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**INDIAN USE OF SHELLFISH IN WESTERN WASHINGTON
AND THE INDIAN TREATIES OF 1854-1855**

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PREFACE

My Background

I received a Ph.D. in Anthropology from the University of Washington in 1953. My area of specialization is Indians of the Northwest Coast. I began ethnographic field research in 1949 in the Coast Salish area within the Northwest Coast. My research has focussed on the Northwest Coast (southeast Alaska to northwest California) since the mid-1960s. Most of the Indian tribes in western Washington are included within the Southern Coast Salish area.

I have taught courses on Northwest Coast Indians and on ethnographic method and ethnohistory at several institutions, including the University of Washington, the University of Victoria, and the University of British Columbia. I served as a member of the planning board of the Northwest Coast volume of the Smithsonian Institution's Handbook on North American Indians and I am co-author of the article on the Southern Coast Salish in that volume. I have served as the Court's appointed expert to assist in assessing the evidence and testimony of anthropological expert witnesses in an Indian treaty fishing rights dispute in United States v. Oregon, No. 68-513-MA (D.Oregon). The United States retained my services as an expert witness in the original trial proceeding of United States v. Washington and in later sub-proceedings in this litigation. I have testified as an expert witness in other legal cases involving treaty rights and Indian cultures of the Northwest. A copy of my curriculum vitae is attached to this report.

Purpose and Scope of this Report

The five treaties made by Governor Stevens with Indians in western Washington in 1854-1855 each contain a provision regarding Indian rights to take fish, including a proviso regarding shellfish. In each of these treaties, the language of the fishing clause and shellfish proviso is essentially identical. The following example is from the Treaty of Medicine Creek, negotiated December 26, 1854 with the Puyallup, Nisqually and other Indians at the head of Puget Sound.

ARTICLE 3. 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, gathering roots and berries, and pasturing their horses upon open and unclaimed lands: *Provided, however,* That they shall not take shell fish from any beds staked or cultivated by citizens, and that they

shall alter all stallions not intended for breeding horses, and shall keep up and confine the latter.

(10 Statutes At Large 1132)

The primary purpose of this report is to provide background data needed to assess the intent of the United States and the understanding of the Indians with respect to the treaty fishing provision and the shellfish proviso. To fulfill that purpose I present data on Indian use of shellfish before, during and after the treaty era that indicates the place of shellfish in Indian culture. I also present descriptions of the role of shellfish in the lives and commerce of Whites before, during and after the treaty era, including information regarding the Whites' awareness of Indian use of and reliance upon shellfish. This information is derived primarily from contemporaneous accounts and ethnographic materials obtained from libraries and archives, including published and unpublished sources. This information is critical to a proper understanding of the context and intent of the treaty language referring to fishing rights.

Based on my review of these data, I offer my opinions as to the Indians' understanding and the United States negotiators' intent regarding the use of the terms "fish," "shellfish," and "staked or cultivated" beds.

Definitions

In this report I am concerned with certain animals primarily of the intertidal zone and the sea bed and associated waters. Activities as diverse as marine mammal hunting and oyster picking are often termed "fishing" and were so denominated at treaty time. Terms such as "gathering", "collecting", or "harvesting" are also employed to describe the procurement of shellfish. I use these terms as interchangeable alternatives for taking any resource attached to, buried in, or moving on the intertidal or subtidal substrate of the coastal zone or in the associated waters.

Shellfish, as used in this report, includes molluscs (such as octopus, squid, clams, cockles, mussels, oysters, scallops, snails, limpets, chitons, abalone and dentalia), crustaceans (crabs, shrimp and barnacles), echinoderms (sea urchins and sea cucumbers) and cnidaria (sea anemones).

The subenvironment of concern (that within which shellfish were and are harvested) is primarily that of the shore zone as well as deeper marine waters and substrate. By "shore zone" I mean "The zone over which the line of contact between land and sea migrates . . ." (Shalowitz

2:1962:603) The term "tidelands" is used to refer to "The land that is covered and uncovered by the daily rise and fall of the tide." (Shalowitz 2:1962:612) In this report I use the terms "shore zone" and "tidelands" interchangeably.

Indians and Treaties Covered in this Report

Shellfish were important to all of the Indian people of western Washington, including those people not ordinarily resident near the coast. This report includes data on shellfish use by Indians living west of the Cascade Mountains. I use "western Washington" to refer to the entire area west of the Cascades. Most of the Indians of western Washington are parties to the Stevens treaties. Some Indians in southwestern Washington signed treaties which were not ratified. Others did not sign any treaties. No attempt is made here to excise data on shellfish resources where several groups harvested together in pre-treaty times and some of these people later were not included as parties to ratified treaties. All of the shellfish locations included in this report were used by Indians whose fishing rights were reserved in the ratified treaties (Treaty of Medicine Creek, Treaty of Point Elliott, Treaty of Point No Point, Treaty of Neah Bay, Treaty of Olympia).

Regions and Subregions Covered in this Report

For present purposes western Washington tidelands and marine waters can be divided into two major subdivisions -- (1) the outer shores and waters from the mouth of the Columbia to Cape Flattery, and (2) the inner shores and waters from Puget Sound and Hood Canal north and northeastward. The Strait of Juan de Fuca connects the inner waters with the open ocean. The western portion of the Strait shares environmental characteristics with the outer region. The eastern portion merges into the inner region.

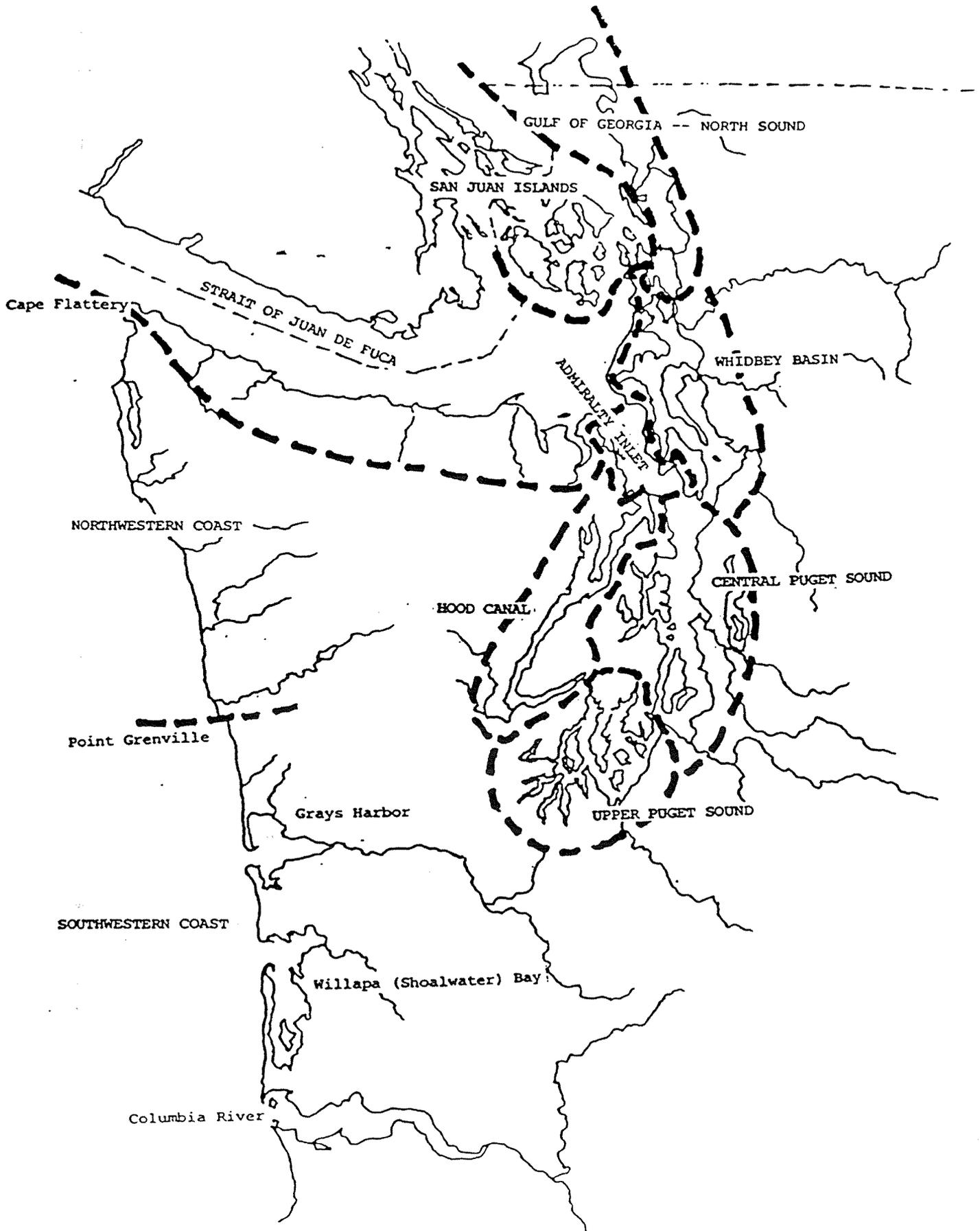
Topographically, the outer region encompasses Willapa Bay and Grays Harbor, the sandy dune-backed beaches of the south coast north to Copalis, the coarser sand and gravel beaches of the central coast north to the Hoh River, and the rocky beaches northward to Cape Flattery. The Strait of Juan de Fuca varies in character from west to east and has several large bays and lagoons toward its eastern end. The inland waters consist of a number of sub-environments. For example, the San Juan Island region is considerably different in many respects from the inlets of the upper Sound beyond the Tacoma Narrows. Although much of the shellfish fauna of the

inner and outer shores are similar, there are some significant differences. The Razor Clam, Bodega Clam, and California Mussel, for example, are common on the outer shores, but are rare or absent on the inner shores.

This two-fold division corresponds to some degree with cultural regions. With one minor exception the people living from Clallam Bay eastward along the Strait of Juan de Fuca and along the waters to the east, north and south were speakers of Coast Salish languages. They all participated in basically the same cultural tradition with minor sub-regional variations.

In many basic respects, the outer coastal cultures were not radically different from those to the eastward. On the outer coast, there was greater linguistic diversity and aboriginally there was more cultural diversity. Also, the fact of living in the open coast environment led to some differences in life style which helped to perpetuate a cultural distinction between the outer coast people and those around the inner coast.

Western Washington



INTRODUCTION

Importance of Shellfish to Indians of western Washington

Fish, including shellfish, have been the mainstay of Indian life in western Washington for several thousand years. Shellfish were important to the Indians as food and as bait used in other fisheries. Shells of various species were used for tools, implements, containers, as wealth objects, as ornaments, in ceremonials, as well as for other purposes. Shellfish figured in the religious life and mythology of the region.

Fresh and preserved shellfish were basic foods. In 1853, General A.V. Kautz (then a lieutenant) posted at Steilacoom noted:

"The Indians themselves live mainly on salmon and clams."

(Kautz [1853]1900:186)

James Swan, who spent two months visiting at Neah Bay in 1859, reported on the foods eaten by the Makah:

"Their means of subsistence are almost entirely drawn from the ocean, and their principal food is whale blubber and oil, dried halibut, salmon and codfish, together with various other kinds of smaller fish, and shellfish of different kinds, such as mussels, crabs, clams, cockles, limpets, sea slugs and snails."

(Swan [1859] 1971:76)

The role of shellfish in the lives of the Indians of western Washington was noted by Fayette McMullin, who succeeded Isaac Stevens as Governor of Washington Territory in 1857. McMullin wrote to the President of the United States reporting on Indian affairs in the Territory:

"The Indian tribes within our territory, living west of the Cascade mountains, numbering some twelve thousand are located chiefly along the shores of the Sound and the Straits de Fuca, from which they obtain immense quantities of shell fish, and other marine articles of food "

(McMullin to Buchanan, 20 October 1857)

Ezra Meeker, a pioneer settler who arrived in Puget Sound in 1853, later recalled the Indians procuring canoe loads of shellfish and other fish around the Nisqually River and Medicine and McAllister creeks. Meeker provides a picture of Indian fishing parties in the Nisqually region of the Upper Sound:

". . . . The song of the Indian, like that of the sailor, seemed to be a part of the life afloat, as it was seldom heard ashore. The temporary camps are made from light mats of their own manufacture, and were quickly put in place, and as speedily repacked when the camp was struck. I am safely within the bounds of truth to say that I have certainly seen and heard thirty of these canoeing parties at a time within a radius of five miles of the Nisqually during the years 1853-4-5,

while residing near these people. Their food was scattered all over the beach, always accessible when the tides were out, if shell fish was wanted, or, if fish, whenever there was calm water.

(Meeker [1853-1855] 1890:218)

There was an extensive trade in dried molluscs from coastal Indians to those in the interior. For several decades prior to the 1850s and at treaty time, Indians had been involved in trade of shellfish as food and shells as wealth objects, not only with other Indians, but also with the Hudson's Bay Company and individual citizens and businesses. The Indians continued to rely on these resources through the mid-nineteenth century when treaties were negotiated which contain language regarding fishing rights.

In addition to their importance as a staple food, shellfish had a vital function as a food resource in time of crisis. The large salmon runs were limited to particular times of the year. A community faced with failure of a local salmon run, or destruction or depletion of its food stores could always obtain food from the tidelands. Anywhere along the coast, an individual alone, lost, exiled, or handicapped by illness or infirmity had at least a chance for survival by eating shellfish. Over time, Northwest Coast culture (or any culture) thrives and survives not by virtue of the years that go well, but in terms of hard times. Over time, minimal rather than maximal food supply affect population size, cultural elaboration, and general well being. This is one of the frameworks in which the significance of shellfish needs to be judged.

The Indians' reliance on shellfish also continued for many decades after the treaties. Writing to the Commissioner of Indian Affairs, Buchanan, the agent at Tulalip, noted the Indians' dependence on their fisheries including shellfish:

"The Puget Sound Indian is self-supporting because he is a fisherman. Our Indians have cost the Government little or nothing for subsistence when compared with other Indians. The Puget Sound Indians are almost entirely dependent upon the never-failing supplies of salmon, clams, shellfish, etc., which their beloved Hwulch bestows upon them. It is because of this that rations have not been and are not now issued to them. If they are to have neither rations nor their natural larders, then pray how are they to eke out an existence between the upper and the nether millstones? Our great and good Government had been far too benevolent in its treatment of the Indian for anyone to be justified in the belief that there has been any intention upon the part of the Government to force such condition upon the Indian of Puget Sound.

(Buchanan to CIA, 24 October 1901)

Despite the importance of shellfish to Indian people, its role in Indian culture has been overshadowed by the attention given to salmon. When Europeans arrived on the Northwest

Coast, they were impressed by the abundance of fish in its waters and, most particularly by the great runs of salmon. Salmon are anadromous. They spend much of their lives dispersed in the ocean and invisible. However, every year along the coast, schools of the different species of salmon come together and travel in runs up fresh water streams to their spawning grounds. At this stage, they are concentrated in shallow waters and can be quite visible. In earlier days, these runs were literally immense.

It is small wonder the Europeans noted and were impressed by the wealth of salmon. On the other hand, it is easy not to notice shellfish. Abundant shellfish resources were not visually impressive. A beach rich in shellfish does not appear to the untutored eye to be radically different from a beach without shellfish. Even dried and stored salmon in a house is more impressive and visible than stores of dried shellfish. Weirs, reefnets and harpoons are visually more evident and technologically more interesting gear than the digging sticks which were used to procure shellfish. It is not surprising that early observers and, later, anthropologists have devoted far more attention to the role of anadromous fish in the cultures of Northwest Indians than they have given to shellfish, despite recognition that shellfish were a staple food of the area and that dried shellfish were an important item of native trade.

Sources of Information

Ethnographic and historical sources for the Northwest Coast are often imprecise in the identification of shellfish and in information about Indian use of shellfish. Ethnographic accounts rarely identify species in scientific terms nor do they report all species utilized in a given area.

"The ethnographic record lists far fewer types of shellfish as having been utilized than the more than 100 varieties available. However, these data are too general and vague to be comparable to the malacological data. For example, ethnographers discuss the use of "limpets," but do not specify which of the 10 available species were taken. In the same vein, "sea snails" and "periwinkles," both mentioned by ethnographers, are common names that may apply to any of a number of species of univalves."

(Friedman 1976:149)

Historical records are also of uneven assistance where information about Indian use of shellfish is concerned. Some mid-nineteenth century data were recorded incidentally in the malacological reports of the Pacific Railroad Survey in 1853, but these reports were not primarily concerned with Indian use. Much information regarding Indian use of shellfish has been recorded by people who were not knowledgeable about shellfish taxonomy.

The deficiencies in the data and inconsistencies in reporting limit the kinds of definitive statements we can make about shellfish use by Indians of western Washington. The amount of data available and the quality of information vary from one part of the region to another. Fortunately, the uneven coverage is mitigated by the similarity in shellfish use and technology throughout the area.

By drawing upon comparative data from neighboring groups it is possible to supplement where data are lacking in detail and corroborate where data are relied on from a single source. This is standard procedure in ethnological analysis.

When the boundary between what is now Washington and British Columbia was agreed to by the United States and Britain in 1846, it cut through the traditional territories of native people whose domains were in the vicinity of the 49th parallel. Nootkan-speaking people living on the west coast of Vancouver Island came under British jurisdiction while the Nootkan-speaking Makah at the northwestern tip of Washington came under American jurisdiction. It was less than a decade later when the United States negotiated the Treaty with the Makah, in January 1855. Before, during, and after 1855, the people of the west coast of Vancouver Island and their Makah kin at the northwest tip of Washington Territory continued to share cultural practices, including fishing practices, and in many instances fished together at the same locations.

The same was true of the Coast Salish people. The Clallam, living on both the north and south shores of the Strait of Juan de Fuca, shared the same fishing technology and practices. On the mainland the boundary line cut through the territory of the Semiahmoo, leaving some of them in British territory and some in Washington Territory. Saanich and Lummi who fished together in the San Juan Islands were similarly divided when the water boundary for that part of the region was finally set by arbitration in 1872, well after the 1855 Point Elliott treaty.

Before 1855, at treaty time, and afterward, the Nootkan people in what is now British Columbia and Washington shared and continued to share cultural practices, including fishing practices. Coast Salish people fishing in contiguous waters on both sides of the international boundary did likewise. In general, all these people harvested and ate the same fin fish and shell fish, dependent, of course, on local availability. For these reasons, it is appropriate to supplement the incomplete documentation relating to Indian technology for taking shellfish and Indian use of particular shellfish in Washington waters with data from culturally related neighbors in British Columbia.

Conclusions

The Stevens treaties of 1854-1855 with Indians in western Washington are the only ratified treaties in the United States that mention shellfish. In my opinion, that fact alone signals the importance of shellfish to the Indians of this area and the recognition of that importance by the treaty commission. Furthermore, it is apparent that the principal negotiators of the treaties for the United States, Governor Isaac Stevens and George Gibbs, recognized the Indians' extensive reliance on and trade in shellfish. This knowledge is reflected, in part, in their own contemporaneous writings, including Stevens' statements in the Pacific Railroad Reports (Narrative of 1853), Report to the Commissioner of Indian Affairs (September 16, 1854), Letter to Commissioner of Indian Affairs (December 30, 1854), and in his statements recorded in the Record of Treaty Proceedings at Chehalis River Treaty Council (February 27 and March 1, 1855). Similarly, Gibbs' knowledge of Indian shellfishing is demonstrated by his Report on the Indians of Washington Territory, dated March 4, 1854, his report on the Reconnaissance of the Country Lying Upon Shoalwater Bay and Puget Sound, dated March 1, 1854, and his report entitled Tribes of Western Washington and Northwestern Oregon, written in 1854-55 (and published in 1870).

It is my opinion, based on the Indians' reliance on shellfish as a staple food, as well as its importance in many other respects, that the Indians understood that they would be able to continue to rely on shellfish after the treaties and be free to take shellfish as they always had. It is also my opinion that the negotiators for the United States intended that the Indians would continue to take shellfish.

TRADITIONAL INDIAN PROCUREMENT AND USE OF SHELLFISH

Cultural Background

All Indians in Western Washington, regardless of where they lived, used shellfish. Coastal dwellers had easier access and year round access to shellfish. People living at a distance upriver visited the coast to harvest shellfish primarily in the spring and summer. They also obtained shellfish through trade.

People travelled widely to harvest shellfish. Networks of kinship and friendship permitted wide access to resource areas and permitted mutual cross-utilization of resources. Upriver people came down to the coast to dig clams and coastal people travelled up to the foothills to collect and dry mountain berries and to obtain plant materials for medicine or basketry which were not available in the lower country. Similarly, people travelled to distant areas to collect shellfish at particularly productive locales or where the shellfish were regarded as especially choice at a given time. While there were differences in ease of access to shellfish, it appears that most Indian people in western Washington, including upriver groups, relied on shellfish as a staple food.

The particular species of interest cannot be understood apart from the total sub-environment in which it occurs. More importantly, in the context of Indian life and Indian subsistence, no resource was viewed as independent from its setting. Visits to a given setting usually were for multiple purposes. While gathering shellfish, people would also take other marine invertebrates and fish in tidal waters. Women and children gathered shellfish when the tide was out and collected berries or plants near the high tide line when the tide was in. At the same time men fished from canoes or while wading in nearby waters.

Control of Coastal Zone Resources

Access to tidal and subtidal resources conformed to tenure and use patterns which varied somewhat in different parts of the region. Throughout much of the Puget Sound region, access to beaches and tidelands having shellfish or other resources was fairly open. People living in a territory had the right to use the resources and locations within it. Kin and friends were also allowed to visit and use such a territory and its resources.

The Makah and some of the Outer Coast people recognized proprietary rights of kin groups to segments of their territories including tide lands and marine waters. With overt or tacit

permission, kin and friends could utilize the resources of such territorial segments. Among some of the more northerly Inner Coast people, such as the Lummi and Samish, ownership of certain shellfish beds by extended families has been reported. The precise nature and extent of such "private" ownership is unclear, but there is reason to believe that, as elsewhere, kin and friends were welcome to share in the use of such resources. These varying patterns of tenure are described later in this section. Despite varying concepts of tenure, access to shellfish resources was fairly open throughout the total region.

Indian values of sharing and of generally open access to food resources were in contrast to White values which embodied in the concept of private property a right to exclude access to all others. As Gibbs noted in his pre-treaty report, these differences gave rise to conflict as Whites took up lands and attempted to exclude Indians from traditional fishing places:

"The subject of the right of fishery, in its present position, is believed to be one concerning which difficulties may arise. It is certain that the intention of Congress never was that the Indians should be excluded from them; but as no condition to this effect was inserted in the donation act, the question has been started whether persons taking claims, including such fisheries, do not possess the right of monopolizing them. It is therefore, proper that this also should be set at rest by law."

(Gibbs 1845a:29)⁵⁴

Scholars knowledgeable about the cultures of western Washington have recognized and documented the existence and importance of the "web of kinship." Kin ties cut across group boundaries and these connections were deliberately cultivated in all directions. This meant that people of a group had ties of kinship with adjacent and nearby groups and thereby with members of groups indefinitely beyond. Such webs of kinship may have been diminished at major cultural boundaries, but even there they existed.

Such webs of kinship had important and practical functions. They were the frame-work upon which subsistence and economic activities were articulated. Specifically, one had the right to use resources in and beyond one's own territory on the basis of kinship connections. See for example M. Smith 1950:337; Suttles 1960:246-305; Suttles 1963:512-525; Allen 1970:161-172; Elmendorf 1971:353-380; Collins 1979:243-254.

Anyone with kinship ties to residents (owners) of a territory had a right to use the resources of the territory. There were minimal qualifications (limiting conditions) in practice. It helped if the non-resident users were known to the owners. It was expected that non-resident

users would abide by local conventions. It was expected that visitors have a currently peaceable relationship with people of the territory.

Anyone unknown to residents, unable to show kinship connection, or known to be openly hostile would be resented and discouraged although, even then, they might not be excluded.

Since the stress of ideology was upon sharing and since another major theme of most of the region was peaceableness, it was difficult for owners to refuse permission or even to take active steps to bar any users. The response to proscribed users was most likely to be silent disapproval rather than active preventive steps. In our European derived patterns of relationship to property, it is the active responsibility of owners to protect and defend their rights. In aboriginal Coast Salish and western Washington thinking, it was the active responsibility of potential transgressors not to transgress. Transgression demeaned the transgressor rather than diminishing the rights of the owner.

Gibbs was one of the first observers to attempt to summarize property and tenure patterns in Western Washington.

"Property.-- As far as I can gather the views of the Sound tribes, they recognize no individual right to land except actual occupancy. This seems to be respected to this extent, that if a man has cleared a spot of land for cultivation, he can hold it on the return of the season for planting from year to year, as long as he sees fit. So in their villages, the site of a house pertains to the individual as long as he leaves any vestige or evidence of a building on it. Among the Tsinuk and Lower Tsihalis, the right may have been carried somewhat further, but unsettled lands away from their usual haunts are but little regarded. Tribes are, however, somewhat tenacious of territorial right, and well understand their respective limits; but this seems to be merely as regards their title, and they never, it is believed, exclude from them other friendly tribes. It would appear also that these lands are considered to survive to the last remnant of a tribe, after its existence as such has in fact ceased. There seems to be, in some instances, a vague claim by chiefs to territorial sovereignty, as for example among the Makah, where any wrecked property floats ashore the proprietor claims from the finder a portion of it, and it is said payment is exacted for the use of particular pieces of ground. Cases have been mentioned of a claim by a chief to the ownership of the whole country occupied by his tribe; but these do not seem to have any foundation in acknowledged right, or to be actually maintained. Sneetlum, the former chief of the Skagit, is said to have made such pretensions. As regards the fisheries, they are held in common, and no tribe pretends to claim from another, or from individuals, seigniorage for the right of taking. In fact, such a claim would be inconvenient to all parties, as the Indians move about, on the sound particularly, from one to another locality, according to the season. Nor do they have disputes as to their hunting grounds. Land and sea appear to be open to all with whom they are not at war. Their local attachments are very strong, as might

be inferred with regard to a race having fixed abodes, and they part from their favorite grounds and burial-places with the utmost reluctance.

(Puget Sound. Gibbs [1854-1855]1877:186-187)

Although the above characterization requires some amplification and qualification, the basic patterns of the area are reflected clearly enough. Territorial boundaries were well known and groups were tenacious regarding their territories. Despite this, friendly groups used resources in one another's territory.

I have noted that the Makah, in keeping with Nootkan practices, claimed rights of ownership indefinitely out beyond their shores. The extent of ownership claims of open waters by other Native peoples of western Washington is unclear. They considered tide lands part of their territories. There was certainly some feeling that inshore waters belonged with adjacent tide lands and shores. I am aware of no evidence that there was much concern with ownership or control of "off shore" waters.

The major key to sharing territories and resources was connection through kinship. Gibbs noted the preference for marriage alliances with outside communities.

"Generally speaking, these Indians seek their wives among other tribes than their own-- whether from motives of policy or an indistinct idea of physiological propriety, it is difficult to say; more probably the former. It seems to be a matter of pride, in fact, to unite the blood of several different ones in their own persons. The expression, "I am half Snokwalmu, half Klikatat," or some similar one, is of everyday utterance. With the chiefs, this is almost always the case."

(Western Washington. Gibbs [1854-1855] 1877:197)

To the extent that one had kinship ties beyond one's local group, one had rights to use resources in the territory of kinsmen.

The varying patterns of tenure to which I referred above are described in the following passages relating to the Twana (Skokomish) of Hood Canal, the Makah and Quileute of the Outer Coast, and the Lummi and Samish of northern Puget Sound. Skokomish patterns are described by Elmendorf.

"Use of canal shore. Much the same attitude existed toward economic use of the canal and of canal-shore sites as toward hunting on inland territory. Hood Canal was "the Twana's salt water" (tuwa'duxqlsi ''dakW), and members of any Twana group were free to use any part of it, notwithstanding the customary summer use of certain shore sites by personnel of particular villages. Although from the mid

nineteenth century Klallam congregated freely in the canal at certain seasons for fishing, most Twana regarded them merely as friendly and favored outsiders so far as use of Twana country went. This special treatment accorded the Klallam was doubtless based on the extensive nineteenth-century intermarriage of the two peoples. As we shall see, ties of marriage and blood kinship often cut directly across territorial and linguistic affiliations. To many Skokomish, for example, the Klallam visitors would have been welcome as their own in-laws l'qWe'laxW) or blood relative (xW d 'XWb 't d) although not members of their own local community or of the Twana speech community."

(Elmendorf 1960:266-267)

"Territory use and rights. There were almost certainly few territorial restrictions on the movements of family groups within Twana territory in the summer. Many families or groups of relatives visited a customary round of camping sites, but often shared residence of these temporarily occupied spots with individuals or groups from other winter villages. Such habitually used summer territory was often spoken of by informants as pertaining to their own winter community; as "Skokomish fishing country" or "Skokomish clamming country." It became apparent despite these phrasings that other communities, e.g., Hoodspout and Tahuya, used some of these "Skokomish" summer areas quite as freely and habitually as did the Skokomish themselves. The mouth of the Hamma Hamma River and Lilliwaup Bay were referred to as "Skokomish fishing places in the early fall," but not only Skokomish but Twana of many other communities congregated here at this season, as well as (in late times) large bands of Klallam from outside Twana territory. Actually there was no exclusive village "ownership" of stretches of summer-used territory outside the immediate environs of the winter-village site."

(Elmendorf 1960:261-262)

Within the Twana community, there were subgroup feelings of special relationship with certain local territories. However, this feeling was strongest regarding the environs of winter villages:

"Village territory use. While Twana territory was in theory free of use to all Twana, certain groups, winter villages or summer campers, did come to look on and speak of certain localities as theirs in view of habitual occupation at particular seasons. Such feeling was much stronger toward the winter-village environs, the true home of a community, than toward seasonal fishing, hunting, or clam-digging localities. Many of the latter, embracing probably the greater part of the salt-water shoreline, were indifferently used by any Twana-speaking group. Even where a single group did claim use ownership of a seasonally occupied fishing or clamming site, there was never any attempt to exclude friendly members of other communities, especially other Twana."

(Elmendorf 1960:268)

As Elmendorf stresses, the people most likely to be visiting one's beaches and sharing one's resources would be those with whom one had kinship relations developed through descent and intermarriage. Visits by unwelcome and uninvited intruders were discouraged.

Suttles reported private inherited ownership of some clam beds, by particular families among Straits Salish groups including Samish, Lummi, Semiahmoo, and perhaps Klallam.

"As with camas beds, most shellfish beds were open to anyone, but a few beds, at least among the mainland groups, were private property. Samish families owned horse-clam beds off the northern shore of Samish Island; Lummi families owned butter-clam beds on west Sound; and clam beds off the end of Tongue Spit may have belonged to Semiahmoo families. Stern describes the butter-clam beds on West Sound:

'At a place called Elelung, or Orcas Island, there is a clam bed cultivated by its owners. They took the largest rocks that were in the clam bed and moved them out to extreme low water marks, setting them in rows like a fence along the edge of the water. This made clam digging very easy compared to what it had previously been because there are only small pebbles and sand to dig in. It is exceptional to cultivate clam beds in this manner and while other clam beds are used by everyone in the tribe, here only the owners who cultivated the bed gathered.'

These beds presumably belonged to Lummi families. In post-settlement times, however, Saanich and Samish were also going to West Sound for clams. West Sound butter clams were, and still are, famous for size and clean appearance; a Samish informant, AL, identified a shell specimen at a glance and said that her uncle Barney had gone there for them. Probably there were beds on West Sound other than those privately owned, but it may be that Barney had himself inherited rights there.

The Samish horse-clam bed was north of the eastern end of Samish Island. It was a higher spot in the flats, four or five hundred feet out from the shore. Here several families owned individual beds, "horse-clam locations." They came in the summer after reef-netting and camped on the beach here to dig and cure horse clams. They stayed in mat houses, and evidently after the village was established on Guemes Island, in small wooden shacks built for the purpose, or in tents. Everyone dug, men as well as women. A grandmother (?) of ChE supervised the digging, at least in her own bed, and saw to it that the diggers did not break the shells, in order that no one cut his fingers next time. These beds were inherited, I do not know in what way."

(Suttles 1951:68-69)

It appears that both the Hood Canal Salish and the Straits Salish had patterns of territorial tenure which included coastal areas. They may have differed somewhat in the degree to which

they shared the use of their coastal territories and resources with others. If there is a difference, people around Hood Canal and southern Puget Sound may have valued shared access to coastal resources to a greater degree than did Straits people. The patterns of tenure prevailing among the Makah were those shared with their kin on the west coast of Vancouver Island.

"Not only were houses themselves owned, but the entire village sites as well were the property of the chief of the local group or tribe residing there. If others built houses at that place, it was with the owner's express permission. Similarly, the sites of the tribal and confederacy villages were private property, as were the fishing places in the rivers and the sea, and hunting and gathering locales."

(Nootka. Drucker 1951:248)

"Mr. Henry Markishtum here explained that the Indians learned not to trespass on some one else's property; that is, they never fished on ground which did not belong to them unless invited. He further explained that anything that drifted ashore, it would belong to that chief or chieftain whomever owns that certain section of the beach on which it landed."

(Makah. Swindell 15 October 1941)

There is no reason to doubt that invitations were commonly extended to kin and friends:

"Since all of the sites have some clams present in the midden, it is reasonable to assume that the inhabitants of all sites traveled to the suitable beaches in order to collect this important resource. This suggestion supports the ethnographic literature that although Makah villages generally were considered to be politically autonomous, there likely was considerable sharing of resources from site to site (Swan 1869:6)."

(Friedman 1976:161)

The Quileute are neighbors to the Makah southward along the open coast. Quileute patterns reportedly were similar to those of the Makah.

"All fishing grounds, whether on the beach or on the river, were the property of a family and no one else could fish there without the consent of the head of the family."

(Frachtenberg 1916:59)

"Jack Ward says that many years ago he was called to translate for older people, now dead, during government hearings on fishing rights, and that he learned then something about the old system of living. As he understood it, people visited back and forth, but the people who lived at La Push claimed as their own the ocean beach and the shores of the lower river.... Others might enter these territories and use them for fishing or hunting, but only with the permission of the family recognized as owner, and usually with an understanding before hand concerning the division of the catch or bag."

(Quileute. Petitt 1950:5)

"Among the Quileute and Makah beach property was owned by different families . . . however, their ownership was limited. Individual or family ownership did not 'mean exclusive right to use, but a sort of stewardship, and the right to direct exploitation of the economic tract by the local group'. . . Olympic Peninsula. Individual 'ownership' or stewardship of economic areas gave to the family or the individual a measure of authority and prestige. The rights were inherited, too, mostly patrilineally."

(Singh 1960:113)

Information regarding shore tenure among the Quinault is not reported in the ethnographic literature, so far as I am aware. The Quinault had marriage alliances north and south along the coast. (Olson 1936:13, 126) These kin connections to the southward included the Chinook at Shoalwater Bay and around the mouth of the Columbia River. These marriage alliances are consistent with accounts of Quinault visits to the lower Columbia region for fishing and other purposes in the first half of the nineteenth century.

Patterns of shared access, based on kin connection, to shellfish resources at distances beyond the territory of those harvesting is reported generally for the Coast Salish of the Puget Sound region. Collins provides an example of how the system operated using a Skagit interaction with Semiahmoo:

"The characteristics which set off one village from another are the sharing of a common name and the possession of land, meaning fishing sites, hunting grounds, berry patches, and more rarely, root plots. The sites for winter villages as well as summer villages seem to be selected with a view to the economy; even winter houses on rivers are located at places where fish traps or nets are set at a certain time of the year. The concept of ownership does not involve members of the village on the basis of territorial location as much as on kinship bonds. Individuals related to the sibling group in charge of the house have the right to visit the household and make use of the village resources. They do not demand this use as a right which cannot be refused. Instead they regard such a visit as one in a series of gift-exchange visits. A trip to another village, in order to participate in food-getting opportunities at a certain time of the year, also provides opportunities to see kin, and for both reasons is keenly anticipated.

That such use is a right by virtue of descent is shown in many ways. The prairies on which camas and other roots grow are divided into individual plots which pass from mother to daughter. Since daughters usually leave the village of their parents, the ownership of the plots has come to rest in the hands of a group of women widely scattered about the country. These come to the plots at the appropriate time of the year and return to their respective villages with their load of roots. An example of how ownership in a clam-site is asserted follows. A

Skagit woman whose great-grandfather (her father's mother's father), lakwati by name, came from Semianoo [sic], went with her husband to dig clams at a Semianoo [sic] site. During the intervening generations, contact between the Semianoo [sic] family and the Skagit family had long been lost. Two old Semiamoo women on the beach objected loudly to the presence of these strangers, but when the Skagit woman explained the lakwate was her great-grandfather, the women admitted her right to dig clams there and stopped complaining. Any relation by blood or marriage is thus welcome to share in use of natural resources. Within the large kinship group which occurs in this society, personal considerations affect one's willingness to spend time in a certain household. There are individuals with whom one is especially congenial and others whom one dislikes, and these feelings influence one's choice in visiting."

(Collins 12-13 in Garland 1974:110-111)

". . . Persons who wished to hunt and fish in the locales of neighboring villages were expected to visit their relatives there first to announce their presence, their intentions, and to be given tacit permission. This was never withheld."

(Collins 1974:80-81)

Suttles is confident that these patterns of interconnection, sometimes with distant villages, are aboriginal. The weight of evidence supports his conclusion.

"Although Barnett suggests that marriage alliances between distant villages may have increased after White settlement, genealogies indicate that they go back to pre-settlement times. Perhaps the best example is provided by Boas (1894). His Tables I and II give the genealogy of a Scowlitz (Harrison River) informant about 50 years of age, i.e., born about 1840. In the fifth, sixth, and seventh ascending generations, and thus presumably in the eighteenth century, marriages are recorded with Kwantlen, Cowichan, Songish, Puget Sound (probably Skagit), and even Makah. In later generations there were also marriages with Lillooet and Thompson.

(Suttles 1987:217 fn)

While there was some variation in tenure patterns and beach rights within western Washington, it is unclear to what extent these affected access to shellfish. The variations discussed above appear to relate to differing cultural traditions. It is likely that access to shellfish may have been affected by other factors as well. At larger bays where there were miles of productive tidelands, people converged from different drainage areas to harvest shellfish. It appears that where shellfish were abundant and where friendly relations existed, beach resources were freely shared.

Early Accounts

One of the first encounters between Europeans and western Washington Indians occurred July 14, 1775. On that day, members of the Spanish Hezeta expedition landed on the Outer Coast near Point Grenville in Quinault territory:

" We did not come across any people, with the exception of six grown boys on the beach who were looking for shellfish and eating, unarmed and who invited us to go where they were roasting the fish, but the Commandant would not allow any of our people to join them, and when they came over to us offering to share the fish they had caught, to avoid delay he declined their offer."

