are the city of Tacoma itself, and the Puyallup river. It is almost impossible to pass over the name of this city, without alluding to the question which has arisen concerning the meaning of the word Tacoma. It is supposed to be "the Indian name for Mt. Rainier," and, as stated by Meany, an agitation has arisen, backed enthusiastically by the city of Tacoma, to change the name officially from Mount Rainier to Mount Tacoma. The matter has been mooted at considerable expense for printing and publicity. All the place-names in the Northwest could have been studied and analyzed for half the money expended on this campaign. Special reports were printed on both sides, neither of which is scholarly, sensible, or honest. As a matter of fact, little is to be added to the statement of Theodore Winthrop, who says that

the mountain was called Tacoma, which he adds is the generic term for all snow mountains. This is perfectly accurate. The word in the form which it assumes in the Puyallup dialect is $^{Tu}qo^{\prime}b\ d$, "that which gleams," formed in a perfectly form from a stem $qo^{\prime}b^{3}a$. I have heard this same name applied to Mount Baker, a lofty snow-peak north of Mount Rainier. To say, as Meany does, that a number of names were used by the Indians for the mountain, is perfectly true, but extremely silly, for a number of dialects are spoken in the area in which Rainier is visible, and there is no conceivable reason to suppose that the mountain would have the same name in all of them.

As far as that is concerned, my own informants, in this very area, have given me other names for the mountain. These are comparable to our nick-names for states. New York State has only one real name, but it is referred to in speeches and elsewhere as "the empire state." So Rainier is sometimes called $Tu_{hwEq}!$, "white one." My informants on Liberty bay, near Poulsbo, call the mountain $Tuwa^{\prime}q^{u}$, "good weather." When they can see the mountain, they feel that they will have good weather for several days.

The words Tiswauk and Tu-ah-ku, ascribed by Meany to Puget Sound informants, are evidently intended for the word I have just given. The word ascribed by him to Tolmie, Puskehouse, is quite beyond my powers of etymology or divination.

Names of places on the lower Puyallup and about Tacoma

1. Site of the smelter, north of the present city, Teotco'^{3}Lats, "where there are maples growing." People used to camp here for digging clams.

2. A place between the present main part of the city, and what is called Old Tacoma, Caba'l^{3}ûp, "shade." In the autumn many Indians camped here, to take and cure salmon. Costello gives Shi-bal-up for "Old Tacoma."

3. A place at what is now the corner of Pacific avenue and Jefferson streets, TsalaL-ale, "pond place containing." There was an open place here formerly, and people used to camp temporarily. Costello gives for Tacoma, Tsa-la-te-litch, not translated, which is evidently his rendering of this same term.

4. A place where there is an old river channel, Pu ya lup. The main current used to strike in here directly against the bluff, but the channel has shifted to the eastward. This was a large and important village. The name is said to mean "ample supply of everything." The statement made by Costello that Pu-yal-lup is the name for the Puyallup river, and also for the Nisqualli river, may be safely dismissed. It is the name of a village, and not a stream.

5. Mouth of the stream which formerly ran in the gully near 24th street of the present city, Tux$_{wa}$'dabcƛb, said to mean

"ground flooded or dry according to the tides." Costello gives Tu-wa-dab-shud, not explained.

6. A small stream, tributary to the former, over which the trees arched, Tca'tc, "hidden."

7. A creek over which the Chicago, Milwaukee and St. Paul railroad passes on a trestle, Kô'yôb, not translated.

8. Creek near the Cushman school, KE'labid, "place where salmon-eggs are stored." The suffix -abid means "leavings."

9. Swan creek, near the Cushman school, B sxwa'qed, "place at the head of something, where there are swans."

10. Place near the edge of the marsh, east of the Puyallup river, Xe'l x-ale, "place where there was a battle" (xelx, battle). This is near the car-barns at Twenty-fourth street and Portland avenue.

11. An affluent of the Puyallup river, entering from the south, Ca'sqwEd, "clear."

12. An old village-site, Casqwo'd-tsid, "mouth of Ca'sqwEd." The father of John Knott (an important informant) was the principal man here.

13. A place on the flat below the mouth of the creek just mentioned, Saoxe'xele'ux, "place where they practice or train for war."

14. A sort of shallow inlet between the mouth of the Puyallup and the mouth of Wapato creek, Asxwop, "where the seals haul out,"

literally "seals (asx^{w}) on the ground."

15. Wapato creek, Qa'lqalEq^{w}, "making many turns." Other names were supplied for this stream, one of which is Spiyaaqo'ts, "Indian potato." The name Wapato, which is Chinook jargon for "potato," seems to be connected with this name. The stream is also called Sto'lagwali, "where the river used to be." This name refers to a mythical tale, already recounted, to the effect that the valley above this point used to be a vast lake, of which Wapato creek was the outlet. Some whales who lived in the lake came plowing through the land, making the Puyallup river. When the water drained out this "river" which was formerly the outlet dried up, and became the Wapato creek of today.

16. Hylebos creek, XaxtL!, "brushy." A Catholic missionary named Hylebos founded a school on this creek (St. George's school) which gave it its present-day name.

17. The tide-flats where the ship yards stood during the busy times of 1918, LtcELEb, not translated.

18. Brown's point, on the north side of Commencement Bay, Tcaia'lqo, "hidden water." A spring on the shore-line here, concealed in a lot of alders, supplies fine water in the forenoon, but in the afternoon is dry. The word for hidden is stcats.

19. The flats between Hylebos creek and Wapato creek, Kalka'laq^{u}, said to mean "place around which the water passes."

20. A place where Wapato creek approaches a swamp, extending to Hylebos creek, StEx^{u}-gw L, "plowing through with a canoe." The term refers to the fact that at this point it was possible to shove a canoe from the creek into the swamp, where they hunted beaver.

21. Simon's creek, flowing from Surprise lake to Wapato creek, QwEd, "waterfall." The term refers literally to the "lip," over which the water flows.

22. Narrow place on the plateau where the Interurban tracks pass from the Puyallup valley to the valley of Stuck river, Cugca'gw L, "little passage for a canoe." The term, which can hardly be intended in any literal sense, may refer to the fact that the upper waters of Hylebos creek almost touch the upper end of the stream draining in the opposite direction. The gullies of these two streams meet on the summit of the plateau.

23. An old village-site above Clear creek (number 11 above) on the river bank, QolEq!, not translated.

24. Clark's creek, a southern tributary of the Puyallup, Tsqwe'yEq, "raven." These birds nested at the head of this stream.

25. A small pond which formerly existed south of the Experiment Station near the town of Puyallup, Xaxa'txEt, said to mean "firm, hard."

26. Knoll at the Experiment Station, K!aca'xad, "sea gulls." Sea-gulls used to come up from the harbor to this point,

in stormy weather.

27. A piece of land where the east fork and middle fork of Clark creek run together, Qwatc, "dog-fish." The ground here quivers if anyone steps on it. Springs under the ground make it very soft and shaky. The Indian belief is that an animal like a dog-fish, but spotted, lives under the ground here. That is why the ground trembles.

28. Site of the present town of Puyallup, Sti'lagwats, "where wild strawberries grow." Costello says that the name for this site is S-tuch-a-gwEs. The suffix -gwEs means "a long object" but the rest of the term I cannot identify.

29. Site of the town of Meeker, SExuba'lt^{u}, "dance house." It is said that the name refers to certain religious performances which were held here. People used to come across the mountains from Yakima, bringing their drums, to take part in the observances.

Names of places along Stuck river

30. Confluence of Stuck river with the Puyallup, St^{B}xo$'$-tsid, "mouth of the Stuck." The word Stuck itself, in Indian StBx, means "plowed through," referring to a myth elsewhere recounted.

31. Site of the present town of Sumner, Qwe$'$qwestolb, "sandy place."

32. A depression on top of the plateau which lies across the river from the town of Sumner, Teaha$'$bid. The stem tca means "to dig." The term probably refers to pits dug here for snaring deer.

33. Creek which runs along the foot of the cliff behind the town of Sumner, Kobe$'$û$\hat{q}$ûd, not translated.

34. Site of the town of Duringer, Qaqe$'$ult^{u}, "skunk-cabbage."

35. Stewart creek, entering Stuck river from the west, Sxwowe$'$tBd, "red salmon."

Names of places along the upper Puyallup

36. Creek entering the river from the east below Alderton, Sta'qwadāts, "where salmonberry-bushes grow."

37. Flat south of the mouth of the above creek, Tsaka'lbadāts, "where gooseberry bushes grow."

38. Creek at the town of Alderton, Qwē'sp L, "trout."

39. Fennel creek, entering the river above Alderton from the east, Txsadtc, not translated.

40. Place on the river at McMillin, TL!xwai-äts, "where dog-salmon come out."

41. A place near the river, north of the present town of Orting, Gw'Lgw L d, said to refer to certain black roots.

42. The open prairie below the town of Orting, Sxweyē'q, "a certain supernatural power" useful for causing a run of fish.

43. A creek running on the west side of the river, rising below the Soldier's Home, Tsu'yat. This word is identical with the word "Siatko" or Wild People, which refers to a widespread mythical belief in this area. The Siatko are thought to be wild people, or forest hobgoblins, who prowl around at night,

Names of places along Stuck river

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34. Site of the town of Duringer, Qaqe'ult^{u}, "skunk-cabbage."

