

VEGETAL FOODS

Vegetal products played no small part in Chinook economics. Though sea food was plentiful and used in great variety, yet a balanced diet was achieved by a generous use of roots, stems and berries.¹ It is difficult to say which was felt to be the more important vegetal food, roots or berries. Perhaps no such contrast should be attempted; the two were distinctly supplementary. In point of gross quantity roots probably outweighed berries; stems ran a close third. In speaking of roots, Lewis and Clark state that they "furnish a considerable proportion of the subsistence. . ." and that they were highly valued and disposed of sparingly.²

ROOTS

The most extensively utilized roots were those of the lupine, bracken fern, horsetail rush, and edible thistle. In addition the wapato was imported in large quantities. This root was found only in one corner of Lower Chinook territory, the south side of the Columbia river opposite and above Puget Island. Therefore most of the roots were obtained by trade, principally from the Klatskanie. The extent to which camas was used is uncertain. One species is found widespread in western Washington but its use by the natives is mentioned only by Swan. Among most groups having access to camas it is very fully used. Edible roots were available to the Chinook over a very long season, so that drying and storage for winter use was not particularly demanded. Yet as indicated below, a number of roots were regularly gathered and dried in sufficient quantity so that a considerable variety of such food was at hand at any time of the year.

Roots were dug with a dibble or digging stick (Figure 13, c) consisting of a wooden shaft and crutch-type handle of elk or deer antler. Because of its hardness and durability, yew was preferred as shaft wood. Shafts were either straight or slightly curved near the point, and sometimes a bit flattened. The greatly flattened or cupped clam digging sticks (Figure 13, A, B) were occasionally used for root digging in sandy soil.

The principal roots are briefly described and discussed below :

1. Lupine (*Lupinus littoralis*). The farinaceous root of this plant is highly nutritive, resembling somewhat the sweet potato in taste. Under the name of licorice it is repeatedly mentioned by Lewis and Clark as an important native food. It grows abundantly and to large size in the deep sandy soil along the river. It was prepared for food by roasting in hot embers, then pounded slightly to loosen the edible portion from the fibrous center spine, which was discarded.³

¹Cf. Swan, pp. 87 f.

²Thwaites, vol. 3, pp. 362, 292.

³Cf. Thwaites, vol. 3, pp. 229 f., 292, 362; vol. 4, pp. 6 f., 10 f.; Douglas, p. 256.

2. Bracken Fern (*Pteris aquilina lanuginosa*). This plant grows in great profusion in open uplands and among sparse timber. "The root is horizontal, sometimes a little diverging or obliquely descending, frequently dividing itself as it proceeds into two equal branches and shooting up a number of stems; it lies about four inches beneath the surface. . . . The root is cylindric, with few or no radicles, and from the size of a goose quill to that of a man's finger; the center of the root is divided into two equal parts by a strong flat and white ligament like a piece of thin tape. On either side of this there is a white substance which when roasted in the embers is much like wheat dough and not very unlike it in flavor; . . . the natives eat it very voraciously. . . ." ⁴
3. Horsetail Rush (*Equisetum telmateia*). "The root of the rush used by the natives is a solid bulb about one inch in length and usually as thick as a man's thumb, of an ovate form depressed on two or more sides, covered with a thin black rind. The pulp is white, brittle and easily masticated either raw or roasted. The latter is the way in which it is most usually prepared for use. . . . It grows in greatest abundance along the sea coast in the sandy grounds. . . ." ⁵
4. Edible Thistle (*Carduus edulis*). The root of this thistle is a "perpendicular fusiform and possesses from two to four radicles; is from nine to fifteen inches in length and about the size of a man's thumb; the rind somewhat rough and of a brown color; the consistence when first taken from the earth is white and nearly as crisp as a carrot; when prepared for use [in the earth oven] it becomes black, and is more sugary than any fruit or root that I have met with in use among the natives; . . . this root is sometimes eaten with train-oil also, at other times pounded fine and mixed with cold water, until reduced to the consistency of gruel. . . ." ⁶
5. Wapato, or Arrowhead (*Sagittaria latifolia*). "The most valuable of all their roots is foreign to this neighborhood [Ft. Clatsop]." Lewis and Clark thus evaluate the wapato and add that it formed the principal article of trade between the upriver peoples and those on the coast.⁷ The root is found in marshy or swampy places. It was collected by wading barefoot into the marsh and feeling out the bulbs with the feet. Large quantities were obtained in this way in a short time.
6. Camas (*Camassia quamash*). "This root, which resembles an onion in appearance, is a species of lily, found in moist places on the prairies. After the plant has done flowering, . . . which is usually in September and October, the root is dug up by the squaws, who go out in parties for the purpose, and are generally absent several days. After sufficient has been collected, the leaves and loose outhusks are removed, and the whole roasted on hot stones