(De La Sierra in Baker 1930:227)

It is clear that use of shellfish was extensive and important in the early contact period. In 1791, for example, Spanish explorers observed Indians harvesting shellfish in Padilla Bay:

" "He entered this and having sailed through it for 12 miles, found himself in the east canal [probably Guemes channel], which we had thought to follow in the preceding voyage, and in a great archipelago of islands. Continuing his course through this, they found it to end in 25 miles in a great sand flat with 1/2 fathom of water on it, and an extended piece of flat land beyond to the horizon. In the sand flat they saw many Indians after shellfish. They named it "Seno de Padilla." After they had examined everything, they turned back and took their course for the great Canal de Nuestra Senoradel Rosario."

(Pantoja in Wagner 1933:179-180)

The following year members of Vancouver's expedition noted the use of shellfish by Indians at Hood Canal and Puget Sound. The explorers were in Hood Canal near the mouth of the Skokomish River on May 12, 1792.

Menzies, botanist with Vancouver reported:

" About five in the afternoon we observ'd smoke & some Natives on a Beach on the Starboard shore to which we pulled in with the Boats & on landing found two or three families occupied in drying & smoking of Clams skewerd upon small rods -- We saw but a few men, the women & Children having fled into the Woods at our approach & from all appearance their residence seemed to be a temporary one merely for the purpose of drying & collecting of fish"

(Menzies [1792] in Newcombe 1923:28)

On May 19, 1792 Vancouver visited a temporary camp at Restoration Point where he saw about 80 to 100 people drying shellfish.

" . . . I visited the village, if it may be so dignified, as it appeared the most lowly and meanest of its kind. The best of the huts were poor and miserable, constructed something after the fashion of a soldier's tent, by two cross sticks

about five feet high, connected at each end by a ridge-pole from one to the other, over some of which was thrown a coarse kind of mat, over others a few loose branches of trees, shrubs, or grass In them were hung up to be cured by the smoke of the fire they kept constantly burning, clams, muscles, and a few other kinds of fish, seemingly intended for their winter's subsistence. The clams perhaps were not all reserved for that purpose, as we frequently saw them strung and worn about the neck, which, as inclination directed, were eaten, two, three, or half a dozen at a time. This station did not appear to have been preferred for the purpose of fishing, as we saw few of the people so employed; nearly the whole of the inhabitants belonging to the village, which consisted of about eighty or an hundred men, women, and children, were busily engaged like swine, rooting up this beautiful verdant meadow in quest of a species of wild onion, and two other roots, which in appearance and taste greatly resembled the saranne, particularly the largest; the size of the smallest did not much exceed a large pea: this Mr. Menzies considered to be a new genus. The collecting of these roots was most likely the object which attached them to this spot; they all seemed to gather them with much avidity, and to preserve them with great care, most probably for the purpose of making the paste I have already mentioned.

. . . They seemed not wanting in offers of friendship and hospitality; as on our joining their party. . . they immediately prepared a few of the roots, and some shell fish for our refreshment."

(Vancouver [1792] in Meany 1907:130-132)

On May 20, 1792, Indians were observed gathering and drying clams in Wollochet Bay off Hale Passage.

"While we were here two Canoes passed on the opposite shore who dodged us at a distance several times in the forenoon, they afterwards crossed over & went into a small Cove close to us, where we soon followed them on the Point of it saw a number of old deserted huts amongst the trees but saw none of the Indians till we were returning back from the end of the Cove, when we heard them hailing from the opposite shore, & as we began to pull across towards them we observed the women & children scudding into the woods loaded with parcels, but the Men put off from the shore in two Canoes to meet us, we made them some little presents to convince them of our amicable intentions, on which they invited us by signs to land, & the only one we found remaining on the Beach was an old woman without either hut or shelter, setting near their baskets of provision & stores, the former consisted chiefly of Clams some of which were dried & smoaked strung up for the convenience of carrying them about their Necks, but a great number of them were still fresh in the shell which they readily parted with to our people for buttons beads & bits of Copper."

(Menzies [1792] in Newcombe 1923:33-34)

Another observation of Indian use of shellfish in Washington waters by Menzies on June 19, 1792 probably referred to the northeast shore of Orcas Island:

"We had not gone far when the appearance of smoke issuing from a part of the wood on an Island before us induced us to land at a place where we found four or five families of the Natives variously occupied in a few temporary huts formed in the slightest & most careless manner by fastening together some rough sticks & throwing over them some pieces of Mats of Bark of Trees so partially as to form but a very indifferent shelter from the inclemency of the weather.

Their food at this time was some dried fish & Clams; we also saw some fresh Halibut & purchasd two large pieces of it for an English half penny each."
(Menzies [1792] in Newcombe 1923:58)

In 1792 Spanish explorers at Guemes Island were trading for dried clams and noted the use of the use of a shell as a measuring cup.

"We arrived at the southwest point of the Canal de Guemes, which we entered, sailing at first in the middle of the narrows to keep clear of the calm along the shore. However, once we were inside the wind took the direction of the channel, and we closed the south shore to get free of the force of the adverse current which continuously checked our progress. This gave us an advantage, since although the wind was weak we made three and one half knots. The sailing was very pleasant, between wooded shores. On the north side, which from the entry has a sandy shore, we saw a village close to the northwest point, which we examined through the telescope, disclosing two large houses. The Indians, running to the beach, boarded a canoe and steered for the goletas, pursuing them with as much skill as the most expert sailor. They confidently came alongside, an old man and four young ones with an agreeable appearance, giving us blackberries from the quantity they brought in shells of three or four pulgadas (7) in diameter, trying to conceal those they did not offer to us. We responded with a metal button for each of them, and they repeated their presents of small portions [of blackberries] to obtain more profit, from a button, a string of beads, or a piece of ship's biscuit. They also gave us dried shellfish of the kind sailors call clams, strung on a cord of tree bark, and other shellfish of different species strung on thin sticks and toasted over a fire. We obtained enough of these items and also a coat of dog's wool lined with feathers, and a tanned deerskin. . . .

We saw the Indians off after they had left us all their blackberries and shellfish, of which the crew ate freely,"

(Kendrick [1792] 1991:106)

The early Spanish and English explorers provide glimpses of one of the major subsistence and economic activities of the people of the Northwest Coast. Descriptions of shellfish gathering and processing are contained in the journals of most of the earliest explorers in western Washington waters. The number of observations relating to shellfish are striking. It is clear that

with few exceptions, the native people of the Northwest Coast, including those of western Washington relied on shellfish and spent considerable time harvesting and processing them.

Ethnographic Data

Procurement

Shellfish procurement was an activity which occupied a considerable amount of time of people on the coasts of Washington. It was an activity which could be engaged in by a single person with complete technical efficiency and yet, as much as any activity, it was social. It was an activity which brought people together – families, groups of women, people from different communities. When shellfish were in abundant supply, large numbers of people could procure fish at the same locality with endangering the supply. Singh's observation for the Outer Coast, is replicated in accounts of people throughout the Straits and Sound.

"Indians found it profitable to go where shell fish were plentiful.

Groups, sometimes of different tribes, visited certain clam beds each year at the same time. The Quinault used to meet the Copalis while digging clams south of Moclips."

(Outer Coast. Singh 1966:23)

Shellfish were available and could be procured year round. Decisions as to when shellfish were procured were influenced by weather conditions, tides, physical state of the shellfish, and by the needs of the people. Spring and summer was the time of year when shellfish were most intensively harvested. Large quantities of clams and cockles procured in these seasons were dried for later use and for trade.

Since the shellfish were taken in intertidal and subtidal waters, tides were an important consideration. Low tides occurred twice daily and the very lowest occurred in June during daylight and in December in the late night and early morning hours. People generally preferred to work in daylight except when digging at night of necessity or to avoid enemies. Light was not an overwhelming problem during night-time digging. With moonlight or even with a clear moonless night and starry skies, there is sufficient light for shellfish harvesting. When necessary torches were used.

"The problems occasioned by darkness were overcome to some extent by the use of pitchwood torches, and by the ability of the gatherers to rely on their sense of touch alone, such as when using a sea urchin spear."

(Nootka. Ellis and Swan 1981:81)

The physical conditions of the shellfish taken into account were the spawning cycle and related firmness and fatness. These considerations varied with different species.

Generally, when shellfish were actually spawning, they were not harvested. People along the British Columbia coast avoided shellfish when herring milt or the milt of other beach spawning fish discolored the water. We do not have direct evidence that discoloring from milt was an inhibiting factor in western Washington. However, the Lummi, who have a number of beaches in their territory where herring spawn, maintained that clams and sea urchins should not be eaten in early spring. This is also the season when herring spawn

"When the frogs sing,' clams as well as cod fish, flounders, and sea eggs are not fit to eat."

(Lummi. Stern 1934:47)

Although some shellfish could be gathered throughout the year, spring through summer into fall was the major season on the Inner Coast. Bolduc, travelling about Puget Sound in 1844, noted:

"The different species of shell mollusks offer the aborigines some resource. It is especially at the beginning of summer that they are caught."

(Whidby Island. Bolduc in Landerholm 1956:192)

"Take it from March until way in October, they come to the island to dig clams and get deer meat and dry it for the winter, dry clams for the winter, dry fish for the winter."

". . . You take it now,—you take it this time of the year at the low tide, in May and June, that is when they dig their clams. There is canoes everywhere; every beach that had a clam on it, they was there."

(H. Cayou testimony, ICC Doc. No. 214, 12 June 1952:96, 98)

"Most shellfish can be gathered at any time of year when tides are sufficiently low. Probably the Straits peoples did gather some shellfish the year round, but the greatest activity was in the summer. It was then that clams were cured for winter."

(Lummi, Samish. Suttles 1951:65-67)

Reporting on the Klallam, Gunther made noted:

"Clams are dug all year but in June and July they are exceptionally fat and milky, so during these months an extra supply is dug for drying."

(Klallam. Gunther 1927:206)

The optimal season in aboriginal times for gathering clams on the Outer Coast in Washington waters is reportedly the same. Sources for the Nootka, just to the north of our region, suggest that considerable gathering took place throughout the year.

"Local people claim that their clams may be eaten all year round and that they have never become sick from eating them, but during the summer months there is a noticeable lack of interest in this food. On the whole, they are dug mainly during the winter months, from November till March or when the herring begin to spawn. One is not supposed to mix herring eggs and clams."

(Nootka. Kenyon 1980:75)

For the Washington coast, Singh reported.

"Although most shell fish can be gathered at any time of the year when tides are low, the principal harvest is during summer."

(Singh 1966:23)

"Shellfish were at their best about April.... Razor clams were dug in the early spring."

(Singh 1966:70)

"Razor clams south of Point Grenville, were gathered throughout the year but they were considered best in May."

(Quinault. Olson, NBI:50-51)

The species of shellfish, intended use, and need determined the optimal season for gathering. Many clams were considered to be in their prime in the summer time. Drying, even with smoking and under shelter, was best done in dry sunny weather. In western Washington, the chances for dry sunny weather are usually greater in the spring-summer-fall than the winter time. Horse clams, butter clams, and, sometimes, cockles were the most commonly dried molluscs on the Inner Coasts and, therefore, they were commonly collected in those seasons. On the Outer Coast, there was concentrated collecting of butter, horse, razor clams, and California mussels in the spring and summer for the same reason. Most shellfish taken for immediate consumption, could be gathered at almost any time of the year.

Upriver Communities

Upriver people did not have year round access to shellfish or other intertidal resources. They procured these species by seasonal visits to the coast and through trade. On visits to the coast, they might harvest directly or they might trade for the desired products. People from upstream communities who came to the salt water to harvest shellfish went to locations where they had rights through ties of kinship or where they had privileges through marriage or friendship.

The quantity of shellfish available to upriver groups was more limited than that available to coastal dwellers, but it was nonetheless important. Dried shellfish were a valued food throughout the year. In the springtime or during periods of food shortage, people would travel to the coast to gather shellfish for immediate consumption. Three reasons underlay the springtime visits: the exhaustion of stored food at winter's end, the lack of anadromous fish runs at that time of the year, and the fact of extreme low tides.

In her ethnography of the Puyallup-Nisqually, Smith reported that upriver people travelled to the Sound specifically to procure shellfish. The upriver Puyallup came to the Poverty Bay area on the east side of the Sound to collect octopus.

"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 Redondo [sic] 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."

(Smith 1940:233)

She noted that Muckleshoot people from upriver villages on the White and Green rivers made annual visits to the Redondo Beach area to procure shellfish. (Smith 1940:26) More detailed information on shellfish species taken in the Woodmont, Redondo Beach, and Adelaide areas by Green River Muckleshoot and Duwamish was independently recorded in 1941 from Green River Muckleshoot in connection with the Swindell survey of traditional Indian fisheries. The Green River people came overland by trail to the Poverty Bay beaches on a trail which is recorded on a map made by George Gibbs in 1855. (See Locations section in this report.)

Ethnographic reports as well as documents dating from the treaty era are in accord that upriver people such as the Nooksack, Upper Skagit and Snoqualmie regularly visited the coast to take shellfish and that salt water foods were important to them.

"There is evidence to suggest that the Nooksack, although primarily riverine in their orientation, had access to the salt water near the present site of Bellingham from Whatcom creek to Chuckanut Bay (Suttles 1954:52). It is not clear whether there was a Nooksack village in either place or whether they were merely permanent camping places used at appropriate seasons of the year as headquarters for salt-water fishing and clam digging (Fetzer 1951). In any case, salt-water foods were an important part of their diet."

(Amoss 1978:4)

For additional information about Nooksack seasonal harvest of shellfish, see Wayne Suttles testimony, Indian Claims Commission Docket No. 110, June 10, 1952, at pages 192-193 and Joseph Hillaire testimony, Indian Claims Commission Docket No. 110, June 10, 1952, at page 253.

The people of upriver villages in the Skagit drainage area obtained shellfish on visits to the coast as well as through trade.

"While the Upper Skagit did not have shellfish in their own territory, they had access to shellfish beds on the shores where many of their relatives lived. They ate clams, oysters, mussels, barnacles, and crabs. Clams were strung on a stick and smoked for winter use. In preparing them the belly of the clam (sk' p) was thrown away. Women placed the smoked clams on sticks in a big cedar bag for storage. They took clams at walus near Utsaladdy on Whidbey Island and at the north side of the beach on Samish Island. They got oysters at tacabs near Edison. Women prepared oysters by first boiling rocks, then cleaning them, and placing the oysters on them to heat. Gifts of smoked shellfish were always acceptable to Upper Skagit who exchanged dried venison for them."

(Collins 1974:51-52)

Evidently some Upper Skagit made sporadic trips to the coast to dig clams, while others moved regularly to seasonal camps on Camano Island.

"It is funny with those Upper Skagit. They never wanted to go down to salt water. Only the people of sikwigilts moved down to Camano Island every year. They liked it down there. People up here were scared that somebody would take them for slaves or kill them. Oh, sometimes they went down and dug clams and took some up the river. They were just like wild fellows and stayed up there all the time.

They used to have hard times up-river. One time a canoe-load went down. This canoe hardly moved. We said, "What's the matter with those people in the canoe. They go slow, just close to the beach." We came and asked them where they were going. They said they were going to get some clams, that they had nothing to eat. They came there, and my grandma told them to get out for awhile. She gave them something to eat - dried fish, dried salmon. they were tired. They had got weak they had nothing to eat. When they came back, these

people said they were strong because they ate things when they got down to salt water. This was in the summer time."

(Fornsby in Collins 1949:302)

This use of shellfish by upriver groups continued into the twentieth century:

"Two years ago so many salmon were taken by traps and by purse seine men, about the mouth of the Snohomish river, that the Skykomish and many of the up-river tribes nearly starved to death for lack of salmon. Dried salmon, dried clams and dried berries constitute the winter food of these up-river tribes, and indeed of many of our own reservation Indians."

(Buchanan to CIA 8 August 1901)

The ethnographic evidence of use of shellfish by upriver people is corroborated by widespread presence of shells in archeological sites at upriver locations. Tweddell notes shell mounds as far as fifty two river miles up the Snohomish-Skykomish river, beyond Sunset Falls (T27NR10E), within the foothills of the Cascade Range. (Tweddell 1953:102) Interestingly, the shells indicate that fresh as well as dried clams were brought up stream:

"Thus an observer below Sultan in the early 1880's saw at least a canoe a day going up and down the Skykomish to and from the coast for clams, though this was towards the end of the usual clam season." (Tweddell 1953:41)

Locations

People harvested at a wide variety of locations on multipurpose expeditions. Often women and children collected and cured shellfish, while men fished in nearby tidal waters. While most shellfish were gathered by women and children, men might participate both in the actual harvest or to assist with the work of curing. In some localities of the Outer Coast, where shellfish were scraped from rocks on surf-swept foreshore and locations were accessible only by canoe, men did most of the harvesting.

While shellfish were taken at all suitable locations, the selection of a particular location at a particular time was not a matter of chance. As I noted previously, there are over 2,400 miles of coast line in Western Washington. Shellfish of desired species were widely but not equally and uniformly distributed along every shore of this region. There were particular places where there were beds or concentrations of particular kinds of shellfish. From any particular point in the region, a person usually had a number of alternative sites available which could provide the desired resource or some reasonable alternative.

"Some shellfish were no doubt obtainable on every bit of shoreline, but just as the Straits people habitually dug at certain times so they dug at certain places.

It was evidently more profitable to go once a year to the best places to get a large supply than to spread one's shellfish gathering equally throughout the year. The result was that certain clam beds were visited each year at the same time by a number of people, sometimes people from different groups. Lummi, Samish, and Nooksack all dug clams at Chuckanut bay; Lummi, Samish, and Saanich at West Sound."

(Suttles 1951:67)

Many Northwest Indians believe that periodic culling improves the taste of barnacles. There were similar beliefs regarding other species. A part of the profit that Suttles notes may have been improved quality.

If there were adequate firewood nearby, shellfish were often dried on the beach where they were collected. If the shellfish could be easily and quickly transported, they might be taken home for curing. The fact that all villages near the coast were associated with shell mounds is probably evidence that this practice was common. Of course, the shells are also evidence that shellfish were brought home to be eaten fresh.

With shellfish widely distributed, a question might arise as to why people ever needed to travel far from home to gather them. There were several reasons. First, apart from the shellfish gathering done in the vicinity of villages, most shellfish harvesting was done on multi-purpose expeditions.

"Some foods could be gathered at any time, others only in season, some could be gathered at many places and others at only a few, but for the Straits peoples nearly everything had its proper time and place. Times and places were more or less fixed by the whole year's schedule of activities, and women's gathering and men's fishing and hunting were made to meet each other's requirements. The gathering activities which received the greatest attention were camas digging and clam digging for winter provisions, and possibly black-berrying."

(Suttles 1951:57-58)

A few kinds of shellfish could be dried and stored or transported. Others could not be dried and had to be consumed before they spoiled. The length of time shellfish would remain edible before consumption fresh or before curing depended in part on whether or not all or only part of the soft body could be enclosed inside the shell. It also depended upon how tightly the shell could be closed. Univalves, with only a single shell, could not close at all except for those snails with a tight fitting operculum. Oysters and those clams and other bivalves which can close their shell tightly could be kept for a period of time. Others, such as geoducks, which have

siphons or other soft parts which prevent their shells from closing tightly could not be kept as long. The distance that fresh shellfish could be transported before spoiling influenced where people harvested, which species were harvested, and where the shellfish were processed or consumed.

Division of labor

Women and children usually harvested and dried shellfish. However, there was no rigid division of labor between men and women. The curing of shellfish in traditional ways was customarily done by women. Men often participated in shellfishing. (See Gunther 1927:207; Smith 1940:138-139; Stern 1934:47; Suttles 1951:69; Collins 1974:75)

On the Outer Coast, California mussels and some other shellfish were often collected by men. This was because many gathering locations were isolated, surf swept, and could only be reached by canoe. Such locations often provided the largest and tastiest specimens. On the Outer Coast, as on the Inner Waters, women could use canoes but they did not normally do so in dangerous and isolated waters. Myths often provide examples of this male participation as a part of aboriginal culture:

"After one year the oldest brother told the others to get ready to go for mussels. The brother-in-law was there and the oldest brother asked him to go with them. The men got into a large canoe and paddled out to a tall rock, around the end of the point. This rock was called Kadi'dabat. All got out except the two youngest brothers. The oldest brother went around to the ocean side of the rock, which is hollow, and he found many mussels there. After a while he called to his brother-in-law, saying, 'Come here, the mussels are plenty around here.' After the brother-in-law had been gathering them for awhile the oldest brother said he would take the catch back to the canoe."

(Densmore 1939:202)

For additional information on the participation of men in shellfishing activities, see also Curtis 1913:124, 149; Waterman 1973:52)

Equipment, Technology, and Knowledge

Equipment used for procuring shellfish was simple and basically similar throughout western Washington. The main items were digging sticks, shell scoops, prying-scraping sticks, spears, dip nets, and open work baskets.

Digging sticks were used to dig out molluscs buried in the substrate. They were made of ironwood (ocean spray), spruce boughs, yew, or crabapple. Ironwood seems to have been the favorite wood along the Inner Coasts. Yew and crabapple digging sticks are commonly reported for the Outer Coast.

Digging sticks varied from three to six feet in length. Shorter sticks were preferred for digging molluscs found near the surface. Longer handled implements were employed to dig for molluscs deeper in the substrate. The shaft was occasionally slightly curved. Some were pointed at one end, others at both ends. The double pointed shaft may have been more common on the Outer Coast, but it was used by some people of the Inner Coasts. Sometimes the pointed end was flattened on one side to produce a spatula effect. The points of digging sticks were fire hardened or, at least on the Outer Coast, toughened by soaking in boiling oil.

Occasionally a "crutch" handle was added to the digging stick. This was a short piece pierced by a hole through which the top of the digging stick was fitted. These may not have been much used on the Outer Coast and they may have been most used by Gulf of Georgia Salish and the Kwakiutl to the north of them.

The digging stick seems a simple tool almost to the point of being no tool at all -- just a pointed stick. This was not the case. Digging sticks were carefully made tools designed to make the performance of specific tasks efficient. The following excerpts gives some sense of the thought and care that went into such implements:

"There were many variations on the digging stick, and the type used to dig clams had its own modifications. It was usually made of yew wood, although wild crab-apple wood was considered the second best choice of materials, and was often used. First, a piece of wood about three feet long would be cut and trimmed. Although green wood was softer and easier to carve than aged wood, it had a tendency to crack and warp as it dried out. An implement made from a piece of yew wood that was aged before being carved had less tendency to develop cracks. A hand adze, ch'ahyak, was used to carve the digging stick and sun-dried dogfish skin sandpaper was used to give it a final polish. The handle was rounded, so that the user could maintain a tight and comfortable hold on the tool. One half of the stick became progressively narrower towards the end that was to be used for the actual digging, although it was usually a consistent three "fingers" wide. To prevent this portion of the implement from cracking under the strain of heavy use, it was often boiled in a mixture of water and mammal or fish oil. This oil seeped into the wood, and helped to preserve the implement."

(Ellis and Swan 1981:75-76)

"The clams were dug at ebb-tide with clam diggers (K'u'yo'o) made of straight spruce limbs, about three feet long, one and one half inches thick, the point was sharpened and burnt to make it stronger."

(Quileute. Frachtenberg Q1,3:19)

Large heavy clam shells were used as digging tools. They were used to scoop sand and dip water out of holes. On the Outer Coast, large California mussel shells were used for these purposes.

The prying-scraping stick was short, curved and often spatula-shaped with a sharpened edge. It was used to pry or scrape shellfish from rocks.

"Mussels and barnacles were pried loose by means of a tool (K'a'xK'utsquo used for barnacles) made of ribs of whale or spruce limbs and yew limbs, about 4 feet long. The end was wide, flat and sharp. When made of wood, the points were burnt."

(Quileute. Frachtenberg Q1,3:19)

A long crooked stick was often used to pull octopus out of their dens. (Klallam, Gunther 1927:198)

Spears were used to get octopus, sea urchins, crabs, and other similar prey. They had straight shafts often of fir of varying length. Two or three short barbless yew or maple wood tines were fitted in grooves in the head of the spear and lashed with cherry bark or split spruce root.

"This spear was of varying length, depending upon the depth at which the sea urchins were to be found. The shaft was usually between two and three "fathoms" in length. Red cedar was the preferred wood for this shaft, although thick, straight, relatively limbless young red cedars were hard to find. Lengths of red cedar that were split from a larger tree were not used, as they could easily break when shaved to the desired thickness. A whole young red cedar, after it had been limbed, de-barked and trimmed to a consistent thickness, was much stronger and had less tendency to break. In lieu of red cedar, a length of Douglas fir that had been split from a larger tree was sometimes used.

Three equidistant four inch grooves were made in one end of the shaft. Then, three sharpened pieces of tough, heart-wood yew, each about eight to ten inches long, were set into these three grooves and lashed into place with split spruce root or wild cherry bark. These three pieces of yew wood were about as thick as a pencil and protruding about four inches past the end of the shaft."

(Ellis and Swan 1981:77-78)

Shellfish harvesting can be a simple activity, when engaged in as a casual or recreational pursuit. However, intensive shellfish harvesting for traditional Indian subsistence and trade

entailed considerable knowledge and skill. The following passage describes the use of the traditional digging stick of Puget Sound.

"The digging stick, on the other hand, was of vast service....the clams which were dried and stored away, were all obtained with this implement. . . .

The digging stick is a short piece of ironwood, flattened at each end and pointed. It is carefully seasoned, and the ends sharpened and hardened in the fire. For digging clams, it is used just as it is. The clam digger jabs one end in the mud and gives the other a circular motion. It goes into the mud very rapidly. In this exercise, the old women, who are very adept, flex their bodies at the hips, and bend far down, as though they were trying to touch their faces to their feet. In this position they reach about very quickly and easily, and work with astonishing speed. They are used to this posture, and take it very easily.... Clam diggers loaf around camp and take things very easily until the tide is at its lowest ebb. When the best beds are exposed, they set to work and move with remarkable quickness, gathering a supply of the best clams before the tide returns. At the present time short handled forks have entirely replaced the digging stick, a few specimens of which, however, I was able to obtain."

(Waterman 1973:51-52)

Olson describes the harvesting of razor clams by the Quinault.

"It requires no mean amount of dexterity and skill to be able to consistently catch the majority of those located, for the clam is more wily than is generally supposed. At the instant that the implement starts to pierce the sand he quickly draws in his neck, reaches the foot down into the soft watery sand below, enlarges it at the end and pulls himself rapidly downward. Unless he can be seized by the neck when the first scoop of sand is flicked away one may as well pass on, for by the time a second scoop is made he will be a foot below the surface. The digging stick was placed about four inches toward the sea from the barely perceptible depression that marks the spot directly above the clam. A single movement shoved the implement downward four inches and removed the sand. The right hand reached quickly downward and seized the neck and the bivalve was slowly pulled to the surface. It was usual to run about over the sand to cause the clams to dig down slightly so that the depressions became visible. This task usually fell to the children, who, upon sighting such a spot, marked a ring around it so that the women would be able to locate the clams more readily. As they were dug the clams were placed in a large open-work basket."

(Quinault. Olson 1936:39)

Large twined open work baskets preferably made from cedar limbs or roots were used for carrying shellfish.

"The burden-basket is oblong, with flaring and slightly curving sides, and open meshes a quarter-inch to an inch wide. It is made of split cedar branches

for the warp and split cedar-roots for the weft, as well as of split vine-maple branches or split spruce-roots for both warp and weft. The style of weaving is checker-work, the simplest form of the art. A receptacle of this kind is usually about fifteen inches deep, equally broad, and twenty-four inches long. It is borne on the back, being supported by a hempen tumpline passing across the head, and is used principally for clams and fish."

(Coast Salish. Curtis 1913:62)

The loose weave allowed water and detritus to drain away so as to keep the load as light as possible. Also, the baskets of shellfish were sometimes submerged in water to wash away mud and sand or to keep the shellfish fresh for a short period of time. They were carried on the back suspended from the forehead by means of a tumpline. To protect the back, a tightly worked water resistant small mat was worn between the back and the basket. Such a basket would last about one season.

Curing

The major shellfish customarily cured for future use were cockles and clams. California mussels were dried on the Outer Coast. Clams or other molluscs being dried were first steamed in the shell in a covered pit (see cooking). After cooking, the meat was removed from the shell and a dozen or so pieces, depending upon their size, were skewered on wood splints. These were stuck in the ground along side a fire. The clams were roasted for a short time, turned and roasted for a short time on the other side. They were then strung on withes and hung over a smoky fire for the final curing. On the Outer Coast they were sometimes suspended over the smoky fire on the original skewers. Also on the Outer Coast, there was evidently some combining of smoking and sun drying:

"The Quinault or Quileute who smoked fish in large quantities, even during summer, smoked clams in summer for a little while and then dried them in the sun. Another reason for smoke-drying which the natives give today is that once the food is smoked, even briefly, no flies come near it."

(Singh 1966:49)

Storage

Dried clams or cockles were stored suspended from the rafters on the withes upon which they were threaded. On the Inner Coasts and, to some degree on the Outer Coasts, they were also stored in baskets where they would keep for months:

"The baskets used for the storage of the clams are made of cedar roots or cedar bark in small meshes. These types of baskets permit plenty of ventilation which is essential in preventing mold and in keeping the clams from decaying."

(Lummi. Stern 1934:47-48)

Cooking

Shellfish could be eaten raw. Some, such as sea urchins, customarily were eaten raw. Most however, were cooked. There were three basic methods. These were steaming in an earth oven, roasting, and stone boiling. The earth oven was a pit lined with rocks on which a fire was built. Alternatively, sticks were laid over a depression, rocks laid on the sticks and these set on fire. The burning sticks heated the rocks which, as the sticks were consumed, fell into the pit. The coals and ashes were brushed away, the shellfish were placed on the rocks and covered. When the rocks were hot, the coals were removed. The shellfish were placed on the heated rocks and covered over until cooked. Sometimes there was no pit or only a very shallow one. In either case, old mats or cedar bark were used as a cover to hold in the steam.

In roasting, the shellfish were either placed directly on coals in the shell or they were removed from the shell and skewered on sticks which were stuck in the ground near a fire.

For stone boiling the cooking vessel was a tightly woven waterproof basket or a steamed and kerfed wooden box. The cooking vessel was partially filled with water to which heated rocks were added to bring the water to a boil. Food was placed in the boiling water to cook and heated rocks added as needed to keep the water the desired heat.

Fresh clams were often steamed. They were also roasted on sharpened sticks stuck in the ground beside a fire.

Oysters were steamed or boiled.

Mussels were commonly roasted in the shell on coals or ashes. At least some Outer Coast and some Inner Coast people cooked mussels in the shell on grates of green sticks over hot coals.

Dried clams were often boiled before being eaten. On the Outer Coast, dried mussels were prepared in the same way. Shellfish were often used in soups or stews.

The following excerpts provide a more vivid picture of the preparation of shellfish:

"The clams to be prepared for storage are shelled and pierced by a piece of ironwood about two feet long and one-half inch in diameter with the sharp edges rounded off so as to leave an oval hole in the clams. One pointed end of the stick is thrust into the ground near a fire and the clams are thus baked. When

baked, the clams from two of these sticks are strung together on cedar bark, hung over the fire on poles to dry, and then stored in baskets. Often butter clams are eaten fresh. Holes are dug in the beach in which large rocks are placed and heated red hot. Then the ashes are cleaned away from the rocks and the clams are heaped upon the hot coals and covered with sea weed. If there are only a few to cook, two sticks are placed above a fire of hot coals and the clams in the shell are placed in a row on these sticks. The small steaming clams, usually found in the same bed as the butter clams, are either eaten raw or cooked for immediate use in the same manner as are the latter. They are never dried and stored away. The cockel clams are generally dried for winter use in large quantities but are sometimes eaten fresh."

(Lummi. Stern 1934:47)

Suttles provides information on the process of steaming clams not covered by Stern in the above account. Suttles' description applies to Straits Salish people generally:

Clams were steamed in a pit upon hot rocks as camas was. But for shellfish the various leaves and barks used to impart fragrance and color to the camas were not required. A woman simply put the clams on the hot stones and covered them with kelp blades or white fir boughs. After about fifteen minutes she looked in and if they had opened she took them out. If they were butter clams and she were going to preserve them, she would wash out the sand and thrust a sharpened stick of ironwood through several, tying each to the stick. She then leaned a number of these sticks, each holding several clams, diagonally over a fire against a horizontal pole supported above it. Then the clams were roasted, she took them off the sticks and threaded a line of cedar bark through them. Thus strung they could be dried until hard. In this form they could be preserved indefinitely to be used in the winter or to be traded away. Butter clams and possibly cockles and rock clams were preserved in this manner. Horse clams did not have to be steamed first. They were opened with a knife and put on the stick raw. The Saanich informant LP said that people preserved rock clams also by simply shelling them raw and leaving them on a cedar plank to dry in the sun."

(Straits Salish. Suttles 1951:65-66)

Smith provides a detailed account of shellfish use and preparation for the Puyallup and Nisqually which probably applies to most Puget Sound people.

"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 kept 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 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 the stomach itself; the head was then turned over and the stick run through the strap on the neck to hold the clam in position. A low rack made of a pole supported on forked sticks was built the length of an extended fire, the cooking sticks were stood up along this with one end on the ground and the 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 stick 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 sticks 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 semipliable 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 ferns 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.

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."

(Puyallup, Nisqually. Smith 1940:243-245)

Smith also provided brief notes on preparation of other shellfish among the Puyallup and Nisqually:

"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."

(Puyallup, Nisqually. Smith 1940:243)

Elmendorf recorded the following account for the Skokomish of Hood Canal.

"All clams were steamed fresh, in the shell, on hot stones in a covered steaming pit. Butter clams and especially cockles were also roasted dry on upright ironwood (spirea) spits before open fires. When thoroughly roasted they were taken off the spits, strung on a circular cedar-bark cord, and further dried in the sun until hard. sundried clams were soaked to soften before cooking; they were boiled, sometimes with vegetable foods. Cockles, which dry to a rocklike consistency, were sometimes pulverized or broken up with a rock before cooking. FA said that dried clams were also trampled on, under a mat, to soften them for eating, and that the same technique was sometimes used with dried meat or fish. Clams were not stored strung on sticks. Dried cockles were in demand by the Yakima and other groups east of the Cascade Mountains, and the Skokomish traded many to the Nisqually and Puyallup, who in turn passed them on to tribes to the east.

Two kinds of horse clams were eaten. One termed st' 'bdza, had a more elongated and curved siphon end of the shell, especially when mature; the shell also tended to accumulate a growth of barnacles and seaweed. The meat of this type was good at any time of the year, although old specimens were apt to have poor and little meat and were preferable in winter. The other horse clam, a'a'qi d, had a cleaner shell. Its meat was best in summer, poor in winter. This type was most often dried and strung on looped cedar-bark cords as with cockles. The above apparently represent varieties of *Schizothaerus nuttallii*, perhaps the varieties *nuttallii* and *capax*.

The indigenous Olympic oyster (*tusa'yad*) was gathered in lagoons, tidal pools, and at the mouths of streams. It was eaten steamed, often with clams, or boiled. The present abundant Quilcene oyster is of postwhite introduction. The scallop, now present in Hood Canal, was not known in prewhite times. One kind of mussel (*t'a'w'*) was gathered as food. It was never dried, and was prepared by roasting in the shell on a "grate" of sticks over hot coals. Mussels were regarded as unfit to eat at certain seasons."

(Twana. Elmendorf 1960:123-124)

Gunther provided the following account for the Klallam:

"Only horse clams (*naEna*), butter clams (*skahai'yo*) and cockles (*slEiyo'um*) are dried, never little necks (*sac^uuna*) or mussels (*to'oe'ank*). Butter clams and cockles are steamed on hot rocks in the ground about half an hour without any water. Then the clams are taken out of the shell and washed. The clams are stuck on a limb of young ironwood (split wood is never used for this) about two feet long. The stick passes through the stomach and head of each clam. Two limbs of ironwood about four feet long with forked ends are set up in a slanting position and connecting them is laid a stick of Green cedar, placed through the forks. A fire of driftwood is built to one side of this and a plank is laid on the ground so that the clams will not touch the sand. The sticks bearing the clams are leaned against the stick between the slanting limbs and set on the plank. They are set up evenly with heads all on the same side of the stick. When they are done on one side they are turned; also the stick is inverted when the upper end is done. Then they are done they are laid on a plank and covered with green fern leaves. Then the women trample on them. To add to their weight they put small children on their backs. Only butter clams and cockles are trampled on in this way. They are taken from the sticks and strung on cedar bark string which is just as long as the stick, and tied into a ring. There are about forty clams on one string. All these rings are hung on sticks and put beside the fire to dry some more. If the fire burns all the time they are left for a week. They they are stored in an open basket, for in a closed receptacle they would get wormy.

The procedure with horse clams is practically the same. After the steaming they are taken from the shell by breaking one side of the shell on a stone. Then a glassy intestine is pulled out. They are washed and cleaned. They

are stuck on a cedar stick in this fashion: the stick is put through the stomach of one, the the stomach of another, then the head of the first, then the head of the second. After being dried by the fire they are not trampled on, but just strung on cedar bark string and dried further by the fire. There are about fifteen horse clams to a string."

(Klallam. Gunther 1927:206-207)

"Crabs, China shoes, skate, flounders and devilfish are not dried."

(Klallam. Gunther 1927:209)

To prepare razor clams, the Quinault placed them in hot water until they opened, took them out of their shells, removed their digestive tracts and skewered them upon three foot long salmonberry sticks. They were exposed to fire for a short time and then they were smoked for a longer period. Alternatively, they might be cooked on coals. When they opened, they were eaten. Dried razor clams could be stone boiled in an alder dish for fifteen minutes and then eaten.

Olson noted the following cooking technique for clams, rock oysters, mussels and crabs.

"Clams were prepared for drying by dashing them with hot water until the shells opened. The fleshy parts were then removed and strung on salmonberry sticks and roasted over the fire for a time, then dried in the sun. When thoroughly dry they were strung on cords and stored. They might be eaten without further preparation or soaked and boiled. Fresh clams were sometimes roasted before the fire until the shells opened, then eaten. Fresh clams were also prepared by placing them on hot rocks in a pit and covering them with leaves and sand.

Rock oysters were usually prepared by boiling them for five minutes. The nectar was drunk.

Mussels were always prepared by baking them in a pit for an hour or so.