35. Stewart creek, entering Stuck river from the west, Sxwowe'tBd, "red salmon."

"Homamish" village

C 208. A'laɬɛl, "houses," a site on the shore of Quartermaster harbor. At one time there was a populous village here. The place gets its name from the old house-pits. This was a fine place to catch "winter" or silver salmon. When my informant was a child, the head-man was Sɛ̃doxe'baL.

whistling and imitating the notes of birds. They often abduct women.

A "wild" girl was once captured along this creek. This word "Tsu yat" was the only sound she could utter. I think that she is to be understood as a human girl, who had stayed with her wild captors until she had forgotten human speech. This explains why the creek is called by this name.

44. A very small creek on the east side of the river, Tua'wi, "rainbow trout."

45. A very high and narrow headland running down to the river, Xwe'yəqwədə, "Thunder-bird." It was believed that Thunder-birds sometimes alighted on these crags.

46. The creek draining Trout lake, and flowing into the Puyallup, $^{Tux}po'^{3}si$, not translated.

47. Trout lake, $St\check{s}^{3}kEx\text{-}alt^{u}$, "beaver's house."

point where they made their landing. They wore the gully by crawling up the cliff.

184. A place one-half mile S. of the preceding, Sxa'labɬts, "measuring a pole." Another informant said that xa'labɬts means "a hollow log."

185. POINT PINER, Dzuqwe'lks, "trash washed up on a promontory."

186. A big black rock at the opening of Quartermaster Harbor, Qoiyaha'tsadjitc, "killer-whale's mother." Nobody can succeed in blasting this rock to pieces, though many have tried. A legend says that it is the mother of Killer-whale, who used to live hereabouts. A story about the adventures of Killer-whale accounts for the black sand at Foulweather Bluff. Killer-whales are said to often play around this rock even today.

187. A place on the beach, at the site of the present Manzanita, QEbqɬba'had. The stem qɬb means "a shelter." The present word is said to mean "sheltered at both ends." A small flat there is closed in by high cliffs.

188. A very large boulder or crag on the shore near the mouth of the harbor, $A^{3}a'tdz^{3}alus$, "the sheen of the sun or moon on the water."

189. A spring on the beach, T^{3}Eodzaha'l-qo, "winter-clam water."

190. A place on the shore-line, Bɨsdzɬ'gwa, "place where there is a harmful monster."

Names of places on Vashon Island

179. POINT VASHON, Taxks, "wide," or "split." The "nose" of the island appears widened out.

179a. A creek in the bight south of Beals Point, on the east side of Vashon Island, Siwai′q^{u}.

180. POINT HEYER, ^{Tu}qo′olil, "hidden spring." A young girl was to be given in marriage to a certain man, although she was unwilling. So some people hid her, and an old woman carried water to her in a basket. The basket of water was transformed into a spring. The girl was in so secret a place that it is hard to find this spring, even yet.

181. The place now called Portage, on a very narrow isthmus between Tramp Harbor and Quartermaster Harbor, StE′xugwiL, "where one pushes a canoe over" (stEx, "to push," "to plow"). The Indians transferred their canoes from Tramp Harbor over into the inclosed waters behind the barrier, by shoving them over the sand.

182. ROBINSON POINT (on Maury Island), TsEtsa^{s}a′p, "hollering across." I think the word refers to the manner in which the point of the island reaches over toward the mainland.

183. A V-shaped gully cutting through a steep declivity, ^{Tu}ksiu′b, "where snakes landed." A myth recounts that the Snake-people came over from the mainland in a war-party to take revenge on the people of Quartermaster Harbor for a killing. This is the

201. The place where Tom Gerand lives, at the point of the peninsula, Qw^{3}Eq^{3}ks, "white promontory." This point is covered with broken shells.

202. A point or promontory known locally as "Gospel Spit," where camp-meetings are held, Tsa dĒkxks. The word tsa'dĒk means the edible inside-part of the fern-root.

203. An ancient site with a kitchen-midden one foot deep, Qoqo'LttcEtc, "madrones." There used to be old house-pits here, but thirty feet of land have washed away. My informant, Lucy Gerand, recalls seeing houses here when she was young.

204. An old village-site with three feet of kitchen-refuse, Kwll^{3}ut. The name is said to mean "yonder," or "across over there."

This ancient settlement was the scene of the famous war with the Snakes. They came here to avenge the death of a snake over in Duwamish valley. The only house they spared was one in which the folk were singing "crying songs" for the dead snake.

205. The place just E. of the dock in Burton, Cxe'btsEgwĒs. I do not know the meaning. Sxeb means "brush;" xeb means "to pick up something by the middle."

206. Place where the dock is built, in Burton. Kwll^{3}uta'gwap, "beyond kwll^{3}ut."

191. A place just N. of the preceding, QaqubqE'baha. This term is the dimunitive of 187, above.

192. The present site of DOCKTON, T bE'hwi, "launching things into the water." The term sounds suspiciously like a paraphrase of the present name, which is based on the fact that there is a drydock there. The native term is said by my informants to be "old" however.

193. A bay E. of Dockton, SE'gwtsEp, "sitting between."

194. A "bend" in the E. shore-line of the harbor, $Tu_{tcila'wi}$, "maples."

195. The inner part of Quartermaster Harbor, behind Burton Peninsula, Sdugwa'laL (sdokw, "enclosed").

196. A place near the N. end of the inlet, where there are several springs on the beach, Bu'lbul^{3}Ets, "bubbling up."

197. A projection on the N. shore-line of the harbor, at the Wyman place, Wa'xultc, "plunging into water." The term is said to refer to the fact that deer used to take the water here, when pursued.

197. BUDD CREEK, in the innermost part of the harbor Sduqo'o, "closed-in creek," referring to its inclosed situation.

199. A place on the shore-line S. of the above, AchwE'tL^{3}os, to face first one way, then the other."

200. The spot at the inner end of Burton Peninsula, DEq^{3}o ya, An old woman gave feasts here, and the name in some way refers to that fact.

stay there. The term means "gathering something together," such as the tops of growing plants. The name apparently would seem to date from rather recent times. The usage is aboriginal, however.

214. PETER POINT, a promontory on the W. side of Vashon Island, Qo':ti, "sleeping-mats." Cat-tails, from which mats are made, are said to be plentiful there.

207. A very fine spring, near the shore, now the site of a brickyard, Siaba'l-qo, "chiefs' water." Common people did not dare to drink here.

208. Site of an Indian village A'lalEl, "old houses." This is on the W. shore, below the present town of Burton. I am inclined to think that in aboriginal times the principal place of settlement was at Kwil^{3}ut, (Number 204 above).

209. A great boulder on what is now called Magnolia beach, Qw^{3}i'la, "white rock." This was in the form of a crouching woman, and is said to be connected with the Transformer story. The rock was blasted to pieces in recent years and taken for crib-work in Tacoma.

210. A place on the W. shore of the inlet at the foot of a high bluff, Higwil-swa'dEtc, "low-tide." I do not know any reason for this name, unless it refers to the fact that one could walk along the foot of the bluff only when the tide was low.

211. A big rock having the appearance of a person peering under his hand, T^{3}ughus, "to peer." There is a story concerning this rock, but I could not obtain it.

212. Neill point, at the entrance to Quartermaster harbor, Xwaye'qwud, "cutting the head off."

213. A place where there was once a Kanaka and Chinese town, Qo^{3}o'li^{u}. The whites in Tacoma would not let such persons

APPENDIX 3. SMITH'S DATA ON FISHING AND FISH CURING

CHAPTER VIII

PROCURING FOOD

The Puyallup-Nisqually were strictly a food gathering people. Fishing was the most constant occupation and whatever a man's economic specialty (see page 140) it did not greatly interfere with the fishing routine. Fish to be eaten fresh were caught throughout the year and in this work women often played an important role (for division of labor see page 138). At the time of the salmon runs, in spring and fall, all other work was suspended while the big catch was made and prepared for drying and smoking. Hunting was, also, more or less constant through the year although inland hunters were especially active in spring and fall, tending to substitute hunting for the more usual emphasis upon fishing at those seasons. All other foods and products were gathered according to the season in which they ripened or became ready for use. Some kind of vegetable food could be obtained for seven or eight months of the year.

A great deal of the hunting and fishing was carried on in the darkness before dawn. Not all food gathering was done at night and most industrial work was done during daylight. Nevertheless, the amount of work accomplished at night by adults was out of all proportion to the extra activity said to have been characteristic of fish and game during those hours.

In night hunting and fishing, fire was often used to attract and blind game. Large fires were built in clearings and when deer were seen moving on the outer edge of the circle of light they could be easily killed. Fishing canoes were fitted with a plank, laid across the canoe about midships and covered with a thick coating of dirt, on which was made a fire of pitchwood. The man in the stern of the canoe paddled and fed the fire. The one in the bow with his back to the fire got the full benefit of the light it gave off and none of the direct glare. Canoes with this kind of fire, djaq, went slowly along shore and deer, which came down to the beach to drink sea foam, became easy marks. Such canoes were always used when fishing with a flounder spear at night. The fire illuminated the water and the fish could be seen as dark shadows. Canoes equipped in the same way were paddled silently to spots where waterfowl slept on the water and, as the canoes moved among them, the ducks were blinded by the light and could be taken with the hands or with a duck spear.

