CONTRIBUTIONS TO THE ETHNOBOTANY OF THE ST. LAWRENCE ISLAND ESKIMO

By

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In a recently published textbook dealing with the native peoples of North America, we find the following statement: "...the Eskimo chose all but to ignore the not inconsiderable vegetable resources of their region..." (Spencer, Jennings, et. al. 1965:4). In quantitative terms this evaluation may be correct. Certainly the aboriginal Eskimo depended on hunting for subsistence to a greater extent than any other of the world's peoples (cf. Lee and DeVore 1968). However, a brief review of the dependence of Alaskan Eskimos on vegetable resources reveals the following (adapted from Hall 1961):

Group	# of Species Known to be Used for Food	# of Species Used for Medicine, Manufacture, etc.	Estimated % of Diet from Vegetable Resources
Chugach	30	29	15
Aleut	17	48	10
Western Eskimo (Kotzebue to Alaskan Peninsula)	57	47	up to 15
Nunamiut	21	8	5
Tareumiut	6	5	1

The sources summarized in this table include: Anderson 1939; Bank 1951, 1952, 1953; Birket-Smith 1953; Collins, et. al. 1945; Gubser 1961; Hall 1961; Hawkes 1913; Heizer 1943; Heller 1958; Ingstad 1954; Lantis 1946, 1959; Murdoch 1885; Nelson 1896; Oswalt 1957; Ransom 1946; Rausch 1951; Spencer 1959; Stoney 1900 and Weyer 1932.

It appears that the Alaskan Eskimos may have been aware of and made use of more plant species than is customarily

scattered bushes at isolated locations. Salmonberries (*Rubus Chamaemorus* L.) are of fairly common occurrence, but the fruit set is so light that it is seldom worth the trouble to gather them except casually. Some of the older Eskimos claim that there is a good crop of salmonberries only once every four years.

In general, the gathering of berries and other wild fruits is presently of little use to the St. Lawrence Islanders. The collection of various "greens," particularly *Sedum Rosea* (L.) Scop. is of considerably more importance and some of the women spend a good deal of time engaged in this activity. Women and young girls undertake trips of several miles from Gambell to procure greens during the summer. However, gathering expeditions often appear to be an excuse for a social occasion rather than a serious subsistence activity. The recreational aspect of gathering also has been noted (by Hall) among the Noatak River Eskimos and the Nunamiut of Anaktuvuk Pass. A third motivation for gathering, beyond subsistence and recreation, may be pride. Some Gambell families express pride in continuing old ways. Finally we might note that berries and greens provide a certain amount of variety in a somewhat restricted diet.

The plant species known to have been utilized by the St. Lawrence Eskimos are listed below.

Seaweed. Species unknown. A number of kelp-like seaweeds are gathered in the spring and fall. As Hughes (1960:121) notes, seaweed is eaten both raw and cooked; in the latter case it usually is served with meat. Many of the organisms considered as "seaweed" by the natives are actually marine invertebrates.

Sphagnum spp. Dried *sphagnum* was used for lamp wicks. Because of the highly absorbent nature of dried *Sphagnum,* it probably had other uses, perhaps, for example, as diapers.

Elymus arenarius L. There is presently no native basket-making industry on St. Lawrence Island. The Eskimos mentioned that baskets can be made of the stems of the beachrye grass as is presently done in the vicinity of Nelson Island. The local Bureau of Indian Affairs schoolteacher had a well made basket made by an old Gambell woman.

Grasses undoubtedly were used for a number of purposes in

earlier times. Collins (1937:272) notes that dry grass insulation was placed between the wooden walls of Old Bering Sea houses. He (Collins 1937:172) also found a small bundle of grass wrapped with baleen and of unknown use in an Old Bering Sea deposit.

Salix spp. The young leaves of *Salix pulchra* Cham. are occasionally collected as greens. *S. reticulata* L. (Eskimo: Okviuk) may also be used for this purpose. The other willows of the island are generally either too small or too densely pubescent to be used as food, though *S. arctica* Pall. may be eaten occasionally.

