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THE EARLY DIFFUSION OF THE POTATO AMONG THE COAST SALISH[1]

WAYNE SUTTLES

THE FIRST EUROPEANS to observe the Coast Salish peoples of the Strait of Juan de Fuca, Puget Sound, and Georgia Strait were the Spanish and British explorers of 1790-91. Their accounts describe these tribes as hunting and fishing peoples without cultivation of the soil.[2] Fifty years later, travelers, traders, and the like report Indian women of nearly every tribe in this area cultivating patches of potatoes with digging-sticks. At this time, in the 1840's, Whites were living only at a few Hudson's Bay Company posts. Settlers began coming into this area in the 1850's, but the potato seems to have arrived before them. Living informants tell how their people got potatoes from other Indians. Settlement eventually destroyed the old potato patches or Whites taught the native men farming on reservations.

The cultivation of potatoes during this period between first contact and settlement suggests three problems: First, where and how did the Coast Salish get their potatoes? Second, what is the relation of the sort of cultivation they practised to pre-contact practices? Third, what bearing does this have on the relation between food-gathering and cultivation in general?

I. THE SOURCE

Historic Evidence

The earliest possible sources of potatoes on the Northwest Coast are the Russian settlements in Alaska and the Spanish settlements at Nootka Sound and Neah Bay.

Although the Russians arrived early, their first colonization was at Kodiak in 1783. Here and at colonies established later to the east agriculture was tried but apparently without too much succees.[3] Diffusion down the coast may have

1 A condensed version of this paper was read before the Northwest Anthropological Conference, May 5, 1950. The material from field notes was obtained while doing work sponsored by the University of Washington and by the Viking Fund.

2 I have found no reference to potatoes or cultivation in the accounts of Espinosa y Tello (Wagner, 1933), Vancouver (Meany, 1942), or Menzies (Newcombe, 1923) where they refer to exploration of the Strait of Juan de Fuca, Puget Sound, or Georgia Strait, nor in Fraser's account of his descent of the Fraser River in 1808 (Masson, 1889).

3 Bancroft says that Shelikof, the founder of the colony on Kodiak, planted vegetables but

occurred, but evidence I will give later suggests diffusion in the opposite direction.

The Spanish put in gardens at Nootka, and one account mentions a number of plants, including potatoes, seen growing there in 1791.[4] But the Spanish did not stay long, and Jewitt in 1803 found a few European plants seeding themselves on the site of the Spanish establishment. He mentions no potatoes among them.[5] I think Nootka Sound may be ruled out as a possible source of potatoes for the Coast Salish. There was also a garden at Neah Bay in 1792, but the settlement was abandoned after less than a year.[6]

Another possibility is that one or another of the earlier traders planted potatoes simply to create good will among the natives. A Captain Douglas planted some beans for the Haida in 1798 as such a good will gesture.[7]

However, the most likely source of potatoes is, of course, the fur companies. The Pacific Fur Company planted twelve potatoes near Astoria in 1811 and three years later harvested fifty bushels of them.[8] When the Hudson's Bay Company took over Astoria, they continued to farm. Soon after posts were established on the Pacific slope, the Hudson's Bay Company was faced with the need for a supply of agricultural products not only for its own use but to fulfill a contract with the Russians as well.[9] Therefore the Hudson's Bay Company established farms in connection with its forts. Gardens were planted at Fort Vancouver in 1825,[10] Fort Colville in 1826,[11] Fort Langley in 1827,[12] and at Fort Nisqually in 1833.[13] At each of these posts company employees were married to native

could not persuade the Kaniagmiut even to eat them, let alone cultivate them (Bancroft, 1886, p. 227n.). However, he says, "Khlebnikov . . . claims that mealy and good-flavored potatoes were raised at Sitka on ground manured with sea-weed, the crop being in some places 12 or 14 to one, but there is no confirmation of this statement." Furthermore, Wrangell states that more than a ton of potatoes were raised in 1831 (Bancroft, 1886, p. 687n.).

Dr T. C. Frye has told me that in 1913 he observed the Indians of New Metlakatla growing potatoes, using *Nereocystis* kelp as fertilizer. He believes this use of kelp was unknown to Americans at that time. It seems possible, then, that the planting of potatoes and the use of kelp as fertilizer by Indians go back to the time of Russian occupation.

4 Wagner, 1933, p. 162.

5 Jewitt, 1815, p. 51. Sproat (1868, p. 53) mentions potatoes as something obtained within the preceding twenty years.

6 Wagner, 1933, p. 62. The account mentions only green vegetables.

7 Dawson, 1880, pp. 159B-160B.

8 Barry, 1929b, p. 161. According to Barry the first Whites to plant in the Oregon country were the crew of the *Ruby*, near Ilwaco, in 1795. Barry (1929b) and Scott (1917) give considerable information on early White farming, especially in Oregon.