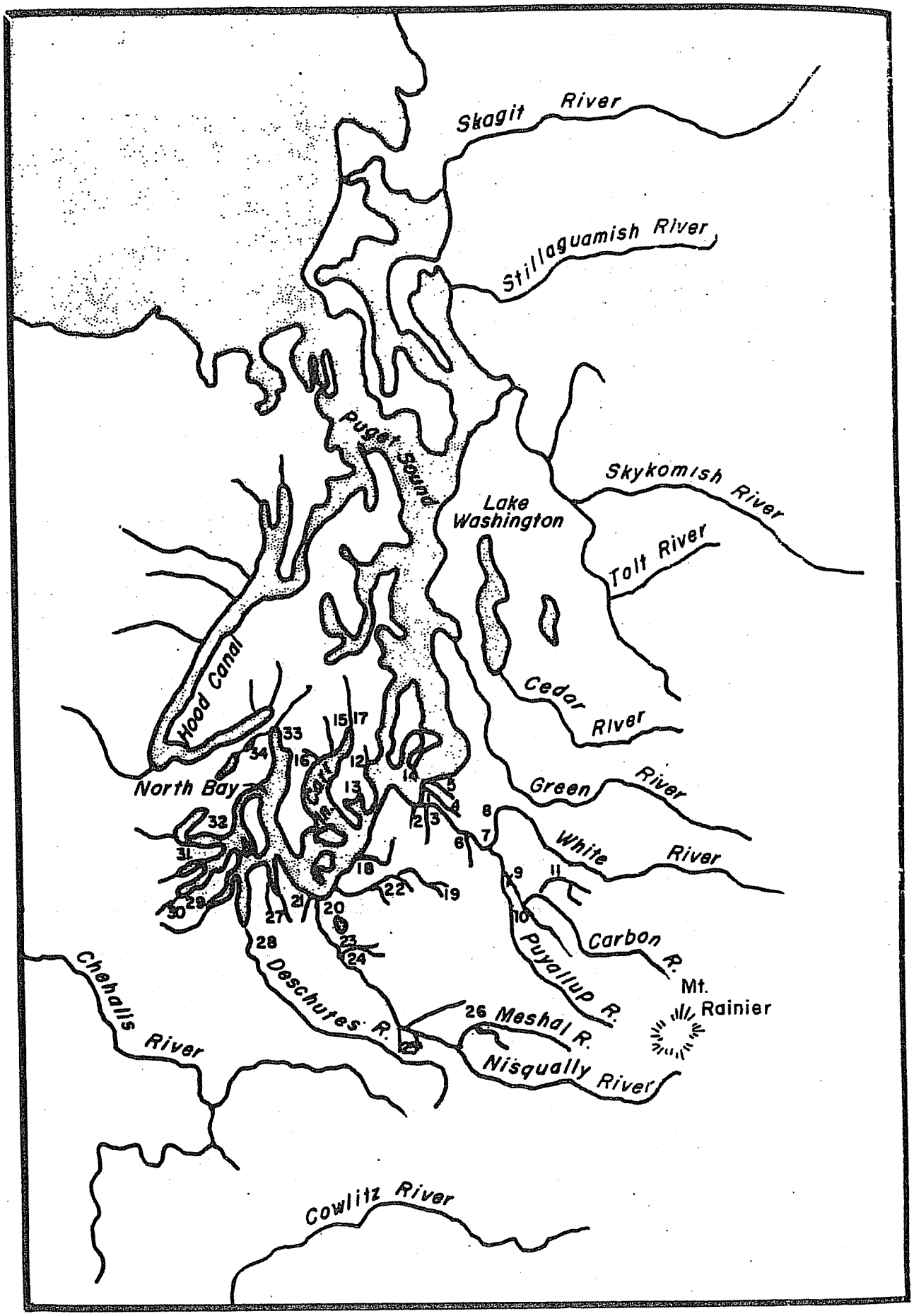

Fig. I Village Sites

After fish or game had been caught or approached it was killed by clubbing (see also page 163). Sleeping seal were stalked and clubbed; ducks snared in nets, bear caught in deadfalls and cornered deer were knocked on the head to kill them. Anything which happened to be at hand was used as a club. But special fish clubs were carried in canoes. They were two feet long with the grip smaller than the striking end. One man had the sharpened foreleg of a deer which he drove through the gill slit, puncturing the backbone. He used this to kill salmon "instead of hammering them."

Fishing

Methods of fishing were highly elaborated. Descriptions of three of these, the large tripod fish trap, nets and spearing, have been treated in separate sections which follow this more general one.

1. A long line was used for still fishing. To the end of it was tied an oval grooved stone for a sinker. Two hooks were fastened above the sinker, one six inches and the other twelve inches from it. In the memory of living men only iron hooks have been used on these lines, but it was thought that small hooks similar to those of the salmon spear were once used. They were baited with cockles, butter clams or the "soft white shrimp" which could be found by treading in the sand when the tide was out. The fishing was done from canoes when the tide was in or coming in. Women caught bull heads and flounder by still fishing. Lyn cod were caught by this method in deep water.

Dog fish for oil were caught on a set line with one hundred and fifty to two hundred hooks but this method was learned from the whites (see page 232).

2. The hook used for trolling was made of ironwood with an ironwood or bone point. The wood was bent and was reinforced, to keep it from spreading, by a fine string or sinew which stretched across the opening. The point was straight, fastened above the reinforcement string so that the upper end protruded beyond the hook at a slight outward angle and the lower end formed a barb on the inner side of the hook. The point was always attached with sinew. The longer side of the hook was notched at the end and equipped with a string leader two to three feet long and with a loop at its end. All of these joinings were permanent. When it was to be used the hook was fastened to the main line, which was three and a half fathoms long, by the loop in the leader.

The trolling hook was baited by means of a small needle about six inches long. It was of ironwood, round and pointed like an awl, and with an eye like a mat needle. The needle was threaded with the leader and passed through a herring from tail to head. The back of the herring was

away from the hook and it was slipped down the length of the straight side so that as the fish went through the water its tail protruded above the point, concealing it. Every time the hook was baited it had to be detached from the main line. The fisherman sat alone in the stern of his canoe. The main line was held in his hands along with the paddle and at each stroke the baited hook darted through the water. Only male herring were used for bait because females do not dart in this way. When the fish was brought within reach, it was landed with a gaff hook or a small spear (see page 268).

3. The shaft of the gaff hook was eight feet long of hazel or fir or, occasionally, of seasoned cedar. The hook itself was of hard wood and relatively large. It had no barbs and was fitted against a straight fixture of hard wood which had a slight gouge along its length to receive the straight side of the hook. A string was laid in this gouge between the hook and the fixture and the whole was secured permanently with wild cherry bark and pitch. The string extended eighteen inches above the fixture and fastened with a loop upon the shaft a foot above its end. The fixture was hallowed at the end to receive the shaft. The hook separated from the staff in the same way as with the salmon spear, lessening the strain.

The gaff hook was used in the fall and early winter when fish were plentiful in the rivers and streams. Big rivers were fished from a canoe, smaller streams from the banks. When the fish would be seen, only the large he-salmon were taken but, at night or in unclear waters, any weight indicated a fish and was pulled out. Inland informants said that the shaft was marked so that the fisherman could always tell in which direction the hook pointed. The shaft was held almost vertical so that the jerk which hooked the fish could be made straight up or it was held more or less horizontally with the point down and the pull which hooked the fish was toward the body.

Gaffing was quicker than the salmon spear because the fish could be slipped off the hook without interference from barbs. After the introduction of iron and the decrease in the salmon runs, gaffing hooks were made with barbs. An iron gaffing hook shown the writer by an inland Puyallup informant and used by his mother's mother's brother was two inches across with a single barb on the inner side. The string which tied on the shaft was wound around the hook beginning just above the curve and this wrapping formed a cavity into which the shaft fit: a device suggestive of the string-wrapping cavity of the barbed salmon spear heads. This hook was said to have had a fir shaft reinforced at the end with ironwood.

4. The herring rake was used to catch herring in deep water when they were not spawning. Most frequently herring caught in this way only served as bait. The rake was fashioned from seasoned cedar or, in modern times, from fir. It was made all in one like a paddle, with an over all length of from ten to twelve feet. The handle was round. The blade, which was three to four feet long, was squared at its end, two and a half inches thick at its upper side and the same thickness on its under side as the small, sharp bone points which were inserted into drill holes on this side. The herring rake was used from the bow of a canoe and was brought through the water like a paddle, the blade being thrust far enough back on the upward stroke so that the fish could be shaken off into the boat.

5. During the spawning season when large schools of herring and smelt crowded in to shore, the fish were dipped out with a loosely twined piece of matting. This matting was six feet long, about two and a half feet wide in the center and tapered to points at each end. It was made from green cedar boughs split once through the heart. Unlike other pieces of twining this was made from the center pole toward the worker and then reversed and the other half made, also toward the worker. The poles were laid flat side down, the butte of each near the tip of the last. They were kept separated in the middle by the twining which continued to within eight inches of the ends. The ends of the poles were laid on the center pole and on top of each other, forming a handle. The fisherman grasped the handles, one in each hand, the flat surface of the split poles toward him, bent the matting into a crescent-shaped curve, waded in among the spawning fish, scooped them up and dumped them on the beach beyond the water line.

6. Weirs were loosely twined of green hazel or willow. They had wide mouths and came to a point at one end. The poles were placed with the buttes at the opening of the weir, the smaller ends crossing one another and bound in a tight bunch at the point. Lighter branches were used for the twining strand. Trout were caught in a four foot weir with a ten inch mouth; salmon in a six or eight foot weir with a mouth two feet in diameter.