Crabs were cooked by placing them on a rack a few inches above hot stones. They were then covered with mats and leaves and water was thrown on the stones. They were steamed an hour or two. Clams and fish were sometimes prepared in this same way."

(Quinault. Olson 1936:40)

It is worth noting that the gathering of shellfish, and specifically molluscs, was one of the few harvesting techniques which was not made more efficient through group cooperation. In the case of salmon fishing, for example, a cooperating group can often obtain more fish from their joint efforts than would be the sum of their catches had they fished independently.

In mollusc gathering, a group may harvest at the same place and time for social purposes or security but the total catch will simply be the sum of the individual catches. There is no quantitative subsistence gain through cooperation.

I have noted that shellfish are available throughout the coastal zones of Western Washington. No people near the beaches were ever far from access to some shellfish supplies. They are also available, with few exceptions, throughout the year. Shellfish are relatively nourishing and can be eaten raw (as by toothless old people). They can be gathered by individuals of almost any age or condition with minimal equipment and with minimal knowledge (although skill and knowledge help).

Consumption

People of Western Washington ordinarily consumed a morning meal and an evening meal. Shellfish, when available, were commonly consumed at both of these meals. They were eaten, depending upon the species, raw, roasted, steamed, or in broths and soups. Broths consisted of the water in which shellfish had been boiled:

"The water which the food has been boiled in is considered a luxury, and each one has a clam shell, which is dipped into the kettle as often as they desire to drink of the broth."

(Willapa Bay. Swan 1857:165)

Except in broths and soups, the cooked shellfish were almost always eaten dipped in oil from fish or mammals. Soups were drunk from clam shell, or, sometimes on the Outer Coast, mussel shell spoons, from a common container.

Shellfish were used as everyday food and as feast food. Often the difference between everyday food and feast food was the variety and particularly the quantity at latter occasions.

Some feasts were ceremonial and some were not. Many feasts were social occasions in which people were invited to eat simply because an abundance of food was available. The periods of extreme low tides were occasions for informal feasts because of the extraordinary varieties and quantities of shellfish available at those times.

Other feasts were matters of social etiquette. Everywhere on the Northwest Coast the arrival of friendly visitors provided the occasion for a welcoming feast. Olson notes such responsibilities for the Quinault.

"After the first day it was the duty of the host to feast everyone in the potlatch house. Tremendous quantities of meat, fish, clams, oil and berries were consumed at every meal."

(Quinault. Olson 1936:127)

Dried shellfish were often used as snacks and they were carried by work parties, travellers, or raiders, for they were convenient to transport, could be eaten without further preparation, and were nourishing. Travellers would often carry a ring of dried clams about their necks to snack on as they went along.

Shellfish were considered to be desirable food for infants, nursing mothers and children.

"A newborn babe is bathed every morning in cold water and talked to while its eyes and mouth are being washed. If the baby gurgles while bathing it will have a short life...."

On the first day, some chopped clam meat soaked in the milk of another nursing mother is given the infant to suck. There after it is nursed by its mother who eats many clams to increase her milk and avoids fruits which give the baby colic."

(Lummi. Stern 1934:15)

". . . The dried neck of the horse clam was tied to the baby's wrist and served both as pacifier and teething ring. The juice of the dried clam was slightly sweet and the meat did not easily disintegrate."

(Puyallup, Nisqually. Smith 1940:182)

". . . A baby is not nursed for about twenty-four hours after birth. During this period the child is given a little dogfish grease to drive the "bad" out of its stomach. Then it is given a horse clam to suck, prepared in the following manner: the meat of a skinned clam is chopped very fine and moistened with the milk obtained from a woman who is nursing a child.

While a mother is nursing her child she eats many clams because being milky, they bring rich milk. She does not eat berries or berry sprouts for they would cause the child colic. She could eat all kinds of meat and fish. She drinks much water often with ground mussel shells in it to increase her milk."

(Klallam. Gunther 1927:234-235)

Dried shellfish were a suitable food for girls in puberty seclusion.

"The bulk of the seclusion diet consisted of dried meat, dried fish, dried vegetable food, and dried clams; it is doubtful whether fresh molluscs were also allowed."

(Twana. Elmendorf 1960:440)

Uses other than as food

Shellfish were a basic food for most Indians of western Washington. Beyond this, the shells of many species were a source of material for a tools, containers, for adornment, as wealth objects and as "money." The range of uses to which shells were put is illustrated in the examples below. The examples provided do not exhaust the list of shell items from this area which are reported ethnographically or are found in museums. Some of the examples cited here, as for example, mussel shell cutting tools, were of fundamental importance to the Indians; others, such as clam shell tweezers, were less important, but serve to illustrate the many uses to which shells were put.

The importance of shellfish to Indians of western Washington is reflected in the ways and degree to which they appear in the world views and ceremonial life of the region. Examples below are taken from ethnographic narratives, mythology, and ceremonials.

Bait

Various kinds of shellfish were used as bait in salmon, halibut and other fisheries. Clam meat was used as bait in trolling for salmon. Octopus was the bait used for halibut.

"When the salmon first began the run they were caught in salt water. The men went out in a canoe, the forward man paddling, the man in the stern trailing a line and hook. The hook was of bone and baited with clam."

(Puget Sound. Haeberlin and Gunther 1930:27)

"Another method was used probably only for the larger lingcod. The fisherman broke sea urchins and threw them into the water. The sea urchins attracted small greenlings ("tommycod") and the fisherman speared one. He then tied a line around the greenling, put a rock in its stomach, and cut the flash off one side to make it uneven. He could then drop the greenling to the bottom, then pull it in rapidly, making it wobble or spin. Sometimes a lingcod only followed it up to where he could be speared, . . ."

(Lummi, Samish. Suttles 1951:125)

Lures

At least on the northern part of the Outer Coast and along and near the Strait of San Juan, some shell trolling lures were made. Hewes (1947:132) reported that the Makah used shell lures for trolling.

Utensils and containers

In 1792 Menzies, of the Vancouver expedition, was exploring around Birch Bay. He found shells evidently used as dippers or cups.

"We had not yet seen any of the Natives since we anchored here but in this days excursion I saw two or three recent fire places on the Beach which made it very evident that they had been lately in the Bay, & a fresh path which went back from there into the Country induced me to follow it in expectation of reaching their village, but I found it lead only to a small well of fresh water dug in the middle of the Meadow with two or three large shells laying on the brink of it which intended no doubt to serve as drinking Cups."

(Menzies [1792] in Newcombe 1923:56)

Clam shells were used everywhere as utensils and containers. California mussel shells were used for the same purposes on the Outer Coast.

". . . Horse clam shells are used as spoons and as grease dishes. The best ones are picked out when the women dry clams and are laid aside for feasts."

(Klallam. Gunther 1927:210)

"Clam shells are placed underneath to catch the oil, which will run from these rich, fat salmon almost in a stream."

(Chinook. Swan 1857:109)

"Clam shells were used as containers for mixing paint pigments with oil and grease."

(Twana. Elmendorf 1960:210)

"When camping some embers are carried in a clam shell so that drilling (to kindle fire) will not be necessary."

(Klallam. Gunther 1927:211)

"The rare black gum which exudes from hemlocks (called stea'mats) was used by girls as perfume. Young chaps used to gather it in clam shells, mix it with tallow from the marrow of the lower legbone of the elk, . . . "

(Quinault. Olson 1936:60)

Knives and scrapers

Knives and scrapers were made from the shells of the California mussel, or, less commonly, from large clam shells. The knives were used for butchering salmon and for other purposes. The scrapers were used in the preparation of skins and for scraping the edible cambrium bark from trees. The California mussel shell knives and scrapers were most common on

the Outer Coast and along the Strait of Juan de Fuca and in adjacent places where these mussels were available.

"In the first sockeye ceremony of the Beecher Bay Klallam, the fish was cut up by a woman using a mussel shell knife."

(Klallam. Gunther 1927:203)

"Knives for light work, such as skinning, cutting fish or meat, and light woodworking, were simply whole mussel shells sharpened on sandstone. Material for whetstones was found at several places along river and beach."

(Quinault. Olson 1936:79)

Large mussel shells were also used as scrapers by many Gulf of Georgia Salish people. (Barnett 1939:234) California mussel are most common on the Outer Coast and it was in this subregion that the shells were most used. They occur sporadically upon exposed rocky beaches along the Strait of San Juan and into the San Juan and Gulf Islands. They do not occur to any extent in Puget Sound. It follows from this distribution that mussel shells are most used for tools on the Outer Coast and to a lesser extent along the Straits of San Juan and around its eastern end. They occur sporadically in archaeological sites in the Puget Sound region, presumably traded in or gathered elsewhere.

Reagan reported that clam shells were used by West Coast Indians in making canoes:

"These canoes range in size from a little river canoe to an ocean whaling canoe that will hold ten whale hunters, or three tons of freight. In making these crafts in the old times it was a slow process of alternate burning and scraping with clam shells"

(Reagan 1934:136-137)

Harpoon points

One of the most important implements made from a sea shell was the harpoon blade made from the California mussel shell. It was closely associated with whaling and was used on the Outer Coast and, perhaps to a limited extent, along the Strait of San Juan. Similar but smaller mussel shell blades were used for hunting smaller sea mammals and, to some extent, for salmon along the Outer Coast and by some groups along and near the eastern end of the Strait of San Juan.

"A head (of a seal harpoon) consisted of two spurs of elk bone, made separately, between which fitted a blade of antler, bone, or mussel shell (*Mytilus californianus*) having a single barb on one side."

(Lummi, Samish. Suttles 1951:106)

"When the otter was struck he seldom swam away, but gnawed at the arrow, "trying to get it out." This enabled the men to approach close enough to use the harpoon. The harpoon was of the same pattern as that used for salmon. One point was about four inches longer than the other. Both were tipped with mussel shell."

(Quinault. Olson 1936:49)

In a study of Makah whaling equipment, Waterman discussed the penetrating power of mussel shell harpoon blades.

"A word about mussel-shell harpoon blades may not be out of place. When the fact is recalled that the entire central part of the blade was cut out, to enable it to fit over the lashings of the head, it seems that the mussel-shell blade must have proven a very weak and fragile thing. The material of the shell itself is, of course, extremely brittle. After the blade was firmly gummed in place, the gum was cleaned away from the edges, and these were thoroughly sharpened. Brittle material often shows astonishing penetrating powers, when driven with sharp impact. Flint, for example, makes a very effective tip for arrows. Dr. Saxton Pope, at the University of California, found by experiment that the obsidian-tipped arrow would penetrate further into animal tissue than a steel-tipped arrow would. The reason he ascribes for this fact is that the flint head, being serrated, cuts a way and clears an opening for the shaft, better than the thin steel blade does. I dare say the mussel-shell harpoon blade inflicted a deeper wound on the whole than the more modern steel blade which has replaced it, even though the shell blade may often have been shattered in the process. The shattering in such material does not come until after the impact is completed, and the wound inflicted. In other words the inflicting of the wound is almost instantaneous, while the shattering of the head, if it does shatter requires an instant or two of time. This accounts for the fact that a delicate flint-arrow point can be driven into a thick buffalo skull, or vertebra, as set forth by Wilson. It must be remembered that the blade of the harpoon has no part in holding the animal. This is entirely the function of the bone barbs. The sinew lanyard is most painstakingly attached to these devices of bone, for any failure in the coherence of these elements means the loss of the quarry. The coating of spruce gum, on the other hand, is all that holds the blade in its place. The blade is thus attached with only sufficient firmness to make certain that it will not come loose as the harpoon is brandished. It will, of course, stand shocks of all degrees, as long as they are directed from the front, until it flies to pieces from impact.

(Waterman 1920:32)

Rattles

On the ocean coast, along the Strait of Juan de Fuca, and about Hood canal, scallop shells served as rattles. They were used by shaman, by dancers, and attached to cradles to amuse babies.

"On the Pacific coast the *Pecten caurinus* and *P. hastatus* are employed by the Makah and other Indians for rattles, . . . "

(Holmes 1883:190)

Swan noted a Tsiakh society among the Makah which was evidently a curing and shamanist complex. He mentioned rattles used by the dancers, but did not indicate what kind.

(Swan 1870:73-75)

Densmore noted and photographed a scallop shell rattle used by a Makah shaman, Young Doctor, when treating sick persons. (Densmore 1939:28)

In his field notes, Frachtenberg described scallop shell rattles.

"The speech over, he started to sing his own (family's) song which marked the opening of the dancing. The starting of this part of the potlatch was called tsi'la'do'o'lx. Then all assembled people, rich and poor, began to dance. The dancing to one tune lasted about 2 minutes, the song being rendered in two or three verses--in which all people joined in. When this song was over, the next man sang his song, and so on. The singing of these family songs was called ki'ya'a. These songs were used only on that occasion and were also inherited: but only the rich families had them hence only they could sing them. The keeping of time to these songs was done by clapping hands, stamping with feet and by means of a special rattler used for this occasion only and called q'ole'lixol. It consisted of round, large shells strung (5 or 6) on a string and held in the hand. While dancing, the men danced on one side, the women on another. The only songs used during a potlatch were the ki'ya'a songs, and these could not be used on any other occasion. Each family had only one ki'ya'a song and it was rendered only by each head of the family, helped, of course by the whole assembly."

(Frachtenberg Q1,4:73,75)

Despite the statement that the rattles were of this restricted use, on another page, he describes another use -- at victory celebrations.

"Each warrior sang his taxelit-song and was joined in by the others. New songs were not improvised. Drums and special war rattle (kw'u'le'a'lixul) made of shells strung together on pieces of hide and held in the hand were used."

(Frachtenberg Q1,4:5)

Olson notes that the Quinault attached scallop shells to baby cradles.

"A few scallop (laama'gwan) shells on a string rattled when the cradle was rocked."

(Quinault. Olson 1936:102)

In 1862 Swan attended a curing session at Shoalwater Bay at which the shaman used a scallop shell rattle.

"So Old John came, bringing with him his family, consisting of some half a dozen persons. These, added to the others, who all remained, made a very formidable battery with which to attack the poor old roof while the doctor should mamoke Tomanawos, or work charms. The style of operations was now materially changed. Old John sat down at the patient's feet, with his head covered up under his blanket, and there he remained a long time, nearly half or three quarters of an hour. A large fire which had previously been built was now reduced to a bed of coals, which were kept alive by additions of rotten wood, which did not blaze, but made a smoke. All at once he threw off his blanket, and commenced singing in a loud voice a most barbarous song, and throwing himself about in a most excited manner. In his hands he had large scallop-shells, which he rattled like castanets, the chorus in the mean time keeping up their pounding, with the addition, over the other performance, of a couple of tin pans and a brass kettle, which served very perceptibly to increase the din.

John then, throwing down his castanets, went through the mesmeric passes till Suis was asleep. Then he bore his whole weight, pressing his clenched fists on to the patient's chest till I thought he would kill the woman. Then he would scoop his hands together as if he had caught something, which he would then try and blow through his hands into the coals. These ceremonies continued for an hour, or till the old fellow was so exhausted with his exertions he could do no more."

(Swan 1857:183-184)

In the context of a large Klallam feast and ceremony, including performances of Klokwal dancers, Swan noted shell rattles.

"Directly opposite to us, some twenty men and boys with black faces, and hair powdered with geesedown, were singing a chorus, accompanied with rattles, drums, thumping the roof, and shaking in the air bunches of shells, and waving fans made of white geese wings."

(Swan [1859]1971:50)

A Quileute story of a visit to the Klallam at Port Angeles mentions Klallam "clam" shell rattles.

"Then two medicine men, whom the Ozette man also knew, one of whose name was Kwiskwastid, the other Ilthaladda, came out of the smokehouse with clam shell medicine rattles and climbed upon the flat roof; you know our houses all had flat rooves then. They then went through various, various ceremonies, seeming to call upon their deities to help them, should our people attack the village. Then when they had finished they, too, went back into the smokehouse."

(Reagan 1929:180)

It is clear that scallop shell rattles and perhaps also clam shell rattles were used along the Outer Coast, as powerful paraphernalia in a ceremonial complex and as shamanistic equipment. The distribution of scallop shell rattles among the Inner Coast people south of the Lummi and the Strait of Juan de Fuca is unclear. Elmendorf denies them for the Twana (Skokomish). (Elmendorf 1960:223)

Smith reported shell rattles.

"Very effective rattles consisted of small shells tied to babies' wrists in bunches so that they jingled when the babies moved.... since shell rattles were used in ceremonies and since war clubs, fish clubs, etc., were ordinarily suspended from the wrist, there seems no conclusive evidence that shell baby rattles were not aboriginal."

(Puyallup, Nisqually. Smith 1940:182)

Densmore reported an interesting use of shells as soundmakers other than as rattles.

"The young man said he had friends and would call them, so he called again, and there was a sound as though frogs were answering. Some men had rubbed cockle-clam shells together, producing a sound like that made by frogs, and the members of the Klokali thought the sound came from living frogs."

(Densmore 1939:103)

These brief and often unclear accounts give some hint of the elaborate patterns of ritual and belief into which some sea shells fitted in traditional Western Washington cultures. The slim evidence available suggests that the shells involved carried symbolic associations with power, wealth and curing.

Body ornaments

Shell was the major material used for body ornaments. The kinds of shell ornaments used in Western Washington were earrings, nose pendants, necklaces, bracelets, breast plates and pendants, and headdresses. The major shells were clam, abalone, dentalium, and various snail shells. Clam shells were widely available in western Washington. Prior to the European introduction of California abalone into the area, abalone came from the San Juan - Gulf Islands and from around the mouth of the Strait of Juan de Fuca. Dentalia were imported from the West Coast of Vancouver Island.

Ornaments were used for beautification and to indicate wealth and prestige.

"The most precious ornaments were ear-pendants of oblong bits of abalone shell, which was obtained in trade from the northern tribes. No person

of low caste could afford these. Some wore a dentalium shell transversely in the septum of the nose, but this was not common. Both males and females of all ages, provided their means were sufficient, wore necklaces consisting of many strands of dentalium shells or of clam-shell beads pendant on the breast."

(Coast Salish. Curtis 1913:42-43)

"Bits of abalone shell were valued ear-pendants, and every person of means had a necklace consisting of many strands of dentalium shells or of clam-shell beads."

(Coast Salish. Curtis 1913:157)

"Head ornaments. -- Head bands made of dentalium shell. Threads are run through the shells, then through the leathers which keep the shells in their places.

Ear pendants. -- There are two kinds, one of dentalim shells, a number of which are fastened together in a bunch. Small pieces of black or red cloth are often fastened to the lower part of the shell for greater ornament. Another is made of abalone shells. Both of these were formerly used as money.

Neck ornaments. -- Necklaces were formerly made by stringing both the dentales and olivella shells, but such are little used now. Sometimes these strings were 5 feet, and were doubled several times."

(Klallam, Skokomish. Eells 1889:631)

Swan described Makah ornaments:

"A Makah belle is considered in full dress with ... a piece of shell pendent from her nose; ear ornaments composed of the shells of the dentalium, beads and strips of leather, forming a plait three or four inches wide and two feet long; . . .

Both sexes have their noses pierced, and usually, although not constantly, suspended from them a small piece of the halotis shell (the "abalone" of the Californians), obtained from Vancouver Island, particularly on the eastern side in the Cowitchin district, where specimens of a large size are found. Some wear pieces of this shell two or three inches square as ear ornaments."

(Makah. Swan 1870:17)

"Their ornaments consist mainly of the head and ear decorations worn by young girls, and of pieces of variegated shell inserted in their noses and ears. The first are made of the Dentalium, which is procured by barter with the Nootkan and other Indians of Vancouver Island. The shape of these ornaments is shown in Fig. 3, the shells being run on strings separated by pieces of leather, and so arranged as to form a fillet to surround the head. The shells, in the ear

ornaments, generally have their tapering or small end up. The last are usually finished off with a quantity of glass beads of various sizes, shapes, and colors. They are not however, attached to the head ornament, as shown in the drawing, unless they are very heavy; but usually tied to the ear, which is pierced all round the edge with holes, into which the strings are inserted. When the ornaments are laid aside, these holes in the ear usually have a piece of twine tied in them, and sometimes brass buttons are attached to the twine. This head ornament is very pretty, and when a squaw is in full dress she has quite a picturesque appearance. The shell ornaments for the nose are made of the Hflliotis, which is procured on Vancouver Island. The largest specimens I have seen came from the Cowitchan district, on the eastern side; smaller ones are found at Clioquot and Nootka. The pieces worn in the nose are of various shapes, circular, oval, or triangular, and hang pendent by means of a string; others are cut in the form of rings, with a small opening on one side, so they can be inserted or removed at pleasure; the size varies from a dime to a quarter of a dollar. Some of the ear ornaments, however, and particularly those worn by children, are much larger--not unfrequently two inches square. These are fastened to the rim of the ear by strings; they are not very attractive ornaments, as they serve to give the wearer a very savage appearance."

(Makah. Swan 1870:47)

The nose ornaments were evidently highly personal.

"Drowned persons they supposed to turn into owls, and several years since a party of Indians having been lost by the accidental demolishing of their canoe by the tail of a whale they were killing, I was gravely assured that the night after the accident eight owls were seen perched on the houses of the drowned men, and each had suspended from his bill the shell worn in the nose of the man while alive."

(Makah. Swan 1870:88)

"Most of the women had their ears pierced for earrings of shell, bird claws, etc. Many of the men, especially warriors, pierced the septum of the nose and wore pieces of shell, bone, or wood pushed through the hole and projecting on each side."

(Quileute. Pettit 1950:11-12)

"They pierced their ears to wear pieces of mussel shell, abalone shell, or dentalia."

(Quileute. Singh 1966:92)

"Dentalium shells of sizes too small to serve as "money" were much used, as were abalone shell ornaments."

(Quinault. Olson 1936:61)

Abalone nose pendants were worn, sometimes by men and women and sometimes by men only, among all of the Gulf of Georgia Salish. (Barnett 1939:248) They were worn by people along the Strait of San Juan and by people of the Open Coast.

Abalone ornaments, at least on the Outer Coast, had significance beyond ornamentation. This is most clearly sensed in Makah beliefs and practices.

Swan described a Makah ceremonial complex named Do-t'hlub (the name of a powerful being). The origin of the complex involved a tale of a man fishing for cod fish who, instead, caught with his hook a huge abalone. Do-t'hlub became the guardian of the participants in the complex. Abalone nose pendants are supposed to trace their origins from this source. (Swan 1870:75)

This complex became less important when the Klokali (wolf) society was introduced from the north. Evidently the abalone shell story held such fascination that it was transferred, as an alternate source for the Klokali.

"Two legends concerning the origin of the society were related. According to one legend a man was fishing one day when his hook caught a shell (hi'daa). When he found that he had something unusual he told his wife to cover her face so that she would not see it. He said: 'It is all right for me to die but you need not do so.' He drew in his line and found the shell. When he reached home he began to sing the songs given him by the shell. The power of the shell was such that it enabled him to see persons through the walls of a house as though through a window. He originated the Klokali, and his songs provided the music for its first dances."

(Densmore 1939:102)

Decoration

Shells and shell opercula were used as inlay material in craftwork in regions adjacent to the Inland Waters region of western Washington. Such work was done by the Makah and their Nootka kin of the West Coast of Vancouver Island. It was noted for those groups by the earliest European visitors.

"Many of the boxes were also decorated with "pearl shells"-- probably the opercula of the sea snail."

(Gunther 1972:72)

George Gibbs described the use of opercula in the ornamentation of the "Chinook" canoe.

"The one by far the most used at present, and the most elegant in shape, is, however, that which has popularly obtained the name of the Tsinuk canoe, the bow of which rises high and projects forward, tapering to a point, while the stern

is sharp, cut off perpendicularly, and surmounted by a block. These canoes are usually painted black outside and red within, and ornamented along the gunwale with the opercula of a sea-shell, set in rows. This kind is by no means confined to the [Columbia] river, but is employed far to the northward also."

(Material in brackets added. Gibbs 1877:216)

Winthrop (1863:20) described a trip in a canoe with Klallam Indians of Port Townsend. The canoe was about 40 feet long and was decorated with "A row of small shells inserted in the red-smearred gunwale. . . ."

Swan also noted the use of canoes ornamented with opercula for the Klallam, and formerly for the Makah:

". . . Until very recently it was the custom to ornament all canoes, except the small ones, with rows of the pearly valve of a species of sea-snail. These shells are procured in great quantities at Nittinat and Cloyquot, and formerly were in great demand as an article of traffic. They are inserted in the edge of the canoe by driving them into holes bored to receive them. But at present they are not much used by the Makahs, for the reason, I presume, that they are continually trading off their canoes, and find they bring quite as good a price without these ornaments as with them. I have noticed, however, among the Clallams, who are apt to keep a canoe much longer than the Makahs, that shell ornaments are still used."

(Swan 1870:37)

Shells were also used for decorating ceremonial garments.

". . . Shells are often used to decorate the breasts of the shirts instead of the bead-work which is a recent innovation adapted from the Eastern Indians. The shells are suspended with a buckskin strand drawn through two small holes in the garment and through a pierced end of the shell."

(Lummi. Stern 1934:65)

Items of wealth and "currency"

Certain shells were not only valued as ornaments, but also had high value as items of wealth and exchange in economic transactions.

Haerberlin and Gunther report that among Puget Sound people shell money was buried with a wealthy person:

"Strings of shell money were put on a wealthy person and small bits of personal property were wrapped with the body, but no food."

(Puget Sound. Haerberlin and Gunther 1930:53)

Haeberlin and Gunther provide the following account of two kinds of clam money used in Puget Sound:

"In trading both along the coast and with the interior tribes, shell money was used. As shell money travelled eastward over the mountains it became more valuable. There were several kinds of shell money. tc °au'wai were discs of clam shell about one centimeter in diameter. The shell must be white. A hole was made in each bead so that it could be strung and the disc was smoothed with a rough stone. These clam shells were found in the Snohomish country. tc °au'wai was always strung in single strings. Solax was made from the shells traded in from the north. It had the form of tubular beads, strung in pairs with a round bead between. Solax was always measured double, so although the Indians claimed it to be only half as valuable as tc °au'wai, it was equal in value, bead for bead, for two lengths of tc °au'wai were equal to one of solax. Single shells in the string must not be broken, for that diminished the total value of the piece. xUcilqs was made of the shell of a very large clam found in the north. Since it was not found in the Snohomish territory, it was highly prized by them. Two to four large shells were worth a slave. Pieces of this money were worn at the end of a necklace, or a chief would have a piece in each ear. A Snohomish informant said that he had never heard of dentalium money."

(Puget Sound. Haeberlin and Gunther 1930:29)

"Currency.--The dentalia shell and the abalone shell, or parts of it, were the nearest thing to money which they had, the former being the most valuable. A species of olivella shell, found in Klallam waters, was sometimes brought to the Twanas, by whom it was used partly for money.... The value of the dentalia shell depended on the size as well as number, a long one being much more valuable than a short one."

(Klallam, Twana. Eells 1887:647)

"Dentalia were strung in double strands of equal length about a foot and a half long. One such string could probably have been exchanged for either a slave or a canoe. Although called "Indian money", its name, solaq, indicated that which was to be kept or taken care of: the word for money, tala, was introduced with the concept and obviously relates to the English word, "dollar". Other shells also had economic and decorative value. Among these were the fan-shaped, salt water shells known as sxwaixwai; a small snail-like, black shell found on fresh water lakes and called kwayetsks; and a pearly shell similar to the latter but found on salt water beaches. Clam shells were not used for ornament. All of these shells were strung and worn as necklaces. After the coming of the Hudson's Bay Company glass beads were used and these, as well as a rolled bead obtained from the Hawaiians in the Company's employ, were strung with the shells."

(Puyallup, Nisqually. Smith 1940:320)

"A minor ceremony attended the plucking of a pubescent girl's eyebrows. thus, when Lena Underwood was about thirteen her parents paid Julia Cole's mother \$50 to pluck the girl's eyebrows and apply a secret medicine which was

supposed to prevent the hair from growing again. The old lady (a Makah) took dentalium shells and crushed them on a hard black rock from the beach. Then she secured a special kind of rock which had always been under water and boiled it until an "oil" came out. This was mixed with the powdered shell and rubbed on the girl's eyebrow."

(Quinault. Olson 1936:60)

"Before the days of the traders most values were measured in terms of strings of dentalium. The Quinault secured these in trade from the north. They knew that the Makah and Nootka gathered them by means of a long pole with small sticks at the end which entered the open mouth of the shell. Ordinary shells were called xwe, exceptionally long ones kuna'lxw. The Nootka were said to eat the flesh of dentalium.

The unit of value was a "string" which was slightly over a fathom in length; the string was supposed to sag to a black dot tattooed on the middle of the chest. The largest shells ran 40 to a string, the smallest 44 to 46. The strings of smaller shells were worth less. One informant said that the number of shells over the unit length determined value. Thus a string of 40 with shells large enough so that there were four over the measure was worth four blankets, if five over, five blankets, and so on."

(Quinault. Olson 1936:86)

"Besides dentalium there was another variety of wampum, made by breaking heavy horse-clam shells into fragments, uniform sizes of which were picked out and roughly trimmed and rounded with stone chisels. These pieces then were bored through the centre by means of a bone-pointed spindle, which was twirled between the palms with down ward pressure. The shell fragments were slipped on a slender needle of ironwood, and the edges were rubbed round and smooth on a coarse, flat stone. They were then strung on deerskin thongs about a fathom in length, to be used for necklaces and for money, particularly in bartering with the interior tribes."

(Coast Salish. Curtis 1913 :91)

Miscellaneous Uses

Sea shells were used as tweezers, lancets, toys, paint and medicine.

"He plucked out his beard and mustache, using his fingers or the two halves of a clamshell, and leaving, perhaps, a few hairs on the chin. He might also pluck his eyebrows into a fine line."

(Washington Coast Salish. Underhill 1945:125)

"After puberty both young and old of both sexes kept the eyebrows trimmed to a thin curved line. Men removed all traces of beard. The straggling hair of the head was also pulled out. The nails or fingers dipped in ashes might

be employed but it was more common to pluck with tweezers made of a split bone or a pair of mussel or clam shells."

(Quinault. Olson 1936:60)

"Minor surgery. Boils were lanced and splinters removed with sharp bits of broken mussel shell. Shell tweezers were also used in the latter operation, as well as in depilation.... I quote HA on splinter removal: "When I was young and got a sliver in my finger and it started to fester, my mother would break a mussel shell and use a sliver of it to cut out the wood sliver. When you do this with an old mussel shell from the beach it breaks into sharp needles. It's the sort of thing that du'kWibal (the World Changer) might have fixed, to make mussel shells good for something. I never heard it said he did, though. My mother also used to use two mussel shells together as tweezers."

(Twana. Elmendorf 1960:250-251)

"A fan-shaped salt water shell, called sxwaixwai, was also treasured by children. If any of these was accidentally broken, the child who owned it cried. Adults often said to children, "go gather sxwaixwai." It is evident that they encouraged the collecting and hoarding and, since the shells were a salt water product, this type of pastime was of more importance for just those groups in which there was none of the sort of play associated with dolls in our culture."

(Puyallup, Nisqually. Smith 1940:186)

"Boys and girls played together in those first years, making toys out of stones and shells which they picked up on the beach. Old Indians can still show how they played doll's house and acted out stories with big and little shells for people, mussels for those of the coast, scallops for the inland ones. A rough dirty shell was a bear and a slender one with pointed end, a dog. A round shell holding bits of seaweed was the serving dish at a feast. A big mussel shell made a perfect canoe and the family of little upright shells riding in it even had pointed shell hats."

(Washington Coast Salish. Underhill 1945:132)

"White paint was obtained from "somewhere on the Sound," the exact substance being unknown. It was also prepared from clamshells in the following manner: A quantity of clamshells was put in a depression of the ground, hot stones were added, and these were covered with ferns. Water was then poured over them and a fire built on top. The fire was kept up for a day, when the shells were found to be "like white flour." When applied to the face this substance was mixed with fish egg.

Colors were often mixed, and white was combined with colors to make them lighter."

(Makah. Densmore 1939:23)

"The shell of the fresh-water mussel (a'kalctan) was burned and the resulting powder applied to boils to "draw" and cause them to break."

(Quinault. Olson 1936:181)

". . . A variety of the thorn oyster is frequently thrown ashore after heavy storms; or is found in the root of the kelp which has grown upon it, and, being torn up by the breakers, brings the oyster ashore in its grasp. These are not eaten, but I have seen the fresh ones made use of as a sort of poultice for boils, . . . "

(Makah. Swan 1870:79)

Swan also noted, without giving details, that some shellfish were "great medicines".
(Swan 1870:89)

Miscellaneous beliefs and associations relating to shellfish

The following examples provide a glimpse of the variety of contexts in which shells appear in the ethnographic accounts of native cultures of western Washington.

". . . She (a pubescent girl) was not to go near the river lest the fish be repelled and refuse to run, nor could she dig clams without polluting the clam beds."

(Material in parenthesis added. Nooksack. Amoss 1978:57)

". . . Warm food or drink which cause the teeth of mourners to decay are avoided as are clams which cause a "roaring" stomach."

(During mourning for the dead. Lummi. Stern 1934:37)

"Crabs are mashed and put on the baby's legs and abdomen to increase its strength and activity, and its body is massaged with oil."

(Lummi. Stern 1934:15)

Densmore collected several songs among the Makah which were sung for entertainment but they also had a practical purpose -- to indoctrinate the young in their roles and, in so doing, to point to things held important. Some of those that she collected related to shellfish gathering.

"We are going to see the little crabs, We hear that they leave piles of bubbles."

"I wish I was out on the rocks gathering sidu, the tide is just right. I wish I was gathering crabs, the early morning tide is out."

"I think we had better go after crabs, they do not hurt so badly when they pinch the hands."

(Densmore 1939:220-221, 264)

Two versions appear to provide slightly different sources for the song, in the one version, little "shell-animals," and in the second, "oldest sister of the little crabs".

"A song was given to Annie Long Tom by the animals that live in a spiral shell called klikli'ibus by the Makah and ki'ets by the Clayoquot. Two records of this song were inadvertently made, the first in 1923 and the second in 1926, and the comparison of the phonographic records are contained in the analysis. On the first occasion she said the song was given her by four little shell-animals and that she heard them sing the song, the words of the first rendition being here presented. On the second occasion she said the song was given her by the oldest sister of the little crabs mentioned in the song, the words of the second rendition being 'I am going to see a little crab who is bubbling.' So slight a difference might arise from the circumstances under which the second record was made, or may have been a freedom of interpretation that is permissible in a poet."

(Densmore 1939:264)

The spiral shell was the wrinkled purple whelk (*Thais lamellosa*).

Spirit Power

Shellfish entered into the religious life of the Indian people of western Washington. In questing for supernatural powers, which is at the core of religion in the region, people either gain power from shellfish or seek power to acquire shellfish.

"Another hunting spirit is sqwaq°s. It helped duck, elk, deer hunters. It helped women in fishing and digging clams."

(Klallam. Gunther 1927:291)

In a Klallam myth a man with a supernatural crab helper destroys a cannibal woman.

"The Klallam tribe at Sequim (SXwckwi'y) met and talked about slala'makW'iyis. They are getting scared. They say now, "You so-and-so, you've got crab tamanamis. You go and get crabs and put them in your canoe." So this fellow laughs, "Ha, ha, ha° Oh, my tamanamis, he'll eat slala'makW'iyis upq'

So he went to the bay now and got crabs and put them in his canoe. He told his tamanamis, "You eat slala'makW'iyis when we get her aboard°"

(Klallam. Elmendorf 1961a:88)

Elmendorf recorded a Twana (Skokomish) ethnological narrative of a man who acquired clam power at Hadlock Bay. The power allowed him to go any where and find lots of clams, and he never got sick eating them. (Elmendorf [in press], 5.13)

Mythology

Shellfish in myths and tales are sometimes associated with supernatural beings and events and at other times are simply background material reflecting daily life. The frequent mention of shellfish in stories reflects the importance of shellfish in the lives of the people. Adamson collected several epic myths from the Grays Harbor area which place great emphasis on the importance of shellfish.

"The two brothers then went a little farther along the beach. There they saw many clams stuck on sticks standing upright in the ground. The clams were left to cook by the heat of the sun. When the sun shone brightly, the clams would open. 'What are you doing?' they asked the people. 'We are cooking clams.' 'That's not the way to cook the brothers said. So they set to work to make a fire with fire-sticks. Then they taught the people how they should cook their clams. They put the clams on top of the sticks and built a fire under them. 'Hereafter,' they said, 'this is how you should build a fire and cook.'

.....
 The people in this place were cooking clams by dancing. 'You people get your nets ready to catch Chinook salmon,' the brothers said. Instead of getting nets, the people got their sticks for digging clams.

They then went to Corner Creek. There they saw a man sharpening a large clam shell. He was singing,

I am making this for the Reformers.

.....
 They went to Rock Creek. There they found a person, his face painted with charcoal, lying among the rocks. All around him in the sun were lying clam shells. The two brothers took the clams and stuck them on his front teeth but he did not wake up. They named him Xw ne'xw ne. (He was a great liar.)

(Humptulips. Adamson 1934:336-339)

"There was a village at Mulla on the southern side of Grays Harbor. Two large houses were there on the river. A young woman who was known as an expert clam-digger lived across the bay at Grays Harbor City. The people of Mulla heard of her fame and decided to cross the bay to her village to see if they could make arrangements for her marriage to one of their young men. They went over to buy the girl. The girl's parents agreed to give her to Land Otter's son, a young man of royal blood. The Mulla people took her home with them.

When the tide went out, the first young woman went to the beach to dig clams. The second joined her and the other women. The first dug clams with her bill, which was very long. The mountain girl could not dig clams for her arms and legs were very short. When the tide came in, they went back to the house, bringing all kinds of clams. Their husband was there. His face was painted and

he was lying down. When they got back to the house, they found five piles of empty clam shells. 'I had company while you were gone,' their husband said. 'I gave them some clams; there are the shells.'

When they came back from the shore once more they found nothing but the leavings of their roots and berries. Before the morning was over, they planned to go into the mountains again. They ate their lunch before they started. They had dug a canoe-load of clams only the day before. They decided, this time, that they would pick berries for a short while only and then return to learn what their husband was doing with the clams. So they returned sooner than usual. When they got near the house, they saw some smoke coming through the smoke opening in the roof. They walked lightly so that he would not hear them and peeped through a crack. (They had gathered a few mussels along with the clams.) Their husband had his hair tied on the top of his head; his face was painted and he was cooking clams. He made five piles of the cooked clams. When he had finished eating one pile, he would hop to another. While he was thus occupied, they opened the door. 'What are the names of your visitors who always eat our food?' they asked. 'We're not going to look for anything to eat again; we're tired out. As for you, you shall be the sea worm.' No sooner had they told him what he should become, than he crawled into a mussel shell. 'You shall never again be like a person,' they said to him. He became a kind of worm, purplish or reddish in color, about eight or ten inches long, found in salt-water mussels and clams.