9 Bancroft, 1887, pp. 61-62, 80-81.

10 Scott, 1917, p. 56.

11 Bancroft, 1886, p. 472.

12 McKelvie, 1947, p. 46, p. 48.

13 Bagley, 1915, p. 187.

women, and it is likely that through them cultivation was spread among the natives. The Company may have encouraged the natives to take up cultivation in order to have another source of supply in emergencies.

Potatoes may have come up the coast from the mouth of the Columbia to the Strait, but the Hudson's Bay Company's Fort Langley, founded on the Fraser in 1827, looks like the most probable source of potatoes for the Strait and northern Sound peoples. The testimony of a company officer, the accounts of informants, and linguistic evidence support this conclusion.

James Douglas, in a letter to London in October 1839, wrote:

> I may be permitted to mention . . . as a matter to interest the friends of our native population, and all who desire to trace the first dawn and early progress of civilization, that the Cowegians around Fort Langley, influenced by the counsel and example of the fort, are beginning to cultivate the soil, many of them having with great perseverance and industry cleared patches of forest land of sufficient extent to plant, each ten bushels of potatoes; the same spirit of enterprise extends, though less generally, to the Gulf of Georgia and de Fuca's straits, where the very novel sight of flourishing fields of potatoes satisfies the missionary visitors that the Honourable Company neither oppose, nor feel indifferent to, the march of improvement.[14]

Douglas was, of course, attempting to refute accusations that the Hudson's Bay Company was determined to keep the country in a state of savagery, so he may have exaggerated the role of the company in the spread of cultivation. However, Fort Langley looks like the best possibility for the northern Sound and Strait.

The next earliest report of potatoes grown in this area I have discovered is that of Father Blanchet, who visited the Skagit in 1840.[15] In 1841 Wilkes found them grown also by the Port Discovery Klallam and the people of Port Townsend (possibly Chemakum). The same year some Indians at Point Roberts offered some to George Simpson. In 1842, while reconnoitering the site of the future Victoria, Douglas found the Songish growing potatoes, and the next year he reported them for the Dungeness Klallam. In 1843 Father Demers was given potatoes by the Snohomish.

During the 1850's potatoes were reported for the Duwamish, Skagit, Makah,

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14 *Fort Langley Correspondence,* p. 190; also quoted in McKelvie, 1947, p. 57. "Cowegian" is an older spelling of "Cowichan." Actually the name Cowichan belongs properly only to the villages on the Cowichan River, Vancouver Island, but it has been used by several writers as a general term for the Halkomelem-speaking peoples. Here Douglas simply meant Lower Fraser tribes.

15 This and the references immediately following are included in the Appendix.

Cowichan, Nanaimo, Samish, Nuwhaha, and Semiahmoo. And I am sure I have not exhausted the literature.

Fitzhugh's description of the Nuwhaha (whom he calls "Neukwers") and other interior groups of northern Puget Sound deserves to be quoted in full because of the cultural and historic context in which potatoes appear. This was written in 1857.

> They have very little intercourse with the Saltchuck Indians, and never had seen a white man in 1852, when the first settlers came to this bay [Bellingham Bay], and did not even then come down for a year after.
>
> They dress in skins and blankets, made of dogs' hair and feathers, of their own manufacture. They have had no muskets until the last three years. They cultivate small patches of potatoes but subsist principally on elk, deer, fish, and berries.[16]

From this one may infer that the Nuwhaha had potatoes before they had any direct contact with Whites.

Outside the Sound and Straits area the situation was the same. Potatoes were raised among the Haida by 1841, the Lower Thompson by 1847, the Kalispel by 1841, the Copalis and the Quinault by 1854, and the Umpqua by as early as 1834.

It is possible, of course, that the word "potato" does not always refer to the white potato, *Solanum tuberosum*. One, perhaps several, native plants have been called "Indian potato." The plant most frequently so called was *Sagittaria latifolia*, called "arrowhead" in English, *wapato* in Chinook Jargon. The two plants, *Sagittaria* and *Solanum*, are not closely related, look quite unlike, and have quite different habits: *Sagittaria* has leaves like a calla lily and grows under water; it was gathered by wading and treading the roots loose. But apparently the two taste alike, so native names for *Sagittaria* came to be used by Indians for the white potato. But the Whites usually used the name "wapato" to designate *Sagittaria*, and when they wrote of large quantities of potatoes of fine quality being raised on the natural clearings called "prairies," it is hard to believe they could have been writing of *Sagittaria*. Several native plants grew on the prairies, the most important being camas. But the early Whites also knew camas and called it that.

16 Fitzhugh, 1858, p. 326. The Nuwhaha lived in the Samish valley and have sometimes been called "Upper Samish." This is a confusing term, however, since they and the Samish were different in orientation and in speech. The Nuwhaha were an inland people who spoke Puget Sound Salish; the Samish were a salt-water people who spoke lək'ɵŋe'nəŋ, the language I have called here "Straits Salish" from its distribution on both sides of the Strait of Juan de Fuca. The term "Nuwhaha" I have taken from the native name which appeared in the Point Elliot Treaty of 1885, "Noo-wha-ha."