Weirs were used in narrow streams and were set with the mouth headed up-stream. The small or trout weir had on one side at about the center a ring made of twisted green twigs through which a pole was passed, the pole rested on either bank of the stream and the weir was thus held in place. The large salmon weirs were anchored by stakes driven into the stream bed. Stone wings, similar to those made for the falls trap, were built in a stream to divert the greatest flow of water into a narrow channel and the salmon weir was placed in the channel. If the fisherman

was in a hurry he might enter the stream several hundred yards above his weir and drive the trout or salmon toward it. This was a one-person fishing method employed by women as well as by men.

7. Falls traps took advantage of the fact that trout and salmon fell or jumped over any falls in their path and could be caught in a receptacle placed below. A large open basket, weighted with a stone, a fish weir made with the upper side open, a piece of coarse screening turned up at one end or barricaded with brush and laid across a log, any of these served the purpose. So long as the water went through and the larger fish did not, the requirements were satisfied. When no falls existed, one might be constructed by felling one or more trees across a narrow stream where the banks were steep, and backing them with stones. Such a dam formed a falls and eventually filled so that there was no deep water pool above it. The screen spoken of was a loose twining of green willow or hazel.

A more carefully constructed screen was used on a more elaborate trap. The screen was of split cedar twined with cedar bark. This was placed on a tripod similar to that used in the tripod trap and slanted away from the falls so the fish could not jump out once they had hit upon it. This was built where there was a natural falls. But stone wings were built in the stream above the falls so that the water was diverted into a narrow channel. The trap was placed at the opening so that it took all the fish which might come down the stream while the screen was set.

Another more or less elaborate type of falls trap was built without any artificial damming and used only when the fish were coming down in schools. Sturdy uprights were set in the river bed below a falls. On the bank and extending over the water was a platform where the fisherman sat and removed the fish as they fell on the screen. The uprights away from the falls were higher than those near it so that the screen slanted. The screen was rolled up and carried away when the fisherman was not using it. The frames of both this and the tripod type of falls trap would last a year until washed away by high water.

sinker.	bá'astɛd
trolling hook	xwábos
trolling line (with or without hook).	sisqwá:ts
trolling.	o·ƚidáp
gaff hook	ƚekwád
herring rake.	'xtxbɛd
matting fish scoop.	sxqʷbábt
fish weir	cxwéxp
falls trap.	yxdád (Nisqually)

Tripod Fish Trap

Large fish traps spanned rivers and streams of any size. They were always built well above tide flats and were used extensively by up-river groups. The work of construction was undertaken by several men each of whom obtained fish from the trap (see page 145). Whatever season of the year the trap was built it stood until a period of high water washed it away. No tripod trap, therefore, lasted beyond the yearly freshets. A group built a trap each year and it was desirable for it to be in working order during the large spring and fall salmon runs but its use was not confined to these periods and salmon were taken more or less constantly so long as the trap stood.

The foundation of the trap was a tripod construction of green fir. Two of the logs were twenty-four feet long, the third was fully thirty feet, and all were of sound heavy timber. The tips of the poles were tied together, that of the longer pole, which was naturally heavier than the others, being fastened between the two smaller ones. The poles were cut separately and brought to the bank where the trap was to be built, they were fastened together with withes, stood erect and then moved into position. When the tripod was moved, one or two men were stationed at each pole. The poles were sharpened at the buttes and when they were set in the comparatively soft river bottom their own weight settled them deeply. The smaller poles were set in a line, the bases of those of adjoining tripods being about five feet apart, so that they formed a straight line across the stream. Below these on the down-river side the heavier sticks formed a second parallel line. From two to six tripods were used to span a stream according to its width.

The series of smaller poles were joined at river bottom level and again at water level by a continuous row of poles tied to them on the down-river side. A third row of poles was fastened to the up-river side about six feet above water level. The two lower rows helped to keep the tripods firm and held them in a straight line one with the other. The upper row of poles formed a walk upon which a person could cross from one side of the river to the other. Vertical poles were set along the walk on the up-river side about four feet apart. At least one of these served as an additional upright between the tripods to keep the walk from sagging. When a person crossed on the walk he faced up-stream, stepped sidewards and held on to each vertical pole. The pitch of the heavy tripod pole was so great that, although it was on the down-river side of the walk, a person had to straddle over it. When the banks were steep the walk extended beyond the end tripods until it touched land; if the banks were low it was necessary to walk up an inclined, notched pole to reach the walk.

On a level with the walk (W) horizontal poles (X and Y) were tied securely, joining each of the two smaller logs of the tripod with the large log of the same tripod. A third horizontal pole (Z) was now fastened across these (X and Y) parallel to the walk, nearer to the heavy tripod pole than to the smaller ones, and extending several feet over its support (X) on the side of the tripod to the left looking downstream. A platform was now constructed resting on poles W and Z. X and Y served only as supports for Z. The platform was rectangular, five feet wide at W and eight feet long, and it extended less than half the way on W between X and Y, so that between the platform and Y, i. e. within the limits of the tripod, was a considerable free space. Each tripod had a platform of its own connected with the others only by the continuous walk (W). The platforms, like the walk, were six feet above the surface of the water.

All of the structural work added to the original fir tripods was of heavy alder and, since all of it was supported by the tripods, its weight dug the tripod poles more securely in place and held them against the action of the water.

A loosely twined screen of poles was let down on the up-river side of the smaller tripod poles. It reached the depth of the water and extended beyond the tripod poles so that the screens from neighboring tripods touched or overlapped. The series of screens formed an unbroken wall across the river. They were held in place against the slanting poles of each tripod by the downward flow of the river. These screens were made in the woods, rolled and carried to the tripod fish trap and were saved and used at least two years until the wood rotted.

Salmon coming up the river were halted by the screen. The fisherman stood on the platform with a net attached to poles long enough (see page 261) so that the net rested on the bottom and the upper ends of the poles were a foot and a half above the platform. The net was manipulated from the inner side of the platform in the open space between sides W, Y and Z. When the net was lifted, it could be held with one hand and the fish lifted out with the other. Since, however, part of the circular rim came up under the platform when the net was lifted straight up and could be raised onto the platform only by swinging it outward, it was customary to have an extra pole fastened to the tripod well above the man's head and upon which he could suspend the net, reaching down for the fish with both hands.

Most of the fishing from the tripod trap was done at night. If it was used in the day time long periods of inactivity occurred and during these the fisherman lay on his platform and dozed. A Nisqually informant said that a net was sometimes set with a small bow and arrow placed between the crossed pole handle of the net. People left this to attend to other

work. When a fish disturbed the net the bow was sprung, the arrow released and, seeing it, someone ran to the platform to take in the fish.

tripod fish trap. . . . . sx̣lósɛd
joining at the top of each tripod . . . . . . koiyóx

Nets

1. The lift net seems only to have been used from the platforms of the large tripod fish traps and the reliance of one upon the other was so fixed that they were always described at the same time. It is quite obvious that the conjunction of the two formed but one method of fishing.

The net was securely fastened to a circular rim between four and five feet in diameter which was held from above, at the center of the circle, by a handle constructed of ten foot poles joining the rim at points opposite each other. A seasoned, hard wood, such as vine-maple or ironwood, was used. The net itself was funnel-shaped, about four feet deep and coming to a point at the bottom. A cord was tied across the rim from the points at which the handle was fastened and from the center of this cord another went straight up to the handle. The extremity of this cord had a knot and loop which prevented its falling from the handle and through which the finger of the fisherman could be placed. A salmon passing over the net made the cord jerk and, if the net was lifted immediately, the fish was raised with it.

Slight variations in the construction of the handle were reported. Inland Puyallup described the simplest form: two separate poles were fastened at one end to the rim and joined together at the other end, with several inches protruding so that they met in a cross. Nisqually said that the two poles were split at the lower end for about one third their length and that the ends of these half sections joined the rim separately fifteen or sixteen inches apart. The rim was, thus, supported in four places. Both these constructions made for a crossed handle which was grasped by the hands on its upper or lower sections, in either case the hands would lift from the same level. Salt water informants described a handle made from a single pole split for over two thirds of its length, the ends of the half sections being fastened to the rim. Like the simple two-pole construction this supported the rim in only two places, unlike either of the others it formed a straight, vertical handle which was grasped with the hands one above the other.

Inland Puyallup said that sometimes the cord across the rim was tied with another every eighth inch of its length and these cords joined, fan-wise, to the single cord at the handle.

2. A second type of net, four and a half to five feet in diameter and several feet deep, was fastened to a circular rim which had a straight handle about ten feet long. The frame was constructed of two pieces of vine-maple, tapering from handle to rim, and bent at their lower portion into three quarters of a circle. The pieces were securely bound together so that the two partial circles met and formed one complete circle. The handle and the circular rim opposite the handle were, consequently, double; the half of the rim hear the handle was single. The net itself was tied fast to the double section of the rim and connected to the single, smooth part of the rim with loose rings of string. A cord was attached to the center of this sliding section of the net and ran up the handle through loops at its base and tip. When this cord was taut, the net completely encircled the rim; when it was slack, the portion of the net nearest the handle slid down closing the mouth. The guide-cord was prevented from slipping from the tip of the handle by a know and loop at its extremity.

The slip net was used in spring when the rivers were high and when the first rich salmon began to appear. The fishing was done from a river canoe in five to six feet of water and at night, when the salmon were most lively. The net was held in one hand in about the center of the handle, one finger was inserted in the loop on the end of the guide-cord so that the mouth was held open. When a fish was felt in the net, the guide-cord was released and the net slipped down entangling the salmon which was then lifted into the boat.