⁴Thwaites, vol. 4, p. 5. Cf. *idem*, vol. 3, p. 362; Swan, p. 88.

⁵Thwaites, vol. 4, pp. 7-9. Cf. *idem*, vol. 3, p. 362; Swan, p. 88.

⁶Thwaites, vol. 4, pp. 3, 6 f. Cf. *idem*, vol. 3, pp. 242, 292, 362.

⁷Thwaites, vol. 4, p. 7. Cf. *idem*, vol. 3, p. 208; Swan, p. 90; Douglas, p. 256.

. . . as follows: A large pile of dry wood is made, on the top of which a quantity of stones are piled; fire is then applied, and kept up till all the wood is burned, leaving nothing but the hot stones and ashes. Fern leaves are then laid on the stones, and on these mats are placed; the camas roots are then placed on the mats, and spread level; water is then thrown over them, and immediately they are covered with mats, blankets, and the whole covered up with sand, every care being taken to keep in all the steam. This heap is allowed to remain till it is cold, . . . twelve to twenty-four hours. The roots then are soft and very sweet, much like a baked sweet potato. The natives preserve them by pressing them into loaves, which, when eaten, are cut in slices like pudding."⁸

7. Cattail (*Typha latifolia*). Cattail root was eaten raw.⁹
8. Skunk Cabbage (*Lysichiton camtschatcense*). The root was eaten after boiling. It was not highly prized.¹⁰
10. Cow Parsnip (*Heracleum lanatum*). The root as well as the stem of this plant was utilized.

FRUIT

A great variety of berries ripen in rapid succession from spring until winter in Lower Chinook territory. First to appear is the salmon berry, followed shortly by strawberries in great quantities. Then one after another become available blueberries, red huckleberries, blackberries, gooseberries, currant, and, in August, salal berries. This fruit is available until December. In the meantime the crab-apple ripens, followed by cranberries. Finally, a fruit called shotberry ripens, the last of the season.

"As the season advances and the fruits ripen," writes Swan, "great quantities are used as food, to the exclusion of fish and meats."

The following list is far from exhaustive, but includes the principal species.

11. Salmon Berry (*Rubus spectabilis*). This species occurs in two forms, most commonly with yellow or "salmon-colored" berries, the other with nearly black fruit. Whether the common name is derived from the color of the former, or from the fact that the fruit first ripens when the salmon appear in the Columbia for spawning (May, June), is uncertain. These berries were eaten raw.¹¹
12. Strawberry (*Fragaria* sp.). Strawberries of several species were gathered and eaten without further preparation.
13. Blueberry (*Vaccinium ovatum*). This deep purple berry "terminates bluntly with a kind of cap or cover at the end . . .; they are attached separately to the sides of the boughs of the shrub by a very short stem hanging underneath the same and are frequently placed very near each other on the same bough;

⁸Swan, pp. 90 f.

⁹Swan, p. 88.

¹⁰Swan, p. 87; Boas, *Chinook Texts*, p. 231.

¹¹Cf. Piper, p. 333; Swan, p. 88.

it is a full bearer. The berry is easily gathered as it separates from the bough readily, while the leaf is strongly affixed. The shrub which produces this fruit rises to the height of six or eight feet, sometimes grows on the high lands but most generally in the swampy or marshy grounds; it is evergreen. . . . The natives either eat these berries when ripe immediately from the bushes or dried in the sun . . . for winter use, when they either eat them in their dried state or boil them in water."¹²

Several other species of blueberries were used, presumably in the same manner.