Old Indian informants describe the potatoes their grandparents raised as white potatoes and clearly distinguish between them and anything that might be called "Indian potatoes." It seems most probable that although there may have been an occasional confusion with a native plant, when early White accounts say "potatoes" they nearly always mean *Solanum tuberosum*.

Ethnographic Evidence

I first became aware of the early occurrence of potatoes among the Coast Salish while working on the Swinomish Reservation. Here three informants, two Samish and one Swinomish, told me substantially the same story. Potatoes came before the Whites were here. According to one account a man went to New Westminster and brought one sack of them to Swinomish. He gave the informant's grandmother about a dozen, told her to cut them into pieces, one eye to a piece, and plant them in the spring. She planted them, using a digging-stick such as women used for camas bulbs or clams. According to another account, potatoes were brought by Seechelt who came in big canoes and gave one bucket to each person. The informant's grandmother got one bucket. The Skagit chief ni·'ƛ'əm came and got some to take back to Whidbey Island.

It was while he was on his way to meet a chief Netlam on Whidbey that Father Blanchet stumbled onto a Skagit potato patch. This was in 1840. When Wilkes came by the following year he found the Skagit growing potatoes and beans, and reported "the priests are inducing the Indians to cultivate the soil." Since Blanchet was the first priest to visit the Skagit and he found them growing potatoes already, he cannot be responsible for them, though he may have introduced the beans.

Informants from the Lummi, Saanich, and other groups also report potatoes being grown in their grandparents' time. One variety, possibly not the first to arrived, was called "ship potato" presumably from its source. The sources of the other varieties were unknown, but a Semiahmoo said that the variety believed to be the first grown used to be obtained from the Snokomish at Boundary Bay.[17]

Marian Smith states that the Nooksack were a center for the early diffusion of potatoes but says nothing as to time, source, or direction of diffusion.[18] It seems quite possible that the Nuwhaha and other interior groups to their east and south got potatoes from the Nooksack, who are of course also interior people. But my Samish and Swinomish accounts suggest that salt-water people got them

17 Appendix 2 gives the data I have obtained on potato varieties.

18 Smith, 1949, p. 2. The statement appears in the article by Dr Trinita Rivera, but was apparently written by Dr Smith.

from other salt-water people. It may be that there were two lines of transmission south, one on the salt water and one in the interior.

Linguistic Evidence

Four Coast Salish languages are spoken in the area I am dealing with: the Vancouver Island tribes from Malahat to Qualicum and the Lower Fraser tribes speak a language they call Halkomelem; the southeast Vancouver Islands tribes, the Klallam, and the Semiahmoo, Lummi, and Samish speak Straits Salish; the Swinomish and Nuwhaha and tribes south to Olympia speak Puget Sound Salish; while the Nooksack speak an isolated Salish language. As I have already indicated, over a fairly wide area the native name for the *Sagittaria* came to be used for the introduced white potato. The Chinook Jargon *wapato,* the Puget Sound Salish spiəqo'l'c, and the Straits, Halkomelem, and Nooksack skä'us, all came to mean the white potato. Perhaps the transfer was made first in Chinook Jargon on the Columbia. Then when the word *wapato* was brought north as the name for both the native *Sagittaria* and the new plant, this precipitated the same transfer in the Salish languages. Or it may be that the two are so alike in flavor that the transfer of names suggests itself to everyone meeting the potato for the first time. Since Lummi and Nooksack informants knew *Sagittaria* as having been obtained on the Lower Fraser or in Duwamish country, it may be that the name skä'us is originally Halkomelem only.[19]

The word skä'us evidently originally meant the tuber of the *Sagittaria*; the whole plant, following the usual Salish practice, was called by a derivative word skawi'səl'ɬ. But when the white potato was introduced and it became skä'us, *Sagittaria* retained the name skawi'səl'ɬ only, and while some informants point out what has happened, others are apparently unaware that the two words are cognates. The common root is *ka'uiṣ. (The initial s is a frequent Salish prefix; the terminal ṣ represents a sound which is probably distinct from s and sometimes appears as a θ.) This root is probably an old one in the Halkomelem and possibly Straits and Nooksack languages. But it has spread in the word for the white potato beyond its original range where it first meant *Sagittaria* tuber.