This type of net was described by an inland informant, and salt water informants, when asked, were vaguely familiar with it as used for trout and other fish on the lakes and upper reaches of the rivers.

3. The net used for ducks was of a relatively fine mesh, about two inch, large enough so that a duck could get its head through but small enough so it could not pull free. The net was about twelve feet long. It hung by poles or trees, if the later were handy, on a fly-away. Black ducks had such a fly-away at Quartermaster Harbor and river Puyallup used to cross the Sound to catch them there.

The same nets were also stretched horizontally across the spawning grounds of small fish and when the ducks dove to feed they were ensnared.

4. The seine used in the Sound was a rectangular piece of netting, with a five to six inch mesh, as much as two hundred feet in length and from six to seven feet wide. Modern seines are much wider. At each corner was fastened a long guide-rope. One side of the net was weighted and the other floated, by means of bouyant blocks of dry cedar, so that the net was held lengthwise and upright in the water.

Page #52 Not Found

SJ

lift net . . . . . kwaix^{u} (Nisqually)
slip net . . . . . wápiac (Snoqualmie)
cedar block floats . . . . . póp'sɛbəxɛd
Sound seine. . . . . ə́xwədsɛ́d
river seine. . . . . ə́bɛd (Nisqually)

Spearing

According to salt water informants, spears were made only for fishing, boys of the inland groups used sharpened sticks and adult males on the Skykomish River used spears with bone points for salmon. According to inland informants, boys used sharpened sticks to catch small rodents and birds but "the salt water people liked to throw spears more than we did". This apparently conflicting evidence is probably not contradictory.

The sharpened stick used by boys of the inland group was thrown, as is a regular spear, from above shoulder level, with bend arm, and some of the success of the throw depended upon the momentum acquired by the spear in motion. It is probable that the Skykomish spears mentioned were thrown in the same way. No adults of the area under discussion used a spear in this manner (see also page 164). The shafts were grasped in both hands and either jabbed almost straight down in front of the man or thrust more obliquely from one side. If the fisherman wished to extend the reach of his shaft by letting it out of his hands, he could only do so when kneeling in a canoe, a position from which he could not be easily dislodged. It is very doubtful than even harpooners ever stood to a throw. When an ordinary fisherman used a salmon spear from the stern of a canoe, the distance he gained by letting the shaft out of his hands was small. When the salmon spear was used from the banks of streams, the fisherman never let go of it or the lunge with which he thrust would have completely upset him. So great was the lunge that missing the [illegible] might send the fisherman spear were linguistically differentiated. The only difference in the instrument itself lay in the length of the shaft. Salt water peoples had a spear with a ten to twelve foot shaft which they either used from canoes, doubling its reach by letting it out of their hands, or from some vantage point in water shallow enough so that the shaft could reach its mark. The inland peoples, who fished less from canoes, had to depend upon the length of the shaft for the reach of their spears and these shafts were twenty-five to thirty feet long.

In the light of these facts the apparently conflicting evidence of the informants becomes reconciled. Spear throwing was limited to the use of children of inland groups; all other spears were used for fishing only and were thrust rather than thrown; salt water peoples elongated the thrust of their spears by letting them out of their hands but inland people did not.

1. Whatever its length, the shaft of the salmon spear was two inches through and made of split wood, cedar or fir, seasoned and rounded. At one end of this were fastened two straight one foot prongs of ironwood, which were so shaped at the upper ends that they fitted flat against the shaft yet were at such an angle to it that their lower ends were spread apart about twelve inches. They were bound securely with wild cherry bark.

The head of the salmon spear was made of three pieces of bone of approximately the same length. The central piece of bone was sharpened at one end and served as the point. At either side of this were placed the other bones to form barbs: they were shaped like the prongs at one end so that they too fitted solidly against their support and spread at an angle from it. A braided string was wrapped around the central bone, where it protruded between the two barbs, and extended above the head in a straight line with the point. The point, with its string, and the barbs were joined by wrapping them tightly together with other string, with sinew or wild cherry bark. The wrapping extended at least half way down the point and fully half way up the barbs, leaving a cavity above the central bone or point and between the two barbs through which came the string attached to the central bone. The joinings were heavily pitched so that they were permanent and smooth. The finished head was about two and a half inches long.

Each prong of the shaft was fitted with a head. The end of the prong slipped into the cavity formed by the wrapping tightly enough so that the head would not fall off and yet loosely enough to allow the prong and head to be separated by a jerk. The braided string from the central bone of each head was slightly longer than the prongs and, just above where the prongs were fastened to the shaft, the strings from the two heads were united into one heavier string. This string was doubled at the end to form a loop and then bound in place with another small string. The shaft was notched to receive the loop at a point about eight inches above where the prongs and shaft joined. In modern times when the Indians no longer "took pride in their workmanship" the string from each head fastened to the shaft separately.

When the salmon spear was used, the heads were fitted onto the prongs and the fish was pierced by one head or, preferably, by both. The first jerk dislodged the heads from the prongs but left them firmly attached to the shaft by their strings. The length of the strings allowed for a great deal of movement on the part of the fish so that one man could haul in even a large, game salmon. The barbs prevented the heads from pulling out of the fish. After the heads were in a salmon, the strain was borne by the strings and the shaft.

The long-shafted, inland salmon spears may have had only one head, detachable in the same way. In such a case the prongs could have been dispensed with. It was said that this type of spear was used in the streams of the Cowiltz country for sturgeon, which did not enter local waters. The size of this fish was so great that it was necessary for the string from the head to continue up the length of the shaft whence it served as a snub line.

2. The harpoon was made exactly like the salmon spear except that it was about four times as big. It was used by a man in a fishing canoe, another man being in the stern behind him to paddle. Seal and porpoise were taken with the harpoon but "black fish were too big for these Indians to tackle" (see page 322). Whales have not entered Puget Sound waters for a long time (see page 234). Only villages right on the salt water had harpooners. All of these were dead before 1870 so that, although one informant had seen the equipment, he had only heard about its use.

The end of the harpoon shaft was notched and a long rope was tied to it. The other end of the rope was fastened to a dry cedar buoy. The buoy was about three feet long. Although it was shaped to represent a seal, there were no incisions, carvings or painting on its surface. Through the narrow section or neck of the buoy was drilled a hole in which was placed a string ring. This ring was not removable. It was big enough to go around the nose to the front and slipped easily back and forth through the hole. To this ring the harpoon rope was fastened with "some kind of a hitch". The buoy was placed on the bow before the harpooner with the rope coiled on top of it. When the harpoon was thrown, the rope connecting it with the buoy was retained in the hands. If the fish was relatively small, the harpooner kept the rope, but if it were large the whole thing was let overboard and the buoy was kept in sight. It sometimes took five or six hours before the fish could be captured. Small fish were put in the canoe, others were towed.

3. The flounder spear was used in the Sound and in the lower, [illegible] reaches of the rivers. The shaft of the flounder spear was ten to twelve feet long and was constructed in exactly the same way as the shaft of the salmon spear except that the prongs were only three inches apart at their extremities and there were often three of them. Three prongs were necessary to land skate. The ends of the prongs were sharpened and no heads were attached to them. The spear was driven straight down into the fish and the points did not slip out because the prongs tended to spring apart and thus held tightly in the flesh. The prongs of the salmon spear had the same springiness but there was no occasion for its use. The shaft of the salmon spear could have been used for flounder but, since the strain of the dead weight of the fish fell upon the prongs as well as on the shaft, it was apt to ruin it for further salmon fishing. The reach of the flounder spear was never extended by letting it leave the fisherman's hands. The

fish were located in shallow water by treading or were seen at night in deep water by the light of a fire built in a fishing canoe. The former method was used by boys and women as well as by men, the latter was a regular adult male fishing method used for not only flounder, skate and sole but also for cods.

4. A three foot spear made exactly like the flounder spear with two or three prongs was used to land large fish caught by trolling or still fishing. When the fish was brought within reach it was speared, preferably near the gills, and lifted.

5. A duck spear, to be used from a canoe fitted out with an illuminating fire, was made in the same way as the flounder spear except that the prongs, of which there were three, were much shorter. The duck's neck was caught between the prongs or the sharp points penetrated the body.

salmon spear (heads)	ta'ɬ
flounder spear (pronged spear shaft)	tc'ɛ́ce
prong on spear shaft	skáɬpɒ (Nisqually)
to fish with salmon spear from canoe	k'laúosɛb "I'm laying fc him
to fish with salmon spear not from canoe	otsásqtcɛd
seal	asxʷ
whale.	hátsɛdjɬtc
black fish	kwádɩs

Hunting

1. When game and fresh food were scarce, four or five men of the same village might make "a surround", i. e., leave separately for distant points, move on different paths to an appointed spot, separate again and reunite at another spot. This was continued until game was obtained, each spot at which they came together being nearer the home site. Organized hunts were also undertaken against panther when they became too ferocious in attacking horses during the winter months.

Less formal group hunts occurred when game was sighted unexpectedly near a camp site or a route of travel. When deer were seen swimming from the mainland to an island, several canoes might put out in pursuit, the men pounding the animal across the head with their paddles to kill it. If the game was sighted when the men were not around, the women were equal to the situation, following the animal and impaling it on double pointed digging sticks run up its anus. Farther north on the Skagit River deer could be cornered, when the snow was crusted, and clubbed to death. Heavy snowfalls drove the deer from inland points toward the Puget Sound beaches and they could be cornered and clubbed in the same way.