Geist (1936:9) maintains that most willows are collected for the edible root bark and only secondarily for the leaves.

Rumex arcticus Trautv. (Eskimo: Ahkakuk). This rather common plant is usually found in rich wet soil along river sloughs and near human habitations. The large leaves are boiled until tender. The taste is reminiscent of rhubarb (to Young).

Oxyria digyna (L.) Hill. (Eskimo: Kowillingok). This species is common throughout the island. This plant is apparently never collected for later use but is much appreciated as a thirst-quenching snack. It is particularly valuable because most of the surface water on St. Lawrence is contaminated by the tapeworm *Echinococcus multilocularis* and most of the Eskimos prefer not to drink the water unless it is boiled. The sour leaves of *O. digyna* are satisfying when no good water is available. We can safely assume that this usage predates white contact.

Polygonum viviparum L. (Eskimo: Soochluk). The small, potato-like tuber of this species is occasionally collected. The plant is usually too rare and the tubers too small to be of much importance. The St. Lawrence islanders apparently do not normally distinguish between this species and *P. bistorta* L., a larger species with a similar tuber which is even rarer on the island. *P. bistorta* is also eaten.

Hughes (1960:122) probably refers to this species when writing about the "Eskimo potatoes" or *Claytonia tuberosa* which were collected in the fall from the storehouses of mice and other rodents.

Parrya nudicaulis (L.) Regel. The licorice-flavored roots of this species are often eaten in the field. Some Eskimos mentioned that the roots can be stored. The species is not common enough to be of much importance.

Sedum rosea (L.) Scop. (Eskimo: Nooneevuk). This is by far the most important "greens" plant. *S. rosea* is found most commonly on bird cliffs and sandy backshores. A particularly lush stand occurs on a disintegrated lava flow near Ataakas Camp, about 15 miles east of Savoonga, and the people of Savoonga often collect greens there. The greens are usually put in a barrel, formerly a sealskin poke, and allowed to ferment and then to freeze. During the winter, frozen chunks are mixed with seal oil to make Eskimo "ice cream."

Use of this species is also noted by Geist (1936:9, 15), Moore (1923:355) and Hughes (1960:121-2). According to Hughes, the roots of *S. rosea* are collected in the fall and eaten with meat.

Rubus chamaemorus L. (Eskimo: Ahkahavazik). This species usually is not available in large enough quantities to be gathered systematically, but the berries are relished whenever they are found. The St. Lawrence Eskimos say that when the berries are exceptionally abundant, the phenomenon is called yewewmattomililingook, meaning "man with no clothes on" because the berries can color the tundra flesh-colored. It is doubtful, with the present climatic conditions, that this phenomenon occurs often on the island.

Rubus arcticus L. (*s. lat.*) This species is of fairly common occurrence on the south side of the island. It was not observed to set fruit in 1966 or 1967. Although a few of the older Eskimos claimed to be familiar with the species, they did not mention eating the berries.

Potentilla spp. The long tap roots of some of the *Potentilla* species allied to *P. hyparctica* Malte occasionally are eaten. These roots are rather small and have a stong medicinal taste. The plants are found as scattered individuals on high rocky barrens and sandy backshores, usually some distance from the villages. It seems doubtful that they would ever have been an important part of the native diet, but apparently some Eskimos consider the roots to have medicinal value.

Geum glaciale Adams. This plant has roots similar to, but larger than, *Potentilla.* The Eskimos claim it is good to eat. Although conspicuous, the plant is rare and is usually found only in isolated areas in the higher mountains. It can hardly have been an important source of food.

Dryas octopetala L. (Eskimo: Kiyuk). The Eskimos claim that the leaves of this plant make a good tea substitute. Tea is one commodity that everyone keeps in good supply, so present use of this species is limited. The local word for tea, *Kiyouoo,*may be derived from the word for *Dryas.*

Moore (1923:355) mentions a plant (possibly the same species) from which a drink was made when tea was scarce.