While the Halkomelem and the northern Straits dialects have skä'us, for the southern Straits dialects, Klallam and Samish, I recorded ska'uc and ska'wəc respectively—the difference is probably not phonemic. (The correspondence of s

19 McKelvie, apparently using McMillan's journal for the fall of 1827, says that at that time as many as 5,000 Indians, on the Lower Fraser for salmon, assembled at Pitt River at the end of salmon season "to dig 'skous,' a tuber that grew in pools and swamps, and which was considered a delicacy" (McKelvie, 1947, p. 33).

of the northern dialects to c in the southern is usual.) Swinomish and Nuwhaha, the two northernmost Puget Sound dialects, have ska'uc for the potato. In other Puget Sound dialects to the south the potato is spiəqol'c, the old word for *Sagittaria*. Swan gives the Makah word for potato as "kau-its,"[20] obviously the same word without the s- prefix and with the southern Straits final c. Dr Morris Swadesh gave me the Alberni Nootka word (if my memory is right) as ska'wəs, with the s- prefix and with the northern final s. It is possible that the Swinomish and Nuwhaha words are old borrowings for *Sagittaria,* but the Makah and Alberni words must have arrived with the potato. And the fact that the Makah and Alberni words are unlike indicates separate borrowings from separate Salish dialects. What is more, Dawson recorded the Haida word for potato as "skow-shīt,"[21] which looks as if it may be the word skä'us plus some Haida suffix.

These terms for potatoes (with the Haida doubtful) then seem to go back to a Halkomelem or possibly specifically Lower Fraser word for the *Sagittaria*. This suggests that the potato itself was carried by Indians from the Lower Fraser.

It seems to me that a similar situation might be discovered elsewhere—lines of diffusion leading out from each early trading post, traceable by the terms used.[22] But what is to me more significant than *where* the Coast Salish got their potatoes is *how*. The inescapable conclusion is that although in some places they got them directly from Whites, elsewhere they must have got them indirectly and with only the barest instructions as to their cultivation.

II. THE POSITION OF THE POTATO IN THE NATIVE CULTURE

To answer the question on the relation of potato cultivation to native cultures, I shall summarize potato cultivation from early accounts and field notes, then try to show what was involved in the addition of potato cultivation to the native culture.

Both the early accounts and the word of informants indicate that the labor of planting and harvesting was done primarily by women, using the traditional digging-stick that women used for roots and clams. The Saanich informant,

20 Swan, 1868, p. 101.

21 Dawson, 1880, p. 113B.

22 Another example: Simpson saw potatoes on the Pend d'Oreille River in 1841, learned the Indians had got "the seed and implements" from Fort Colville (Simpson, 1847, p. 134), and gives the native word "*patac*" (presumably for potato, p. 146). Dr W. W. Elmendorf was told by a Columbia that the Columbia and the Wenatchee raised potatoes, called läptä'k, before White settlement. In this instance the planting was done by men who broke the soil with large (six feet or more long) digging-sticks. Both sexes harvested.

however, said that the chief ləsčeʻm at East Saanich owned about ten slaves of both sexes and that they cultivated potatoes for him. They turned the soil with digging-sticks and broke up the clods with their hands. In both the Swinomish and Samish informants' accounts potatoes were brought by men but given to women to raise. A Semiahmoo said his grandmother raised them, and Swan speaks of Makah women raising them. I am not sure how to interpret Gibbs' statement about the Duwamish: "Each head of a family plants his own, the quantity being regulated by the number of his women."[23]

Early accounts usually describe the potato patches as small. So do the accounts of the informants: even the ten Saanich slaves cultivated altogether only about an acre.

Potato patches were usually on the natural clearings called "prairies" that used to be found on some of the islands and on some of the upper river valleys. The Samish first planted on a camas-prairie on Fidalgo Bay which was an abandoned village site to which women had habitually come for camas before they got potatoes. Blanchet, Gibbs, and Wilkes wrote of Skagit patches on prairies on Whidbey Island.[24]

Simmons wrote in 1858 that the interior tribes raised more potatoes than the salt-water tribes.[25] This may be simply because they had more prairies.

Two exceptions to the usual description of fields as small are those of the Cowichan and the Duwamish. The Cowichan fields which Douglas saw in 1854 were on "alluvial islands near the mouth of the river." He described them as "large and well-kept."[26]

Gibbs says that the Duwamish and some others had about thirty acres under cultivation at the outlet of Lake Washington. In 1854 they raised about 3,000 bushels, an average of one hundred bushels to the acre. "Of these," he says, "they sold a part, reserving the rest for their own consumption." He does not say to whom they sold, but I take it sale was to Whites. He says, "Their potato patches are very fine, although they have used the same seed on the same ground for a succession of years."[27] Elsewhere, referring to Puget Sound tribes in general, Gibbs writes, "Inclosures for garden patches were sometimes made by banking up around them with refuse thrown out in cleaning the ground, which, after a long while, came to resemble a low wall. . . ."[28]

23 Gibbs, 1855, p. 432.
24 See Appendix 1 for references.
25 Simmons, 1858, p. 225.
26 Douglas, 1854, p. 246.
27 Gibbs, 1855, p. 432.
28 Gibbs, 1877, p. 223.

These statements, incidentally, suggest practices of long standing.