2. As a whole, however, hunting was a one-man occupation, a hunter going out alone or taking with him only a young relative for instruction. Regular hunters used bows and arrows to kill game. Care was taken to make the shot effective. Standing targets were preferred and when a deer or elk bounded away it could frequently be brought to a stop and made to turn in curiosity if the hunter gave a shrill whistle. Hunters also whistled on a salal berry leaf imitating the cry of a fawn in distress and killed the doe when it came up. "Small Indian dogs" were used to track game; they moved without baying and the hunter followed the sound of their progress through the underbrush. One of the sxótlbəbc who was born between 1800 and 1805 had a pack of over thirty hunting dogs. Hunters traveling without dogs preferred to keep on windfalls. They traveled slowly and looked for small game, although they did not kill it; "then you saw the big game all at once."

One great inland hunter had a scent of some sort which en (page missing)

Picking Berries

Berries were picked into small coiled baskets suspended from the neck so that both hands could be employed at the same time. When these baskets were full, the contents was dumped into larger baskets lined with leaves. As the large baskets, in which the berries were carried, were filled, they were covered with leaves which were tied across the top to hold them in place. Sword fern was never used to line or cover baskets because this fern was "a great joker" and would eat up the berries when the baskets were unpacked they would be found half empty.

Safeguarding the Food Supply

The voluntary preservation of game with the accompanying knowledge of its numbers and whereabouts and the penalties for trespass and theft has already been considered under the heading of "hunting territories" (see page 24). At this point, therefore, the safeguarding of the food supply will be treated without reference to customs clustered about the concept of hunting territories.

Two major attitudes influenced food preservation: (1) the feeling that no part of what was killed should be wasted and, (2) the competitio

between food gatherers to collect only the best. So rigid was the feeling about wasting meat from large game animals that a lone traveler, who was forced to kill a deer because he found no smaller game or fish, felt called upon to camp, partially dry the meat and carry it with him even though the labor entailed delay his journey five or more days. Generally when large game was killed, it had been hunted but the feeling against waste was strong in respect to any food.

The other attitude, that of taking only the best of what was available, was constantly invoked. Only large roots were dug, small ones remaining in the ground. Children were cautioned to pick only fine berries: "Don't be lazy, move around and take the best." And women who came in with scrub berries were ridiculed and looked down upon. An instance serves to illustrate the point in regard to game. A famous hunter and a young hunter happened to go out for deer on the same day. The young man brought in a yearling buck in fine condition and was immensely pleased with himself. Hours later the old man returned empty handed. He asked if the other had killed anything and was shown the yearling. "Oh," he said, "I saw that and passed it up." Whether this was true or not the effect on the young man was such that he never afterward shot anything but adult gam. "It made him feel so cheap."

These attitudes worked more or less unconsciously toward insuring a continuation of the food supply. More definite methods were also employed. Berry fields, especially blackberry patches, were burned over, but how, when or by whom this was accomplished could not be discovered. Inland peoples had a greater fear of fire and its results on grazing land and game than dwellers on the moist lowlands and employed this method of clearing land seldom if at all. Fawns with the spots still in evidence were never killed and children who did so were scolded harshly. There were no such restrictions on children regarding small animals for these played little part in adult economy.

Only enough salmon eggs, shellfish and other varieties of fish were taken for daily consumption or for winter storage, and this could not have constituted a real drain on the large supply of marine life. The situation in regard to spawning salmon was apparently complicated by the presence of fish traps, etc., and deserves attention.

When dams were built for traps, they were built not twelve but six feet high because "the old Indians knew what they were about: the salmon could jump six feet but they couldn't jump twelve". The explanation is unnecessary to the fact, however, for the extra work entailed by the additional six feet of construction would have been normally prohibitive and completely unnecessary. A screen left on a falls trap clogged with leaves and drift and the water flowed right over, the fish going with it.

Screens on the tripod traps had to be lifted and cleaned at least twice a day when they were in use or they, too, would have clogged and the action of the water might have destroyed the entire framework. Screens were, therefore, removed when the tripod traps were not in use and generally also from the falls traps. Even when the screens were set on the tripod traps, the salmon which were not caught could burrow under a corner of the screen, lift it and continue up-river. The traps, consequently served to slow up the speed of those salmon which were not caught. But other salmon were not prevented from spawning and so continuing the supply, neither were they stopped from reaching up-river groups.

FOOD AND ITS PREPARATION

Fresh Fish

The following fish were caught and, when eaten, cooked fresh and not in combination with any other food:

There were said to have been six kinds of bull-head: only the one with a smooth skin was eaten.

Candle fish were not eaten.

Cods would keep a few days if they were hung up when the weather was cool. The rock cods, including black and brown cod and red cod or snappers, and the lyn cod were slit down the ventral side and the entrails, not the backbone, removed. They were roasted open.

A big blue fish, similar to the black cod but longer, was also eaten.

Devil fish were a favorite food. The people of the upper Puyallup valley made special trips to the Sound in the neighborhood of what is now Rodondo Beach, where devil fish were plentiful, in order to secure them. They were picked up while asleep along the shore and were said to have had four, five or six arms, with a total spread of about five feet. The head, which had to be eaten immediately, was split, opened flat and roasted. But the solid meat of the arms was the favorite portion because of its salt water taste. The arms were sometimes chewed raw, more generally they were boiled until about three quarters done: fully cooked they became dry and tasteless. Chewing the partially cooked arms was highly recommended for an alcoholic hang-over.

According to the informants, there were no eels in the Puyallup or Nisqually Rivers. There was, however, a large dark eel in the salt water of the Sound which was caught occasionally by Sound fishermen. They never ate these eels. It was well known that the east of the mountains peoples ate eels and even dried them like salmon. Nisqually informants said that there were two kinds of eel in the Chehalis country, a big kind and a little kind, and that the Nisqually ate these when they could get them. Other informants expressed repugnance at the thought. "You wouldn't eat a snake, would you?"

Flounder, of which one kind was known, were well liked. They were cleaned of water slime, gutted and roasted whole.

Halibut did not come into the waters above Whidby Island in any numbers and now they come not nearly so far. But they were occasionally caught by still fishing. The Whidby Island people speared them and farther north both halibut and salmon were caught by trolling. Halibut were cooked like flounder.

Neither the blue nor light perch was commonly eaten. They were too bony. Present day Orientals of the region are said to be very fond of them, however.

The sea cucumber was boiled. One informant said he never tasted it because he didn't "like the looks of the thing".

Sea eggs were eaten raw.

There used to be very large sharks in the Sound. But long ago the whales and the sharks fought a terrible battle between Johnson Point and Devils Head and all the big sharks were killed. One whale was left alive and for some time after the fight he came back to the Sound with his mate. There used to be man-eating sharks but they caught six or seven in one year between Browns Point and Des Moines and that seems to have cleaned them out. There are still plenty of mud sharks. Neither of the three types served as food.

The skate was considered good eating. The two slabs of meat near the gills on each side of the head were the best part: in the myth about Skate these were the combs which he wore in his hair, for he was a great dandy, and, when he sang, the words of his song were, "There is nothing wrong about me, even the sides of my head are beautiful." The tail and wings were taken off the skate, leaving the whole front section in one piece, and it was roasted open.

Two kinds of sole were caught. One, which lived near the shore all the time, was called the "smells-bad sole". It was not very good. Sole were wiped off on the outside, gutted and roasted whole.

Fresh water trout were cleaned by cutting them straight down the ventral side. Several were then put on a single cooking stick which pierced the mid-back so that the fish were at right angles to the stick.

bull head	sxwə́di (Nisqually)	salt water eel	t'wálcad
rock cod.	t'áxleksɬd	small Chehalis eel . . .	ax̌s
lyn cod	t'taíɛb	large Chehalis eel . . .	kópa,
devil fish.	sqálɬtc	flounder	p'wai
		halibut.	stcut'x

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The strings, intact, formed an important item of exchange and the clams, which could be eaten as they were, or boiled, were not removed from the strips of bark until they were to be used. Peoples from east of the mountains are said to have been very found of these clams and one is given a particularly vivid picture of Sahaptin visitors wearing precious necklaces of clams which they munched on the homeward journey.

The neck of the gwiduck was occasionally cured. The clam which was intermediate between the horse clam and gwiduck was cured in the same way as was the horse clam but it was hung in lighter smoke.

Rock clams were steam-baked and eaten in great quantities at feasts. They were, also, cured occasionally and would keep for a few weeks or even months. In curing they were steam-baked, removed from the shells and placed on drying racks in the sun. They were not strung on cedar bark and no smoke entered into the curing process.

Chinese slippers . . .	ok's	rock clams	qóxɛdɩx
mussel	sctitc'	horse clams.	há'αts
oyster	tlóxtlox (Nisqually)	gwiduck.	gwí'dαk
		intermediate type. . .	st'âbsα
clams (general). . . .	sáx:xo	string of clams or cockles.	tάcɛd (Nisqually)
cockles.	sxápαb		
butter clams	tsɛk'iwάt		

Meat

When eaten fresh, the meat of large animals was boiled, steam-baked or roasted open before the fire.