(Humptulips. Adamson 1934:324-326)

A Skokomish myth relates certain basketry designs to sea shells through the media of Crow and the Transformer (Creator).

"In the myth period, before people came to live in the Puget Sound region, Crow was the expert basket-maker. When the Transformer, duk iba changed the order of the world to ready it for humans, he turned Crow's dishes into keyhole limpet shells and Crow's baskets into clam shells. The Twana basket design shown here represents Crow's footprint on a stack of limpet shells. The patterns visible on clam shells today are all that remain of the designs on Crow's baskets."

(Skokomish Indian Tribe Phamplet, n.d.)

Crow or Raven are often involved with tidelands and shellfish. One or the other (Crow or Raven) often appears in tales explaining the origin of tides, a natural phenomenon of critical importance to people dependent upon shellfish.

Duskia is a powerful ogress who gathered clams and other shellfish for food. She also kidnapped children and ate them, after fattening them on clams. She also devoured children whom she heard crying.

"The giantess Duskia, sister of the god Kwatte, and known to the coast Indians as the Evil One, had her home at the mouth of Maxfield creek (a tributary

of the Bogachiel river from the south, forming a confluence with that river about eight miles above the Indian village of LaPush, Wash.). She gathered clams and seashells from the beach and took them to her home and there ate them. The middens from her 'table' are there yet. They have turned to stone. (There are large fossil beds at the mouth of the above creek.) You can see them there to-day.

Duskia, you know, had stolen many children. These she fed on the clams. These clams she carried from the beach to where the shells are now stone. This woman had three different places of abode—one at a place just this side of Quillayute prairie, one just over Quillayute Needle's Point, south of LaPush, and this one at the mouth of Maxfield creek. At each of these places you can find the clam shells and other kitchen middens turned to stone.

This woman Duskia took away—stole—all the Indian children who would cry. When walking around, if she heard a child cry she would go and eat it. That is why one never hears an Indian baby cry.

This woman lived not so long ago, the old people say. The first white men who came to this country lost many things from camp. They could not imagine what became of them. At last they set a beaver trap; and lo^o they caught Duskia in it. She was a very large woman, with long hair that reached to her heels. She was good looking. She did not dress like an Indian then; she wore a short dress that came only to her knees. This dress was made of snake skin. When they caught her she hallooed and screamed and talked in a language no one could understand. She tried to get away as ordinary mortals might, but failed. Quickly then she changed herself to a meteor and passed out into space as a vanishing streak of blaze."

(Reagan 1911:146)

In Skokomish mythology, a transformer goes about the world changing it and giving people cultural items and natural resources.

"He gave the Chehalis crabs and clams and oysters."

(Elmendorf 1961:23)

In a Skokomish myth, Mink has a fondness for sea urchins.

"So now everyone went home and those rich people took Mink in. He lived with them now. And he said, "I'm going to get sea-eggs (sqWi'qaB, sea-urchins) now." So he got sea-eggs and all his relatives in-law ate. And he kept getting sea-eggs and feeding them. Every day that way. And now Mink said one day, "Well, today we'll go in a canoe. Over there are lots of sea-eggs." So the whole family went in a canoe after sea-eggs.

They got where the sea-eggs were. "All right, I'll go down." So Mink dived and brought up sea-eggs. After a while he went down and didn't come up. His wife looked down into the water. "Oh, oh, he ate too many sea-eggs^o His

rectum and bowels have come out of him now' So the father and his wife told her, "We'll leave him." So they threw his baby over to him and went off and left him.

And now Mink came up. "Come on now, my son, we'll make a home at q l'q l';a'di (roots sticking out of the bank)." So they went there and made a home among those roots.

And now it's done with Mink. Now he makes a home in the roots in the bank and lives there. And it's done."

(Skokomish. Elmendorf 1961a:87-88)

A version of this story carries the implication that sea urchins were delectable but not a high class food.

"Mink and his family started home. He no longer had to paddle his own canoe. They were travelling near shore. It was a nice calm day. They could see clear to the bottom of the water. Then the slaves noticed some sea-eggs and called their master's attention to them. The slaves dived for the eggs. 'Would you like to eat some?' they asked their mistress. 'Yes,' she said. 'Oh, my children's-mother, don't eat that stuff?' Mink said. 'But wouldn't you like to try some?' his wife asked. Mink spit and spit to show his disgust. He would not eat them; he wanted his wife to think he was a high-class person. He tried to persuade her not to eat them. Finally, he consented to try a taste himself. 'Oh, my children's-mother, how good they taste' he cried. 'I'll dive for a few myself' 'No,' his wife answered, 'we have our slaves for that.' But Mink stripped off and dived in. He stayed down a long time. He was eating down there. He ate so much that his hind parts stuck out of the water. At last the woman realized who her husband was. She told her slaves to paddle away. The slaves left him behind. She knew now that she had married Mink"

(Skokomish. Adamson 1934:366)

A culture hero of the Makah brought daylight to the world through a trick which involved his becoming a clam.

"Kwattee was appraised of this tribe's monopolizing the sun. They also made known to him that this certain chief and his people were going 'clam digging' down the beach around Quillayute Needles Point. He thereupon changed himself to a clam and buried himself in the sand along with the other clams; and in due course of time the diggers came down the beach to the clam beds. Then they moored their canoes and opened up the sun box so that the sun would shine on the particular spot in which they wished to dig, after which they set to work at their clam digging.

Not thinking that there was an enemy in the country, they left their canoe unguarded. Furthermore, a quick, unexpected in-coming tide caused them to work with all speed to get the clams before the tide should shut them out. In their rush they also dug up the clam Kwatee along with the other clams, and he was hurriedly poured roughly out of a bucket into the canoe, as the canoers started on the run for some more clams.

This was Kwatee's chance. He quickly changed himself back into the god-man form. He next closed the sun box and shoved the canoe out into the surf. He then pulled it out into deep water, shifted it with the wind, hoisted sail and was soon out of possible reach of the shore, after which he turned the light on the chief and his subjects and laughingly remarked: 'Don't you want a little sun?' Then with a click of the box lid he brought forth utter darkness again. He next sailed around the point and came to anchor in the bay here. He then took the sun out of the box in which it had been kept and lifting it in his hands, tossed it up in the sky where it is now, as the people of the village exclaimed: 'That's Kwatee. We knew he would help us, his children.'

(Reagan 1934a:26-27)

In a Makah epic, Kwati is given a whale in a mussel shell. (Densmore 1939:210) Throughout western Washington and particularly the Outer Coast, there is a connection between clams or mussels and deer. A basic example is the myth explaining how the deer got its markings.

"Kwati was sharpening a mussel shell when someone came and asked, 'What are you doing?' He replied, 'I am sharpening these shells to use on the man who will try to change our form.'

The man said, 'Show me your shells.'

He put one shell on each side of Kwati's head and they became ears, then he slapped Kwati on his hip. The man's hands were white with dust from the shells, so he left white marks on Kwati's hips. Kwati ran away, changed into a deer, and to this day the deer has dusty white marks on his back."

(Makah. Densmore 1939:213)

"Some Indians once heard that another tribe of Indians were coming to civilize them. So they made up their minds to make some weapons which they could use to drive them away. They went to the lagoon, where they could use the water to wash with and sharpen their tools. Then while making the war things they sang over and over again: 'We are going to use these things on the people who are going to civilize us.'

They were thus singing and grinding and sharpening clam shells for weapons, somewhat like we could whet a scythe with a scythe stone, when a civilized Indian jumped over one of them and took his whittling tools from him,

as he asked him peremptorily: 'What are you doing that for?' as he flashed the tools in his face.

Scared, the uncivilized Indian at once became a deer, as it fled into the woods. Then the civilized man said to it as it thus fled: 'Whenever you see our people coming, you must turn your eyes over straight and look at us and then jump and run away. This is the curse I pronounce upon you for changing yourself into something else.' And to this day when a deer sees any one coming, it looks at him straight and then flees away."

(Quileute. Reagan 1935:76)

Given the logic of "how" stories, this linkage of the deer's features and markings and the shape and color of the shells is a reasonable conjunction. However, another bit of evidence suggests that the linkage has deeper ramifications. Densmore also reported that during an elk dance, a part of a Klokali ceremony -- "If anyone at that time mentioned deer horns or horse clam shells the dancers 'went on a rampage' ". (Densmore 1939:128)

Shellfish commonly enter myths and stories as minor elements, filling similar roles as in real life. Throughout western Washington, an important myth is the "Dog Husband." In this myth, a dog, who also has human form, impregnates a young girl. When her people learn of this, she is abandoned. The following extract is from a Klallam version of this myth:

"Now the girl gave birth to six little dogs, five male and one female. When this happened her people left her, they were so ashamed. They went to the other side of Sequim Bay to live. The girl was left alone. She struggled to get enough food for the little dogs. She always went down to the beach when the tide was out to dig clams. The little dogs grew very rapidly.

Later when she went out digging clams she would hear them singing and dancing. When they danced while their mother was away the little female dog would watch at the door so that they would not be taken unaware. When the mother started home the little female dog told her brothers who had taken off their dogskins and danced as human beings, that it was time to dress again. They put on the skins and lay down by the fire as dogs. When the mother brought home the clams she opened them and fed them raw to the dogs. She kept on doing this because it was the only kind of food she could get."

(Gunther 1927:185)

"After five days the girl was able to rise from her bed. Crow came nearly ever night to bring food and gather wood. On the fifth day the girl took a basket and dug clams for her children, and this she did each day."

(Shoalwater Bay dog husband myth. Curtis 1913:123)

The following extract from a Skokomish tale repeats the theme of survival through digging clams:

"Now this woman goes to dig clams at night, when the tide is out.... And every night she went to dig clams to feed her children."

(Elmendorf 1961a:131)

Summary

Most Indian people in Western Washington relied on shellfish as a food staple. Upriver people came to the coasts to harvest shellfish and obtained additional supplies through trade. People travelled to distant areas to collect marine invertebrates at productive locales.

Throughout much of the area access to shellfish appears to have been freely shared. Friends and relations from different drainage systems often harvested together at seasonal camps. While there was some regional variation in tenure patterns and beach rights, it is unclear to what extent these may have affected access to shellfish.

Archaeological evidence indicates that shellfish have been an important feature of native economy for several thousand years. The earliest written records describing Indian harvesting and trade in shellfish appear in the accounts of explorers who visited the area in the late eighteenth and early nineteenth centuries.

Shellfish gathering was a year round activity and occupied a considerable amount of time. People harvested at a wide variety of locations on multipurpose expeditions. Often women and children collected and cured shellfish, while men fished in nearby tidal waters. While most shellfish were gathered by women and children, men might participate both in the actual harvest or to assist with the work of curing. In some localities of the Outer Coast, where shellfish were scraped from rocks on surf-swept foreshore and locations were accessible only by canoe, men did most of the harvesting.

The major implements and equipment used in harvesting shellfish were: digging sticks, prying and scraping sticks, shell scoops, spears, dipnets and open work baskets. Openwork baskets were used not only as carrying baskets, but also were set in tidewater when filled to allow shellfish to clean themselves and to keep them alive until they were ready for cooking, transport or curing.

Shellfish were eaten raw, cooked, or they might be cured for later use. Clams, cockles and mussels were dried. Shellfish were cooked by steaming in an earth oven (usually a pit dug in a sand beach), roasted on small sticks, or stone boiled. They were consumed at daily meals,

were a favored feast food, and were often eaten as snacks. Dried shellfish were strung on cordage and worn around the neck. Lightweight and nutritious, they were an important food for travellers and hunters.

In addition to their use as human food, shellfish were used as bait. Shells were used to make a variety of implements and containers—dippers, cups, knives, spoons, harpoon points, rattles, tweezers, and lancets. Shells were used as body ornaments, decoration of wooden and other artifacts and objects, as toys, paint, and medicine as well as wealth and "currency."

Shellfish figure in numerous ceremonial contexts, both mythological and as spirit helpers frequently associated with important powers. Fresh and dried shellfish figure prominently in food prescriptions and proscriptions at various life crises.

TRADE

I use the term "trade" in the way in which it tends to be used by anthropologists, as "the exchange of goods between people" (Hunter and Whitten 1976:391). If, in a more limited sense "trade" is taken to be exchange within a group and "commerce" is large scale exchange between different groups, most of the trade referred to here (at and prior to treaty time) was commerce.

Trade was highly developed and important on the Northwest Coast, including western Washington, and it had existed far back in prehistoric times.

Small gray olivella shells from the Pacific kept appearing down through the layers as far back as 7,000 B.P. Shells of a strictly saltwater snail, they must have come to Palouse Canyon in trade, or possibly from long journeys to the coast via the Snake and Columbia rivers, or overland. Most were drilled, probably to string as necklaces.

(Marmes site. Kirk and Daugherty 1978:37)

In a prehistoric site excavated in the vicinity of McNary dam on the Columbia River, Ark shells, Olivella (marine snails), Haliotis kamchatka (Northern Abalone) and dentalia occur. (Osborne 1957:107-110) The latter species would have to come from western Washington or northward from there.

Dentalia were traded across the Rocky Mountains on to the Great Plains and indefinitely beyond (Holmes 1883:239, Orchard 1929:19).

Browman and Munsell summed up the knowledge of trade to the Plateau (eastern Washington) as of 1969:

As for the timespan of trade, there is ample evidence for trade in marine shells, not for six or seven centuries as suggested by Swanson (1962, 1965), but for six or seven millennia. A large number of varieties of marine shells have been traded, among them such shells as the large scallop (*Pecten sp.*), salt water clam (*Pectunculus sp.*), oyster, *Dentalium*, *Olivella*, *Spondylus*, and *Odostomia*. Along the Snake River, *Olivella* and *Dentalium* first turn up in numbers between 6000-4000 B.C. (Fryxell and Daugherty 1962; Nelson 1966). Along the Upper Columbia, the first marine shells do not occur until somewhat later (Gunkel 1961), but, interestingly, the subtropical shellfish *Spondylus* turns up as early as 1000 B.C. (Browman 1966). There does seem to be a slight expansion of trade, perhaps, around A.D. 1000-1200 for it is from this time that we find our first manifestations of such items as maize, turquoise, and certain clay figurines.

In sum, trade must have been of economic and social consequence for several millennia, with a great variety of articles being exchanged. As yet, few

routes have been indicated for times earlier than the protohistoric. It should be noted that the evidence of this long-standing trade, as an adjunct to diffusion, must be considered along with possible ethnic movements and changes in natural environment to explain the occurrence of new or different traits appearing on the Plateau.

(Browman and Munsell 1969:262)

The trade was impressively large in scale. Orchard (1929:20) notes two string of dentalia tips collected in Santa Barbara County, California. One was 8 1/2 feet long and the other 41 1/2 feet long. Together the two strings contained the tips of an estimated 20,000 dentalia shells. The "trade" was clearly commerce:

"The old chief was a venerable and worthy savage: his influence was great over a wide circle, not only at home, but abroad among the neighbouring tribes. The Red Fox had been many times with his young [291] men at the Great Salt Lake, as they call it, meaning the Pacific, the direct road to which, across the mountains, is almost due west to where they fall on the sea-coast, in about the 49th degree of north latitude. They take generally fifteen days to make the journey, sometimes more, sometimes less, according to circumstances. Traffic is their object: they carry along with them the wild hemp of the interior, prepared and neatly put up into small parcels, which they give in exchange for the higua and trinkets. The hemp is used for making fishing-nets, and is always in great demand on the coast. The higua, which has already been noticed, is the most valuable commodity among the Indians to be found west of the Rocky Mountains, being the circulating medium throughout the country.

(higua is dentalia. Okanagan. Ross [1849] in Thwaites 1904:276-277)

There were a number of well established trade routes:

Revais said that the greatest intertribal trading-place was at the Dalles. The people there lived entirely by fishing and trading. They bought almost anything brought to them, and resold it again. Grande Ronde, in eastern Oregon, was an important trading-place. Other places were the mouth of the Cowlitz, near Scappoose or about opposite the mouth of the Lewis, near Oregon City, the western Grande Ronde, the middle Nisqually, the upper Puyallup, near the mouth of the Okanagon, near Colville, and near the mouth of the Snake; but there were other minor trading-places in the territories of most tribes.

(Teit in Spier and Sapir 1930:225)

Trade in shellfish and shellfish products is well documented in ethnographic sources. Elmendorf reported that dried cockles were a regular article of trade from the Skokomish to south Sound middlemen who traded them to Indians east of the Cascades.

"*Sale to outsiders.* Patterns in food distribution were simple. Any type of food, fresh or preserved, might be sold, but only to outsiders, nonmembers of the seller's own winter village community. Sale was usually of preserved foods;

dried cockles were a regular item of trade to southern Puget Sound groups who in turn found a market for them among groups east of Mt. Rainier. . . . Food sale was in terms of items of equivalent value, definable by units of dentalium currency. I was able to obtain no examples of aboriginal food prices.

Distribution in community. Food sale to member's one one's own community was unthinkable. Here the pattern was, at least in theory, indiscriminate generosity with newly secured food. . . . These patterns were incumbent on anyone not a slave, and a freeman's social repute partly rested on his conformity to them. They applied equally to women. Several incidents in myths indicate that stinginess with food within the household or within a group of relatives was not merely resented but evoked strong feelings of hostility and personal injury."

(Elmendorf 1960:141-143)

Stern, writing about horse clam curing by the Lummi, noted:

"These clams are often exchanged for other articles the family may need."

(Stern 1934:47)

Haeberlin and Gunther described patterns of trade among people within the Puget Sound basin area.

"The tribes of this area subsisted principally on roots, berries, fish and meat. The chief tribal differences in regard to food were the proportion of seafood to meat. For instance, the Nisqually who lived on the Sound had large quantities of clams, while those of the interior only secured them occasionally through trading camas and dried meat for seafood. . . . There was much trading in food as well as in other things between the Snohomish and Snuqualmi. The Skagit carried this even further. They were also good hunters and after drying large quantities of meat, they would load it on canoes and travel down the Sound, trading their stores of meat for other supplies."

(Haeberlin and Gunther 1930:20)

Writing about the Upper Skagit, Snyder reported:

"Mountain-goat and mountain-sheep wool was traded downriver for things like dried clams, sea-eggs and devilfish.

. . . .

"They (Upper Skagit) had no trouble with the Swinomish because they were relatives. The Swinomish brought up clams and oysters and gave them to the Upper Skagit chief (and brought them also to the Suiattle), and they would give the Swinomish meat to take back because they got very little meat down there."

. . . .

"Two men customarily handled exchange of food for their 'relatives.' The Upper Skagit man was daxa'lx d who lived in the village of s.ba'lixW near Concrete on Lake Shannon at the present Mount Baker. The Lower Skagit was keke'd b at b3a'3ale who handled negotiations to upriver for the people of Penn Cove. If a

person had 50 strings of clams he wished to trade he contacted keke'd b to make the transactions with daxa'lx d, for some commodity of his people. Upriver people wanted dried clams and downriver people wanted dried meat."

(S. Snyder field notes)

Haerberlin and Gunther reported use of dentalia and sale of clams and other commodities by Nisqually to Klikitat middlemen who in turn passed the dentalia on to Indians of Idaho and Montana.

. . . "The Nisqually traded largely with the Klikitat, using shell money for payment. Shell money was highly prized by the Indians east of the mountains and the coast tribes used it more in trading with them than among themselves. The shell money which the Klikitat obtained from the Nisqually they in turn passed on to the Indians of Idaho and Montana. When the Klikitat came to the coast in summer they *bought clams*, herring, smelts and berries. In return they gave the Nisqually dried Columbia salmon, which is highly prized by the coast people. They also brought dressed buckskins and clothing made of skins."

(Emphasis added. Haerberlin and Gunther 1930:11)

Gunther described two main arteries of trade across Naches Pass and along the Columbia River.

"The people directly on the coast had little difficulty in reaching each other, but trade with the interior could only be conducted through passes in the mountains and along rivers flowing west. Naches Pass was a well defined trade route for the Yakima, who came over with horses to sell to the Nisqually. They *bought dried clams* and salmon from them. . . . The narrows of the Columbia River at the mouth of the Walla Walla River and again at the Dalles were favorite trading and fishing centers. . . . The Chinook along the Columbia traded with the Indians who came from the interior, and after the articles had passed from tribe to tribe they would eventually reach the coast. Coast tribes seldom went far up the Columbia. At these points the principal objects of trade were horses, buffalo robes, and tobacco, which the interior Indians exchanged for *shell-money*."

(Emphasis added. Gunther 1927:218)

Suttles reported for Lummi and Samish:

"*Dried clams* and possibly sun-dried salmon were sent up the rivers."

(Emphasis added. Suttles 1951:318)

Smith's report of Sahaptin Indians savoring dried clams as they left on their homeward journey provides some sense of the esteem in which the smoke-cured shellfish were held by Indians east of the mountains.

"*The strings (of clams), 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. People from east of the mountains are said to have been very fond 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.*"

(emphasis added. Smith 1940:245)

Many of the dried clams traded to the Sahaptins from east of the Cascades was originally harvested and processed by Skokomish who traded these shellfish to Puyallup and Nisqually middlemen in exchange for "Indian hemp" from the Sahaptins.

"Farther along this axis, to the east, the Twana had somewhat less intimate contact with and knowledge of other Puget Sound-speaking groups on the Nisqually and Puyallup rivers and the sound shores adjoining the mouths of these rivers. Such Nisqually and Puyallup groups as were known were almost entirely of lower-river or salt-water habitat. They were termed collectively *cssqWa'la* and *ctpuya'lap* by the Twana. Through these peoples passed an *aboriginal trade in dried cockle clams (xXp'a-'b)* which originated with the southern Twana communities and were passed on by the Puyallup to Sahaptin peoples (*la'k tat*) east of the Cascade Mountains. Mountain goat wool and "Indian hemp" (apocynum) fiber were commodities obtained by the Twana in exchange from the Nisqually and Puyallup."

(emphasis added. Elmendorf 1960:29)

Gunther noted that the Klallam traded dried clams to the Makah and the Skokomish.

"Evidence from every phase of life points to the fact that in the old days there was constant travel between the Klallam villages and also to a limited number of other tribes. . . .

During the fishing season a great deal of trading is done wherever the Klallam go along Hood Canal they trade with the Skokomish groups they meet. This trade is usually limited to the most ordinary commodities: baskets are exchanged for dried fish or *dried clams* or dried meat. The Skokomish hunt more than they fish, so each tribe had a product which the other desires. *The Klallam are famous for their dried salmon and clams. The Makah for centuries have secured dried clams from the Klallam. Of later years since the hop fields have become a great meeting place for these people the Klallam have sold large quantities of dried clams to the Yakima and other interior tribes who relish them greatly.*"

(emphasis added. Gunther 1927:212-213)

"*In the old days a string of dried horse clams sold for one small store blanket worth about \$1.50. Now any kind of dried clams sells for \$.50 a string. Neah Bay people used to buy dried clams when they returned from hop picking. In the hop fields the Klallam used to meet the Yakima who paid as much as \$3 for a string of dried clams.*

(emphasis added. Gunther 1927:207)

Testimony regarding the trade in shellfish across the Cascade Mountains to the people of the Columbia Basin also comes from a treaty time report of George Gibbs. Speaking of the Klikitat and Yakima, he reported:

"The business of gathering these of course falls on the women, who go out in small parties, attended by a boy or old man as camp keeper, collect and dry the berries, or bring into the general camp what is wanted for present food. Such of them as bear keeping they store for winter use, and also for trade, exchanging them for fish, *smoked clams*, and the roots which their own territory does not furnish."

(Emphasis added. Gibbs 1855:404)

With the tribes on Puget Sound they communicate continually during the summer by the Nahchess and main Yakima passes, taking horses for sale to Nisqually, and *purchasing "hai-qua," dried clams*, and other savage merchandise, on their return."

(Emphasis added. hai-qua is dentalia. Gibbs 1855:408)

The trade between the two districts was once considerable. The western Indians sold slaves, *haikwa*, kamas, *dried clams*, &c., and received in return mountain-sheep's wool, porcupine's quills, and embroidery, the grass from which they manufacture thread, and even dried salmon, the product of the Yakima fisheries being preferred to that of the sound."

(emphasis added. Gibbs 1877:170)

The two districts referred to above are the Puget Sound region and the Columbia Basin east of the Cascade Mountains.

Elmendorf's accounts indicate that the Skokomish harvested and cured large amounts specifically for trade to the Indians east of the mountains through the Puyallup and Nisqually as middlemen.

"Dried cockles were in demand by the Yakima and other groups east of the Cascade Mountains, and the Skokomish traded many to the Nisqually and Puyallup, who in turn passed them on to tribes to the east."

(Elmendorf 1960:124)

The foregoing extracts document that much of the trade in dried shellfish was from the Puget Sound district to eastern Washington. In addition, there was considerable trade north-south along the Outer Coast and from group to group on the coasts.

"TRADE - The Makahs, from their peculiar locality, have been for many years the medium of conducting the traffic between the Columbia River and Coast tribes south of Cape Flattery, and the Indians north as far as Nootka. . . . Before

the white men came to this part of the country, and when the Indian population on the Pacific coast had not been reduced in numbers as it has been of late years, they traded largely with the Chinooks at the mouth of the Columbia, making excursions as far as the Kwinault tribe at Point Grenville, where they met the Chinook traders; and some of the more venturesome would even continue to the Columbia, passing through the Chihalis country at Gray's Harbor and Shoalwater Bay. The Chinooks and Chihalis would in like manner come north as far as Cape Flattery; and these trading excursions were kept up pretty regularly, with only the interruption of occasional feuds and rivalries between the different tribes, when the intercourse would be suspended, or carried on by means of intermediate bands; for instance, the Chinooks would venture up as far as Chihalis, or perhaps Kwinault; they would go as far as the Kwillelyute, and these last in turn to Cape Flattery. After a while peace would be restored, and the long voyages again resumed. The Makahs took down (south along the coast) canoes, oil, dried halibut, and *hai-qwa*, or *dentalium shells* Their trade with the northern Indians was for *dentalium*,"

(Material in parentheses and emphasis added. Swan 1870:30-31)

Singh commented on the particular suitability of the abalone and dentalia shells as ornaments and as "money-like" valuables.

"Dentalia and abalone shells were traded as valuables. The Makah got these items from the Nootka. The shells were used, of course, as ornaments. There was a constant demand for them as money-like valuables. They were imperishable, unlike most other commodities. They were portable and they were neatly divisible units."

(Singh 1966:83)

The Makah may have fished for dentalia in their own waters, in addition to importing dentalia from their Vancouver Island kin. Parts of what appears to be a dentalia picker were found in a house at the Ozette site (personal communication, Dr. Jeffrey Mauer, formerly Assistant Director of the Ozette Archaeological Project, now Collection Manager, Makah Cultural and Research Center). The presence of an implement for procuring dentalia in a house at Ozette raises the possibility that dentalia were procured in Washington waters.

According to Frachtenberg, the Quileute obtained their dentalia and abalone from the Makah.

"From the Neah Bay Indians they obtained the long dentalia shells, abalone shells, the canoe mats made of cedar bark and also used for sails, round shells with handles used for money (*K'abo'xwa'q i*)"

(Frachtenberg Q1,3:135)

The "round shells with handles" may refer to scallop shells.

Olson provides data on the trade along the coast as seen from the perspective of the Quinault.

"The principal trade relations of the Quileute were with their immediate neighbors on the north and south. The Makah and Ozette brought to them dentalium shells and blankets of the Hudson's Bay Company in exchange for camas, whale oil, and dried whale flesh, which in turn they carried northward to Vancouver Island. The shells and blankets were taken southward by the Quileute to the Quinault and exchanged for the highly prized salmon of that tribe."

(Olson 1936:61)

"The northern groups, especially the Makah and Nootka, were the sources of ocean canoes and dentalium. These flowed south chiefly from tribe to tribe, although trading voyages were undertaken. In exchange for these the southern groups exchanged dried salmon, *dried clams*, and the like."

(Olson 1936:87)

Ray provides data on the trade between people at Willapa Bay and those near the mouth of the Columbia River.

"From Willapa Bay to the mouth of the river steadily flowed large quantities of *dried shell-fish*. These were arranged on sticks of salmonberry wood, each about two feet long. From the Kwalhiokwa the Willapa Bay people received furs of the larger animals and dried meat packed in tule bags. A portion of these goods was kept for home consumption but much of it found its way, along with the shell-fish, to the Columbia River. The bay people furnished the Kwalhiokwa with shell-fish likewise; and again, with goods first received from the Columbia."

(Emphasis added. Ray 1938:100)

Suttles noted trade by Straits Salish groups to Indians from east of the mountains in the lifetime of his informants.

"Horse clams were not only useful as food but also valuable as an export. The Samish traded strings of dried horse clams to up-river people for smoked salmon and for waterproof baskets, which the Samish did not make themselves. After they began going to the hop-fields, they sold them to the Yakima; a string about two feet long, doubled, was worth two or three dollars.

(Suttles 1951:69)

The aboriginal trade in shellfish was immediately extended to Europeans when they arrived on the Northwest Coast. The first account on record is an interesting turnabout. The first European visitors on the Northwest Coast south of what is now Alaska were the members of the Spanish expedition led by Perez in 1774. The expedition carried Southern abalone as part

of its trade goods. Off the Queen Charlotte Islands, the Perez expedition traded Southern abalone, among other things, for boxes ornamented with shell insets. Off Vancouver Island, the expedition again traded Southern abalone to Nootkan kin of the Makah (Akrigg and Akrigg 1975:10-14; Cook 1973:61, 64).

Years later, as Spanish and English expeditions penetrated the inner waters, a trade in fresh and dried shellfish developed immediately. In 1792, a Spanish expedition in the Sutil and Mexicana traded for shellfish in Guemes Channel.

" . . . They confidently came alongside, an old man and four young ones with an agreeable appearance, giving us blackberries from the quantity they brought in shells of three or four pulgadas⁷ in diameter, trying to conceal those they did not offer to us. We responded with a metal button for each of them, and they repeated their presents of small portions [of blackberries] to obtain more profit, from a button, a string of beads, or a piece of ship's biscuit. They also gave us dried shellfish of the kind sailors call clams, strung on a cord of tree bark, and other shellfish of different species strung on thin sticks and toasted over a fire. We obtained enough of these items and also a coat of dog's wool lined with feathers, and a tanned deerskin. . . . "

(pulgadas = 7 to 9 cm.)

(Kendrick [1792] 1991:106)

On May 12, 1792 the Vancouver expedition encountered in Hood Canal a group of Indians harvesting shellfish near the mouth of the Skokomish River:

"These good people conducted themselves in the most friendly manner. They had little to dispose of, yet they bartered away their bows and arrows without the least hesitation, together with some small fish, cockles, and clams; of the latter we purchased a large quantity, a supply of which was very acceptable in the low condition of our stock. They made us clearly to understand, that in the cove to the S.E. we should find a number of their countrymen, who had the like commodities to dispose of . . . "

(Vancouver [1792] in Lamb 1984:528)

Puget conjectured that these people were "preparing clams and fish for the winter season." (Puget in Anderson 1939:185).

Later at Wollochet Bay, off Hale Passage, south Kitsap Peninsula, Menzies recorded the purchase of more shellfish:

"While we were here two Canoes passed on the opposite shore who dodged us at a distance several times in the forenoon, they afterwards crossed over & went into a small Cove close to us, where we soon followed them & on the Point of it saw a number of old deserted huts amongst the trees but saw none of the Indians till we were returning back from the end of the Cove, when we heard them hailing from the opposite shore, & as we began to pull across towards them

we observd the women & children scudding into the woods loaded with parcels, but the Men put off from the shore in two Canoes to meet us, we made them some little presents to convince them of our amicable intentions, on which they invited us by signs to land, & the only one we found remaining on the Beach was an old woman without either hut or shelter setting near their baskets of provision & stores, the former consisted chiefly of Clams some of which were dried & smoaked & strung up for the convenience of carrying them about their Necks, but a great number of them were still fresh in the shell which they readily parted with to our people for buttons beads & bits of Copper."

(Menzies in Newcombe 1923:33-34)

The above encounter took place May 20, 1792. Puget made it clear that although these Indians had never seen Europeans before, they were quite prepared to sell shellfish.

"About a Mile from Dinner Point we found a Small Cove at the head of which were a Party of Seventeen or Eighteen Indians in temporary Habitations drying Clams Fish &c which they readily parted with for Buttons Trinkets &c they did not appear the least Alarmed at our Approach but immediately offered their Articles for Sale."

(Puget in Anderson 1939:196-197)

In the period between the first encounters with European sailing ships and later voyagers and the establishment of early trading posts, the Indians continued to sell shellfish to passing voyagers. In August 1825 Alexander McKenzie, aboard the William and Ann, recorded several such purchases made of Klallam Indians in the Strait of Juan de Fuca.

August 11 (off New Dungeness)

In the course of the day had a very formidable party of these Indians along side and among those that appear most assiduous in his little marks of attention towards us is Old Squastin a Chief of as great authority as any we saw since we entered the Straits. Does everything in his power to see that we are supplied with whatever the country produces and seldom comes himself without a quantity of salmon, shell fish, and berries.

Friday 12th August

As this has been a wet and disagreeable day throughout, had seen few or any of our friends from the village and those that did come -- brought the usual supply of salmon, berries, and shell fish.

13 August

Old Squastin the Chief as usual was fore most in bringing his accustomed supply of salmon, berries, and shell fish, his unremitting attention since our arrival draws our warmest acknowledgements."

(McKenzie Journal, Hudson's Bay Company Archives B/223/a/1)

Scouler, also on this voyage, also mentions crabs being brought to the ship at Discovery Bay (Scouler 1905:198).

Just before we encamped the Interpreter went off to one of the villages, and some of the men followed in order, I suppose, to trade themselves a few shellfish.

(1828. Hudson Bay Company expedition in Suquamish country en route to Strait of Juan de Fuca. Ermatinger 1900:23)

"This day we have had many natives along side selling fish clams mussells &c. &c.

...

Fish we have in abundance Salmon, Cod, flounders, Clams, Crabs, oysters (small) ducks, geese, Venison. The water to be had easily and plentifully at Carr's Point."

(Discovery Bay. Wilkes 1841 in Meany 1926:12-13)

Much of the shellfish trade with explorers and travellers occurred in casual encounters. After the Hudson Bay Company established Fort Nisqually on Puget Sound in 1833, the purchase of shellfish was an important part of its activities.

The records of the Hudson's Bay Company at Fort Nisqually for the decade preceding the Medicine Creek treaty show that the Indians had been supplying large quantities of fresh and preserved shellfish to the Company store. Cockles, clams, oysters, and at least according to one entry, "squid" were traded for European goods. Preserved cockles and clams were traded by the string. Fresh molluscs were traded by the basket.

The transactions were often large. For example, in one transaction on May 10, 1845, 247 strings of cockles were traded. Between January and October 1844, 2,786 units (bushels, baskets, bunches, strings) of cockles were purchased from Indians.

The sellers came from up and down Puget Sound. They included Snoqualmie, Snohomish, Swimonish, Skagit, Nisqually, Suquamish, among other groups (Fort Nisqually Blotter, FN 1247, Vol. 1).

The trade was not confined to the Hudson's Bay Company (or its subsidiary, the Puget Sound Agricultural Company). As settlers came into the country, they also became purchasers of shellfish from the Indians. Joseph Heath was a tenant farmer of the Company at Steilacoom. His diary records purchases of shellfish:

11 June 1845 "Traded eight rock cod and some cockles."

- 15 September 1846 "Traded some potatoes, salmon, cockles and mats from Indians."
 17 September 1846 "Traded 15 bushels of potatoes and a large quantity of cockles and mats."
 8 May 1847 "Traded a quantity of cockles, herring, and salmon."
 8 July 1847 "Traded some cockles."
 1 August 1847 "Indians brought a quantity of cockles which I purchased, having 30 people working for me and no provisions but wheat and peas."
 26 July 1848 "Traded some cockles."
 (Heath [1845-1848] 1979:44,67,68,99, 107,109,149)

Some of the shellfish Heath purchased may have been for personal consumption, but the August 1847 entry indicates that they were also used to provision native employees. Dried cockles were also used as food by travellers. In 1833 Tolmie went to Mount Rainier with some native guides. He reported in his diary entry for August 30, 1833 that their provisions for the trip included dried shellfish.

"Breakfasted at a small marsh on Bread, Sallal, Dried Cockles & a small piece of Chevreuil saved from the last night's repast of my companions (for I cannot call them attendants).

(Tolmie [1833] 1963:231)

Following U.S. acquisition of the region, the trade with whites continued unabated. John P. Richmond, a Methodist missionary, settled near Fort Nisqually in 1840. He later observed that on their arrival: ". . . he and his family lived exclusively upon oysters and other shell-fish, brought by Indians from the sound, for three weeks, . . ." (Bagley 1905:508).

In 1852 settlers sailing by Neah Bay enroute to Puget Sound were approached by Makah in canoes:

"The Indians then wanted to trade fish for tobacco and trinkets. A few pieces of tobacco were thrown into their canoes and then they commenced throwing fish aboard, . . .

There were also mussels and clams among the lot, which we found to be very good. We were surrounded by another lot of Indians near Clallam Bay, with about the same performances and with the same results as at Neah Bay."

(Shelton in Denny 1909:485-486)

Ezra Meeker, who arrived at Puget Sound in 1853 described his first experience with the shellfish trade in that year:

"An Indian encampment being nearby, a party of them soon visited our camp and began making signs for trade. "Mika tik-eh clams?" came from out of the mouth of one of the matrons of the party . . .

And so, after considerable dickering, and by signs and gestures and words oft repeated we were able to impart the information that we wanted a lesson in cookery; that we wanted her to show us how to cook them, and that we would buy some. This brought some merriment in the camp. The idea, that there lived a person that did not know how to cook clams. Without saying by your leave or any thing else the motherly looking native began tearing down our camp fire.

"Let her alone," said the senior, "and see what she's up to," noticing that the younger man was going to remonstrate against such an interference with his well laid plans for bread making. And so the kitchen of the camp was surrendered to the native matron, who quietly covered the hot pebbles and sand where the fire had been, with a light layer of pebbles, upon which the clams were deposited and some fine twigs placed on top, upon which earth was deposited. "K-l-o-s-h-e." said the matron. "Hy-as-kloshe." said her seignior, who sat squatting watching the operation with evident pride upon the achievement.

Our first clam bake gave us great encouragement. We soon learned that these bivalves were to be found in almost unlimited quantity, and were widely distributed; that the harvest was ready twice a day, when the tide was out, and that we need have no fear of a famine even if cast away in some unfrequented place."