In regard to cooking methods, Lummi and Saanich informants say that potatoes were at first only roasted in the ashes and eaten with dried fish. One added that they were boiled only after iron kettles were acquired. Swan says that the Makah steamed their potatoes in wooden troughs by putting hot rocks in with them, sprinkling, and covering them over with mats. Describing meals, he says, "The potatoes are served first, and are eaten with oil, the custom being to peel off the skins with the fingers, dip the potato in oil and bite off a piece, repeating the process at each mouthful."[29]

It is difficult to determine what role potatoes played in the native diet. Marian Smith says, "The potato was so quickly and readily accepted by all the groups of the area, and soon formed such an important item of diet, that one suspects the Indians had previously felt a certain deficiency in starch foods."[30] But Swan, writing of the Makah, says, "Potatoes are esteemed by them rather as a luxury than as ordinary food. . . ."[31]

The truth may be that potatoes were accepted quickly and readily because in part they had a cash value at the trading posts, and this in turn gave them a potential value and thus a superior status among roots even at some distance from the posts.

During the period of settlement White needs may have been a factor in increasing native production. Buying potatoes from Indians seems to have been a common practice among settlers.[32]

On the other hand, White settlement eventually had a bad effect on native potato-raising. Without clear title to their lands, the Indians could not hold patches of prairie that they visited only for a few weeks or months of the year. Simmons in 1858 mentions the Whites' practice of taking over the good potato prairies.[33] The spot on Fidalgo Bay where the Samish first planted potatoes was, it so happens, the spot where the first settler in that area picked to settle. Even where colonists did not settle on the inviting prairies, they often had loose grazing livestock which soon found the prairies and destroyed the plants. Gibbs in 1855 speaks of the cattle and hogs of settlers on Whidbey Island destroying not only

29 Swan, 1868, p. 26.

30 Smith, 1949, p. 21. See Note 16.

31 Swan, 1868, p. 33.

32 In 1852 two traders, Cooper and Blankhorn, bought potatoes and cranberries from the Katsey to sell in San Francisco (Nelson, 1927, p. 19).

33 Simmons, 1858, p. 235; and better, Jones in Alvord, 1857, pp. 9-10.

the Skagits' potatoes but the native camas as well.[34] Thus it seems likely that the Indians were raising more potatoes before White settlement than after.

III. POSSIBLE SIGNIFICANCE

The change from a food-gathering to an agricultural mode of life is usually represented as a highly significant one. It *is,* of course, in its ultimate consequences. But here such a change was taking place almost imperceptibly. The institutions and techniques of the native food-gathering societies were organized in such a way that the cultivation of potatoes was able to enter without any need for a major economic readjustment.

Two things made this possible: first, the existence of a root-gathering tradition; and second, a sedentary life.

A root-gathering tradition implies a division of labor, with some members of the group assigned root-gathering as their regular task. It implies tools and digging techniques. And it implies methods of preparation and possibly of storage. Coast Salish culture assigned to men the task of providing meat and fish and to women the task of providing vegetable food and shellfish. Women gathered, among other things, roots, which they dug with digging-sticks, stored in baskets or bags, steamed with hot rocks under mats, served with fish and oil.

A sedentary life implies opportunities for the revisiting of the same root patches, the tending of the plants, and the development of concepts of ownership. The Coast Salish peoples maintained permanent dwellings in which extended families lived during half the year and which served as bases for food-gathering expeditions the other half. Their habitat was rich enough in natural foods and their preserving techniques were good enough to allow some members of the group to stay at home at any time if need be. And their means of transportation was fast enough that few expeditions took them more than a day's journey from home base. Thus women were able to return to the same root-patches, year after year, not only at digging-time but at other times as well if they chose to. Concepts of ownership and simple tending of the plants could exist and did.

Ownership of patches may not be necessary to cultivation but caring for plants usually is, and the two—ownership and plant-tending—seem to be related. Among the Straits people, whose territory extended into the San Juan and Gulf islands, families owned not only camas beds but clam beds as well. In both cases they took some care of their property. In camas beds they kept the ground loosened up so as to make digging easier, and one informant spoke of burning off the bed after digging. In clam beds they sometimes took out the bigger rocks; one old

34 Gibbs, 1855, p. 433.

Samish woman supervised the digging in her horse-clam bed, not allowing anyone to leave broken shells in the sand. Such beds and patches were the property of upper-class families. Ownership was through inheritance, but I suspect that an investment of labor helped maintain it.

Into this natural background came the cultivation of potatoes. The only new elements that were added were the plant itself and the planting of it. Moreover, this sort of planting does not require as great an understanding of what is involved as the planting of turnips or carrots. The potato-grower does not plant a small seed which sprouts and grows into a plant, another part of which is eaten. The potato-grower simply puts back into the ground a piece of the same stuff he eats.

Diffusion may also have been accelerated by other practices. Local exogamy, especially among the upper classes, and residence with the husband's family mean that women have greater mobility than men, and that women's activities have a better chance of spreading than men's.