Deer and elk were cut down the ventral side and cleaned, then hung by the feet and skinned. It was said that no knife was used in skinning the animal, that the hands were completely sufficient

at both ends by the cooking stick so that they formed a sort of ring when cured. Butter clams were pierced only once, the stick running through the body but not breaking the stomach itself; the head was then turned over and the stock run through the strap on the neck to hold the clam in position. A low rack made of a pole supported on forked stocks was built the length of an extended fire, the cooking stocks were stood up along this with one end on the ground and other resting on the rack. The fish were cooked before the fire for an hour or less during which time the position of the cooking sticks was shifted four times, i. e. small end of stock up (1) back and (2) front of clams or cockles, large end of stick up (3) back and (4) front. When the fish were cooked thoroughly all the way through, they were removed from the stocks and, while still warm, strung by the same holes on strips of tanned cedar bark. They were then hung on the smoking racks and within one night or longer, depending on the fatness of the clams, became dry and hard.

It was not necessary to steam-bake horse clams to remove them from the shells but, because of this and of their greater size, the cooking process was considerably longer and more tedious. Horse clams were strung, not on round cooking sticks, but on flat cedar splints of the same length. It took four or five hours to cook them thoroughly, during which time the position of the splints was changed eight times, i. e. one end of the splint up (1) back, (2) side, (3) front, (4) side and other end of splint up (5) back, (6) side, (7) front (8) side. The clams were left on the splints and laid across the smoking racks. When they were completely cured the splints were removed and the clams were strung by the same holes on tanned cedar bark.

Twelve or fourteen horse clams were cooked upon one cedar splint and even a greater number of the smaller butter clams and cockles fit upon the cooking sticks. One strip of tanned cedar bark was made to hold the clams from two splints or cooking sticks. The strip of bark was about four and a half feet long and was doubled at the center into a sharp V: each side of the V held the clams or cockles from one splint or stick. The ends were tied tightly together, forming a sort of semi-pliable ring. Strings of horse clams were stored without further treatment in large loosely woven baskets. The strings of butter clams or cockles were laid on the ground on a covering of sword fern and layers of fern and clams were placed on top of each other until a pile about 2 x 2-1/2 x 5 feet was formed. These piles were then stamped and tread upon until the clams were partially flattened. The fern, which had kept the clams from sticking together, was removed and the strings were stored in loosely woven baskets. Horse clams could not be flattened in this way because they burst. Almost twice as many flattened strings could be stored in the same amount of space.

these were ready for the midwinter months and could be kept to flavor the first spring sprouts. It is little wonder that they were regarded as a "high-toned food".

salmon eggs (general). . .	qαlq	eggs cured alone. . . .	tcαk'gwαs
fresh salmon eggs.	sklαbklάbkʷ	moist eggs.	stsαk
herring eggs	kéqαlx	whole-egg-seasoned-salmon.	sqwα'lɛb
thoroughly dried eggs. . . ("hung up" as compared to the eggs cured in a sac, which were not hung)	ƛ'aíus		

Shellfish

The following shellfish were eaten fresh, either boiled or steam-baked:

There is some indication that barnacles, unlike other shellfish, were eaten raw.

Chinese slippers were taken at low tide from the deep water rocks. They grew to be eight inches long and were eaten when they were soft. At Port Townsend they used to eat Chinese slippers raw.

Craw fish were never eaten.

Mussels only took ten or fifteen minutes to cook. Sometimes they were laid on hot coals and eaten as soon as they opened.

Oysters were never eaten raw.

Clams and cockles were not only eaten fresh but cured as well. Five kinds of clams were used: the butter clam, the rock clam, the horse clam, the gwiduck and another for which the English name was unknown but which was described as intermediate between the horse clam and the gwiduck: it had a neck not quite so long as the gwiduck and a shell, more oval than that of the horse clam, into which its entire body fit. Clams or cockles cured with smoke could be dept indefinitely. Occasionally worms started in the body portion and, although the necks remained edible, the whole thing was discarded. This was unusual, however. As a rule these clams kept as well as smoked salmon and, in the same way, were regarded as economic items to be accumulated and traded.

Butter clams and cockles were cured separately by the same process. They were first steam-baked, then removed from the shells and strung on thin, single cooking sticks. The cockles which are long, were pierced

cured by either of these methods became thoroughly dry and saturated with smoke in less than a week. They were sometimes stored in baskets but, since they were apt to get wormy, were generally used shortly after they were finished. They were eaten with potatoes or, occasionally, with sprouts.

Loose eggs were likewise smoked in a sac made of two salmon skins. Any salmon eggs could be cured in this way but the dog and silverside eggs were more commonly used. The sac was always made from the skin of dog salmon. Nisqually informants said that if the tripe of a deer happened to be handy it might be substituted for the fish skin. The dog salmon were boned, as they would be for smoking or drying, and all of the flesh was immediately scrapped of the skin. Since these sacs were made when the fish was plentiful, the scraps of flesh were thrown away. The skins, while still fresh, were sewed together with string, using a running stitch. Although the perforated skin was the tougher skin of the dorsal side and tail, it was generally soft enough for the string to pierce it without an awl being necessary. The eggs were poured into the sac and packed solid by their own weight. The mouth was overcast shut.

The filed sacs were now laid across the poles of the smoking racks and turned occasionally so that they cured evenly. Salmon, which was being smoked on the same racks, absorbed the heavy smoke and direct heat so that the eggs were cured slowly in the light, upper smoke. The outer portion of the eggs became completely dry but the smoke never penetrated the whole sac and the inner eggs remained moist. The dried eggs came away from the sac "like a stock of candy" or they were scraped off. They could not be eaten alone but were combined with sprouts or wappato. The moist eggs were cooked alone in water or boiled with a little fresh salmon. A handful made a stew sufficient for four or five persons.

A type of smoked salmon was made which depended upon salmon eggs for its flavor. A fresh salmon which was ready to spawn was selected. The head and gills were removed and the entrails drawn, leaving the spawn within the fish. The cavity was then filled in with loose eggs from other salmon. The opening was sewed shut and the fish hung by its tail in heavy smoke. It took a long time for the meat of such a salmon to cure and some of the eggs inside it always remained moist. These moist eggs were similar to those at the center of the fish-skin sacs, although not as strong in flavor, and were used in the same way.

Fish eggs, whether cured alone or within a salmon, could be kept so long as they remained in the racks in light smoke. They took a great deal of time to prepare and constant attention during curing. Although fresh and quickly dried eggs were eaten as they were obtained,

According to this informant, the reproductive fluid of the he-salmon was likewise smoked. Both of these objects of diet were later boiled separately and eaten alone. A salt water informant denied that the hearts and livers were cured, even adding that the bloody tissue of the salmon heart was poison and would kill a dog which might be so unfortunate as to eat it. The Chehalis word ma·q'w, "salmon heart",[1] was recognized as Chehalis but the meaning was not known. The informant thought it might mean belly salmon. There seems little doubt, however, that occasionally the fresh intestines of tyee salmon were cleaned and boiled with the gills or roasted.

smelt	tc'a·'au	dog salmon	tl'xwaí
tyee salmon	sátsɑb	humprey	hɑdo'
silver salmon	sgwɑ́xwɪts	steelhead	skwáwɛl
summer salmon	xeuɣ	belly salmon	sɛ́·ɛkotl
fall salmon	scɑdád·ʷ	dried salmon	t'ɑlóp
smolts	qeq'ɛ́lâdi	smoked salmon	q'was
smelt	stɑwóps	cooked-and-partially-salmon	sc·ʷɛɑbus
lake salmon	élaɬd	cooked-and-smoked	sck·ʷɛ́lus
curing salmon	oládt·ʷ	forked-and-smoked	t'áxɑbts
fresh boned cooked salmon	slwɑ́t'ɑb	backbone-smoked	xets'ótɬd
fresh whole cooked salmon	sk'wɑ́lɑb	head-smoked	p'ɑ́lqɑd

Fish Eggs

Every informant compared the position of fish eggs in the diet to that of cheese in today's. In the same way their pungency lent zest to meals otherwise drab after frequent repetition. They seldom constituted a whole meal but were added to one as tidbits or were combined with food staples.

Fresh eggs cracked and smapped between the teeth. The eggs of silver salmon were eaten fresh or were eaten with dried meat or salmon or with potatoes. Herring eggs were, also, eaten fresh with smoked salmon or, if the supply of smoked salmon were exhausted by the time herring eggs were available, they were eaten with sprouts. With these two exceptions fish eggs were cured before they were used.

The eggs could be taken, from salmon which had just entered the rivers, before they had loosened. These adhesive egg masses were hung in heavy smoke. Loose eggs were put into the reproductive sac of the he-salmon, the mouth of which was tied, and hung in the same way. Eggs

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1. Adamson, ms.

a great deal of work to prepare and took extra space on the racks, salmon were cured in this way to serve as a delicacy rather than a food staple.

e. Salmon, to be forked-and-smoked, were laid in the same position for boning as described above and handled in the same way. The knife, however, was drawn as closely as possible to the bone and entrails; it penetrated from dorsal to ventral sides and stopped short of the tail. The backbone was broken off at the tail and discarded. Such cutting left all of the flesh adhering to the skin and, instead of the two sides being connected along their length at the ventral side, the pieces hung separate from each other except for the joining at the tail.

After they were boned, the forked fish were suspended like wishbones along heavy poles. They were not heavily smoked for, since the meat was thick, the curing process was a very slow and tedious one. Only experts could so cure fish cut in this way that it would keep for any time.

f. It will be remembered that the backbones were taken out, in the boning method used for dried and smoked salmon, with a considerable quantity of meat adhering to them. The best of these bones, regardless of the species of salmon from which they were taken, were kept. The entrails and head had already been taken off, the small ribs were now knocked away, leaving only the single backbones and the meat on them. Two of these bones were tied together just below the tail and were suspended from poles in the same way as were the forked-and-smoked salmon. They were smoked thoroughtly, hard and dry, and had subsequently to be soaked before they were eaten.

g. The heads of he-salmon, especially dog salmon, were treated like the cooked-and-smoked salmon. They were first split down the nose and spread open. A single cooking stick was stuck through the eye or ear holes, in one and out the other, so that the opened heads were held flat. They were then roasted, the sticks removed and the heads laid flesh-side down upon the smoking racks.