(Henderson Inlet. Meeker 1905:45-57)

In 1853, General A.V. Kautz (then a lieutenant) was stationed at Fort Steilacoom and touring Puget Sound. Writing about potatoes at Fort Steilacoom, he noted:

". . . but the Indians were fond of them, and brought us all the clams, fish and game we wanted, . . ."

. . . .

"We purchased fish and clams from the Indians for our table."

(Kautz [1853]1900:117, 119)

A woman who moved to Bellingham Bay in 1853 noted the importance of food products provided by Indians:

". . . and, even before that, when we depended almost entirely on the Lummi Indians for food and well did they merit our faith. They brought in fish, clams and many different sorts of birds, and duck, gull, diver eggs."

(Eldridge [1853] In Bellingham Librarian 1926:90)

A. J. Hanford, an early settler at Seattle in an account of Indian-White relations prior to the hostilities in 1855-56, said:

"The settlers had always dealt with them on strictly business principles employing them to work and paying them liberal wages, buying of them fresh fish, venison, clams, oysters, grouse, ducks, pheasants, and cranberries, paying them their prices in money or articles as they preferred."

(Hanford Ms. P-B 11)

The trade with whites continued, and perhaps with greater importance after 1856. Indian Agent F.C. Purdy wrote of the Klallam and Chemakum:

". . . with but little effort, can procure abundance of shell and other fish for food, also money sufficient for their limited wants, some by working for the whites, others by selling berries, venison, salmon, shell fish, &c."

(Purdy to Hale, 20 July 1863, ARICA 1863:466)

Some people, such as the Squaxin, because of the nature of their reservations and the nature of their geographic locations, depended in large part upon commercial shellfishing for their survival:

"The Indians of this reservation depend for subsistence and obtaining the necessaries of life almost wholly upon gathering oysters and clams for sale to whites, and upon working around among the whites."

(Milroy to CIA, 31 August 1880, ARCIA 1880:159)

RESOURCES

The Indians of western Washington in the mid-nineteenth century used a large variety of marine invertebrates as food. Among these were molluscs: cockles, clams, mussels, oysters, octopus and squid; crustaceans: crab and shrimp; and echinoderms: sea urchin and sea cucumber. I do not include in this section all species used, nor is my treatment regarding any particular species exhaustive. The intent is to indicate the range of marine invertebrates used by the Indians of this area. The variety and range of shellfish used indicates that Indian use of intertidal and subtidal environments were not restricted to a few specialized locations. All intertidal and subtidal environments could provide resources and it might well be said that all marine shores of western Washington were used for taking shellfish.

In providing some information on environment, I draw upon standard sources as I do for zoological information. I make no claims of expertise in either of these two technical fields.

Other sections of this report treat in more detail the specific localities where Indians harvested shellfish and the manner of harvesting, preserving and using the various species. The majority of these animals were eaten by the Indians; some were also taken to be used as bait. Shells were used as tools, containers and ornaments. Shells were used in ceremonials and also served as a form of wealth.

Environmental Considerations

In western Washington there are about 2,400 miles of coast line (Scott et al.1986:6). The waters and substrate along this coast line provide good habitat for a variety of shellfish species. There was an abundance of shellfish but species were not uniformly distributed. Distribution and abundance depended upon the nature of the species and the nature of the local environment.

Some clams thrive on sandy beaches; others require mud flats. Native oysters were found in shallow bays where the water was relatively warm and somewhat diluted with fresh water. Piddocks, barnacles, and chitons require rock or other hard substrate.

The variety of shellfish found in the region today does not directly indicate the great quantities of shellfish which once existed in the region. Shoalwater Bay must have been one of the major shellfish producing locations of the world. The great bays of the Inner Waters nourished clams and oysters in numbers that were remarkable by any measure.

Nature of Resources

The Indians of western Washington used a large variety of shellfish and other resources of the intertidal and subtidal zone. Analysis of faunal remains from archaeological sites in western Washington documents the use of many more species of shellfish than are mentioned in ethnographic and historical records.

Examination of a sampling of archeological site reports provides evidence for the use of 20 to 30 or more species at some sites (Kennedy and Thomas 1977:37-39; Campbell 1981:225ff; Reagan 1917:14; Friedman 1976:156-157; Ham in Matson 1976:57). Considering all of the evidence, it is probable that the Indian people of western Washington used just about all of the species of shellfish available to them (and large enough to be used) at any particular location in addition to other fauna and flora of the coastal zone.

There follow examples of some of the shellfish most important to the Indians of western Washington. These species are culled from historical and ethnographic sources. They include those shellfish most commonly used by Indians in western Washington. For each of the species listed, citations to historic or ethnographic sources record Indian use. As noted earlier, it is not always possible to be certain about species identification. Common names for the species are in boldface. These common names may vary from one part of the Northwest to another. Within categories, species are listed alphabetically by genus. The order does not indicate importance. Habitat information is taken from Quayle 1974, Griffith 1975, Hart 1982, and Cornwall 1975, unless otherwise indicated.

Molluscs

Bivalves

Cockle, Basket (*Clinocardium nuttalli*, earlier *Cardium corbis*. Stearns 1883:357)

These occur on the Outer Coast and on the Inner Coasts. Cockles were eaten fresh and were preserved by drying.

"This large shell is the most abundant of the clams in Shoalwater bay, and is very much used as food. It inhabits a mixture of sand and mud, a few inches from the surface, in all parts of the bay about half way between the shores and the large channels. The Indians are very expert in finding them, getting numbers where a stranger can see no sign of their existence, by feeling for them with a knife or flat stick."

(Cooper, W. 1860:382)

"Swan says that 'the cockle, *Cardium corbis*, is very plentiful, and is dried by the Indians in great quantities for their winter use and to sell to the tribes of the interior.' It may be said that at the present time the cockle is not of any commercial importance."

(Collins, J.W. 1892:248; see also Stearns 1883:356-357)

"The cockle clams are generally dried for winter use in large quantities but are sometimes eaten fresh. They are found on sand bars very near the surface and are easy to get. Even children gather them by kicking them loose with their toes."

(Lummi, Stern 1934:47)

Geoduck (*Panope generosa*; earlier named *Glycemeris*. Stearns 1883:356)

Eaten but not so popular as some other clams. "The boys inform me that Indians on the Sound call them Quenux, and dry them for food with other clams." (Tryon in Ryder 1882:21)

"The neck of the gwiduck was occasionally cured." (Smith 1940:244)

Clam, Native Little Neck, or Steamer Clam, Little Round Clam, Rock Cockle (*Protothaca staminea*; earlier named *Cuneus* or *Tapes*. Stearns 1883:356)

"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."

(Puyallup, Nisqually. Smith 1940:243-245)

According to Elmendorf (1960:123), the Skokomish considered the native little neck too small to dry and only ate it fresh, steamed or boiled).

Clam, Bent-Nose (*Macoma nasuta*. Snyder, S. 1955:54)

According to Snyder this species was eaten by the Swinomish.

Clam, Butter (*Saxidomis giganteus*. Called *S. Nuttalli* at Shoalwater Bay by Cooper, W. 1860:383.

Compared to Atlantic quahog by Cooper and sometimes called that by early settlers.)

"It is found in the south part of Shoalwater bay only, and near the mouth of the Copalus. I have found it, also, common in Puget Sound."

(W. Cooper 1860:383)

This clam was common and important. The generic name for clam in some Coast Salish languages is the same as the name for butter clam. Butter clams were the preferred clam of early settlers as well as being prized by the Indians (Stearns 1883:356). The butter clam was one of the most important molluscs for the Indians of western Washington. It was eaten fresh and great numbers were dried.

Clam, Razor (*Siliqua patula*)

Found in Outer Coast beaches. Not present on Inner Coasts. Razor clams were collected in large numbers by the people of the Outer Coast. The Quinault gathered them year around but considered them best in May.

"Razor clams (haitssaw'us) were an important source of food. While there were no good clam beds near the mouth of the river they could be found just south of Point Grenville, less than two hours walk from Kwi'nail. The beds between Grenville and Moclips river were usually resorted to for small supplies of fresh clams. But the best digging was to be had at Copalis Beach and in the vicinity of Oyhut. Dozens of families moved to these places every summer to dry clams for the winter's supply. It is said that the shell heaps at Copalis are miles long and many feet deep. Clams might be gathered at any time of the year, but those dug in May were considered best. A flat digging stick of yew was used. One must always face the ocean while digging, otherwise the clam will be missed or one's fingers get cut."

(Olson 1936:38-39. See also Singh 1966:23.)

Clam, Horse (*Tresus capax*, *Tresus nuttalli*. *Lutraria Maxima*, (W. Cooper 1860:384; earlier, the Horse Clam was called *Schizotharus*, Stearns 1883:356)

There are two species of this large clam in western Washington, *Tresus nuttalli* and *Tresus capax* (Kozloff 1974:221; Quayle 1960:51). Ethnographic and historical sources generally do not distinguish between the two species.

According to Cooper:

"This great clam (as all these edible bivalves are indiscriminately called) is found in Shoalwater bay, within a rather limited area near the mouth and along the larger channels. It is buried near two feet deep in hard sand, near low-water mark, its long siphon reaching the surface and showing where it can be found. It also abounds in many parts of Puget Sound, up to near Olympia. It is excellent as food, and has always been one of the chief articles of winter stores

to the Indians, who preserve the hard parts by stringing and then smoking them in their lodges."

(W. Cooper 1860:384)

". . . Schizotharus, which is certainly superior for its flavor and delicacy, closely approaching the best oysters in these respects, is not eaten by the whites in the immediate neighborhood, though preferred by the Indians above all the others."

(Upper Puget Sound. Stearns 1883:357)

"The horse clams also are found on sand bars. As one walks along the bar at extreme low tide, one sees round formations on the sand. When these are touched there is a spurt of water and the clam pulls its head down. They work themselves down into the sand very quickly, so one must dig fast in order to catch them. Men therefore help to dig these clams which are considered very good and comprise the goodly part of the winter storage supply."

(Lummi. Stern 1934:47)

"Two kinds of horse-clams were eaten. One, termed [Native term], had a more elongated and curved siphon end of the shell, especially when mature; the shell also tended to accumulate a growth of barnacles and seaweed. The meat of this type was good at any time of the year, although old specimens were apt to have poor and little meat and were preferable in winter. The other horse clam, [Native term], had a cleaner shell. Its meat was best in summer, poor in winter. This type was most often dried and strung on looped cedar bark cords as with cockles. The above apparently represent varieties of *Schizothaerus nuttallii*, perhaps the varieties *nuttalli* and *capax*."

(Skokomish. Elmendorf 1960:124)

"Mud clams (*mita'ks*) were secured at the same places as razor clams, but they could be gathered only during a few of the very lowest tides in May. The small hole marking the spot above them served to locate them. A digging stick was not necessary in digging them."

(Quinault. Olson 1936:39)

Two species of mussel, the California and the blue mussel, were important to western Washington Indians. The former occurred on the outer Coast and in relatively smaller numbers, at suitable locations along the Strait of Juan de Fuca and in the San Juan Islands. It was rare on most of the inner coasts. The blue mussel was found on both the Inner and Outer Coasts.

Mussel, California (*Mytilus californianus*)

California mussels were an abundant and important resource on the Outer Coast. They did not occur on the Inner Coasts except in small numbers at suitable exposed and rocky locations along the Strait of Juan de Fuca and in the San Juan Islands.

The Quinault travelled by canoe to rocky places such as Cape Elizabeth and Cape Grenville to gather California Mussels. The mussels were steam cooked in pits dug in the sand and lined with rocks. The shells were used for knives and for harpoon heads (Olson Notebook I:53).

The shells were sometimes acquired by Inner Coast people as is evidenced by their occasional occurrence in archaeological sites (cf Campbell 1981:224; Ham in Matson 1976:59).

Bryan (1963:B11) reports, on the authority of local inhabitants at Rosario Beach on southwest Fidalgo Island, that the California mussel "occurs on nearby rocky islets." He found unworked pieces at sites in the vicinity. The people of the Inner Waters also used the shells as material for blades, weapons points, scrapers, and containers (Barnett 1955:62).

Mussel, Blue or Bay (*Mytilus edulis*)

The Blue Mussel was the most common mussel in the more sheltered waters of western Washington.

When W.F. Tolmie arrived at Fort Nisqually May 30, 1833 the first thing he saw were Indians roasting mussels:

". . . arrived at the proposed site of Nusqually Fort on a low flat about 50 paces broad on the shores of Puget's Sound - Welcomed by a motley group of Canadians, Owyhees & Indians, & parties of the latter were squatted around the fire, roasting mussels."

(Tolmie [1833] 1963:195)

"There are several varieties of mussels found, one of which, a white-meated one, grows singly on the flats near the oyster-beds. Whenever I could obtain these mussels, which are not very plenty, I always found them preferable to oysters. Some other varieties of mussel grow in immense beds, and, by making shoals, are a nuisance to the oystermen, whose boats frequently get aground on them, and have to wait sometimes six or eight hours for the return tide. These mussels, although eaten by the Indians, are not very good, and are seldom partaken of by the whites; still, I never heard of any ill effects attending their use as food."

(Willapa Bay. Swan 1857:86)

"The common mussel of Europe and our own eastern coasts is found in Shoalwater bay in equal abundance, and presenting the same variations in color and markings as there. It is also common in the estuaries along the whole coast, and to the head of Puget Sound. They are eaten by the Indians, but less used than the large clams so abundant in the same places."

(W. Cooper. 1860:380)

". . . women pried sheets of mussels off snags and transported them in that form."

(Lummi, Samish, Semiahmoo. Suttles 1951:65)

"Mussels (to'e"ok) are best in winter. They are never used in March and April."

(Klallam. Gunther 1927:198)

Oyster, Native or Olympia (*Ostrea lurida*)

This was the only species of oyster present in aboriginal times. Optimal locations in western Washington were the eastern side of Shoalwater Bay, Dabob Bay, Lynch Cove (upper Hood Canal), and many of the shallow bays of upper Puget Sound: Oyster Bay (head of Totten Inlet), Mud Bay (head of Budd's Inlet), Eld Inlet, Carr's Inlet and South Bay (head of Henderson Inlet).

"Oysters are rare on most parts of the northwest coast, but there are a few localities in which they are found in abundance. One of these is Shoalwater bay, a little to the north of the mouth of Columbia river, where are to be found the conditions requisite for their existence and multiplication. The markets of San Francisco and all the coast southward are supplied from this bay. The oysters obtained here appear to differ little, if at all, from the common oyster of Europe, and possess the same peculiar coppery flavor remarked in the European mollusc when eaten for the first time.

In Puget Sound small oysters are found near the mouth of the Nisqually river, and some others, but nowhere large enough to be of much value. They are said to grow larger at Vancouver island, and very large ones have lately been discovered near the mouth of Hood's Canal."

(W. Cooper 1860:379)

"The indigenous Olympic oyster (tusa'yad) was gathered in lagoons, tidal Pools, and at the mouths of streams. It was eaten steamed, often with clams, or boiled."

(Elmendorf 1960:124)

Piddock

Several species of piddock or burrowing clams occur in western Washington. Some species, as for example the *Penitella*, are small (up to 3 inches). The Pilsbry piddock may reach a length of six inches. All are found in holes which they bore into hard clay or rock surfaces. They occur in Inner Waters but they are most characteristic of the Outer Open Ocean Coast where they are still prized as a delicacy by Quinault and other Outer Coastal people.

Olson describes how the Quinault gathered piddocks on the Outer Coast.

"Rock oysters (*sklapa ligwa*) were a favorite food. About a mile south of kwi nail are several beds of blue clay, visible at low tide, which are hardened to almost the consistency of rock, but not so hard that pieces could not be split off quite readily. The substance was honeycombed with the burrows of these curious molluscs. The old method of gathering them was to split off sections of the rock by means of mauls and wedges. These were broken into smaller pieces and the oysters removed and placed in baskets to be carried home."

(Olson 1936:39)

"In some places there are beds of clay slate in the conglomerate which have been bored full of holes by the borer clam (*Parapholas*), and present a singular appearance. . . "

(Neah Bay. Swan 1870:89)

"Rock-oysters were obtained by pounding, then breaking the rock in which they were imbedded by means of heavy, solid stones."

(Quileute. Frachtenberg Q1,3:9)

The term "rock oyster" is loosely used for piddocks, purple hinged rock scallops and jingle shells. Only piddocks actually embed themselves in soft rock.

Scallops

Scallop, Giant Pacific (*Pecten caurinus*)

This mollusc is generally found in deeper waters. The shells were customarily used as rattles for ceremonial and sacred occasions. There is no explanation in the records that I have examined as to how these shells were gathered. However, there is an interesting account of their capture by Nootkans farther north:

"Mr. Swan could not remember the word for an indigenous scallop, the shell of which was slightly smaller than that of the thick scallop and much flatter. This was probably the weathervane scallop, *Pecten caurinus* Gould, which was

quite plentiful in Hayden Passage, where Mr. Swan had seen his father collecting scallops by a rather extraordinary method.

As they (Mr. Swan and his father) were canoeing through the passage one day, they spotted a number of these scallops on the shallow ocean bottom. Mr. Swan's father began to strike the water with his V-shaped alder wood bailer. A scallop began to "flow" or swim up from the bottom. He continued hitting the water with the bailer, until finally the scallop came close enough for him to grab it. Although this method of obtaining scallops had been passed down for many generations, it was rarely practiced.

(Ellis and Swan 1981:65)

"Scallop.--The shells are used for rattles in tamanousing, and the flesh for food."

(Klallam. Eells 1889:620)

"The sxoaxi dancer is generally naked down to the waist. His costume consists of a belt of goat wool, with fringes made of coarse heavy tassels serving as a skirt, and swan's hide leggings. In one hand, or sometimes in both, he carries a set of rattles made of deep sea shells fastened on a rim loosely enough for the shells to strike against each other when shaken."

(Lummi. Stern 1934:57)

"Directly opposite to us, some twenty men and boys with black faces, and hair powdered with geesedown, were singing a chorus, accompanied with rattles, drums, thumping the roof, and shaking in the air bunches of shells, and waving fans made of white geese wings."

(Klallam. Swan 1971:50)

"In his hands he had large scallop-shells, which he rattled like castanets, the chorus in the mean time keeping up their pounding, with the addition, over the other performance, of a couple of tin pans and a brass kettle, which served very perceptibly to increase the din."

(Willapa Bay. Swan 1857:183)

Gastropods (Univalves)

Abalone (*Haliotis kamtschatkana*)

These are found mainly on the Outer Coast. They also occur in the Gulf Islands and in the San Juan Islands. Abalone was not available from most of the Inner Waters but it was important in the material culture of the region. Abalone was particularly valued as a material for ornaments. In pre-European times, the northern abalone (*Haliotis kamtschatkana*) was used. In the early historical period, California abalone shell was brought to the Northwest Coast by

Spanish visitors and trade in the California shell continued after the Spanish voyages (Heizer 1940:399, 400).

Local abalone was directly available to the Makah and the Klallam (Swan 1870:75; Eells 1889:620). The importance of it to the Makah is reflected in the following excerpt from Swan:

". . . . The origin of the Do-t'hlub was, as stated to me by the Indians, in this manner: many years ago, an Indian while fishing in deep water for codfish, hauled up on his hook an immense haliotis shell. He had scarcely got it into his canoe when he fell into a trance which lasted a few minutes, and on his recovery he commenced paddling home, but before reaching land he had several of these trances, and on reaching the shore his friends took him up for dead, and carried him into his house, where he presently recovered, and stated, that while in the state of stupor he had a vision of Do-t'hlub, one of their mythological beings, and that he must be dressed as Do-t'hlub was and then he would have revelations. He described the appearance, as he saw it in his vision, in which Do-t'hlub presented himself with hands like deer's feet. He was naked to his hips, around which was a petticoat of cedar bark dyed red, which reached to his knees. His body and arms were red; his face painted red and black; his hair tied up in bunches with cedar twigs, and cedar twigs reaching down his back. When his friends had dressed him according to his direction, he fell into another trance, in which he saw the dances which were to be performed, heard the songs which were to be sung, and learned all the secret ceremonies to be observed. It was also revealed to him that each performer must have a piece of haliotis shell in his nose, and pieces in his ears. He taught the rites to certain of his friends, and then performed before the tribe, who were so well pleased that they adopted the ceremony as their tananawas, and retained its observance for many years, till it was superceded by the Dukwally. The haliotis shell worn by the Makahs in their noses is a custom originating from the Do-t'hlub.

(Swan 1870:75)

Native abalone was employed for ornaments on the southern Northwest Coast for it is found in archeological sites of the Columbia Basin to the east. (See section on trade.) The local abalone was supposed not to have been used for inlay work (Heizer 1940). Leechman has suggested that California abalone (*Haliotis rufescens*) may have been traded up the coast prior to the arrival of Europeans on the Northwest Coast (Leechman 1942:161-162).

Abalone was available in Makah territory and in the San Juan Islands in the vicinity of Haro Strait (Friedman 1976:149). In the latter case, people such as the Lummi, the Samish, and others would have had access to it. We have no ethnographic information on the use of abalone as food by the Makah, but their more northern kinsmen, the Kyuquot, treated it as follows.

"Various types of seafood are almost as important for the local diet as fish, especially during the winter months when fresh fish is scarce but shellfish are plentiful.

Abalone (ap'tsi:en) is probably the most important seafood. Some people also claim to be starving if they have eaten no abalone for some time and they can consume it in great quantities when it is available. It is gathered all year round, during exceptionally low tides. There are certain places known for abalone; for example, off Actis, abalone are found in large numbers around the rocky inlets that lie behind Mission Island. Special three-pronged poles are used to prise them off the rocks; these are made simply by knocking stout nails into the end of a long pole. Nevertheless, it is no mean task either to spot the abalone or to knock it off the rocks and secure it on the pole, without either mangling the whole abalone or losing it into the sea. Certain people are more adept than others. One man, a good abalone gatherer, claims to be able to hear the abalone before he sees it.

Abalone is eaten in a variety of ways. Several people prefer it raw, while others like to beat it, scar it and fry it lightly in butter. It is also canned, although this takes a long time as it has to be scrubbed so thoroughly. There is no need to add water, for abalone will cook in its own juices."

(Kenyon 1980:74)

Scaphopoda

Dentalium (pretiosum)

Dentalium are subtidal molluscs which were important and highly valued in the Northwest for their shells rather than as food. They occur in deeper waters of western Washington including those of Puget Sound (Keys 1935:132 cited in Ham 1976:42). So far as we knew until recently, they were not gathered in these waters, although they were much admired and used. The Makah may have fished for dentalia in their own waters, in addition to importing dentalia from their Vancouver Island kin. Parts of what appears to be a dentalia picker were found in a house at the Ozette site (personal communication, Dr. Jeffrey Mauger, formerly Assistant Director of the Ozette Archaeological Project, now Collection Manager, Makah Cultural and Research Center). The presence of an implement for procuring dentalia in a house at Ozette raises the possibility that dentalia were procured in Washington waters. The shells used in western Washington were traded from the west coast of Vancouver Island. They were used as ornaments and as a form of wealth.

"The dentalia fishery of the Nootkans has brought them some fame, as these tribes were apparently the source from which the prized shells were spread

up and down the Pacific coast, and inland, in early historic times at least, to the Great Plains. The shells actually grow, as I understand, over a wide area in Pacific waters, but apparently only under rather special conditions do they occur in beds shallow enough for the Indians to reach them with their rather crude sounding devices. Oregon Indians and Haida alike claim to have found dentalia occasionally washed up on the beaches, but such shells were often damaged and lusterless. The Nootkans were the only people who got the live shells from the beds.

The method of bringing up the shells is well known, even though none of my informants had ever actually seen it performed; it was abandoned before their time. A bunch of fine cedar splints was lashed to one end of a long fir Pole in a round bundle flaring toward the unlash end in a form resembling somewhat that of a home-made broom. The bundle was 8 or 9 inches across at the open end. The splints in the center were quite fine, those near the edge, coarser, and around the outside was a row of flat rather wide splints. A hole was cut in a narrow piece of board so it would slip over the end of the bundle where it was lashed to the pole, but would not slip off the flaring end of the "broom". Two stones of about the same size, weighing, informants estimated, about 10 pounds each, were lashed in withes and secured to the ends of the perforated board. The dentalia fisherman provided himself with enough additional poles in 15 to 20 foot lengths, to reach bottom at the grounds when joined end to end, and a quantity of good heavy cordage of nettle fiber. He went out to the grounds with the poles and the broomlike affair in his canoe. There he laid the "broom" in the water, with the perforated board in place. The weight of the stones pulled the "broom" end down, and the fisherman lashed another of his poles to the upper end, continuing to join the poles till he could sound the bottom. For greatest efficiency of the rather clumsy implement, of course, the stone weights should have almost counter balanced the effective buoyancy of the poles and board: it may be that the estimates of weights given are a little low. In any case, when he had enough poles lashed together, he jabbed downward sharply a few times, then pulled up the pole, letting the top lean over till the whole length was afloat in the water. One informant specified a line was made fast to the lower end, just above the bundle of splints, to pull it up by; this sounds like the most practical method. As the gear was raised the weights drew the perforated board down snug over the splints, compressing them slightly. If he had been lucky the fisherman found a dentalia or two pinched firmly between the splints (not, informants insisted, skewered on them); if not, there was nothing but mud and trash from the sea floor. Then he had to unlash his poles, paddle back to the place he had been sounding, for the water was too deep to anchor in, and rig his gear for another sounding. It was slow laborious task, by all accounts. One hardly wonders that it has been a long time since anyone has gone to all that trouble.

The fact that the apparatus is an invention of no mean order is worth stressing. The part that made the gear function - the weighted perforated board that made the splints grip any small object inserted between them - is mechanically quite neat. One is impressed by the abstract reasoning involved. A primitive

inventor conceivably could work out a new device for, let us say, hurling a spear, in great part by trial and error, for he could actually see what his experimental model was doing. Whoever invented the dentalia gear had to be able to visualize what his equipment was doing out of sight in deep water. He had to be sure enough of it to know that when it brought up no shells on several tries the reason was no shells grew where he made the sounding, until he eventually found the beds (unless he was such a fortunate individual that he achieved success on the first few tries).

The day's catch of shells were boiled in a small cooking box to remove their unfortunate occupants, and then put into a box of fine sand to polish them up a bit. Informants said rather vaguely the shells were "stirred around" in the sand- one might guess they were shaken gently back and forth to remove mosslike marine growth that the boiling had not detached. Not a great deal of such polishing was necessary. After some quantity of dentalia had been collected, they were sorted into lots of large (a' h), medium (o'o'umh), and small (atcaqinhais) shells and stored in small finely woven cedar-bark baskets. The sizes were not measured, but roughly estimated by eye. There is said to have been no particular difference in value of the three sized, but "it looked better to have all about the same size on a necklace". The shells were also sometimes strung on fathom-long strings for storage."

(Drucker 1951:111-113)

The use of dentalia shell among western Washington Indians at treaty time was described by George Gibbs.

"Measures of length were probably all referred to parts of the body, the principal being the extent of the outstretched arms, which was used in valuing their money, the haikwa, or wampum of the Pacific. This shell, a species of Dentalium, was procured on the northern coast by letting down long poles, to which was attached a piece of wood filled with spikes, or teeth, between which the shell became fixed. Its price depended entirely upon its length; forty to the fathom being the standard of value. When the shells were so short that it required more to make up the required length, they were of very inferior account, but rose proportionately with increased size. A fathom of forty was formerly worth a slave, and even now will bring five dollars in money. Single shells were shown me on the Tsihalis for which the owner refused a dollar apiece. This money is, however, becoming scarce, and is far less used than formerly . . ."

(Western Washington. Gibbs 1877:213)

The Twana, or Skokomish, received dentalia in trade through their Klallam neighbors to the north and via Chehalis neighbors to the southwest:

"Dentalium. Various valuables used by the Twana a media of exchange were termed generically su-'lax, "money". Commonest in use as money was dentalium shell (X 'a"ac) strung in units of fathom (X 'a'c) length, measured from fingertip to fingertip of the out stretched arms. The single strand was

ordinarily doubled over in an approximately three-foot length. One dentalium strand is said to have equalled, aboriginally, the value of one slave, although this could not have been an constant figure. Dentalia were not obtained in the Hood Canal region but were traded in, some from the Klallam, some from the Lower Chehflis via the Satsop. They were believed to originate on the west coast of Vancouver Island, although a myth places their origin in a land far to the north and west where a pygmy people with protrusive, sucking mouths, the q^w xq^w xsta'vb x^w, obtained them by diving (Elmendorf, MS. a, items 25, 26). Separate, unstrung dentalia were also valuable, their value varying with their length, the longer shells being considerably more costly. The measure of value of single shells is not certain. Both strung and separate dentalia might be given as potlatch gifts. Their use as ornament included: ear pendants, woman's necklace, woman's neckpiece with rows of horizontally strung shells extending over the chest and stomach, and sewed in rows to woman's dress. Use of dentalia as ornament indicated the wealth of their possessor, or of her husband or father."
(Skokomish. Elmendorf 1960:212, 215-217)

"The Twana also travelled to Gray's Harbor to trade for dentalium."

(Elmendorf 1960:288)

"From the Strait of Juan de Fuca came no item of greater importance than dentalia. The quantities of these shells imported by the Chinook must have been tremendous, for not only did they use a great quantity in the daily routine of trade, but they also furnished the bulk of the supply used in the southern Plateau and western Oregon. Though the shells of exceptional length maintained an exceptionally high market value, indicating their rarity, the price dropped rapidly for those of shorter length, reflecting a corresponding increase in quantity."

(Shoalwater Bay Chinook. Ray 1938:100)

Although dentalium apparently was not harvested in western Washington, it was an important mollusc for the people in this region. Because it was widely traded, it is important evidence of the highly developed trade and trade networks which tied Northwest North America to other parts of the continent.

"....Every people except the Polar Eskimo, who lived in isolation from all other ethnic units for perhaps 500 years, had trade contacts with neighbors. Where the source of trade objects can be localized, the distances they travel can be easily determined. For instance, the dentalia shells obtained only from the ocean bottom off the west coast of Vancouver Island were traded north as far as Point Barrow and the Mackenzie delta, east as far as the upper Missouri river in the Dakotas, and south to northern California. Hundreds of villages, bands, tribes received these shells in trade."

(Driver 1970:266)

Limpets (various species)

Limpets are sometimes called, because of their shape "china hats". This creates endless confusion for chitons are often called "china slippers" and some times the two are confounded. These small shellfish occur on rocks and seaweed in intertidal and subtidal waters.

"A kind of limpet which the Whites call "China slippers," is so tiny that it is not worth while to cut it from the rocks. Chinook women never bothered with it but Klallam women had a plan for removing it and cooking it all in one action. They found a flat rock covered with the "slippers," laid seaweed on the rock and put hot stones on the seaweed. As the limpets cooked, their hold on the rock was loosened and then they could be scraped off and carried home. Sometimes it was more convenient to pry off a slab of rock, take the whole thing home and cook it."

(Underhill 1945:29)

Underhill is in error calling these "china slippers," a popular term for chitons. She must have intended "china hat," a popular term for limpets.

Snails (various species)

A variety of coastal zone snails were gathered. The fact that snails are small does not preclude their being important as food. In some archeological sites on the west coast of Vancouver Island, sea snails may be as much as 10% to 30% of the total shell content (cf Haggarty 1982:114, 115, 119).

"These animals (snails) are hard to pick out of the shell, in fact they can only be removed by a small needle. They are considered by the Indians as very fine to eat. It takes two or three minutes to boil them."

(Makah. Waterman [1920] Map 2, site list #198)

Snail, Moon (*Polinices lewisii*; earlier *Natica Lewisii*)

This large snail, a predator upon clams, was eaten:

"This large shell is abundant throughout the northwest sounds, and is collected in great numbers by the Indians for food. From May to August it may be found crawling out above high-water mark to deposit its eggs, which are enclosed in a curious structure of sand, shaped like a shallow bowl without a bottom, or still more like some glass lamp shades, and beautifully symmetrical, smooth, and Perfect on both sides. - J.G.C."

(W. Cooper 1860:373)

Purple Olive (*Olivella biplicata*)

The Purple Olive was used as an ornament:

"Olivella.--The shells used for ornaments and sometimes money."

(Skokomish. Eells 1889:620)

Chitons

Rock Sticker, Coat of Mail, China Slipper (Various species)

Chitons are generally distinguished on the Northwest Coast as Black, Leather or Sea Cradle (*Katharina tunicata*) and Red, or Gumboot (*Cryptochiton stelleri*).

"China shoes are gathered by the people of Dungeness and Washington Harbor at a place east of the Harbor and on Protection Island. They stick to the rocks and are pried off with a knife. There are two sizes, the larger being called oq^owus and the smaller tunsu'ete."

(Klallam. Gunther 1927:198)

"A long time ago, says the myth, the earth was in darkness, the sun and the moon being kept concealed by a certain old man. Qati, the creator and transformer, intending to be taken captive by this person, so that he might steal the sun, appeared as a young boy before the daughter of the owner of the sun as she was gathering wood, and told her he was a slave. She took him home. They had chitons for supper, and he liked them so the next day the old man said they would gather more of the shellfish."

(Quileute. Curtis 1913:149)

Chitons were collected by other Coast Salish groups such as the Quinault and Suquamish.

"China slippers (tsa'al) were treated like clams."

(Quinault. Olson 1936:39)

In October, some Puyallup would gather chitons, octopus, and berries in the islands of the Upper Sound (Meeker Family Notebook, loose sheets).

Cephalopods

Cephalopods are a class of molluscs which includes octopus and squid. Two species of octopus in Washington waters are found intertidally or in shallow subtidal waters. Unlike squid, octopus are relatively sedentary and tend to inhabit nooks and crannies around rocks. Squid are common in Puget Sound waters and they occur in shallow waters when spawning (Cheney and Mumford 1986:75).

Reports on Indian use of molluscs often neglect to distinguish these two kinds of cephalopods. When the word "octopus" is used and people are described as searching them out in lairs among the rocks at low tide, I assume that octopus is the likely identification.

Uncertainty in identification also arises when sources refer to "devilfish" or "cuttlefish" (cf Eells 1889:620). Devilfish is a common name sometimes applied to octopus and sometimes applied to squid. When a source uses the word "devilfish" and the sub-environment is one in which octopus would be expected, I assume that the referent is octopus. "Cuttlefish" formerly was used to include both squid and octopus. When a source uses "cuttlefish," we cannot always be certain whether octopus or squid is meant.

At one of the earliest recorded contacts of Indians and whites in the Strait of Juan de Fuca, the Europeans were given "cuttlefish" to eat:

"In the afternoon we landed to visit the villages of Tetacus, where there about fifty Indians. They spread blankets for us to sit upon and all surrounded us and gave us a portion of cuttle-fish which was all they had."

(Journal of the 1792 voyage of Sutil
and Mexicana in Wagner 1933:242)

Tetacus was a Makah chief guiding the Spaniards up the Strait of Juan de Fuca. The villages referred to were on southeast Vancouver Island.

Another early source refers to "mollusks without shells" which could refer to either octopus or squid.

"There are in addition mollusks without shells . . . of which they make use on occasion."

(Whidby Island. Bolduc 1844 in Landerholm 1956:192)

Curtis (1913:51), writing of the Coast Salish generally, reported that cuttlefish was a highly prized delicacy.

Octopus

Octopus was prized as a food.

"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 Redondo 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."

(Puyallup-Nisqually. Smith 1940:233)

In addition to their use as food, octopus were used as bait in halibut fishing. In mid spring, about May, the Makah hunted octopus.

"The Makah went along rocky coastal streams to look for devilfish which were exposed at low tide. They sought fissures and caves in which devilfish might be hiding. A fisherman had two long sharp poles, one with a backward-projecting barb. He poked under rocks until he felt a devilfish and thereupon stabbed it with his pole. He cut up the devilfish and used it for halibut bait. Halibut fishermen kept a constant supply of devilfish."

(Singh 1966:69)

Suttles provides a description of Coast Salish practices.

"To catch octopus, a man went out in a canoe at low tide, taking with him a two-pronged spear (c x ' n) and a long pole with a crook at the end. He cruised in 4 to 6 feet of water, looking in the rocks for an octopus den, which he recognised by the clam and spider-crab shells around it. With the crooked pole he poked into the holes and poked or prodded the creature out where he could spear it. Octopus arms were skinned and cut up for halibut bait; they were also boiled about twenty minutes and eaten."

(Straits Salish. Suttles 1951:131-132)

The octopus was not merely food for humans and bait for halibut; it was also associated with guardian spirit power and curing abilities. When a powerful force causes illness:

"If the force is a whirlpool, persons having the guardian spirit of the black fish, the sea lion, the seal and the devil fish are the most likely persons to overcome its influence by tracing the whirlpool to its source."

(Lummi. Stern 1934:76)

Swan reported that the Makah used squid for food and as bait for halibut.

"SQUID SEPIA.--Te-thlope.

This species of cuttle fish is common in the waters of Fuca straits, and is used by the Indians both for food and as bait for halibut. It is taken usually at low water by means of long slender sticks with a barb on the end. This is thrust under the rocks, and where ever a squid happens to be concealed it seized hold of the stick with its long arms, and is drawn out from its hiding place by the Indian and transfixed with the barbed stick. When dead, the squid presents a disgusting looking mass of jelly like substance, but this when boiled becomes a firm white meat, somewhat tough, but resembling lobster or crawfish meat both in appearance and flavor. It makes a nice salad with lettuce. Sometimes the Indians catch squid in deep water while fishing for halibut. Cooper and Suckley make no mention of this animal in their report."

(Swan in Washington Standard, August 9, 1862)

Given the habitats and methods of capture, it appears that this may refer to octopus. Barnett (1955:63) reported that squid were eaten by Gulf of Georgia Salish. Elsewhere, Swan enumerated the foods eaten by the Makah as including ". . . and shell fish of different kinds, such as mussels, crabs, clams, cockles, limpets, sea slugs and snails, octopus, squid and barnacles." Seattle Post-Intelligencer, October 6, 1895. Swan here enumerates octopus and squid as foods eaten by the Makah.

Crustaceans

Crabs

The most important crustacea for western Washington people were crabs. Several dozen different species occur in Washington waters. Evidently any living in tidal waters and of sufficient size to make them worth taking as food might be eaten although only the Dungeness crab and other members of this genus were important as food. None was preserved. All crabs were eaten fresh. Many sources fail to identify the species of crab, as in the citations below.

"His present consisted of berries of *G. Shallon*, shellfish, crabs, & in short, everything the country afforded."

(Scouler [1825] 1905:198)

Father Bolduc, on a missionary visit to the Indians of Whidbey Island in 1844, reported:

"There are in addition mollusks without shells and crabs of which they make use on occasion."