Potato cultivation in turn may have had some influence on the uses of native plants. A Nuwhaha informant reported that the Nuwhaha had patches on Jarman Prairie where they raised three kinds of native bulbs. Each woman had her own strip, and around the patches were high fences of upright poles tied with cedar-limb rope. If a woman found good bulbs elsewhere, she brought them to her patch; and when she harvested the roots, she broke off the tops, crumpled them up, and put them back into the holes the roots came from. A Nooksack reported similar practices for her people at Goshen.[35]

How late this was I cannot say. These may have been practices transferred from potato cultivation or they may be older. Haeberlin and Gunther also have a tantalizing reference to the possible transplanting of *Sagittaria*.[36]

The kind of cultivation practiced by these peoples naturally had its limitations. Without further development, either through more contact with the Whites or through native inventions, the potato crop probably could not have been increased to any great extent. The amount of arable land available was limited, since most of the area was heavily forested. The fertility of the land used was limited; without manuring, crop-rotation, or any such means of renewing it, the soil would eventually have become poor. Simple farming peoples who do not practice manuring or its equivalent simply move on to richer soil. This means slashing and burning or actual clearing of land. The Coast Salish might have burned, as they sometimes did to let berries grow, but real clearing requires steel axes.

35 Stern (1934, p. 42-43) reports a similar seeding practice for the Lummi. But since Stern's data include items which are not Lummi but from neighboring groups I cannot be positive that this is a separate instance.

36 Haeberlin and Gunther, 1930, p. 21.

Another sort of limitation, imposed this time not by the habitat but by the organization of activities within the society, is the limitation of human time and effort. I suspect that women with digging-sticks could not have got much more land tilled than they did, considering the amount of time and effort required of women in their other activities, such as the gathering of other kinds of food and especially the preservation of fish and game brought in by the men. I doubt if potato production would have risen without better tools to till with or a decided shift in emphasis, or both.

But this is simply speculation. White settlement ended the whole native way of life. The Indian men who were taught to plow and sow on reservations were taking over a new way of life.

Recent workers in this area seem to have ignored cultivation. It it understandable that one might say cultivation is due to White influence, therefore it is not part of the native culture. But then neither are the products of steel blades a part of northern Northwest Coast culture nor horses of Plains culture.

I think we can learn something from Coast Salish potato-raising. A culture's ability to accept an item presented to it by diffusion tells us something about the structure of that culture. The ability of Coast Salish culture to accept the potato shows that food-gathering societies may be set up so that they can take over food-producing without wholesale change. But what has happened here is that the kind of cultivation which resulted looks quite unlike that prevailing at the source of the plants. Coast Salish cultivation took the form of something rather close to the simplest form of agriculture known elsewhere. The age-area principle applied to a series of peoples like the Coast Salish, marginal to advanced agriculture, could make a story quite different from the truth.

But the study of a number of such cases—food-gathering societies that were able to fit food-producing into pre-existing patterns—would tell us something about the origins of agriculture. What kinds of societies can begin cultivation?

APPENDIX 1

Tribe or location	*Date of observation*	*Observer*	*Source*
Duwamish	1855	Gibbs	Gibbs, 1855, p. 432
Snoqualmie	1853	Jones	Alvord, 1857, p. 7
Snohomish	1843	Demers	*Rapport,* 1843, p. 57
Skagit	1840	Blanchet	*Rapport,* 1842, p. 65
	1841	Wilkes	Wilkes, 1845, 4:481
	1855	Gibbs	Gibbs, 1855, p. 433
Samish	1857	Fitzhugh	Fitzhugh, 1858, p. 327

Tribe or location	*Date of observation*	*Observer*	*Source*
Nuwhaha ("Neukwers")	1857	Fitzhugh	Fitzhugh, 1858, p. 329
Semiahmoo	1857	Fitzhugh	Fitzhugh, 1858, p. 328
Point Roberts	1841	Simpson	Simpson, 1847, p. 183
Lower Fraser, etc.	1839	Douglas	*Fort Langley Corresp.*, p. 190
Katsey	1852	Cooper and Blankhorn	Nelson, 1927, p. 19
Port Townsend (Chemakum?)	1841	Wilkes	Wilkes, 1845, 4:303
Klallam			
Port Townsend	1855	Gibbs	Gibbs, 1855, p. 430
Port Discovery	1841	Wilkes	Wilkes, 1845, 4:299
Dungeness	1843	Douglas	Douglas, *Journal*, 1840-41, p. 101
			Bancroft, 1887, p. 93
Makah	1855	Gibbs	Gibbs, 1855, p. 429
	1855	Gibbs	Gibbs, 1877, p. 126
	1868	Swan	Swan, 1868, pp. 2, 11, 23, etc.
Sooke	1849-57?	Grant	Grant, 1857, p. 283
Songish	1842	Douglas	Bancroft, 1887, p. 89
Cowichan	1852	?	Douglas, *Letter*, 1852
	1854	Douglas	Douglas, 1854, p. 246
Nanaimo	1854	Douglas	Douglas, 1854, pp. 246-7
	Outside the Sound and Straits Area[37]		
Haida	1841	Work	Simpson, 1847, p. 232
	1878	Dawson	Dawson, 1880, p. 113B
Lower Thompson	1847	Anderson	Bancroft, 1887, p. 167
Pend d'Oreille	1841	Simpson	Simpson, 1847, pp. 143-4
Copalis	1854	Swan	Swan, 1857, p. 259
Quinault	1854	Swan	Swan, 1857, p. 267
Umpqua	1834	Work	Bancroft, 1884, p. 528