14. Red Huckleberry (*Vaccinium parvifolium*). This berry was eaten raw; it is not adapted to drying.
15. Blackberry (*Rubus* sp.).
16. Gooseberry (*Ribes* sp.).
17. Black Currant (*Ribes* sp.).¹³
18. Salal (*Gaultheria shallon*). The salal bush varies in height from three to five feet. The shrub is an evergreen with somewhat reclining branches bearing oval leaves of glossy deep green. Its fruit is a deep purple berry of ovate form quite small. The berries were either eaten raw when ripe, dried in the sun, or cooked by the fireless or earth oven method, similarly to camas. Frequently they were pounded and baked into loaves weighing ten to fifteen pounds. These loaves remained well preserved for a season, retaining the juices of the fruit very well. When used the loaf was broken and mixed with cold water to form a paste and then eaten with clam shell spoons.¹⁴
19. Oregon Crab-apple (*Pyrus rivularis*). The apples of this tree, which grows in abundance, are quite small but appear in clusters of three to twenty, averaging about eight. They were gathered in considerable quantity each fall and prepared for immediate use by boiling.¹⁵
20. Cranberry (*Oxycoccus oxycoccus intermedius*). The cranberry was very plentiful and extensively used.¹⁶
21. Bearberry (*Arctostaphylos uva-ursi*). The bearberry occurs in the prairies or on their borders in the more open woodlands. The fruit ripens in September and remains on the bushes all winter. They were eaten fresh or dried for winter use. When fresh they were sometimes mashed and eaten with oil. In order to dry them, they were merely packed in bags and hung inside the house. The leaves were used as tobacco or mixed with tobacco.¹⁷

¹²Thwaites, vol. 4, pp. 13 f., 52. Cf. Coues, p. 753; Swan, p. 89.

¹³Swan, p. 89.

¹⁴Thwaites, vol. 4, pp. 52, 14. Cf. *idem*, vol. 3, p. 392; vol. 4, pp. 13 f.; Swan, p. 89.

¹⁵Thwaites, vol. 4, p. 19; Swan, p. 89.

¹⁶Swan, p. 89; Thwaites, vol. 3, pp. 220 f.; *idem*, vol. 4, pp. 12, 16 f. (called "solme"), 19; Coues, p. 753.

¹⁷Thwaites, vol. 4, pp. 21 f.; Swan, p. 88. Cf. Thwaites, vol. 4, p. 12.

22. "Shotberry" (*Rubus* sp.?). These ripen in the fall and remain until December. "The berries grow in clusters and resemble the prim. The leaf is small, of oval shape, with finely-serrated edges. It is an excellent berry, and, if kept dry and cool, can be preserved fresh for several months. It is, however, usually dried by the Indians and eaten early in the spring, before the other berries begin to ripen."¹⁸
23. Oregon Grape (*Berberis nervosa*). These berries were eaten fresh.
24. [Unidentified]. This plant has "a root like a yam, which, baked or boiled, is excellent. This is found on the seaside, in the sand near the beach."¹⁹

STEMS AND NUTS

25. Horsetail Rush (*Equisetum arvense*). The young shoots of this plant were eaten raw.
26. Salmon Berry (*Rubus spectabilis*). The sprouts of this plant, which shoot up very rapidly, were eagerly sought as food. "These sprouts are collected in bundles and brought into the lodge, where they are denuded of their tough outer skin, and the center is as crisp and tender as a cucumber, and being slightly acid, is delicious."¹⁹
27. Cow Parsnip (*Heraclium lanatum*). This plant grows abundantly in moist soil. The young stems were eaten raw after the outer skin was peeled off. Swan comments that this tender vegetable formed a grateful addition to the dried salmon eggs extensively used in earliest spring.¹⁹
28. Wild Celery (?). Used similarly to the cow parsnip.¹⁹
29. Oak (*Quercus garryana*). Acorns were fairly extensively used.

¹⁸Swan, p. 89.

¹⁹Swan, pp. 87, 88.