(Bolduc [1844] in Landerholm 1956:192)

Swan reported use of a crab (not otherwise identified) at Shoalwater Bay.

"In the creeks that run into the Bay a small crab is taken in great quantities, which are boiled by the Indians and eaten, shells and all (in the spring time). These shell-fish are not taken during the winter months, and then, if the Indian has been improvident or neglectful of his winter supplies, he is at times reduced to great distress."

(Swan 1857:87)

Eells (1889:620) reported that two varieties of crab were used for food. He did not further identify them. Jacob Hall, Jamestown Klallam, reported that "The Indians used to fish for crabs at night by torchlight and rake them up." (Keeting 1976:78)

It is an interesting footnote to history that the first explorers to penetrate Juan de Fuca Strait purchased crabs from Indians at Dungeness Bay:

". . . . At this hour many canoes of Indians came out with delicious and abundant fish and shellfish, among which were flounder, ray fish, salmon, mojarras, sea-bass, little dog-fish, crabs, and some venison, I obtained this in order to refresh the men, for cask-hoops from two casks which I had knocked down."

(Quimper [1791] in Wagner 1933:110)

Crab, Dungeness (*Cancer magister*)

The largest crab in intertidal waters. They were most common and available in shallow waters in spring and early summer:

"The crabs, which are of a large size, very fat, and of delicious flavor, are plentiful in the spring and early part of summer. We would gather them by the bushel, and when boiled I think them superior to any lobster or craw-fish I have ever eaten. When the Indians catch them they break off the shell, saving only the claw part. This method not only reduces the bulk to be carried, but most effectually cures the biting propensities of these crabs, who can give a pretty severe nip."

(Swan 1857:82; J. G. Cooper 1860:387)

"This large crab is very abundant at Shoalwater bay during spring and summer. They can be taken by hand in large numbers at low tide on the sand flats or in shallow pools. Their spawn is deposited in July, after which they leave the bays for deep water. As food they are superior to the common crab of the Atlantic coast, (*Lupa dicantha*.)"

(J. G Cooper 1860:387)

Crab, Hermit (Various species in superfamily Paguridea)

Reagan (1934:135) reported that hermit crabs were boiled in the shells they occupied, pulled out and eaten on the "West Coast".

Shrimp

Mud shrimp (*Upogebia pugettensis*) and ghost shrimp (*Callinassa californiensis*) occur in the substrate in some local intertidal waters (Hart 1982:52-60). Swan noted one of these as an important food for people at Shoalwater Bay where they occurred in considerable numbers.

". . . shrimps, mussels, and a small species of sand-lobster, are in greatest abundance, and furnish nutritious food, not only to the different tribes of Indians who resort to the Bay at different seasons to procure supplies, but also to the white settlers, . . ."

(Swan 1857:26)

James Swan, who lived at Shoalwater Bay from 1852 to 1855, reported that shrimp were harvested in Shoalwater Bay by Indians who came there at different seasons to procure supplies. Swan wrote:

Several varieties of clams, crabs of the largest size, and of a most delicious flavor, shrimps, mussels, and a small species of sand-lobster, are in the greatest abundance, and furnish nutritious food, not only to the different tribes of Indians who resort to the Bay at different seasons to procure supplies, but also to the white settler,

(Swan 1857:26)

Some of the Indians who came to Shoalwater Bay were from Puget Sound. At another place in his book, Swan described the Indians who came to Shoalwater Bay to harvest shellfish:

The weather was now propitious for prosecuting the oyster-fishery, and hundreds of Indians came to the Bay from Chenook and the tribes at the north. Some of the Indians came as far as the region round Puget Sound.

(Swan 1857:59)

He then mentions that these Indians came to the bay to procure clams and crabs for their own eating, and oysters to sell to the whites. He does not mention shrimp. While the account is not precise as to which Indians harvested shrimp at Shoalwater Bay, it is clear that some Indians who came there got shrimp, and there is some evidence to suggest that these may have included Indians from the Puget Sound region.

The shrimp found at Shoalwater Bay were identified at treaty time as San Francisco Shrimp (*Crangon Franciscorum*, Stimpson) and described as a shrimp sold as food in the markets in San Francisco. (J.G. Cooper 1860:388)

Swan recorded a short word list in the Chehalis language and included in the list is a native name for shrimp. (Swan 1857:414) If, as Swan reports, Indians were harvesting shrimp at Shoalwater Bay, it is likely that Indians took shrimp at other places as well. Shrimp were present in Puget Sound waters and there are oral history accounts of Indians harvesting shrimp in Hood Canal.

We have no description of the technique used to capture shrimp at Shoalwater Bay, but they could have been taken in dip nets (or perhaps basket scoops) as the fish swam near the surface of the water. Both of these were aboriginal methods of taking other small fish such as schooling herring, at times when the fish approached the surface of the water.

Barnacles

Barnacles, technically crustaceans, were eaten by almost all of the people of western Washington. At least two genera of barnacles were used as food by Indians of the Northwest Coast. These are the acorn (*Balanus*) and the goose (*Mitella*) barnacles. Acorn barnacles often grow on kelp holdfasts. The kelp with the holdfast would often be torn loose and washed ashore by storms.

"Larger species, such as the clouded barnacle (*Balanus nubilus*) found on kelp holdfasts were eaten by Indians after being roasted in the embers of a fire."
(Carl 1966:116)

"The peduncle of the barnacle, *Mitella polymerus*, found at about half-tide mark where it is well washed by the waves, makes an acceptable food item when steamed about twenty minutes in the Indian fashion."
(Cornwall 1975:17)

However, in ethnographic and historic accounts they are usually noted simply as "barnacles." Swan reports their use as food by the Makah, Quinaults, and Klallam. In April 1859, James Swan accompanied some Klallam Indians on a fishing excursion to Chemakum Creek. He described his first taste of barnacles.

"Our dinner consisted of clams, roast and boiled, broiled salmon, roasted trout, mussels, oysters, and barnacles, the last a dish I never ate of before, but which I found delicious. The barnacle grows on the rocks around the bay to a great size, and is much esteemed by the Indians."
(Swan [1859] in Katz 1971:16)

"The common barnacle grows very large on the old logs about the Bay and up the coast. Some of the Indians, particularly the Queniults, are very fond of them, but I never saw any of the Bay Indians use them."
(Swan 1857:****)

D. N. Egbert, physician at the Skokomish Reservation, reported on the Indian diet:

"In the spring and summer they have their clams, oysters, mussels, barnacles, roots, berries, and fresh and dried fish, -- in the winter they have dried salmon, fresh seal, beaver, roots, &c."

Haeberlin and Gunther also report that:

"When constantly picked, barnacles became large and juicy and were preferred to the oyster. Only certain places where the beach was clean and the tide ran swiftly were visited for barnacles, for those in sluggish water frequently were poisonous."

(Puget Sound. Haeberlin and Gunther 1930:21)

Swan (1870:24) mentions that the Makah ate barnacles, but provides no information on harvesting locations or methods.

Echinoderms

Sea Urchins

Sea urchins were highly esteemed as food and were eaten by all of the people of western Washington. Various types were distinguished, usually on the basis of size and/or color. Sea urchins were eaten raw or roasted. Sea urchins were taken by either dip net or spears. (Eells 1889:234; Swan 1870:24; Jenness n.d.:16). The following account reports a technique for taking these species in subtidal waters.

"Three varieties of echinus are found here, and are eaten in great quantities: they are either caught by spearing them at low tide, or are taken in a very simple manner by means of a piece of kelp. To effect this a stem of the kelp is sunk to the bottom, having a line and bouy attached. The echini go on it to feed, and after the kelp has remained several hours, it is gently drawn into a canoe and the creature picked off. The Indians collect them in this manner in great numbers during the spring months."

(Makah. Swan 1870:24)

Eells (1985:58) reported that sea-eggs were used for food. The 1985 publication is based on notes made prior to 1894.

In a general discussion of Coast Salish people, Curtis wrote

"Cuttlefish is a delicacy highly prized, and roasted sea-urchins were considered the most palatable food a wealthy chief could serve at his feast."

(Curtis 1913:51)

Leighton, who was at Port Angeles in 1866, twice mentions Klallam use of sea-urchins as food (1884:23, 111):

"Today, when we were coasting along the shore, we saw Yeomans preparing his canoe for a long excursion. It was lined with mats. In the middle were two of the baskets the Indians weave from roots, filled with red salmon spawn. Against them lay a gray duck, with snowy breast: then, deer-meat and various kinds of fishes. Over the whole he had laid great green leaves that looked like the leaves of the tulip tree. The narrow end of the canoe was filled with purple sea-urchins, all alive, and of the most vivid color. I took one up, and asked him if they were good to eat. He said, 'Indian muck-a-muck, not for Bostons' (whites)."

(Leighton [1866]1884:111)

"One or two men often paddle to places where sea eggs can be found, such as Pt. Midgley, and at low tide gather with dip nets a whole canoe-load of eggs which are brought back to the fishing camp. These sea eggs are eaten fresh as a relish by breaking open the shells and eating the yellows."

(Lummi. Stern 1934:46)

Smith (1940:234), also reported that the Puyallup-Nisqually ate sea urchins.

Sea Cucumber

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

(Puyallup, Nisqually. Smith 1940:234)

Skokomish ate sea cucumbers taken from rocks at low tide. These were 'hooked' up from the water.

(Miller in Skokomish v. France 1960:156, 169)

Cnidaria

Sea Anemones

Sea anemones were eaten on the Outer Coast where they were much prized.

"Birds, oysters, anemone, barnacles, and crabs were eaten fresh . . ."

(Singh 1966:50. See also Drucker 1951:359)

Olson reported that sea anemones were collected by the Quinault only at Cape Elizabeth in the winter time and that they were cooked by boiling (Olson 1936:39).

LOCATIONS

Marine shellfish were harvested where they occurred and were accessible. People harvested within their own territories and, with few exceptions, when they wanted to do so, in the territories of other groups with whom they had kinship connections. This latter point is explained in the section of this report dealing with control of coastal zone resources, above.

As noted previously, there are over 2,400 miles of marine coast line in western Washington (Scott 1986:6). Shellfish harvested by Indians were widely, but not uniformly, distributed along these shores. People of any given community usually had available a number of alternative sites from which to procure particular shellfish species. Certain localities were known for vast beds or concentrations of particular kinds of shellfish, and these were widely known. These were visited on an annual basis by people from a number of different communities who would harvest and dry large quantities for storage and for trade. James Swan, who was resident at Shoalwater Bay (Willapa Harbor) in 1852-1855 reported that hundreds of Indians from as far away as Quinault and Puget Sound visited Shoalwater Bay in the summer months to take shellfish.

"The weather was now propitious for prosecuting the oyster fishery and hundreds of Indians came to the Bay from Chenook and the tribes at the north. Some of the Indians came as far as the region round Puget Sound. ...

These Indians, during the summer months, resort to Shoal-water Bay to procure clams and crabs for their own eating, and oysters to sell to the whites. ...

(Swan 1857 [1972]:59)

. . . Among the Indians who came to the Bay to work was a chief of the Queniult Indians, a tribe who live on the banks of a river of the same name, which empties into the Pacific five miles north of Point Grenville, or about sixty miles north of Shoal-water Bay. . . . The chief, whose name is Kape, was accompanied by two of his sons and a large party of his people."

(Swan 1857 [1972]:78)

There were similar rich locations along the Inner Coasts:

"Some shellfish were no doubt obtainable on every bit of shore line, but just as the Straits people habitually dug at certain times so they dug at certain places. It was evidently more profitable to go once a year to the best places to get a large supply than to spread one's shellfish gathering equally throughout the year. The result was that certain clam beds were visited each year at the same time by a number of people, sometimes people from different groups. Lummi,

Samish, and Nooksack all dug clams at Chuckanut bay; Lummi, Samish, and Saanich at West Sound."

(Suttles 1951:67)

The selection of a location for gathering shellfish usually involved considerations beyond shellfish collecting. Most expeditions were multipurpose. They undertaken to harvest a variety of resources.

. . ."The next day being the fourth of July, we concluded to celebrate it by going after berries; so. taking our tent and large canoe, we went across the Bay to the point of the peninsula, called Leadbetter Point, where we found a number of Indians camped, and any quantity of berries -- strawberries, blackberries, raspberries, and blueberries, black currants, and huckleberries. These berries the Indian women and children picked when the tide was up, but at low water they collected clams for drying, while the men shot seals or caught sturgeon."

(Willapa Bay. Swan 1857[1972]:249)

"During the fishing season, the salmon berries which are found in abundance in the woods, are gathered by the women and served as refreshment. One or two men often paddle to places where sea eggs can be found, such as at Pt. Midgley, and at low tide gather with dip nets a whole canoe-load of eggs which are brought back to the fishing camp. These sea eggs are eaten fresh as a relish by breaking open the shells and eating the yellows.

When the sockeye salmon season is over the ropes used to stay the canoes while fishing are cut loose and everything cleared away preparatory for future use, so that there will be nothing to clean the next year when the season begins. The people then prepare to go to the clam beds on the east and west sounds of Orcas Island, where they remain during September and October. On the way to the clam beds, and while the clams are being gathered, the men are busy hunting ducks and deer."

(Stern 1934:46)

For much of the Puget Sound region, winter villages were at or near shellfish gathering locations. However, I have not listed village sites without specific statements about the presence of shellfish.

A few kinds of shellfish can be dried and stored or transported. Others cannot be dried and had to be consumed before they spoiled.

The length of time shellfish would remain edible before consumption fresh or before curing depended in part on whether or not all or only part of the soft body could be enclosed inside the shell. It also depended upon how tightly the shell could be closed. Univalves, with only a single shell, could not close at all except for those snails with a tight fitting operculum.

Oysters and those clams and other bivalves which can close their shell tightly could be kept for a period of time. Others, such as geoducks, which have siphons or other soft parts which prevent their shells from closing tightly cannot be kept as long. The distance that fresh shellfish can be transported before spoiling, influenced where people harvested, which species were harvested, and where the shellfish were processed or consumed.

In the following list of shellfish sites and locations, I have organized the data by subregion rather than in terms of group territories. I take this approach for two reasons. First, people were welcome to take shellfish in the territories of others so long as kinship or friendly relations existed. Second, many places are recorded without indication as to which groups used them. For example, a historical report may simply say: "The Indians used to come here every spring. . . ". This list is not exhaustive. I have selected primarily from ethnographic and historical sources places that were known to have been used in the mid-nineteenth century, that is, at treaty time. I have drawn upon a few archaeological sources, but have avoided exhaustive culling of archeological sources to avoid duplicating research data. The locations I note are examples for various parts of the region.

In identifying locations of shellfish gathering places, names, and township, range, and section numbers are sometimes given to locate such places geographically on maps and not to specify their exact locations or extent on the ground.

Subenvironments

Columbia River Estuary

Baker Bay.

"Razor clams occurred along the beaches of Baker Bay in front of Chinook."
(Collins 1892, Plate XLI opposite p. 236)

Southwestern Coast

From the mouth of the Columbia River to Point Grenville. These beaches commence at Cape Disappointment and run northward approximately 56 miles to Point Grenville. The beaches tend to be wide and sandy. The ocean offshore is shallow and the tide flats extend well out to sea.

Long Beach, Pacific County.

Some Upper Sound people went to Long Beach to dry clams after salmon fishing around Upper Puget Sound was finished.

(Meeker NB Loose Sheets)

Oysterville Point, North Beach Peninsula just north of Oysterville, Pacific Co. (T13N R11W).

"kalawa uus. This was an important clam-digging site on the peninsula at Oysterville Point. Camps were maintained for both digging and drying of clams."

(Ray 1938:40)

Copalis Beach, Grays Harbor Co. (T19N R12W)

Razor clams and, in May, with extreme low tides, horse clams (Olson, Quinault Notebook 1:52). Butter clams (W. Cooper 1860:383).

"To the south lived the Copalis, noted for their dried razor clams."

(Olson 1936:11)

Point Grenville, Grays Harbor Co. (T21N R13W)

California Mussels and horse clams. Razor clams were dug along the shallow bay south of Cape Grenville (Olson, Quinault 1:53).

The whole extent of beach from Copalis Beach to Point Grenville was a location for gathering razor clams (Olson Notebook 1:50-51). They were present in all sand beaches from Baker Bay northward.

Willapa Bay

Willapa (Shoalwater) Bay is about 25 miles long and three to seven miles wide. The bay is shallow. Approximately two-thirds of the bottom is exposed at low tide. The substrate is mainly sand. Toward the southern end and around the mouths of numerous streams which flow into it from the east, the sand is mixed with mud. There are also gravelly spots and some rocks. The combination of substrate composition and easily warmed shallow water diluted by the freshwater streams provided an ideal environment for native oysters, particularly along the eastern and southeastern side. There was also a variety and abundance of other species of shellfish. The bay was a focal point for birds and fish as well. The low surrounding coastal lands provided an abundance of berries, particularly cranberries.

"Oysters are rare on most parts of the northwest coast, but there are a few localities in which they are found in abundance. One of these is Shoalwater bay, a little to the north of the mouth of Columbia river, where are to be found the conditions requisite for their existence and multiplication. The markets of San Francisco and all the coast southward are supplied from this bay. The oysters obtained here appear to differ little, if at all, from the common oyster of Europe, and possess the same peculiar coppery flavor remarked in the European mollusc when eaten for the first time."

(W. Cooper 1860:379)

The Lower Chehalis gathered shellfish at Willapa Bay and Grays Harbor:

". . . the (Lower) Tsihalis properly belong to the bays, from which they obtain winter salmon and shell-fish, and trade with the interior for kamas roots and berries."

(Material in parentheses added. Gibbs 1877:167)

"Part of the Chihalis Indians still frequent the bay for fish, clams, and oysters, and, with the Chinooks living there, are employed by the whites in taking the latter for market. They bring their canoes along the coast; if the water be smooth, paddling outside the breakers; if rough, trailing them with great dexterity between the surf and the beach."

(Shoalwater Bay. Gibbs 1854:427)

"As this last named locality has only recently been much known, a rather more particular notice of it is not out of place. It was really the principal seat of the Chinooks proper, who resorted to the Columbia mostly for their spring salmon, while they dug their clams and procured their winter supplies on the bay. It formed, in fact, a perfect Indian Paradise in its adaptation to canoe travel and the abundance of scale and shell-fish which it furnished. The southern half of the bay belonged to them; the country on the Willopah river to the tribe of that name, and the upper end to the Chihalis. Trails now partially obliterated and overgrown connect it with the Cowlitz, the Chihalis, and different points on the Columbia, with the people of which the inhabitants kept up a trade in dried fish and clams, purchasing in return kamas, wappatoo, and other foreign commodities."

(Gibbs 1967:33-34)

"The shoals are covered with shell-fish, among which the oyster is the most abundant, and constitutes the principal article of export. Several varieties of clams, crabs of the largest size, and of a most delicious flavor, shrimps, mussels, and a small species of sand-lobster, are in the greatest abundance, and furnish nutritious food, not only to the different tribes of Indians who resort to the Bay at different seasons to procure supplies, but also to the white settler, who is thus enabled to greatly reduce the expenses of living when compared with those settlements on the Columbia River and interior where provisions of all kinds are usually scarce and high."

(Swan 1857:26)

"It appears to me as if Shoal-water Bay is an Indian's paradise. There is no time of the year, excepting winter, and only a short time then, but what a Plenty of food can be obtained by any one who is not too lazy to go out for it."
(Swan 1857:249)

". . . these were essentially 'salt-water Indians,' dwelling for the greater part in places adjacent to the extensive mud flats of the bay, with their inexhaustible beds of clams and oysters."

(Shoalwater Bay. Curtis 1913:8)

Grays Harbor

Grays Harbor, not quite so large as Willapa Bay, extends fifteen miles eastward to the mouth of the Chehalis River. It is also shallow and filled with shoals and tide flats bare at low water. The harbor was surrounded by salt marshes and, towards the southeast, by cranberry bogs. The substrate is sand and mud. The harbor had considerable shellfish resources but it was not so rich in this regard as Willapa Bay.

"Two varieties of shellfish are also very abundant on the mud flats --the eastern soft-shell clam (*Mya arenaria*) and the razor clam (*Siliqua patula*).

. . .

Soft clams are found in abundance on beds on both sides of the river's mouth west of Hoquiam. Razor clams occur in the mud flats in North and South Bays."

(Collins 1892:241)

"From the flats inside the harbors the Indians dug a large clam called "metar" or "smetar," a quahaug called "clolum," and the common mud clam called "mita'k," along with oysters and mussels. . . .

Heavy concentrations of driftwood inside the harbor especially at the mouth of the Hoquiam River, were heavily encrusted with mussels, while there were huge beds of cockles near Chenoise Creek and along the shore of Laidlaw Island."

(Van Syckle 1982:74)

Northwestern Coast

From Point Grenville to Cape Flattery. Northward beyond Point Grenville, sand beaches continue, but they tend to be narrower and more mixed with gravel and cobbles. They are also interspersed with rock cliffs and beaches. This increasingly rugged coast line is often fronted with rocky reefs and islets.

Place south of Taholah, Grays Harbor Co. (T21N R13W S10)

". . . klapa'lagwana, 'rock oyster rocks.' The soft claylike rocks one mile south of Taholah, visible at low tide."

(Olson 1936:20)

"Rock oysters were a favorite food of the Quinault who had several beds in hardened blue clay a mile south of the Quinault River mouth. The clay was broken with a crude maul or stone and the oyster removed."

(Van Syckle 1982:74)

Cape Elizabeth, Grays Harbor Co. (R13W T22N)

Sea anemones (Olson Notebook 9). Mussels (Olson Notebook 1:53).

From James Island at the mouth of the Hoh River to Cape Alava, the coastal zone is rugged. There are rocky headlands and narrow beaches backed by steep bluffs. Rocky islets and reefs lie immediately off the coast but they give little protection to the shore which is exposed to heavy surf during stormy weather.

The coast to the north of Cape Alava is similar to that to the south until Mukkaw Bay which is a shallow bay with low sandy beaches and low country behind. Between Mukkaw Bay and Neah Bay, the shore is again rocky with small pockets of sand and gravel beach and steep cliffs behind.

The shellfish resources of this subenvironment are not so great in quantity, but there is a rich diversity.

Brown's Point, north of the mouth of the Queets River, Jefferson Co.

"Affiant further deposes and says that the Queets Indians dug clams and caught smelt at a place called Quailth-tails, which meant "red rock". and which is now known to the white People as Brown's Point; that the Indians a long time ago when they used this place would live in the caves in the rocks along the beach and that they did not erect houses until after the white people had come to the country; that the Indians would only go to this place during the proper season of the year when the clams could be dug from the sand and the smelt were spawning along the beach; that this lasted about two or three months. . . "

(Queets. Jack Sam, born 1860. In Swindell 1942:210)

Kalaloch, Jefferson Co. (T24N R13W)

"The Hoh division of the Quileute went to Kalalock beach to dig clams. If they got more than they could consume, they dried them for future use."
(Singh 1966:69)

"That clams were also dug at a place known now as Kalaloch but that they would return to their camps at Brown's Point rather than spend the night at Kalaloch; that the people from all of the Queets villages were accustomed to visiting the ocean during the clam digging time and the time when the smelt were available in order to obtain a supply to take home."
(Queets. Jack Sam affidavit. In Swindell 1942:211)

Ruby Beach, Jefferson Co. (T26N R13W S32)

"That a long time ago the Hoh Indians used to go up to what is now known as Ruby Beach for the purpose of catching smelt which they would dry and take back to their permanent homes; that they have not done this since the state required that they must have a license to fish if they were outside their reservation; that when the Indians went to this place to catch smelt, they used to erect temporary shacks in which they lived and dried their fish; that they ordinarily would stay at this place about one week or 10 days at a time and the various families in the tribe would take their turns in using the houses that were erected at this place; that in the proper season, they would also dig clams which were plentiful at certain times of the year."
(Frank Fisher, Hoh, born 1864. In Swindell 1942:186)

Island at mouth of Quillayute River north of James Island, Klallam Co. (T28N R15W S28)

"c da iwas'aatal, Mussel Gathering Place"

(Powell, Penn et al 1972:108)

Crescent or Deep Bay on the south side of Cape Johnson, Klallam Co. (T28N R15W S5)

"Pa ta ' o o'dox This site was noted for whaling. The residents also dug clams, did bottom fishing and obtained other kinds of sea food."
(Quileute v US ICC No. 155, Pet. Ex.73a)

Cape Johnson, north side, Klallam Co. (T28N R15W S5)

"q dau'watq 'short beach'. A village used for whaling, bottom fishing, clam gathering and taking of other sea food."
(Quileute v US ICC No. 155, Pet. Ex. 73a)

Quillayute Needles vicinity, Klallam Co. (T29N R15W S18, 19)

"A place on the beach, opposite an outlying sea-rock TLutca'pL (tLutcab, "mussel"). In every storm mussels are washed off this rock and carried to the beach. People pick them up and eat them."

(Waterman nd:15, #7)

Quillayute Needles (mainland) vicinity, Klallam Co. (T29N R15W S18)

"A cliff, washed by the sea, Tatska'uLEtL. Women digging clams used to watch very closely and when a wave receded they ran past the base of the bluff. The name is said to refer to this fact."

(Waterman [1920] Map 2 site list, #5)

Ozette River mouth vicinity, Klallam Co. (T31N R16W)

"How about clams down there? (Shy Shy beach)
It was more clams at Ozette."

(Arthur Johnson, Makah, born 1874, in Swindell 15 October 1941)

"How long did they stay at Shy Shy?

About three or four months in the summer time.

Did they dig clams?

Yes, about three or four miles on the other side of Shy Shy. On the end of the Ozette River."

(Chester Wanderhard, Makah, born 1874, in Swindell 15 October 1941)

Anderson Point vicinity (end of beach to east) (T32N R15W S5-6)

"Southern end of the Sooes Village beach, Kokots3iksEt, "where one gets black mussels". This shellfish, ko'tsup, is small, grows on piles, has thin shells, and is very sweet to the taste."

(Waterman [1920] Map 2 site list, #104)

Sooes River mouth (Mukkaw Bay), Klallam Co. (T33N R15W)

"The beach at Sooes is characterized by a slight gradient and by very fine sand. Both plate limpet and rough keyhole limpet (*Diodora aspera*) are found on the beach along with black turban snails. The burrowing species, however, are the most frequently found at Sooes. These include razor clams (*Siliqua patula*), butter clams, and native littleneck clams, according to native informants. According to one such source (Isabelle Ides personal communication: 1974), butter clams are a rather recent phenomena at Sooes Beach. At Hobuck, an area about 1 mile north, purple olives (*Olivella biplicata*) are found in abundance."

(Friedman 1976:154-155)

Tatoosh Island, Klallam Co. (T33N R16W)

"According to Dr. Robert Paine, marine biologist with the University of Washington who has studied the island's intertidal zone for many years, there is rich and varied sea life in this area. This includes primarily rock dwellers such as blue mussel, California mussel (*Mytilus californianus*), purple sea urchin (*Strongylocentrotus purpuratus*), various species of limpets (*Notoacmea scutum*, *Acmaea pelta*, *A. digitalis*), and species of purple snails (*Thais emarginata* and *T. Canaliculata*)."

(Friedman 1976:154)

Strait of Juan de Fuca

Subregion from Tatoosh Island eastward to Point Wilson across to Admiralty Head northward along the west coast of Whidbey and Fidalgo Islands to Shannon Point, Fidalgo Island.

From Neah Bay to Crescent Bay, the shore consists of narrow (30' wide) gravel and sand beaches tucked between rocky headlands and backed by steep hills. Some of the beaches are around shallow bays. The coast and the bays, though more sheltered than the open ocean coast, are nevertheless exposed when compared to the waters to the eastward.

Warmhouse (west of Neah Bay), Klallam Co. (T33N R15W)

"These rocks serve as homes for many of the creatures of the intertidal. The most visible species is the blue mussel which seems to be almost everywhere on the rocks. Other common species are the plate limpet (*Notoacmea scutum*), and Sitka littorine (*Littorina sitkana*). There is no evidence of the presence of any clam species; clam shells never were seen on the beach during the period of excavation, and digging for clams proved to be non-productive. Various species of clam are represented in the site midden but are not abundant. Gumboot chiton (*Cryptochiton stelleri*) is common in the intertidal zone."

(Friedman 1976:152)

Neah Bay, Klallam Co. (T33N R15W)

"A place just west of the Life Saving Station on Neah Bay, bo'Es, "fire". They tell me that for some reasons large fires used to be kindled here, possibly for cooking clams."

(Waterman [1920] Map 2 site list, #184)

Neah Bay (East end of bay), Klallam Co. (T33N R15W)

"The intertidal zone in front of the site at Neah Bay is almost continuous rock outcroppings, a rock pavement. One hundred meters to the east of the excavations, a sandy beach is encountered. Today, the rocky area reveals very little in the way of shellfish. Pollution and the construction of a breakwater probably have changed the character of the intertidal zone considerably.

According to local informants, this area once was rich in native littleneck clams (Protothaca staminea). The sandy beach yields butter clams (Saxidomus giganteus), horse clams (Tresus capax), and native littleneck clams, as well as blue mussels (Mytilus edulis). Crabs are seen and often caught along this beach."
(Friedman 1976:151-152)

Klachopis Point (beach to the east), Klallam Co. (T33N R14-15W S1)

"A long sand beach, k3acukudit, where they used to get dandelion shells, for Indian money. These shells are to be distinguished from the dentalium which was also used for currency."

(Waterman [1920] Map 2 site list, # 194)

Place between Klachopis Point and Seal Rock, Klallam Co. (T33N R15W S7?)

"A place along the shore line, hihi'daaLts3, where they used to find abalones."

(Waterman [1920] Map 2 site list, #195)

Place southward from Sail Rock, Klallam Co. (T33N R14W S17? 20?)

"A place along the shore, sidE3'u, (sedu, "little snails on rocks"). These animals are hard to pick out of the shell, in fact they can only be removed by a small needle. They are considered by the Indians as very fine to eat. It takes two or three minutes to boil them."

(Waterman [1920] Map 2 site list #198)

Beach northwest of Sekiu River mouth, Klallam Co. (T32N R13W)

"A long beach, tc3it3u, where they dig clams."

(Waterman [1920] Map 2 site list, #208)

Klallam Bay vicinity, Klallam Co. (T32N R12W)

"That the Indians of the Clallam Bay villages obtained plenty of roots and berries in the vicinity and did not need to go to the mountains for those things; that they also obtained clams on the beach outside of the bay and in a westerly direction from Pillar Point; that the clams were brought home and cured at their permanent residences."

(Mrs. Sam Ulmer, 66, John Mike, 80, Charley Hopie, 78, affidavit.
Lower Elwha Klallam. In Swindell 1942:140)

Promontory east of Pysht River, Klallam Co. (T31N R12W S13?)

"A small promontory east of Pysht River, T° a'tsln "breaking sea eggs". These sea-eggs were used, under certain circumstances, for food."

(Waterman [1920] Clallam site list, #15)

Beach east of Low Point, Klallam Co. (T31N R9W S22, 23 ?)

"A stretch of shingle lying eastward of the above promontory, LlmLlmuq°a'muk. This term refers to the fact that the people obtained lots of sea-eggs there. Literally it means "turning rocks over"."

(Waterman [1920] Clallam site list, #24)

Promontory at west side of Crescent Bay, Klallam Co. (T21N R8W S20)

"The promontory on the western side of Crescent Bay, TL°teu'dlt, "abounding in mussels". The People were afraid, however, to eat the mussels on this promontory, for fear of some supernatural influence."

(Waterman [1920] Clallam site list, #26)

New Dungeness Harbor, Klallam Co. (T31N R4W S26)

"Site of an Indian village in Dungeness Bay, Tsaq!, "refuse; rubbish". A lot of refuse, clam-shells, etc. was always piled up on the beach there.

Somewhere on this spit the explorer Vancouver found some tall poles for the support of an aerial duck-net (thEp). His interesting description of this structure I have quoted and discussed elsewhere."

(Waterman [1920] Clallam site list: #73)

Sequim Bay, Klallam Co. (T30, 29N R3W)

"At Washington Harbor many salmon and clams were dried by the Indians."

(Resident at Washington Harbor since 1888. Gierin 1971:127)

Discovery Bay, Jefferson Co. and Clallam Co. (T30, 29N R2, 1W)

"In the afternoon I accompanied Capt Vancouver to the head of the Harbour which we found to terminate in a muddy bank of shallow water on which the Pinnacle grounded - This led to the discovery of a species of small Oyster with which the bottom was Plentifully strewd but being now out of season they were poor & ill flavored & consequently not worth collecting.

(Menziess May 2, 1792 in Newcomb 1923:19)

". . . Port Discovery. . . is eight miles long, two miles in average width . . . The shores are supplied with large quantities of shell fish . . . The Indians . . . are of the Clalam tribe . . . There is no permanent settlement of Indians at Port Discovery. . . They live principally on fish, shell fish, the camas-root, and potatoes."

(Wilkes 1845:319)

"We lived at Fort Discovery and we made our living or we partook of the clams in all of the bays, the inlets, you know, the little coves in there. That's of course the only place--they didn't grow in the Straits. They didn't produce themselves on the Straits because the waters on the Straits were entirely too rough."

(Cynthia Larsen, born 1881. ICC Dkt.No.134:6)

Anacortes, Fidalgo Island, Skagit County. (T35N R1E)

Sea urchin gathered.

(Snyder 1955:57)

Flounder Bay, Fidalgo Island, Skagit County. (T35N R1E S27-28)

Clam digging location.

(Suttles 1951:42)

Fidalgo Island west side including Burrows Bay, Skagit County. (T34-35N R1E)

"Sea urchin were taken from the west side of Fidalgo Island . . ."

(S. Snyder 1955:57)

"Crabs were taken from all along the west side of Fidalgo Island . . ."

(S. Snyder 1955:58)

Reservation (Bowman Bay), Fidalgo Island, Skagit County. (T34N R1E S22-23)

"Devil fish were taken by the Swinomish in Deception Pass in Bowman Bay."

(Snyder 1955:52)

Bowman Bay is now called Reservation Bay.

(Hitchman 1985:28)

Admiralty Inlet

The waters and shores of Admiralty Inlet from a line between Point Wilson and Admiralty Head in the north, to a line from Tala Point to Foulweather Bluff and from Point No Point to Indian Point on Whidbey Island.

"They have an abundance of salmon, shell-fish, and potatoes, and seem to be very well off. In fact, any of the tribes living upon the Sound must be worthless indeed not to find food in the inexhaustible supplies of fish, clams, and water-fowl, of which they have one or the other at all times."

(Klallam living at Port Townsend. Gibbs 1855:430)

Port Townsend vicinity.

The next morning I was up at six o'clock, and called them, but they heard the wind blowing, and thought that it would not yet be safe to go around Point Wilson, so they did not get up. But in an hour it had calmed down, so they concluded to go, and fearing that the wind would rise again (and it did soon after) they started without any breakfast, and went to Port Townsend, where they stayed until noon. After this most of them went three miles further and camped, but the owners of a few smaller canoes feared to cross the bay, for it was quite rough. As I had business in town, and my companions wished to dig clams during the rest of the day for the journey, the delay was acceptable.

(Eells 1888:28)

Underhill provides a reproduction of a photograph of people gathering clams near Port Townsend (1945:213).

Chimacum Point. South of Port Townsend toward Chimacum Creek.

April 3- Morning delightful, calm and warm. After breakfast started for Chimacum Creek with the Duke of York and Jimmy Lind and accompanied by General Gaines, Queen Victoria and Mrs. Gaines, Queen Victoria's little boy and a little girl. We passed several canoes containing Indians fishing, all of whom paid a tribute to the Duke by presents of fish, so that before we were half way to the station we had food enough to last . . . day. Stopped at Chimacum Point to get clams, found plenty of trout at the mills and had a grand feast of fish.

(Swan Diary 3 April 1859)

Killisut Harbor (Scow Bay). (T29-30N R1E)

Mar.4- Wind s.e. light and pleasant. Went over to Yank's claim with Yank and Farnar in Yank's boat. A number of Indians were camped there - about 60 I judge they were Clallams and came for the purpose of fishing and getting clams. Yank's claim is at the mouth of Scow Bay.

(Swan Diary 4 March 1860)

May 6- Wind s. to s.e. pleasant. Started about sunrise with the Duke of York, Jenny Lind, Wiltoh and Saul's wife and went to Scow Bay to dig clams and catch rock fish. Found some shells. There are several settlers in Scow Bay and the place looks quite different from what it did a year ago when I was here on a similar excursion.

(Swan Diary 6 May 1860)

May 14- Started with the Duke of York for Scow Bay to get fish and clams. Landed at Williamses about an hour before sundown and left shortly after to camp out about three-quarters of a mile down the bay, where we found a party of Indians already camped drying clams. Remained all night. During the night more Indians arrived and by morning they were about 45 altogether. They were with the exception of our party all bound to Port Townsend from up the Sound.

(Swan Diary 14 May 1859)

In Dungeness: The Lure of a River, there is a photograph with the caption:

"Clallams digging clams at Scow Bay. From the left are the Prince of Wales; Dave Prince; the brother of Dave Prince; Queen Victoria, wife of the Duke of York who was Chief Chetzamoka; and Mrs. Prince of Wales."

(Keeting, 1976:74)

Scatchet Head, southwest Whidbey Island, Island Co. (T28N R3E)

"clam beds, . . . "

(Tweddell 1953:140 in Garland 1974:618)

Double Bluff, Whidbey Island, Island Co. (R2E T29N)

"DOUBLE BLUFF: Clam beds."

(Tweddell 1953:140 in Garland 1974:618)

Mutiny Bay, Whidbey Island, Island Co. (T29N R2E)

"MUTINY BAY (perhaps AUSTIN): Clam beds, shell heaps, camp."

(Tweddell 1953:140 in Garland 1974:618)

Hood Canal

Marine waters south of a line drawn westward from Foulweather Bluff, and from Foulweather Bluff eastward to Tala Point.

Hood Head, Jefferson Co. (T28N R1E)

"dux xa'y. A site and adjacent territory on the west side of Hood Canal, 4 to 5 miles north of Squamish Harbor; possibly Hood Head. This was a camping site for fishing and clam digging. It marked the northern limit of Twana territory on the west side of the canal, according to PA. According to HA, "Whiskey Spit," 4 or 5 miles south of Port Ludlow, was the northern limit; this may refer to the same place."

(Elmendorf 1960:45-46, #106)

Squamish Harbor, Jefferson Co. (T28, 27N R1E)

"duxWho''b d (FA), duxWh ''b d (HA). A stretch of territory on the west side of Hood Canal, across from Port Gamble; probably territory in Squamish Harbor. There were camping sites here on a good sand beach. Twana from all over the canal area went here for late summer and fall clam digging."