Appendix 2

The following are varieties of potatoes said to have been grown before the introduction of those raised in recent years. The descriptions are poor and confusing. It is even possible (though I doubt it) that the first two do not refer to potatoes at all but to other plants, native or introduced. The informants insisted all were potatoes.

1. According to one of the Samish informants, the first potatoes, which were introduced from "across the [Canadian] line," were small, round, and black with white spots. The informant gave no distinguishing name.

37 For further references to cultivation, especially in Oregon and eastern Washington, see Barry, 1929a.

2. ƛ̓'uχʷk'ə́kələŋ ("no eyes," from k'ə́'ləŋ, "eye"), described by a Semiahmoo as the first potato. They were smooth ("dirt didn't stick"), with thin ("thin as cigarette paper"), light orange skin and white flesh, and the size of prunes. Each hill produced a large cluster. The informant saw his grandmother dig these in her patch near White Rock, B. C., when he was a child. Although he is unsure whether they really had eyes or not and did not see the tops because they were dried up, he is certain that this was a variety of white potato. This potato had been replaced by other varieties by the time the informant, (now in his 80's) was grown. He does not know anything of its origin, but remembers his grandmother saying that the Semiahmoo used to get them from the Snokomish at Blackie Spit, Boundary Bay. The Snokomish were wiped out by an epidemic, possibly that of 1852. They were in direct contact with Fort Langley via the Nicomekl River.

The name "no eyes" must have been given to this variety to distinguish it after the deep-eyed variety was introduced. It may have been merely a shallow-eyed potato, but if it were actually without eyes it could not have been a potato at all.

3. šə́'pəɬ skä́'us ("ship potato," from šə́'p "ship"), described by a Saanich as bluish and as big as one's fist. They were raised by chief ləsčeʻ'm's slaves before White settlement, although the name indicates that they were introduced from a ship.

The Semiahmoo believed that this variety had been introduced by a United States government ship before the Indians had any other contact with the government. He described them as similar to the present "red rose" variety. They came after the "no eyes" variety.

A Lummi knew vaguely of this variety and believed it was long, white, and with deep eyes. This sounds like the Saanich informant's kʷi'tələs (No. 4).

4. kʷi'ƛ̓'ələs (meaning not known), described by the Semiahmoo informant as a big potato, raised by an uncle on San Juan Island during the informant's childhood.

The Lummi informant described potatoes of this variety as almost round, heavy, with reddish skin, white flesh, deep eyes and therefore hard to peel, slow to cook. They were also called χ̣əmχ̣əmi'kʷən skä'us, "heavy potatoes."

kʷi'tələs (wrongly recorded?), described by the Saanich informant as white, long, with lots of eyes. It was also planted by ləsčeʻ'm's slaves in pre-settlement times. They kept the two varieties separate.

5. χ̣ʷəŋχ̣ʷəŋəl skä'us ("early potatoes," from χ̣ʷə'ŋ, "fast"), described by the Lummi informant as small, crooked (kidney-shaped?) and white, with good dry flesh.

Obviously more information is needed on early varieties of potatoes and native plants with which they may have been confused. It is possible that some early varieties still exist and may be collected: Dr Erna Gunther has told me that the Makah still raise a small white "finger potato," which they have had longer than other varieties.

The presence of several varieties of potatoes here soon after the first White contact would not be surprising. It is possible that different Whites introduced different varieties. It is also possible that new varieties were produced naturally from the variety or varieties introduced. Potatoes are usually grown from tubers, and that is the way the Indians learned to plant them. This involved no genetic change from one crop to the next. But let potatoes seed themselves and something different is bound to show up. The difference can then be preserved simply by planting from

tubers again. The Saanich kept their two varieties separate. This is easy when one plants from tubers, since cross-fertilization is not a problem.

BIBLIOGRAPHY

ALVORD, BENJ. (*et al.*)
1857 *Reports on Indian Affairs on the Pacific* (34th United States Congress, 3rd Session, House Executive Document no. 76, pp. 1-22).

BAGLEY, C. B., ed.
1915 *Journal of Occurrences at Nisqually House, 1833* (Washington Historical Quarterly, vol. 6, pp. 179-187).