When finished the heads were tied in bundles and stored. They were soaked and then either boiled or picked up, eaten and sucked without further cooking.

h. The situation in regard to the eating of salmon entrails is somewhat clouded. A Nisqually informant offered the information that salmon hearts and livers were strung on tanned cedar bark and smoked.

b. Smoked salmon was prepared from the dog salmon and from the steelhead when it could be caught in quantity. It was said that this type was not made by the peoples who lived east of the mountains, that, indeed, the only type known to them was the dried salmon described above. It was the smoked salmon which was more important along the Sound and the coastal plain in its neighborhood. This was apparently because the smoked flavor was desired but, also, because smoking preserved the salmon indefinitely. Thus, smoked salmon became not only a food but an economic unit, accumulated by the wealthy and employed as a medium of exchange.

The salmon was boned in exactly the same way as for drying, or, the cuts were so made as to leave the tail attached to the meat. In either case the cross-braces of cedar splint were put in the fish immediately after it was boned. At no time was it slabbed. Consequently, one entire surface was covered with skin. The fish was hung on the racks and, as the smoking progressed, it could be moved into lighter smoke, either higher above the fire or to one side of it, thus making room for a new batch in the heavy smoke.

All salmon was smoked within wooden or bark houses which were practically smoke proof. Large fires were built and upon these were thrown the entrails and refuse left after boning the fish. Intense heat, which was detrimental to proper curing, was thereby reduced and the amount of smoke increased. The process depended entirely upon the smoke for its efficacy.

When it was finished, the meat was under half an inch thick and each salmon hung in a perfectly flat piece, very hard and completely inflexible. The cedar splints were now removed and the fish prepared for storing. The fins, which were brittle, and the coating of deposited smoke, were carefully knocked off. Twenty or thirty fish were laid on top of each other and tied into a tight compact bundle. These bundles were put safely away in the storage space of the houses.

Smoked salmon was soaked in water over night before it could be boiled or roasted. Without being first soaked or cooked, it was sometimes rolled lengthwise into a firm mass and pounded with a heavy stick until it was soft enough to chew.

c and d. The kinds of cured salmon called respectively cooked-and-partially-smoked and cooked-and-smoked were distinguished from the regular smoked salmon by the fact that they were first thoroughly cooked. The dog salmon, boned as for smoking, was braced flat by cedar splints and roasted until it was done enough to eat. It was then laid upon the poles of the smoking racks, flesh-side down, and smoked lightly. The fish were frequently taken down and eaten while they were still soft. When they were smoked through, such fish could be kept some time. But, since they required

so that the dorsal side remained to the worker's right but the head was toward her. When the fish was in this position the knife was drawn away from the worker making, again, a cut from head to tail. This manner of cutting left the backbone and entrails, head and tail, in one piece in the center of the fish, together with a considerable quantity of flesh. The upper skin was laid back, to the left. The inner portion was lifted out, taken in the left hand just below the head and, with the right hand in an outward motion, the head broken away, carrying the entrails with it. The tail was rested on the ground before the worker and with the first finger of the right hand, or with an instrument which was not described, the blood was scrapped down and away from the backbone. One long scrape cleaned the bone pretty thoroughly. It, with the meat attached to it, was put to one side. The fish to be dried now lay before the worker in one piece of solid flesh with a uniform thickness of from one to two inches.

A gash was made in the tail end of the fish through which a seasoned cedar stick six to eight inches long was inserted. This stick was laid across the poles of the drying racks and the fish was allowed to hang for two or three days until the flesh was firm enough to hold together. It was then taken from the racks and cut in two down its length. Each part was slabbed, i. e. it was split to half its thickness by a cut extending through the meat to within about an inch of the ventral side. Slabbing divided the fish into two joined pieces, each of which was the shape and size of the boned fish but half its weight. Small seasoned cedar splints were now placed across the inner surface of the pieces through slits in the flesh: these served to hold the meat flat and open. The pieces were again pierced at the tail end by the cedar stick and hung up until they were thoroughly dry.

Nisqually informants said that dried salmon was rubbed and bent, before the cross-braces were put in, in order to keep it soft and so that it would dry evenly. Other informants denied that it was worked in any way.

The dried salmon was cured on racks built under mat or bough shelters which were open at the sides. A certain amount of sun was allowed to reach the fish but the drying process was dependent upon the free circulation of air and the warmth from a slight smudge built beneath the racks. Very little smoke reached the fish.

When the salmon was completely dry, it was stiff but not really hard. Since it was cured for more or less immediate use, it was not prepared for storing nor was it stored with any particular care. The dried salmon could be picked up and eaten just as it was or could be boiled directly, without soaking.

A small salmon was said to live permanently in Lake Washington, spawning in the creeks which emptied into the lake. The Duwamish of that section, and even those at the intersection of the White and Green Rivers, were said to prefer this salmon to that which entered the rivers from the Sound. They were boiled fresh or were cured. For curing they were slit down the ventral side, the entrails removed, the bone remaining, and were smoked heavily. These smoked lake salmon would keep as well as any smoked salmon. They were eaten like cured herring, i. e. soaked and then toasted.

When eaten fresh, the large salmon was either boned, braced open and cooked before the fire or the entrails were drawn, the tail removed for the entrance of the cooking stick and the fish roasted whole. The flesh from the lower portion of the salmon, the so-called belly salmon, was preferred.

Cured salmon was an important item of diet. The outside of the fresh fish was first cleaned by wiping it off carefully with moss. Great piles of vine-maple moss were used for this purpose, moss gathered from maples being too fine and dirty to be efficient. The fish were cut and cleaned upon the ground on thick layers of fern. When the ferns became saturated they were thrown down the river or burned and fresh ones were spread in their place. The cutting was done in long, sweeping strokes which retraced the same gash, going deeper each time. No jerky movements were employed.

There were eight kinds of cured salmon, each having its own distinct flavor: (a) dried, (b) smoked, (c) cooked-and-partially- smoked, (d) cooked-and-smoked, (e) forked-and-smoked, (f) backbone-smoked, (g) head-smoked and (h) entrails. Each of these had its own name but the terms used here are less translations of native words than rough descriptions of the finished product and its method of preparation.

a. Dried salmon was made from the tyee and the summer and ear fall salmons. It was, consequently, cured while the weather was fi a circumstance which enabled the work to be done out of doors. This type would keep some time but it was eaten steadily during the summer and the supply was generally exhausted by the early winter months.

To bone the salmon it was laid before the worker with its dorsal side to the worker's right and the head away from her. The knife was drawn toward the worker making a cut from head to tail down the dorsal side and partially separating the meat next to the upper skin from the remainder of the fish. Care was taken to keep the meat even and thin. The incision went through the fish to within an inch of the ventral side. The whole fish was then grasped by the head with the left hand and reversed

perch . . . . . sɑ̓bkʷ
sea cucumber. . . . . t'djábɑ̓ts (Nisqually)
sea eggs. . . . . sqwéqwetc
shark (mud or man-eating) . . . . . qwatc' tɑ̓lítcu
skate . . . . . kwékwel (Nisqually)
skate:best meat . . . . spɑ̓kpɑ̓kwaɬɑ̓di
sole. . . . . sxɑ̓tc
sturgeon. . . . . k'watc
trout . . . . . skw sp

Dried and Smoked Fish

1. Herring were caught in great quantities and cured. They were slit and the entrails removed. Strung on cedar splints, they were roasted done enough to eat and then hung in heavy smoke. When finished the smoked herring were stored in baskets which were placed in the storage space of the houses. They would keep for a long time and could be eaten direct or toasted.

Herring were called sto'l and, when cured, cɑ̓bsto'l. "sto'l is a pretty name: it ought to be the name of a woman."

2. Silver smelt were smoked but they were not cured for storage. The fresh smelt were strung on a small round stick, which pierced the head through the gill slits, and were hung in heavy smoke. They were toasted before they were eaten and often the entrails, which were shriveled, and the backbone were removed. The skin toasted off. Smelt were eaten as quickly as they were smoked.

3. Salmon was the most important single food. Four of the five species of Pacific salmon (Oncorhynchus) were commonly known and used: tyee or Chinook (O. tschawytscha), silver or silver side (O. kisutch), dog (O. keta) and humpback or "humprey) (O. gorbuscha). To these should be added the steelhead (salmo gairdneri) which shares salmon characteristics and was treated in the same way. When asked about the red salmon (O. nerka) informants said the silver side might be called that as it turned red in fresh water, but they knew of no separate species by this name.

The terms spring, summer and fall refer to the season in which the salmon, regardless of species, enter the rivers. Since the tyee is generally the earliest to arrive, the term "spring salmon" is occasionally used as referring only to this species. The spring and summer salmon enter the rivers long before the growth of the organs of reproduction has reduced the richness of the flesh. The fall salmon, however, cannot be taken in quantity in the rivers until their flesh has deteriorated. Consequently, the dog, a fall salmon, is one of the least rich of the salmons. The Indians were quite aware of this quality, which decreased its value as a fresh-cooked fish, but which made it possible for them to cure the dog salmon so that it could be kept over indefinite periods of time.