(Elmendorf 1960:45, #105)

Thorndyke Bay, Jefferson Co. (T27 N R1E, 1W)

"(A Twana name, not recalled.) Thorndike Bay. This was a camping site for late clam digging in the fall."

(Elmendorf 1960:45, #104)

Dabob Bay, Jefferson Co. (T26, 27N R1W)

Major native oyster beds at the head and on the west side (Collins 1892:267, chart).

Beach south of Wawa Point, Jefferson Co. (T26N R2W S26)

"duxWc'o 'cc'c. A stretch of beach between sites nos. 71 and 74 (Wawa Point); used for clam digging."

(Elmendorf 1960:42, #73)

Triton Cove, Jefferson Co. (T25N R2W S31)

"a' 'sc's, "rock cod." Triton Cove, Fulton Creek, and neighboring territory. Rock cod were numerous off Triton Head, and there were butter clams at the mouth of the creek. A very good camping site."

(Elmendorf 1960:41, #59)

Eldon Bay, Mason Co. (T25N R2W)

"QHUB-QHUB-EYE, now known to the white people as Hamma Hamma and located at the mouth of the river bearing the same name; that this was a temporary fishing and camp ground at which the Indians would remain as long as the fish were running; that the Indians in addition to catching salmon with a trap and spears, also dug clams from beach and at night time they would spear ling cod from canoes using lighted torches to bring the fish to the surface; that the surplus fish and clams were dried for future use when fresh fish was not available or for trading purposes with other Indians."

(Swindell 1942:239)

Ayock Point, Mason Co. (T23N R3W)

"iya'qs, "good point." Ayock Point and camping site on the north side of the point at the present (1939) Stetson Camping Grounds, a little over a mile north of no. 51. This was a good locality of summer hunting, berrying, and clam digging."

(Elmendorf 1960:40, #52)

Skokomish River, Mason Co. (T21N R4W)

"duxWt'a'laqab d, "place where one eats mussels out of the shell." A camping site and after 1860 possibly a permanent settlement slightly over 1 mile above no. 9, on the north bank of the Skokomish, near the mouth of Purdy Creek. This was the site of the first salmon weir encountered in going upstream; it was the earliest trap to be set up each year. The site was just above the limit of tide water."

(Elmendorf 1960:33-34, #10)

Lynch Cove, Mason Co. (T22, 23N R1,2W)

Major native oyster beds.

(Collins 1892:267)

Site at T22N R2W S9, Mason Co.

"b sq l-a'w d, "having a lagoon" (q la'w d, "lagoon"). A point and small lagoon 1 3/4 miles west of no. 137, with two small creeks immediately east of the point and a camping site on a clear, grassy place. Oysters were gathered in the lagoon. There was a reputed ancient (pre-nineteenth century) village site at the mouth of a creek 1 mile west of the point."

(Elmendorf 1960:50, #139)

Shoofly Point, Mason Co. (T22N R2W S18)

"sk'alla'l w c. A point 1 mile west of no. 140, with a creek immediately west of it; known to old residents of the area as "Flyblow" or "Shoofly" Point. This was a camp site during the nineteenth century. Oysters were gathered in the lagoon behind the point, and pilchards (p' 'd s) used to come to the beach here in numbers. Traditionally, a winter village was once situated between the lagoon and the creek; it had not been inhabited within the memory of anyone living when HA was a boy, i.e., since about 1800. Many years ago HA and Mr. Ed Dalby of Union and Seattle excavated a small portion of the site and found it apparently stratified: 1 foot of broken shell and occupation debris, 6 inches of sterile soil, and a second lower and deeper layer of shell deposit (see Elmendorf, MS, b, item 48)."

(Elmendorf 1960:50, #141)

Sisters Point, Mason Co. (T22N R3W)

"Place on the front of this promontory, DeUxt°at°awai, "many mussel-shells" (t°aU). This point used to be a graveyard, where bodies (in the old days) were hauled up in canoe into the trees."

(Waterman [1920] Map 4 site list, #25)

Ayres Point, Mason Co. (T22N R3W S19)

"ay'u's, "good face" (-u's, "face, bluff"). Ayres Point (Bald Point), at the bend of Hood Canal, and territory for about] mile on either side of it. Clam digging was good to the east of the point."

(Elmendorf 1960:50, #151)

It was at the beach just north of here (between Ayres Point and Musquetu Point a mile north) that the Vancouver expedition encountered people smoking and drying clams one hundred and ninety one years ago (May 12, 1792).

(Menzies in Newcombe 1923:28)

"DUE-WAH-TAGH, now known as Dewatto; that affiant does not know the meaning of the Indian name; that it was the permanent home of a large number of Skokomish Indians and they were able to catch plenty of fish and dig large quantities of clams; that in the summer the Indians moved upstream from the permanent village at the mouth of the Dewatto River to a place about two miles distant where the river was narrow and fish were caught there with spears and gaff hooks; that he has at various times caught fish there."

(Swindell 1942:239)

Anderson Cove, Kitsap Co. (T24N R2W)

"ba'w'a' (HA), ba'w' ' (FA). Anderson Cove and Anderson Creek, with camping site on the north side. The locality is north of Holly, slightly over 1 mile south of Tekiu Point (no. 165). The creek here was well stocked with salmon, and there was good summer clam digging. Klallam as well as Twana came here in the fishing season. The creek was ba'w-fl'alq ". FA gave the name as designating also Holly."

(Elmendorf 1960:53, #164)

Hood Point (1 mile south), Kitsap Co. (T25N R2W S23)

"t'o-'l x", "mussel flat" (t'a'w, "mussel"; or cf. st' 'l, "herring"). A tideflat area given by HA as "1 mile north" of no. 165; more probably 1 mile south of Hoods Point (no. 168). A creek here runs out into the tideflat. Mussels were numerous here and were gathered at low tide."

(Elmendorf 1960:53, #167)

King Spit north to Salisbury Point, Kitsap Co. (T26, 27N R1E)

"slca'wks, "farthest down stretch" (from lca'w, "farthest down the beach, farthest down the inlet"). The east shore of Hood canal from Bangor (King Spit) north to Port Gamble. There were no permanent settlements along this stretch, but people camped here in summer, particularly during the late clam digging in August. These temporary sojourners were termed slca'wksb s; they formed no social unit, but were a mere seasonal aggregation of families from several Twana winter villages (cf. no. 160)."

(Elmendorf 1960:54, #176)

The locations and sites noted above are provided as examples. As in all parts of the region, where the environment was suitable, shellfish were harvested.

Actually shellfish were pretty abundant on both shores of the Hood Canal for its entire area, more than fifty miles on one side and fifty or more miles back, but there were certain areas where shell fish were better than others and certain kinds occurred rather than other varieties. . . . The whole south arm, nearly all of it was good clam digging territory and certain stretches on the main arm -- on the east shore of the main arm of the canal. Quite a variety of shell fish were taken, three major varieties of clams -- large geoduck clams at least as large as two fists were taken at low tide, mussels and other kinds of mollusk were obtained. I should add crabs here. They were abundant particularly in the southern drainage area.

. . . .

I perhaps should mention here that during the middle of the summer the clam digging was supposed to be unusually rich along a section of shore in the southern and central Hood Canal area on the easter side. At that time you had a large concentration of camps, each of these consisting of several families not all necessarily from the same winter village. These camps practically lined the shore from Dewatto on the east bank of the canal, north to Tekiu Point.

(Elmendorf 1956:75, 55)

Other examples are: Duckabush, Sowald in Skokomish v France 1960:548; North of Hoodsport, Alice M. Hanson in Skokomish v France 1960:619-620; Union River, Archie Adams in Skokomish v France 1960:113-114; Red Bluff (T27N R2E), Alice M. Hanson in Skokomish v France 1960:618; Port Gamble area (T27N R2E), Elmendorf 1956:43; Wilsons Slough at the mouth of the Skokomish River for crabs, Emily P. Miller in Skokomish v France 1960:192; Annas Bay (T21-22N R3-4W), Emily P. Miller in Skokomish v France 1960:168-169; between Hoodsport and Millard Gulch (T22N R4W S1), Wallace O. Hanson in Skokomish v France 1960:572; Hoodsport (T22N R4W S12) Wallace O. Hanson in Skokomish v France 1960:565.

San Juan Islands

All of the islands eastward to Lummi and Guemes Islands but excluding Samish, Fidalgo, and Whidbey Islands.

West Sound, Orcas Island, San Juan Co., (T36N R2W)

"Lummi, Samish, and Saanich all dug clams here."

(Suttles 1951:67)

East Sound, Orcas Island, San Juan Co. (T37N R2W)

"Clams towards head."

(Suttles 1951, Map 6:34)

Lopez Island (East Shore), San Juan Co. (T34, 35N R1, 2W)

". . . dug clams on the east shore of Lopez in the early summer, . . . "

(Suttles 1951:41)

Hunter Bay, Lopez Island, San Juan Islands (T34N R1W)

"Clams."

(Suttles 1951:Map 7:42)

Decatur Island, Reads Bay (Southwest Side), San Juan Islands (T35N RIW)

"Clams."

(Suttles 1951:Map 7:42)

Guemes Island (West Central Coast), Skagit Co. (T35, 36N R1E)

"Clams."

(Suttles 1951:Map 7:42)

Point Migley (the northwestern extremity of Lummi Island), Whatcom Co. (T38N R1E S32)

During the fishing season, the salmon berries which are found in abundance in the woods, are gathered by the women and served as refreshment. One or two men often paddle to places where sea eggs can be found, such as Pt. Midgley, and at low tide gather with dip nets a whole canoe-load of eggs which are brought back to the fishing camp. These sea eggs are eaten fresh as a relish by breaking open the shells and eating the yellows.

(Lummi. Stern 1934:46)

"Sea eggs" are sea urchins. Point Midgley is Point Migley.

Lummi Island east coast, Whatcom Co. (T37N R1E)

The eastern shore of this island which lies across Hales Passage contains gravel beaches. In fact the shoreline from the southeastern end of Lummi north to Beach contains at low tideline varying quantities of butter and rock clams. Indians formerly procured butter and rock clams in considerable numbers on this beach line for the Bellingham market.

(Nightingale 1928:79)

North Sound (Gulf of Georgia - Bellingham Bay- Padilla Bay):

The mainland shores and waters stretching southeast from Point Roberts to Shannon Point on the northwest tip of Fidalgo Island.

Boundary Bay, Whatcom Co. (T41N R1, 2W)

"During the summer they (Semiahmoo) went into Boundary Bay to dig clams and harpoon sturgeon."

(Suttles 1951:27)

Semiahmoo Bay- Drayton Harbor, Whatcom Co. (T40N RIW, IE)

"I will call your attention to a small tribe that belongs on this side of the boundary line, called the Sem-mi-an-mas. They were formerly a powerful tribe, but have suffered from the hostilities of the Northern Indians to such an extent that they hardly number 100 now. They have a large prairie country back of the coast, but prefer to live on a bay, whence they derive their name, and where the old homes of their parents now stand. They dare not make that their general stopping place, but go there to get their shell-fish and vegetables. They are intermarried with the north band of Lummi and Cowegans and Quantlums, and rove backwards and forwards among those tribes for protection. They gather a great many cranberries, and raise a goodly amount of potatoes, but are not as cleanly as the other tribes."

(E. C. Fitzhugh, Special Indian Agent, 18 June 1857)

Drayton Harbor - Tongue Point, Whatcom Co. (T40N RIW)

"The narrow part of the spit, between the burial ground and the trees which grew on the broad outer end, was divided into a number of family-owned locations for raised duck nets. A few people lived out on the end of the spit. Among the crabapple trees there was a well which gave brackish water. Beyond the end of the spit were clam beds, possibly also family-owned. (Semiahmoo)"
(Suttles 1951:30)

Birch Bay - South Shore, Whatcom Co. (T39, 40N RIW)

Clams.

(Suttles 1951:Map 5:28)

"The Hulhwaluq had formerly inhabited the southern end of Vancouver island eastward of Victoria harbor, and were therefore presumably allied to the Clallam-speaking tribes, as are the present-day Sooke and Songish of that district. The abundance of clams on the beach at Birch bay and the elk in the near hills was the cause of their migration."

(Curtis 1913:26)

Chuckanut Bay, Whatcom Co. (T37N R2E)

"Lummi, Samish, and Nooksack all dug clams at Chuckanut Bay, . . . "

(Suttles 1951:67)

"CA's wife's grandfather had a big house at a place called coyobal at the Horseshoe on Chuckanut Drive on the beach, located at about the mouth of the horseshoe. This was a duhW'G?a home-ground for clams and ducks and dog fish for oil. Down there they boiled dog-fish oil in a big kettle and emptied it into a little canoe by the fire. The people wore big boots and tramped all those cooked fish. And after all of it was smashed it was drained and then sold to Bellingham. AC has never heard of any use of this oil by the Indians aboriginally. They got crabs down there. They just looked for them. They had no traps. They used a pole with two or three sharp sticks on the end and just speared them under water.

The salt-water fish at duhW'G?a were small native oysters (CA's wife's grandfather and uncle used to get them there), clams (butter and horse), cockles, dogfish and crabs. That's a real place for everybody to get clams in June and July. The Upper Skagit would come down there too. It was a place for clam-drying (the dried clams are then ground up)."

(Snyder Fieldnotes 8-6, p.5)

Samish Bay, Skagit Co. (T36, 35N R2, 3E)

Clams, horse clams, and oysters gathered along the north side of Samish Island. (Suttles 1951:Map 7:42).

Padilla Bay, along south shore of Samish Island, Skagit Co. (T36, 35N R2E)

"Clams and oysters."

(Suttles 1951:Map 7:42)

"Crabs in Padilla Bay particularly."

(S. Snyder 1955:58)

March Point, Fidalgo Island, Skagit Co. (T35N R2E S21-28)

Shellfish gathering location (S. Snyder 1955:53).

Fidalgo Bay, Fidalgo Island, Skagit Co. (T34-35N R2E)

Shellfish gathering location (S. Snyder 1955:53).

Whidbey Basin (Skagit Bay - Saratoga Passage - Possession Sound)

The marine waters and shores of Skagit Bay, Saratoga Passage, Port Susan and south to a line eastward from Possession Point on the south end of Whidbey Island to Picnic Point on the mainland.

Similk Bay, Fidalgo Island, Skagit Co. (T34N R2E)

"Similk Bay, a shallow bay in the south side of the island, Q°eq°ala'xud, "small stockade". This was a wonderful place for digging clams. The name would suggest that there was an Indian stronghold here."

(Waterman [1920] Map 12 site list, #7)

Utsalady, Camano Island, Island Co. (T32N R2-3E)

ACALA"DI (45-IS-7) Evidently an important winter village from the earliest part of the period until the latest part. In fact, during the latter part of the period it was probably the only permanent settlement on Camano. Smelt were netted here with a little round net on the end of a pole LO'Q. Smelt rakes evidently were not

used. The village was located on the eastern shore of Utsaladdy Bay. Fish were caught and dried here, clams were dug and dried for storage, as was the smelt."
(Osmundson 1961:6)

There were shellfishing locations at all suitable beaches along the west side of Camano Island. (Pt. Demock, Osmundson 1961:6 Madrona Beach, Osmundson 1961:6; Camano City, Tweddell 1953:94; Indian Beach, Osmundson 1961:7; Camp Diana, Tweddell 1953:94; Camano Head, Alex Young, Elizabeth Shelton, Johnny Sam in Swindell 1941).

Point Demock, Camano Island, Island Co. (T32N R2E)

"SZDWKS D (45-IS-84) Spoken of as a 'village' but was probably never more than a summer camp site. Fish were caught and dried here and land hunting was carried on at this site. Mussels were collected and clams were dug. The Upper Skagit came here to get clams. In the woods behind this site there were salmon berries."

(Osmundson 1961:6)

Penn Cove, Whidbey Island, Island Co. (R1E T32N)

"The ensuing week finds Isaac N. Ebey going to the Cove to get clam shells to burn into lime. Along the western shore of Penn's Cove these clam shells lie to a depth of several feet. An archeological expedition from the East has done some digging for Indians relics there in recent years. For centuries, Indian tribes had gathered at these clam beds and the piles of shells remain as mute evidence of many a night's aboriginal banquet."

(Kellogg 1934:41)

Madrona Beach, Camano Island, Island Co. (T31-32N R2E)

"XU'YTXU'YTKAE3 (45-IS-10) Evidently a considerable winter village at one time, but it is uncertain whether it remained a permanent village throughout the Kikialos period. It was an important clam digging and drying site. Fishing was carried on here. The Upper Skagit came here for clams. There were graves 'white man's fashion' here. The people who lived here went up the Skagit in the summer to fish."

(Osmundson 1961:6)

Indian Beach, Camano Island, Island Co. (T31N R2E)

"KAS'ALAB (45-IS-86) A campsite where smelt and clams were collected, land hunting was carried on, and ducks were hunted. All of these were dried here for winter use.

O OW'ALUS (45-IS-86) A 'big house' is mentioned for this site at the mouth of the creek immediately to the south of the site mentioned above. The Upper Skagit came to dig and dry clams in the fall. Smelt and other fish were caught here."
(Osmundson 1961:6)

Cama Beach vicinity, Camano Island, Island Co. (T31N R2E)

"YA-LKED (45-IS-2) Spoken of as a 'village' but probably means a summer camp. Clams were dug and dried here."
(Osmundson 1961:6)

Camano Island State Park, Island Co. (T31N R2E S36)

"X E S D (45-IS-44) Summer camp for digging and drying clams and catching smelt and herring. The Upper Skagit came here after clams. This was the last Kikialos site on the western side of Camano."
(Osmundson 1961:7)

Camano Head. Camano Island, Island Co. (T30N R3, 4E)

"whoishit. Clam bed."
(Alex Young, Elizabeth Shelton. Johnny Sam. in Swindell 1941)

Hat (Gedney) Island, Possession Sound, Snohomish Co. (T29N R4E S8)

"A fair-sized island, some two miles long known as Hat Island, in Possession Sound in front of the mouth of the Snohomish River, TLltcusLe'....

The western shore of this island is said to have been a good place for clams, and for fishing."

(Waterman [1920] Map 11 siet list, #41)

"Chitch-ly (North end of Hat Island). Clams."

(Johnny Sam, Alex Young, Elizabeth Shelton. Swindell 1941)

"The Indians - the Snohomish - used to go to Hat Island in the summer for clams and salmon. These were dried. They lived in mat houses or [native term], 'mat houses'. There were no permanent houses (i.e. at this time). Some come down

the Snohomish River. Skykomish folks and Snoqualmie, for clams, which they dried. Also flounder and crabs. All the Indians in the area went wherever they wished to dig clams and dry them. Hibolb folks also came and camped on Hat Island."

(Tweddell 1953:134)

. . . but it is certain that the clam beds at Camano Head and the northern end of Hat Island always have been the most important beds in the Snohomish area.

(Tweddell 1953:48)

Mrs. Agnes James said there used to be long houses on the Island, way before treaty time, on the northern and facing Camano Head. There were springs near the village. She had been there with her Grand aunt, and had stayed right by the clam bed on the north end of the Island. There were Indian houses on the Island, long houses owned by Snohomish, Snoqualmie, and Skykomish.

(Tweddell 1953:108)

Southward on the mainland, there were shellfish locations at Tulalip (Tweddell 1953:162 in Garland 1974:640) and south of Mukilteo (William Kitsap in ICC 132:1952:140).

The east side of Whidbey Island was lined with shellfish locations, some of which, such as Holmes Harbor, Penn Cove, and Crescent Harbor, were of major importance (Clinton - Columbia Beach, Tweddell 1953:93); Sandy Point, Tweddell 1953:93; Langley, Tweddell 1953:93 and W.J. Hunziker in Hilbert 1977; Saratoga, Tweddell 1953:93; Rocky Point - Hackney, Tweddell 1953:134 and Waterman Ms., Whidbey - Fidalgo Island; Holmes Harbor, Elizabeth Shelton, J. Celestine, Johnny Sam in Swindell 1941; Dines Point, Tweddell 1953:134; Lagoon between North Bluff and Race Lagoon, Suttles 1952; Race Lagoon, Suttles 1952; Coupeville eastward, Suttles 1952; Penn Cove, Kellogg 1934:41 and Suttles 1952; Duqualla Bay, Snyder, 1955:54).

Holmes Harbor, Whidbey Island, Island Co. (T29, 30N R2E)

"Allis-du q. Clams. Great gathering place for many Indians."

(Elizabeth Shelton, J. Celestine, Johnny Sam. in Swindell 1941)

"Indians camped in the harbor near Langley several times each year. They came in the spring to gather cockles and smoke them over open fires on strings."

(Holmes Harbor circa late 19th - early 20th century. Hilbert 16 January 77)

Rocky Point - Hackney (Baby) Island, Whidbey Island, Island County. (T30N R2E S11)

This was a summer mat house area when the Snohomish went to dry clams and fish there.

(Tweddell 1953:134)

"Clam beds, clam shell heaps, camp."

(Tweddell 1953:93)

"A tiny islet lying off Rocky Point, called Hackney Island on the maps, Q!sdo, "wrinkled." A beach connects this islet with the shore, and extraordinary numbers of clams were obtained here in the old days."

(Waterman [1920] Map 12 site list, #74)

Dines Point, Whidbey Island, Island County. (T29-30N R2E)

The whole area was a busy one with numerous camping sites for fishing, clamming, berrying, and hunting all through the summer season. The only point which was specifically mentioned by name was Dines Point. It was here that the mother of John Brown was born. Mrs. Agnes James confirmed the statements of Brown and Mrs. Elizabeth Shelton, and others, concerning the Snohomish use of and control over this area.

(Tweddell 1953:134)

Penn Cove, Whidbey Island, Island Co. (T32N R1E)

"The ensuing week (in September, 1855) finds Isaac N. Ebey going to the Cove to get clam shells to burn into lime. Along the western shore of Penn's Cove these clam shells lie to a depth of several feet. An archeological expedition from the East has done some digging for Indian relics there in recent years. For centuries, Indian tribes had gathered at these clam beds and the piles of shells remain as mute evidence of many a night's aboriginal banquet."

(Information in parentheses added. Kellogg 1934:41)

Central Puget Sound

The subregion from a line from Point No Point east to Scatchet Head and from Possession Point southeast to Picnic Point and southward to Tacoma Narrows.

"The tribes living upon the eastern shore possess also territory upon the islands, and their usual custom is to resort to them at the end of the salmon season--that is, about the middle of November. It is there that they find the greatest supply of shell-fish, which form a large part of their winter stock, and which they dry both for their own use and for sale to those of the interior."

(Puget Sound. Gibbs 1855:432)

Cultus Bay, south Whidbey Island, Island Co. (T29N R3E)

"An important village-site, on a tiny promontory on the east side of Cultus Bay, DEgwadsk, lots of a certain large species of crab (adzck). Bits which mark

the site of the old houses are visible here even yet. . . . The group were know as the Sdugwa 'dsxabc, people of the place of crabs."

(Waterman [1920] Map 12 site list, #54)

Edmonds, Snohomish Co. (T27N R3E)

Clambeds.

(Tweddell 1953b:198)

Salmon (Shilshole) Bay vicinity, King Co. (T25N R3E S3, 10)

"A small curved promontory in Ballard, just at the entrance to Salmon Bay, Tce'dkedad, "lying curled on a pillow". The name refers to the shape of the sand-spit, which is curled around on itself. This used to be a fine place to dig clams."

(Waterman Ms: 146, #12)

Elliott Bay, King County. (T24-25N R3-4E)

Emily Denny, writing of her early days in Seattle, recollected an Indian woman whose ". . . camp was a mile away on the shore of Elliott", who traded clams for potatoes (Denny 1909:135).

The Seattle Press-Times of 30 March 1892, in an article about Indians camped on Ballast Island, incidentally notes that they were digging clams. Ballast Island was an artificial island off the foot of Washington Street formed from discarded ballast (rocks and gravel) (Hitchman 1985:13). Their clam digging would have been on nearby beaches and tide flats.

Des Moines, S. King Co. (T22N R4E)

"skah-kah-khwats. Camped there and dried clams for winter food."

(Philip Starr, Johnnie King George, Mary Dominick, Jerry Dominick. in Swindell 1941)

Peoples Park (Possibly Salt Water State Park) S. King Co. (T22N R1E)

"tchahguks. Camped there and dried the clams for winter."

(Philip Starr, Johnnie Sam, Mary Dominick, Jerry Dominick, Johnnie King George. in Swindell 1941)

Woodmont, S. King Co. (T22N R4E)

"tchakhagwas. Clams, mussels."

(Philip Starr, Johnnie King George, Mary Dominick, Jerry Dominick, Johnnie Sam. in Swindell 1941)

Redondo Beach, Poverty Bay, Pierce Co. (T22, 21N R4E)

The beaches between Des Moines and Brown's Point were used for shellfish gathering by the Puyallup and Muckleshoot (M. Smith 1940:26).

Commencement Bay, Tacoma, Pierce Co. (T21N R3E)

". . . the exhaustless clam beds at low water, along the shore of the Bay nearly a mile south of the mouth of the Puyallup and for over two miles north of the marshes of that river. . . "

(Milroy to CIA, 20 March 1873)

Ruston, Tacoma, Pierce Co. (T21N R2E S14, 24)

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

(Waterman [1920] Map 6 site list, #1)

Gig Harbor, Pierce County. (T21N R2E S5-8)

"We found here about a dozen Indians collecting berries and clams."

(July 1853. Trowbridge 1942:393)

Quartermaster Harbor south Vashon Island, King co. (T22, 21N R3E)

"Quartermaster Harbor was the annual place for clams. Puyallup, Gig Harbor held camp at Pt. Defiance and went across to Q.M. Harbor for clamming."

(Puyallup and neighbors. Meeker Family Notebook Vol. 1:87-88)

Blake Island, Kitsap Co. (T24N R2, 3E)

"tatco. This is the name for Blake Island. It is the diminutive for the name of Vashon island to the south which was called tatco. Blake island was used as a temporary camping place. It had good clam beds, and fish, ling cod and bullheads in particular, were speared in the surrounding waters. The west point and areas along the west shore were used as burial grounds."

(Suquamish. W. Snyder 1968:130)

Manchester vicinity, Kitsap Co. (T24N R2E S22)

"qeqtz b. This was a summer camping area. It was known especially as a place where clams were dried."

(Suquamish. W. Snyder 1968:130)

Restoration Point vicinity, southeast Bainbridge Island, Kitsap County. (T24N R2-3E)

Vancouver, in 1792, visited a camp here at which clams and mussels were being smoke dried (Vancouver in Meany 1907:130-131; see also Menzies in Newcombe 1923:32).

Clam Bay, Rich Passage, Kitsap Co. (T24N R2E S16)

"The first lagoon N. of the town of Colby, Qe'qthub, "full belly". This lagoon is called locally "Clam Bay". The old people had an aerial duck-net here."

(Waterman [1920] Map C site list, #133)

Sinclair Inlet, Inlet head, Kitsap Co. (T24N R1E S32, 33)

"stacabac. The camping grounds and stream at the head of Sinclair inlet as well as the whole inlet were known by this name. Dog salmon and silver salmon went up the stream. They were caught and dried here. The end of the inlet was shallow and devil fish were caught here. Clams were dug and dried. The area was noted for its abundance of huckleberries."

(Suquamish W. Snyder 1968:131)

Sinclair Inlet, Kitsap Co. (T24N R1E S28)

"kbadeb. kbade are round, snail-like shell fish that used to be gathered here. This was a camping ground especially used for clam digging."

(Suquamish. W. Snyder 1968:131)

Port Washington Narrows vicinity towards upper end, Kitsap Co. (T24N R1E)

"qWasapc. This was used as a clamming beach and camping area."

(Suquamish. W. Snyder 1968:132)

Bremerton City Park, Washington Narrows, Kitsap Co. (T24N R1E S13)

"sqyawb.... Remnants of the shell mound were still visible in 1952. It was known as a good clamming, fishing, and duck hunting area."

(Suquamish. W. Snyder 1969:131)

Bass - Rocky Point vicinity, west end of Port Washington Narrows, Kitsap Co.(T24N R1E)

"xelelex. ... This was a camping ground used especially for clamming."

(Suquamish. W. Snyder 1968:131)

Dyes Inlet, Chico Bay, Kitsap Co. (T24N R1E S5)

"A tiny bay at the inner end of the promontory just mentioned, TL3O'tL3OX ts, 'oysters'."

(Waterman [1920] Map C site list, #99)

Dyes Inlet at mouth of Clear Creek, Kitsap Co. (T25N R1E S21)

"saqad means 'spear it.' This name was given to the camping ground at the mouth of the creek itself, and all of Dyes Inlet...."

Oysters and clams were plentiful on the beach. Inland, huckleberries and deer were abundant."

(Suquamish. W. Snyder 1968:132)

Port Orchard just south of Illahee, Kitsap Co. (T25N R2E S31)

"qWqwlb means 'where huckleberries are.' They camped here while picking huckleberries, digging clams, or hunting deer."

(Suquamish. W. Snyder 1968:132)

Arrow Point, Bainbridge Island, west side, Kitsap Co. (T25N R2E S8)

"scecagWalde means 'a little beach ear.' This was a good clamming beach and was used for temporary camping."

(Suquamish. W. Snyder 1968:136)

North of Manzanita Bay, Bainbridge Island, west side, Kitsap Co. (T25N R2E S5)

"palg as means 'to be separated or divided.' This was a camping area for hunting, fishing, clamming and berry picking. Its name comes from the fact that it was a flat area with high banks on each side."

(Suquamish. W. Snyder 1968:136)

Keyport (mouth of Liberty Bay), Kitsap Co. (T26N R1E S35)

"The enclosed lagoon at the W. side of the Keyport Peninsula, TL3O'tL3Ok ts, "oysters."

(Waterman [1920] Map C site list, #57)

". . . means oyster beds. Oysters and clams were gathered here."

(Suquamish. W. Snyder 1968:133)

Liberty Bay, point east of Pearson, Kitsap Co. (T26N R1E S24)

"qqWes means 'a narrow strip of land projecting into the water.' They camped here while gathering clams and oysters."

(Suquamish. W. Snyder 1968:133)

Liberty Bay, Kitsap Co. (T26N R1E S22)

"badatoced. Oysters were abundant at the mouth of this creek. They camped there while gathering oysters."

(Suquamish. W. Snyder 1968:133)

Liberty Bay, Kitsap Co. T26N R1E S25, 26)

"'xWkWalekwed means 'something wound around it.' It was so named because of a tall rock which once stood there which was white around the top. This was a good clamming beach."

(Suquamish. W. Snyder 1968:133)

Lemolo, Liberty Bay, Kitsap Co. (T26N R1E S25)

"Outer face of this promontory, at Lemolo, SExkwa'sEpsEb, "where a certain one scorched his throat" (kwas, "to scorch"). A legend recounts that Mink steamed a lot of the kind of clams called sta'bza, at this point. He was too greedy to wait until they had cooled."

(Waterman [1920] Map C site list, #46)

"'saxWkwasabsb. A camping place for clamming, duck hunting, and catching flounders."

(Suquamish W. Snyder 1968:133)

Point Bolin (southwest end of Agate Pass), Kitsap Co. (T26N R2E)

"palak eca. This was the name of the point. Clamming was good on the east side."

(Suquamish. W. Snyder 1968:134)

Rock Crabs. (Martha George interview with Karen James OH, G.1.09:10) ✓

This area was also a source of sea cucumbers. There were sea urchins east of Bolin. ↓

(Martha George Interview OH, G.1.09:9)

Old Man House "Spit" (State Park), northeast end of Agate Pass, Kitsap Co. (T26N R2E S21)

"It had, however, been known as a clamming ground -- clams are still taken from the spit -- and as such had undoubtedly served as a camping ground for the parent village and, probably, for other villages as well over a considerable period of time. The heavy ash and shell content of the soil affirms long occupation."

(Smith 1950a:5)

Agate Pass, Miller Bay, Indianola, Kitsap Co. (T26N R2E)

Dungeness Crab are said to be found in larger numbers north of the Agate Pass bridge. According to Lawrence Webster, there used to be some Dungeness in the area of the Suquamish Tribal Center, but most of the Dungeness were found north of the pass:

"We had some, there used to be some right around here (the Suquamish Tribal Center), but not too plentiful. Most of them come through Suquamish; then about half way, not quite half way, on the north end of the pass where Jim Thompson used to have his float house, there's quite a flat in there. There used to be quite a lot of crab in through there near low tide and right in front of Suquamish was some. But the best place was down in Miller's Bay area where you got the flats on both sides. And all along in front of Indianola there, clear over to where those high bluffs are, there was crabs in there. We used to go out with a tub, put it in the water walk along there about, oh, not even knee deep in the water at night with a light and just rake 'em in. We'd get a couple, three dozen crab there in a very few minutes."

(Lawrence Webster Interview # (OH) W.1.25)

Miller Bay, Kitsap Co. (T26N R2E)

"All kind of clams, even geoduck, were gathered in Miller's Bay. Two island areas exposed at low tide at mouth of Bay were especially good for clams. Best island area was ruined when spit was filled in."

(Lawrence Webster. May 17, 1983)

Point Monroe Spit, Bainbridge Island, Kitsap Co. (T26N R2E S26)

"cawec. They camped on the sand spit. This was a good clam digging area and a good place for salmon trolling."

(Suquamish. W. Snyder 1968:134)

Skiff Point, Bainbridge Island, east side, Kitsap Co. (T25N R2E S13)

"'cagWalwec means 'the beach on the back side.' It was not a camping area. There were good clam beds and a good salmon trolling area off the point."

(Suquamish. W. Snyder 1968:135)

Jefferson Head (Point), Kitsap Co. (T26N R3E)

Good place for octopus. (Lawrence Webster OH, W.1.25:21)

"And down there at, well, all along Indianola down to the Head is a great place when they were getting horseclams because that beach used to be full of horseclams. They'd dry that the same way."

(Lawrence Webster (OH) W.1.16:2-3)

Shellfish could be gathered from any part of the tidelands between Jefferson Head and Lemolo Point. Rocky beaches tended to have greater numbers of littlenecks, butterclam and cockles, but they also had geoduck and horseclam. Sandy beaches, which are most extensive in the area between Miller's Bay and Jefferson Head, had greater numbers of horseclams and geoducks, but other species could be found there too. For instance, at the spit fronting the Davis and Fisk allotments near Jefferson Head, there were large numbers of geoduck, horseclam and cockles. Geoduck, according to Lawrence Webster, are deeper in the sandy beaches than they are in the rocky beaches.

Eglon, Kitsap Co. 3 miles south of Point No Point (T27-28N R2E)

"The site of the present Eglon, Ts3api dyu. The term tspida means a variety of little red crab. There were lots of them there."

(Waterman [1920] Map C site list, #15)

Upper Puget Sound

Marine waters and shores south of Tacoma Narrows. This was a region of narrow channels, numerous bays and inlets, and numerous sandy beaches. It was a region rich in shellfish. Some of the major and most productive oyster beds were in the upper (southern) Puget Sound, south of Tacoma Narrows. The bays of this area provide a particularly rich habitat for oysters.

Ezra Meeker, a pioneer settler who arrived in Puget Sound in 1853, later recalled the Indians collecting canoe loads of shellfish and other fish around the Nisqually River and Medicine and McAllister creeks. Meeker provides a picture of Indian fishing parties in the Nisqually region of the Upper Sound:

". . . The song of the Indian, like that of the sailor, seemed to be a part of the life afloat, as it was seldom heard ashore. The temporary camps were made from light mats of their own manufacture, and were quickly put in place, and as

speedily repacked when the camp was struck. I am safely within the bounds of truth to say that I have certainly seen and heard thirty of these canoeing parties at a time within a radius of five miles of the Nisqually during the years 1853-4-5, while residing near these people. Their food was scattered all over the beach, always accessible when the tides were out, if shell fish was wanted, or, if fish, whenever there was calm water."

(Meeker [1853-1855] 1890:218)

As a part of the Swindell survey of traditional Indian fishing locations, Nisqually elders, Allen Yellout, Peter Kalama, and George Bobb reported the following information regarding traditional Nisqually clam digging places:

McAllister Creek -- That this place was known as She-nah-dah-dob where the Nisqually treaty was signed*; that the Indians fished all along this creek using spears and Indian gaff hooks; that the Indians established temporary camps at the mouth of the creek and from these camps they would go out into the bay when the tide was out to catch flounders and dig clams; that they also used this place as a sort of headquarters from which they would go over to what is now known as Anderson Island to dig clams; that they would stay at the Island for several weeks at a time until they had sufficient clams for their future needs.

Affiants further depose and say that the foregoing were the more important of the many Nisqually fishing places "

(Swindell 1942:210-202)

Steilacoom vicinity, Pierce Co.

Heath, a tenant farmer near Steilacoom noted in his diary entry of July 8, 1846:

"Walked to the beach to see Indians collecting clams."

(Heath [1846] 1979:60)

Sequalitchew Creek mouth vicinity, Pierce County. (T19N R1E S27)

In 1833 Tolmie noted that the proposed site for the Hudson's Bay Company Nisqually post was attractive because it would be in the immediate vicinity of a natural oyster bed.

". . . The proposed site of the (HBC Nisqually post) Establishment, was on the opposite side of a small streamlet close by, where the bank was level & the soil rich & clayey, but the plain not within five miles of the shore -- abundance of oysters within 100 yards of the beach, no small recommendation."

(Tolmie [1833] 1963:213)

Budd Inlet, Thurston County. (T8-9N R2W)

"In those days a wooden bridge crossed Budd Inlet near the location of the present concrete bridge to the Westside district. In honor of an early pioneer, it was called the "Marshfield" bridge. Chinatown was located south of this bridge,

along the east shore; so, in Territorial days the Chinamen took over possession of the oysters south of the bridge. North of the bridge and on both sides of the bay, the oysters were claimed by the Indians who had a village on the west side, just north of the bridge. The natural oyster beds south of the bridge are now covered by water due to the dam recently constructed to create a lake for capital beautification.

(Steele 1957:8-9)

Eld Inlet, Thurston Co. (T19N R2W)

There were major native oyster beds in the vicinity of Flapjack Point

(Collins 1892:267, chart).

Mud Bay, head of Eld Inlet, Thurston Co. (T18N R3W S12)

"The point of land between these two streams which is broad and flat, Xwiu13c1d, 'that on which one wipes the mud from his feet.' This term is said to be in the Chehalis language. The curious information was given me that this is where the Chehalis visitors used to "wipe the mud off their feet" after they had dug a supper of clams and were going home."