BANCROFT, H. H.
1884 *History of the Pacific States,* Vol. 23: *The Northwest Coast,* Vol. 2, *1800-1846* (San Francisco).
1886 *History of the Pacific States,* Vol. 28: *Alaska, 1730-1885* (San Francisco).
1887 *History of the Pacific States,* Vol. 27: *British Columbia, 1792-1887* (San Francisco).

BARRY, J. NEILSON
1929a *Use of Soil Products by Indians* (Oregon Historical Quarterly, vol. 30, pp. 43-52).
1929b *Agriculture in the Oregon Country in 1795-1844* (Oregon Historical Quarterly, vol. 30, pp. 161-168).

DAWSON, GEO. M.
1880 *Report on the Queen Charlotte Islands, 1878* (Reports of Explorations and Surveys, 1878-1879, Geological Survey of Canada).

DOUGLAS, JAMES
1840-41 *Journal, 1840-41* (ms.: typed copy in University of Washington Northwest Collection; original in Bancroft Library).
1852 *Letter to Wm. F. Tolmie, dated Fort Victoria, Dec. 6, 1852* (ms.: typed copy in University of Washington Northwest Collection).
1854 *Report of a Canoe Expedition along the East Coast of Vancouver Island* (Journal, Royal Geographical Society, vol. 24, pp. 245-249).

FITZHUGH, E. C.
1858 *Report No. 135, Bellingham Bay Agency, Washington Territory, June 8, 1857, of E. C. Fitzhugh, Special Indian Agent* (in *Report, Commissioner of Indian Affairs accompanying the Annual Report of the Secretary of the Interior for the Year 1857,* pp. 325-329, Washington).

Fort Langley Correspondence (British Columbia Historical Quarterly, vol. 1, pp. 187-194, 1937).

GIBBS, GEORGE
1855 *Report on the Indian Tribes of the Territory of Washington* (Pacific Railroad Report, vol. 1, pp. 402-436, Washington).
1877 *Tribes of Western Washington and Northwestern Oregon* (Contributions to North American Ethnology, vol. 1, Washington).

GRANT, W. C.
1857 *Description of Vancouver Island* (Journal, Royal Geographical Society, vol. 27, pp. 268-320).

HAEBERLIN, HERMANN, and ERNA GUNTHER
1930 *The Indians of Puget Sound* (University of Washington Publications in Anthropology, vol. 4, no. 1, pp. 1-84).

JEWITT, JOHN R.
1815 *A Narrative of the Adventures and Sufferings of John R. Jewitt* (Middletown).

MCKELVIE, B. A.
1947 *Fort Langley, Outpost of Empire* (Vancouver).

MASSON, L. F. R.
1889 *Les bourgeois de la Compagnie du Nord-Ouest* (vol. 1, Quebec).

MEANY, EDMOND S.
1942 *Vancouver's Discovery of Puget Sound* (Portland).

NELSON, DENYS
1927 *Fort Langley, 1827-1927: a Century of Settlement in the Valley of the Lower Fraser River* (Fort Langley, B. C.).

NEWCOMBE, C. F., ed.
1923 *Menzies' Journal of Vancouver's Voyages, April to October, 1792* (Archives of British Columbia, Memoir no. 5, Victoria).

Rapport sur les missions du Diocèse du Québec, qui sont secourues par l'Association de la Propogation de la Foi (Quebec, 1839-1874).

SCOTT, LESLIE M.
1917 *Soil Repair Lessons in Willamette Valley* (Oregon Historical Quarterly, vol. 18, pp. 55-69).

SIMMONS, M. T.
1858 *Report No. 81 of M. T. Simmons, Agent for the Indians of Puget's Sound District* (in *Report of the Commissioner of Indian Affairs for 1858*, pp. 224-236, Washington).

SIMPSON, Sir GEORGE
1847 *Narrative of a Journey Round the World during the Years 1841 and 1842* (2 vols., London)

SMITH, MARIAN W., ed.
1949 *Indians of the Urban Northwest* (Columbia University Contributions to Anthropology, vol. 36).

SPROAT, G. M.
1868 *Scenes and Studies of Savage Life* (London).

STERN, BERNHARD J.
1934 *The Lummi Indians of Northwest Washington* (Columbia University Contributions to Anthropology, vol. 17).

SWAN, JAMES G.
1857 *The Northwest Coast; or, Three Years Residence in Washington Territory* (New York).
1868 *The Indians of Cape Flattery, at the Entrance to the Strait of Fuca, Washington Territory* (Smithsonian Contributions to Knowledge, vol. 16, article 8, no. 220, Washington).

WAGNER, HENRY R.
1933 *Spanish Explorations in the Strait of Juan de Fuca* (Santa Ana, California).

WILKES, CHARLES
1845 *Narrative of the United States Exploring Expedition during the Years 1838-1842* (5 vols., Philadelphia).

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Bibliography

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