(Waterman nd:112, #107)

"That he has been told there was a permanent village of the Chehalis Indians at what is now known as Mud Bay; that the Indian name for this place was Squieyelth, which was the Indian name for what the white people call the Chehalis Indian Tribe; that this designation included the Indians living at Mud Bay and Eld Inlet; that when he first visited the place when he was a young man there was no village there but he and other Chehalis Indians would go there quite often for the purpose of digging clams and to catch dog salmon for which this place was very good; that the clams which were not eaten fresh were dried for future use by smoking them; the salmon were caught by hand in the shallow water where they were accustomed to spawn; that he has not been to this place for several years because the game wardens molest the Indians when they come up there to catch fish or dig clams."

(Andrew Lewis, 77, Chehalis. Affidavit in Swindell 1942:126-127)

Totten Inlet east of mouth of Skookum Inlet, Thurston - Mason Co. (T19N R2, 3W)

There were major native oyster beds along the west side and north of the mouth of Little Skookum Inlet. (Collins 1892:map)

Menzies, botanist with the Vancouver expedition, made the following entry in his journal
May 25, 1792:

"Next morning we again pursued the arm keeping the Starboard Shore on board & passing on the other side some Islands that were divided by two or three branches leading off to the Eastward, we found the Arm which was now about a Mile wide winded round to the southwestward & by noon we saw its termination though we could not get with the Boats within two Miles of it on account of the shallowness of the water which was one continued flat, dry at every retreat of the Tide, & on which we found abundance of small Oysters similar to those in Port Quadre."

(Menzies [1792] in Newcombe 1923:46)

Oyster Bay, Totten Inlet, Mason - Thurston Co. (T19N R3W)

There were major native oyster beds in Totten Inlet.

(Collins 1892:267; Townsend 1893:370)

Skookum Inlet, Mason Co. (R2W T19N R2W)

There were major native oyster beds in Skookum Inlet. (Collins 1892:267)

Peale Passage, east of Squaxon Island, Mason Co. (T20N R2W)

This passage had native oyster beds (Collins 1892:267).

Oakland Bay, Mason Co. (R2W T20N)

This was another area of native oyster beds (Collins 1892:267).

North Bay, Case Inlet, Mason Co. (T22N R1W)

"That there was probably a permanent village at this place but he is not certain as to this; that the Indian name for this place was Qui tse-lay-chen, which in English means 'center of where people lived'; that this was one of the well known clam digging grounds of the Upper Chehalis Indians and although he has never been there he has heard that it always has been used by the Indians to obtain clams."

(Andrew Lewis, 77, Chehalis. Affidavit in Swindell 1942:127)

Still Harbor, McNeil Island, Pierce Co. (T20N R1E S15)

"A place on Still harbor, on the north side of McNeill island, Suwo'stld, "steaming place". The reason for this name is that many clams were obtained here, which were cooked by steaming in pits."

(Waterman [1920] Map 5 site list, #156)

The Waterman site noted above is perhaps the saame place referred to here.

"At Still Harbor used to get butter clams"

(Meeker Family Notebook, Vol. 2:39)

Filucy Bay, Pierce Co. (T20N R1W)

"A place on Ellice [Filucy] bay, near Longbranch, TuxsbakEbk.... There were formerly an enormous quantity of clams and mussels here."

(Material in square brackets added. Upper Puget Sound.
Waterman [1920] Map 5 site list, #145)

Long Branch, head of Filucy Bay, Pierce Co. (T20N R1W S24)

Place for drying clams gathered in Filucy Bay.

(Meeker Family Notebooks, Loose Sheets)

Carr Inlet, Pierce Co. (T21N R1W, R1E)

Major native oyster beds on the west side between South Head and Glencove.

(Collins 1892:267, chart)

Henderson Bay, Carr Inlet, Pierce Co. (T22N R1E)

Major native oyster beds.

(Collins 1892:chart)

Purdy, on Henderson Bay at head of Carr Inlet, Pierce Co. (T22N R1E)

Clams.

(Meeker Family Notebooks, Loose Sheets)

Raft Island, south side, Carr Inlet, Pierce Co. (T21N R1E S10)

Clams between island and mainland.

(Meeker Family Notebooks, Loose Sheets)

Arletta, beach along bight, Hale Passage, Pierce Co. (T21N R1E S21, 22, 27)

"Butter clams and, later in season, horse clams."

(Meeker Family Notebook, Vol. 2)

Sylvan Bay to northwest on Hale Passage side of Fox Island, Pierce Co. (T21N R1E S35)
"Butter clams."

(Meeker Family Notebook, Vol. 2:40)

Wollochet Bay, Pierce Co. (T21N R2E S30, 31)

Here the Vancouver Expedition found people drying clams. They purchased some fresh in the shell (Menzies in Newcomb 1923:34).

Summary

Most species of shellfish were readily available to Indians throughout western Washington either in the tidal areas near the drainage system where their winter villages were located, or at more distant locations. Shellfish were taken from all accessible locations and large, productive beach areas were visited by people who travelled great distances to harvest shellfish and other foods from the tidewaters and tidelands.

Shellfish were harvested year-round, but major shellfishing expeditions to collect and cure shellfish for winter stores were generally undertaken in the spring and summer months. At that time, people from upriver villages would visit the coasts and people from mainland villages often travelled to the islands in Puget Sound to dig at favorite beaches.

Like salmon and steelhead, shellfish formed an important staple in the native diet and large quantities were cured for winter stores and for sale to other Indians. As with anadromous species, large quantities of shellfish could be taken at specific times, particularly at low tides. However, unlike the migratory anadromous species, some shellfish were relatively immobile. Salmon and other anadromous species which travelled to the various rivers were taken in largest quantities at the river locations in peoples' home territories. In contrast, intertidal shellfish were taken at beaches within peoples' home territories, but also beyond. In consequence, shellfish might be taken at more distant locations than salmon. While a number of specific shellfishing locations are known, either because they were especially productive, or because they happen to be documented, any listing of locations only provides examples. It is clear that shellfish were taken wherever they were accessible, in good supply, and in good condition.

THE TREATY LANGUAGE

Each of the five treaties negotiated by Governor Isaac Ingalls Stevens with Indians in western Washington reserves to the Indians certain fishing rights and each treaty contains a proviso regarding shellfish that is essentially identical. Article 3 of the Treaty of Medicine Creek, negotiated December 26, 1854 with the Puyallup, Nisqually and other Indians at the head of Puget Sound, will serve as an example:

ARTICLE 3. 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, gathering roots and berries, and pasturing their horses upon open and unclaimed lands: *Provided, however,* That they shall not take shell fish from any beds staked or cultivated by citizens, and that they shall alter all stallions not intended for breeding horses, and shall keep up and confine the latter.

(10 Statutes At Large 1132)

The United States' Intent

To determine what the United States' negotiators intended by the language of the treaty regarding fishing rights and the shellfish proviso it is important to consider what those negotiators knew about Indian use of shellfish at the time the treaty language was drafted. The members of the treaty commission whose statements are most informative, in my view, are those of Stevens and Gibbs. Stevens was designated the officer responsible for negotiating treaties with Indians in Washington Territory. Gibbs, a lawyer and ethnologist, who had had experience on two previous treaty commissions in Oregon and California, served on Stevens' treaty commission in western Washington. Gibbs is generally considered to be the author of the fishing clause language. In my opinion the statements of Stevens and Gibbs provide direct information as to what was intended by the treaty language respecting fisheries.

In addition to his appointment as Governor of the newly created Washington Territory, Stevens was ex-officio Superintendent of Indian Affairs for Washington Territory and was also in charge of the exploratory survey of a northern route for a transcontinental railroad to the Pacific coast. His published reports, containing statements relative to our present concerns, are contained in the records of the Bureau of Indian Affairs; others are published in the Pacific Railroad Reports.

Gibbs was attached to the western division of the Pacific Railroad survey and was charged with collecting information about the Indians along the proposed route. Gibbs' "Report on the

Indian Tribes of Washington Territory," submitted March 4, 1854 to Stevens through Gibbs' immediate superior, George McClellan, was designed to provide Stevens with information he would need for the prospective treaty negotiations. This document discloses at least some of what Gibbs knew about Indian use of shellfish prior to the drafting of the treaty language and what information he transmitted to Stevens in this report.

Gibbs' 1854 report on the Indian Tribes of Washington Territory contains references to Indian use of shellfish on the Pacific coast, on the Straits of Fuca, and in Puget Sound. These are summary statements which reflect Gibbs' understanding that shellfish were abundant in the major regions of western Washington and that Indians throughout western Washington harvested shellfish and relied on it as a staple of their food supply.

At the time that he wrote this report Gibbs had recently returned from a reconnaissance of Shoalwater Bay. He reported on Shoalwater Bay as follows:

"As this last named locality has only recently been much known, a rather more particular notice of it is not out of place. It was really the principal seat of the Chinooks proper, who resorted to the Columbia mostly for their spring salmon, while they dug their clams and procured their winter supplies on the bay. It formed, in fact, a perfect Indian Paradise in its adaptation to canoe travel and the abundance of scale and shell-fish which it furnished. The southern half of the bay belonged to them; the country on the Willopah river to the tribe of that name, and the upper end to the Chihalis. Trails now partially obliterated and overgrown connect it with the Cowlitz, the Chihalis, and different points on the Columbia, with the people of which the inhabitants kept up a trade in dried fish and clams, purchasing in return kamas, wappatoo, and other foreign commodities."

(Gibbs 1854a: 427-428)

The above extract also shows that Gibbs knew about the trade of dried clams from the coastal people to those upriver along the Columbia.

In a continuation of his remarks on Shoalwater Bay, Gibbs noted the participation of the Chihalis and Chinook Indians in harvesting oysters for the Whites at Shoalwater Bay who were exporting it:

"Part of the Chihalis Indians still frequent the bay for fish, clams, and oysters, and with the Chinooks living there, are employed by the whites in taking the latter for market."

(Gibbs 1854a:428)

Gibbs' report on the Klallam at Port Townsend on the Strait of Juan de Fuca notes that these people, and indeed all the people of the Puget Sound region had access to rich food resources which permitted them to live well:

"They have an abundance of salmon, shell-fish, and potatoes, and seem to be very well off. In fact, any of the tribes living upon the Sound must be worthless indeed not to find food in the inexhaustible supplies of fish, clams, and water-fowl, of which they have one or the other at all times."

(Gibbs 1854a:430)

Finally, in describing the people living along the eastern shore of Puget Sound, Gibbs observed that dried shellfish formed a large part of their winter food supply as well as an article of sale to tribes in the interior:

"The tribes living upon the eastern shore possess also territory upon the islands, and their usual custom is to resort to them at the end of the salmon season—that is about the middle of November. It is there that they find the greatest supply of shell-fish, which form a large part of their winter stock, and which they dry both for their own use and for sale to those of the interior."

(Gibbs 1854a:432)

Gibbs' summary statements for each of these areas identify shellfish as a major resource on which the Indians relied. He reported on the trade in dried shellfish to Indians of the interior both via the Columbia River and through the mountain passes leading from Puget Sound to the eastern district of the Territory. As well, Gibbs reported on the White export trade of oysters to the San Francisco market and Indian participation in this new commerce.

Further examples of Gibbs' familiarity with the Indians' shellfish use are found in his report entitled Tribes of Western Washington and Northwestern Oregon. (1854-55) which was published in 1870.

"Shell-fish in great variety exist in the bays and on the coast, and many of these are dried for winter stores."

(Gibbs [1854-1855] 1877:195)

Other statements of Gibbs contained in the same monograph refer to shellfish. In writing about Shoalwater Bay, Gibbs remarked:

". . . It was a district admirably suited to Indian habits, furnishing great quantities of fish and clams, and the neighboring forest abounding in game."

(Gibbs [1854-1855] 1877:166)

Speaking about the Chehalis Indians, Gibbs wrote:

". . . the Tshihalis properly belong to the bays, from which they obtain winter salmon and shell-fish, and trade with the interior for kamas roots and berries."

(Gibbs [1854-1855] 1877:167)

In his discussion of the Makah Indians and their fishery resources, Gibbs noted:

" . . . Muscles and echini of large size are also abundant."

(Gibbs [1854-1855] 1877:175-176)

In the above quote, echini is used as a scientific term to refer to sea urchins. Finally, after a discussion referring to the Straits of Fuca and Puget Sound, Gibbs stated:

"Shell-fish in great variety exist in the bays and on the coast, and many of these are dried for winter stores."

(Gibbs [1854-1855] 1877:195)

In my opinion, these statements taken together, document Gibbs' recognition that shellfish were a staple food of the Indians in each of the major regions on which he reported -- the Pacific Coast, the Straits of Fuca, and Puget Sound. Gibbs' summary statements regarding the most important foods of each region consistently include shellfish as part of the discussion of fish.

Finally, In 1851 Gibbs was assisting Redick McKee in negotiating treaties with Indians in northwestern California. On September 1 McKee sent Gibbs down the Eel River in a canoe to examine the country around Humboldt Bay to find a suitable location for an Indian reservation for Indians of Eel River and the vicinity of Humboldt Bay. Gibbs explored the country and obtained information regarding the Indians which he conveyed to McKee. Three days later, after receiving Gibbs' report, McKee concluded to establish a reservation for those Indians on the coast and on Eel River. He described the lands to be reserved along the coast and Eel River and the rights to be reserved. The description of land is followed by:

"together with the right of taking fish, in any part of said river, below the said place of beginning and of fishing or digging for shellfish on any part of the Coast."

(McKee 1851)

Humboldt Bay is a large sheltered bay on the northern California coast within the territory of the Wiyot Indians. Clams and mussels were the most important shellfish to the Indians in aboriginal times. In post contact times a commercial oyster fishery developed at Humboldt Bay.

The proposed language, quoted above, shows that Gibbs understood that shellfish were a staple food for the Indians of this area, and that McKee's intent was to secure to the Indians the right to have continued access to the shellfish.

". . . Their food consists principally of fish, eels, shell-fish, and various seeds, which, like those in the southern valleys, they collect after burning the grass. A small species of sunflower furnishes a very abundant supply of these last. The

sallal, salmon, and berries, hazel nuts, &c., also abound. Occasionally the more enterprising snare the elk, which are very numerous. ...

. . . The reservation could at this time be made without embracing any land occupied by whites, and yet to include all the requisites for subsisting the Indians themselves. The tract was selected after obtaining the best information practicable, and comprised the country between Eel river and the Mendocino range, extending from the coast up to a point opposite to our camp. This it was believed would furnish sufficient agricultural land, together with the fisheries upon which they chiefly depend."

(Gibbs 1853:127,130)

Three years later, Gibbs was a member of the Stevens treaty commission in western Washington.

Based on the above, it is my opinion that Gibbs understood shellfish to be a major resource for these Indians and one which was central to their economy. It is my opinion that the 1854 Gibbs' Report on the Indians of Washington Territory leaves no doubt that Gibbs understood that the Indians of western Washington had abundant shellfish resources and relied upon shellfish for a major part of their winter stores, for trade to other Indians, and of recent date at Shoalwater Bay as participants in the supply of oysters to market.

The information in the March 4, 1854, report was transmitted to Stevens and was duly read by him. Stevens took exception to that portion of the report in which Gibbs offered suggestions for the organization of the Indian Service, apparently believing that Gibbs was intruding on matters beyond those on which he had been asked to report. However, Stevens had no criticism of that portion of the report which described the Indian tribes and their mode of life. Stevens' displeasure with part of the document is evidence that he had, in fact, read the report.

Later that year, Stevens submitted much of Gibbs' report, including all of the portions extracted above, without any material alteration, as his annual report to the Commissioner of Indian Affairs. The report was submitted over Stevens' name under date of September 16, 1854. It is my opinion that Stevens, through Gibbs' report, and prior to the treaty negotiations, was aware of the importance of shellfish to Indians in all of western Washington and understood that this was a resource on which they depended for food and as an article of commerce.

Stevens' report to George Manypenny, the Commissioner of Indian Affairs, regarding the recently concluded treaty of Medicine Creek, also shows his knowledge of the importance of shellfish to Indians. Stevens explained the fishing clause language to Manypenny in the letter transmitting the treaty:

"The Indians on Puget Sound have been for a considerable time in contact with the Whites, have acquired many of their habits and all of their vices. They form a very considerable proportion of the Trade of the Sound. Many are good laborers and are employed in families, vessels, lumber yards, mills and on farms. They catch most of our fish, supplying not only our people with clams and oysters, but salmon to those who cure and export it.

The provisions as to reserves and as to taking fish, pasturing animals & gathering roots and berries had strict reference to their condition as above, to their actual wants and to the part they play and ought hereafter to play in the labor and prosperity of the Territory."

(Stevens to Manypenny, 30 December 1854)

One point to Stevens' letter to Manypenny was to explain how he had complied with his instructions for negotiating the treaty. The letter advising Stevens that he had been designated to negotiate treaties on behalf of the United States with the Indians of Washington Territory contained explicit language that the treaty arrangements were intended to be permanent:

"It is the expectation of the Department that the sum appropriated, will prove sufficient to defray all expenses incurred in and incidental to making conventional arrangements *designed to be permanent*, with all the Tribes and fragments of Tribes within your Superintendency,"

(Mix to Stevens, 30 August 1854) (emphasis added, italics not in original)

Stevens was given general instructions for making treaties with the Indians of Washington Territory. He was also sent copies of treaties recently concluded in Oregon and in Nebraska. These were to provide suggestions and to illustrate government policy. He was specifically directed to make any necessary alterations to meet local circumstances:

"With these general views, *you will nevertheless exercise a sound discretion, where the circumstances are such as to require a departure from them*; and you will take care, in all treaties made, to leave no question open, out of which difficulties may hereafter arise, or by means of which the Treasury of the United States may be approached."

(Mix to Stevens, 30 August 1854) (emphasis added, italics not in original)

The major departure made in the Stevens treaties is the language contained in the fishing clause. The United States wanted the Indians to continue to be self-supporting. Prior to the treaties, and at treaty time, Indian economy in Washington Territory was based on fishing, hunting, and harvesting wild plants, such as roots and berries. In western Washington the fisheries included marine fisheries as well as river fisheries. As discussed above, there was an important trade in dried shellfish from coastal Indians to Indians living east of the Cascade Mountains. In the years preceding the treaties, Indians in western Washington also engaged in

sale of shellfish, both fresh and cured, to White settlers and businesses, and to supply the newly established export trade in oysters from Puget Sound and Shoalwater Bay to San Francisco.

As settlement increased, the treaty commissioners anticipated that availability of game, roots, and berries would be diminished, but the fisheries were thought to be inexhaustible. Stevens and others anticipated that fisheries would prove to be a mainstay of the economy of western Washington.

It is my understanding, based on the above, that Stevens was instructed to shape treaty provisions appropriate to local circumstances and that the United States intended the treaty arrangements to be permanent. In my opinion, the treaty language with respect to fisheries and restrictions thereon and Stevens' explanation of the fishing clause reflect his compliance with those directives. It is my opinion that Stevens understood that the Indians of western Washington relied on fish, including shellfish, as staple foods, as articles of intertribal trade, and for sale to Whites, and that these were indispensable to their economy.

It is also my opinion that Stevens and his advisers used the term "fish" to include "shellfish" and made specific reference to shellfish only when there was a particular reason to do so. It is my opinion, based on evidence to be discussed below, that Stevens and his advisors consistently used the terms "fish," "fishing," "fisheries," and "fishers" in the same generic sense to include reference to shellfish as well as to other fish. Specific reference to shellfish as a separate category, or mention of specific kinds of shellfish, was made when there was a particular reason to do so.

The use of the term "fish" to include "shellfish" was not a novel use of the term by Stevens and his advisors. Gibbs ([1854-1855] 1877:233) quotes a description by George Vancouver of an Indian camp in Puget Sound in 1792 where people, in Vancouver's words, were drying "clams, muscles, and a few other kinds of fish."

Gibbs, prior to serving as one of Stevens' advisors, visited Shoalwater Bay in 1853 and wrote of "the great quantities of shell and other fish which abound in its waters It is the only place yet known on the coast where oysters are found in any quantity, and the shallow waters are admirably adapted for their cultivation." (Gibbs to Secretary of the Treasury, 5 July 1853)

James Swan, another of Stevens' advisors, wrote about the "oyster-fishers" and the "oyster-fishery" of Shoalwater Bay. (Swan [1852-1855] 1857:59)

In passing, I note that some shellfish at treaty time were denominated "fish." The razor clam was called a razor fish at treaty time and for some decades thereafter. Cuttlefish at treaty time was a generic term used for squid and octopus, as well as other cephalopods.

Stevens' letter transmitting the Treaty of Medicine Creek reported that the Indians of Puget Sound "catch most of our fish, supplying not only our people with clams and oysters, but salmon to those who cure and export it." (Stevens to Commissioner of Indian Affairs Manypenny, 30 December 1854)

It is my view, based on the above, that Stevens recognized the need to include language in the treaties to secure continued Indian access to these resources. Based on his knowledge of the Indians and his instructions as to treaty arrangements, my opinion is that Stevens intended the right to take fish provisions to be permanent.

Finally, it should be noted that there is nothing, so far as I have ever seen, that indicates that Stevens or any of the other negotiators for the United States ever expressed any intent to prohibit Indian fishing for shellfish or that they thought that the treaty would lead to that result. Based upon Stevens' and Gibbs' knowledge of Indian reliance on shellfish, the United States' interest that the Indians be self-supporting to minimize the financial obligations of the government, and the lack of any contrary expression of intent, it is my opinion that the United States negotiators intended that the tribes should continue to have access to shellfish after the treaties.

Indian Understanding

It is also my opinion that the Indians understood that the treaties would not prevent them from continuing their use of and reliance on shellfish. It is my opinion that they would have been unwilling to sign the treaties if they had understood that they would be prevented from taking any shellfish where they were naturally found within the areas they were accustomed to use for fishing. My opinion is based on the importance of shellfish as a staple food for Indian people, its important role in trade with Indians and Whites, the post-treaty statements and actions of the Indians and the Whites, and the assurances given to the Indians by Stevens and others of the treaty commissioners that the Indians would be able to continue to fish after the treaties.

The importance and central role of shellfish in the culture of Indian people has been explained in detail above. Given the Indians' vital interest in shellfish, I do not believe that they

would have knowingly given up their right to take shellfish as they always had. I can find nothing in the treaty language or the record of the treaty proceedings that indicates that the Indians were told or expected that their use of shellfish would change as a result of the treaties, other than that they would have to share their fishing places with the Whites.

The Indians' understanding that they would continue to have access to shellfish is shown by what happened in the years and decades immediately after the treaties. Shortly after the treaties, Fayette McMullin, Stevens' successor, remarked on the "immense quantities of shell fish" taken by the Indians of Puget Sound and the Strait of Juan de Fuca. (McMullin to Buchanan, 20 October 1857).

Evidence that in 1860 Indians continued to harvest oysters at Shoalwater Bay is demonstrated in a document preserved in the Records of the Department of Indian Affairs in the National Archives. The document is a manifesto issued by 21 of the Whites who were engaged in the oyster trade at Shoalwater Bay. The entire document is reproduced here:

Bruceport W. T., March 5, 1860

At an adjourned meeting of the residents of this place held in the Block House on March 5th 1860 the following resolutions were adopted.

Resolved that after the eight day of March 1860 the trade with indians for oysters shall cease, and those who attempt to carry it on shall do so at their peril and shall expect no farther warning from an outraged community.

Resolved that a committee of three (viz) Hiram Paulding, Isaac Smith and Sanfield Soule be appointed to warn all indians to cease collecting oysters for sale and to warn all foreign indians to depart (By foreign indians are meant those not belonging to this place) and those indians are allowed untill the 8th inst to depart failing they may if necessary be ejected.

Resolved that we disclaim an attempt to injure Indians either in their persons or property and we will discountenance all acts of that nature.

Resolved that we will mutually support each other in such measures as may be necessary. The indian trade in oysters and shall consider those who attempt to continue it as enemies to our interests and to the prosperity of the white inhabitants, and we hereby agree and pledge ourselves to assist and protect each other against any attempt at violence or intimidation.

*Resolved that as it has been declared lawful to abate a nuisance We will abate this one at any peril.

Resolved a copy of these resolutions shall be served on those persons waited on by our committee.

Wm Henegan	M.L. Wikle	Amos Smith
Seth Bullard	John Nelson	Hiram W. Paulding
George Johnson	Joseph Francis	Sanfield Soule
Wm Saunders	F.S. Garretson	John Herbert
Isaac Smith	Chas Barstow	John R. Nelson
Wm Clement	Chas Anderson	I. B. Baker } objected to the
G.W. Parker	John Pope	B.A. Townsend} fifth resolution

It is my opinion that the March 5, 1860 resolutions of some of the White oystermen at Shoalwater Bay demonstrates that Indians from the local area and from elsewhere were harvesting oysters at Shoalwater Bay and selling the oysters to Whites. In my opinion the above March 5, 1860 manifesto is evidence that Indians at Shoalwater Bay and from elsewhere considered that they could continue to sell oysters to Whites as they had done before and as Governor Stevens had assured them they would be able to continue to do.

The Indian understanding that they could continue to harvest shellfish and sell them to White people was general and apparently was an understanding shared by Michael T. Simmons, Indian agent for the Puget Sound district, and a member of the Stevens treaty commission. In 1858 Simmons reported to Nesmith, then Superintendent of Indian Affairs for Washington and Oregon Territories, that the Indians party to the Treaty of Point Elliott were concerned about the delay in ratifying the treaty. Simmons reported a meeting with about 750 Indians at Skagit Head at which Hetley Kanim, a Snoqualmie sub-chief said:

"We consider it good to have good white people among us. Our young women can gather berries and clams, and our young men can fish and hunt, and sell what they get to the whites."

(Simmons to Nesmith, 30 June 1858)

The Indian agent in charge of the Bellingham Bay Agency (Semiahmoo, Lummi, Nooksack, and Samish Indians) noted in his annual report for 1857:

"They have an abundance of fish; salmon is the principal stand-by; also shell fish of all kinds; in fact, I think that I never saw a country so well adapted for the Indians to live in as this."

(Fitzhugh to Nesmith, 18 June 1857)

Speaking of the Semiahmoo in particular, Fitzhugh wrote:

"They have a large prairie country back of the coast, but prefer to live on a bay, whence they derive their name, and where the old homes of their parents now

stand. They dare not make that their general stopping place, but go there to get their shell-fish and fish and vegetables."

(Fitzhugh to Nesmith, 18 June 1857)

There is an abundance of testimony in later years from Indians who had been parties to the treaty negotiations or present at the negotiations that they understood they would be able to continue to harvest shellfish after the treaties as they had done prior to the treaties.

Caroline Leighton, who resided at Port Angeles in the mid 1860s, recounted a conversation with Klallam Chief Yeomans at Port Angeles October 29, 1866:

"Today, when we were coasting along the shore, we saw Yeomans preparing his canoe for a long excursion. It was lined with mats. In the middle were two of the baskets the Indians weave from roots, filled with red salmon-spawn. Against them lay a gray duck, with snowy breast; then, deer-meat, and various kinds of fishes. Over the whole he had laid great green leaves that looked like the leaves of the tulip-tree. The narrow end of the canoe was filled with purple sea-urchins, all alive, and of the most vivid color. I took one up, and asked him if they were good to eat. He said, "Indian *muck-a-muck*, not for Bostons" (whites).

(Leighton [1865-1866] 1884:111; see also 23)

Indians apparently also understood that their right to continue to harvest shellfish was not to be destroyed by White settlers allowing their pigs to root in the tidelands. Eli Hathaway, a settler on Whidbey Island, wrote to the Department of Indian Affairs seeking compensation because local Indians had killed some of his pigs who rooted up the clams from the beach. His letter is produced here in full :

Whidbys Island
Washington Territory
Nov. 19. 1859

Sir

Inclosed please find my account against the Government for the sum of One Hundred Dollars (\$100), this amount is based as you will perceive by refference to the enclosed affidavits upon trespasses committed by the Skagit Tribe of Indians in my neighborhood upon my Hogs that may in all probability have become obnoxious to the Indians as you may be aware this species of property are partial to clams or whatever else they can get to eat and these Hogs ranged a good deal upon the beach unavoidably as my residence is quite contiguous to the water whence they became objectionable to the Indians and they killed them -- and regarding it as impolitic to have a row with these Indians have concluded it probably best to make out my account and forward it to you in the hopes that you

will give it your kindly consideration and that through your instrumentality I may be paid for the loss of this property.

Very Respectfully
Your Ob Servt
Eli Hathaway

E. R. Geary, Esqre
Superintendent of Indian Affairs
for Oregon & Washington Territory

It is my opinion, based on the above sorts of post-treaty evidence, that the Indians understood that the United States intended them to be able to continue to take shellfish from the tidelands and waters for their own sustenance and to sell the shellfish which they harvested to derive a cash income from their labor.

Additional support for this view comes from statements made by Indian people in litigation in the early part of the twentieth century. For example, Julia Sam Simmons, about 54 or 55 years of age, a member of one of the bands of the Squaxin Tribe of Indians, said:

". . . all of our wild game, fish, both fin and shell fish, were left to the Indians to make their living from, the same as they did when there was no white person around their territory, in the streams or in the bays; it don't make any difference where they were, an Indian had the right to go catch his salmon or his wild game at any time to make their living from. Otherwise, they would not have agreed to the treaty, because that is the only living they had -- all wild game and fish. And they still want it to-day, the same as they did, with their grandfathers and mothers."

Mrs. Anna Fredericks, a Squaxin Indian, age about 61, whose occupation was that of digging clams, testified that:

"She heard the old people say about these fish rights and oyster rights and game rights, that they were going to have that; she heard the old people say that all the time, that they had that right. She said at that time that the treaty was made the old Indians didn't know anything about any food excepting their own food, and that is why they asked for their rights, for all of this game.

. . . .
Question. Well did the people get these game rights and oyster rights and fish rights that Governor Stevens promised them?

Answer. No; they don't get that right now. Probably the old Indians did, but not them -- not in her generation.

Question. Did the old people say that the treaty was interpreted to them that they would only have such game rights and fish rights as the white people in the territory had?

Answer. Yes; she heard them saying that, but nowadays it isn't like that.

Question. I don't think she understands the question. Did the old people understand by the treaty that they didn't have any rights except what the white people did?

Answer. No; she didn't hear the old people say that."

Dick Lewis, over 80 years of age, a member of the Skokomish Tribe of Indians, said:

"Question. Was there plenty of game and fish and shellfish and oysters in your country in early days?

Answer. Everything was plentiful.

Question. How is it now?

Answer. Very scarce.

. . . .

He said that if you wished to hear Governor Stevens' promise to the Indians he will say it as he heard it, he will repeat. This is what Governor Stevens stated to the old Indians at the treaty. I will state everything as nearly as I can remember as I heard it at that time.

Now, the Indians at that treaty wished to reserve the streams and fish and all shellfish, deer, elk, bear, ducks, and all game, and Governor Stevens said that "They will all be yours. All that I want is the timber and the land, and all games of all description and fish will be yours, and also cedar with which to make your canoes with; also cedar bark" was made into buckets.

We wonder why we get arrested when everything is ours, was promised us. We can not go out and get a deer without being arrested. We can not get fish out of the streams without being arrested. We were raised on wild game and we still like to get them, but on account of the present laws we are unable to do so. He says that at no time can we go out to a white man's place and kill a cow or pig or anything, because it is theirs; and we consider the wild game is ours."

Joe Dan, about 80 years of age, a member of the Skokomish Tribe of Indians testified:

"Question. Were there many oysters in the bay?

Answer. Yes; there were plenty of oysters.

Question. Has the State taken away those oyster lands from the Indians?

Answer. Yes."

Frank Allen, didn't know his age, a member of the Skokomish Tribe of Indians said:

"Well, if you want it, I will tell it just as it is, as the chiefs said. Now they left off – they wanted their clams, they wanted their salmon, they wanted their game of all kinds in the woods; they wanted their cedar timber to make their canoes and buckets and such things as they used to use; dead tree bark, dead tree, they want that for the firewood. Governor Stevens told them all right, it is yours, and the creeks where the salmon runs. That belongs to me. That left off. You can have my country and the timber with it, and that is what the chiefs said, these four I have been counting to you. . . . "

Charles Blowl, who did not know his age, being a Swinomish Indian. (a boy, present at treaty), testified:

"Question: How did John Taylor interpret the treaty with reference to the fishing rights reserved by the tribes who signed it?

Answer. John Taylor said "White man won't take your fish, clams, and all your Indian foods; you shall have it for always."

John Davis, who did not know his age, a Swinomish Indian.(present at treaty), said:

Question. What rights did John Taylor say the Indians reserved in the fish and game in the country, when he was interpreting the treaty?

Answer. John Taylor told the people that the Great Father said "You people will keep your fish, your clams, and all your food, because God has given you folks all that."

These statements are consistent with the assurances the Indians were given at the treaty negotiations. For example, in his opening address at the Chehalis River treaty council, Stevens said:

"We want this, if any of you want to go to Shoalwater Bay to dig oysters for pay, we want you to do so."

(Record of Proceedings at Chehalis River Treaty Council, 27 February, March 1, 1855.)

At the same treaty council, Stevens also said:

Handwritten notes:
 (1) ...
 ...
 ...
 ...

". . . on the Copalis there is a prairie, now there used to be twice as many Indians as there are here North of there, and they could not sell salmon, oysters and cranberries to the settlers for there were none. Well you can now not only sell these things but you will besides be furnished yearly with clothing, tools, etc."
(Swindell 1942:369)

It is my opinion that the above statement of Stevens refers to past, present, and future sale of oysters by Indians to Whites.

Meaning of "Staked or Cultivated"

The treaty clause provides that Indians "shall not take shell fish from any beds staked or cultivated by citizens." The "staked or cultivated" language appears to relate to the commercial oystering operations in which non-Indians were then involved.

The export of oysters from Washington Territory to San Francisco appears to have started in 1851 with shipments via sailing schooner from Shoalwater Bay. By 1853 shipments of oysters to San Francisco from Port Townsend and Puget Sound are also recorded. (Columbian, 18 January 1853, 6 November 1853)

On March 27, 1854 the first Territorial Legislature passed an Act for the Preservation of Clams, Oysters, and Other Shell Fish. The legislation prohibited anyone who had not been a resident of Washington Territory for at least a month from taking "oysters, clams, or other shell fish, for sale or transportation, in any of the rivers, bays, or waters of this territory" and provided for penalties and permits under certain conditions.

I have found no evidence that any shellfish other than oysters were an article of White commerce at that time, although there may have been some of which I am not aware. If there were not, it seems clear that the legislature anticipated that there would be in the future.

The oyster trade at Shoalwater Bay was growing rapidly and was duly noted in a number of newspaper articles. In August 1854 the method of "cultivating" oysters at Shoalwater Bay was described as follows:

"The country around the Bay is settling up rapidly -- the oyster business is being embarked in on scientific, Chesapeake Bay principles and already furnish the market of San Francisco with a cultivated and respectable sized specimen of the article."

(Olympia Pioneer and Democrat, 5 August 1854)

James Swan, who arrived at Shoalwater Bay in the latter part of 1852 to engage in the oyster trade, described the oyster fishery there. His description appears to refer to the summer

of 1853. He notes the staking of beds. His comment that the staked beds can be reached by foot at low water suggests that the staked beds were at intertidal locations:

"These oysters are found on the flats and in shoal water, in different parts of the Bay, and are readily procured, either by collecting them by hand at low tide, when the flats are bare, or, in the deeper water, by oyster-tongs, rakes, or dredges. The best method is by using the tongs. When the tide is nearly out, the boats and canoes start for the oyster-beds, where they wait till the water is gone, when they go to work picking up by hand into baskets, which are emptied into the canoes. These hand-picked oysters are the best, as they are all good; those taken by the tongs, being half shells, have to be carried ashore and culled over, and then put on the beds. Each oysterman has a bed, which is marked by stakes driven into the flats, and can be reached at any time, either by foot at low water, or in boats at high tide.

As the tide rises and covers the flats, the boats and canoes begin to creep ashore; and as soon as they arrive at the beach a lively time ensues, trading, measuring, and shovelling the oysters, and for an hour or two all is bustle."

(Swan [1852-1855] 1857:60)

It appears from Swan's description that the oysters were taken up from the natural beds, sorted and culled, and then placed on staked beds to fatten and to await the arrival of schooners. He notes that after the arrival of a schooner:

". . . the day of loading would be designated, and then each man exerts himself to the utmost to get as many on board as he can. The scows, boats, and canoes are loaded at low tide, and, as soon as they float, they start off for the vessel. First come, first served, is the motto, and a bustling scene ensues."

(Swan [1852-1855] 1857:60-63)

Swan reports that in the winter of 1853-54 every one of the oystermen at Shoalwater Bay lost his oysters during a heavy frost that lasted three or four days. This suggests that the staked beds were so located that the oysters were exposed to the frost at least at intervals during that period. This would be consistent with an intertidal location of the staked beds.

Anticipation of a burgeoning future commerce in whale fisheries, salmon, and shellfish appears in a newspaper article which was published the month before Stevens negotiated his first treaty in western Washington. The article noted that salmon and shellfish "will someday be the source of an important trade. . . . The waters of the Sound and Straits (of Fuca) are alive with almost every species of the fish kind, from the Mussel throughout all the testacea, crustacea, and cetaceous species." (Olympia Pioneer and Democrat, 4 November 1854)

Based on the newspaper articles noted above, and others in similar vein, and the 1854 Act passed by the Territorial legislature cited above, it is my opinion that the treaty language

containing the proviso about "staked or cultivated" shellfish beds was written with an awareness of practices at Shoalwater Bay and an anticipation of further expansion of oyster and other shellfish commerce.

Further, it is my opinion that Indian understanding of "staked or cultivated" would have been based on practices at Shoalwater Bay that they had seen or heard about. As described by Swan, this involved culling and relocating oysters at intertidal locations.

In my opinion the United States negotiators intended the treaty language referring to "staked" beds to mean those beds which were the depository for oysters placed there by the oystermen, as distinct from the natural beds. The staked beds were those intertidal locations where the oysters were stored as described above.

Summary

In summary, the treaty clause respecting fishing, including the shellfish proviso, was written with knowledge of the role of shellfish in Indian life and economy and with a view to the future importance of fisheries in the non-Indian economy. The Indians were assured and understood that they were to be protected in the continued right to their traditional fisheries. No limitations were indicated with respect to places of harvest within their usual and accustomed grounds and stations, except for shellfish beds which had been staked or cultivated by citizens. No limitations were indicated regarding species of shellfish to be harvested.

The Indians were assured that they could continue to fish to secure food for themselves and to earn money by selling fish, including shellfish, to non-Indians. These assurances were necessary both because of the central role of shellfish in the native economy and because of the prospective importance of fisheries in the non-native economy.

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