Empetrum nigrum L. This species is quite rare on St. Lawrence. The small, black berries are collected when found.

Epilobium latifolium L. (Eskimo: Angookuk). This plant is common only along rocky streambeds. Apparently it is occasionally collected for use as greens.

Angelica lucida L. (Eskimo: Tepplook). This species is found commonly only along the barrier beaches of the south side of the island. It is eagerly sought out by the natives and this fact may by responsible for the relative rarity of the species. The extremely strong-tasting root is used fresh or dried. It is considered to have great medicinal value, supposedly being a "broad spectrum" drug, useful in the treatment of most illnesses and feelings of malaise. The Eskimos believe it is desirable to eat a small piece of the root each day as preventive medicine.

It is interesting to note that this is essentially the same plant which many other peoples, from the Classical Greeks onward, have considered to have great medicinal value, hence the name *Angelica.* Also, this is not basically an arctic species. Except in the regions of the Bering Sea, *Angelica* is mostly confined to temperate regions. The possibility that the St. Lawrence Islanders learned to use *A. lucida* from the white man should not be overlooked.

Ledum decumbens (Ait.) Lodd. A close relative of this shrub, *Ledum groenlandicum* Oeder, has often been used as a tea substitute in many areas of the far north. During the summer of 1966 Young mentioned this to the Eskimos. They were anxious to try using the aromatic leaves of *L. decum-*

bens and added a few leaves to regular tea. Whether they liked the highly perfumed tea or simply the novelty, the idea was a success, and several people in Gambell and Savoonga were shown how to recognize the plant. During the summer of 1967, a party of anthropologists at Gambell were quite interested in the ancient Eskimo custom of using *Ledum* leaves for flavoring tea. Had Young not been there to explain, this custom might have become part of the ethnography of the St. Lawrence Island Eskimo.

Cassiope tetragona (L.) D.Don. This species is occasionally abundant on high, rocky barrens. It may form a thick, dry mat which consists mainly of dead twigs and leaves and is therefore quite inflammable. The Eskimos say that they often use it for fuel. There is always abundant driftwood along all of the coast of St. Lawrence Island, so *Cassiope* would be used only on trips to the interior.

Arctostaphylos alpina (L.) Spreng. The black, rather insipid berries of the species are gathered, but the plants are seldom abundant enough to be of much importance.

Vaccinium vitis-idaea L. (Eskimo: Kaetmik). The sour red berries of this species are gathered whenever possible. The species is reasonably abundant, but the plants are usually very small and set few fruit. Last year's berries are sometimes collected in the spring.

Valeriana capitata Pall. (Eskimo: Ahseukpuk). Part of this plant apparently is used as a medicine for stomach troubles. Young also noticed that several people were quite pleased to discover this species, saying it was good luck.

Artemisia Tilesii Ledeb. (Eskimo: Raychlook). This species has highly aromatic, minty-smelling leaves and stems. It grows abundantly over much of the island, particularly in the vicinity of human habitations. One of the women of Gambell (who was the local Avon cosmetics representative) claims that this plant once was used as a body deoderant. Also, jokes were made about smoking *A. Tilesii* when someone ran out of tobacco.

Other species are known to have been used by St. Lawrence Islanders through time. Fuel and raw material for the manufacture of many items of the material culture were provided by the abundant driftwood, predominately white spruce [*Picea glauca* (Moench) Voss]. Birch bark, stripped from

driftwood, may have been used for baskets or for tinder (Collins 1937:175). Undoubtedly, many other species of plants have been used for one purpose or another. There are a number of species not mentioned which have edible leaves, including *Taraxacum* spp. and *Senecio pseudo-Arnica* Less., but we have no evidence of their consumption.

The data now available indicate that the St. Lawrence Eskimos at present or in the past utilized at least 17 plant species for food, 3 for medicinal purposes and about 10 (including a number of species present as driftwood) for fuel or manufacture.

It is extremely difficult to evaluate the importance of vegetable products in the aboriginal diet. The dependence of the St. Lawrence Eskimos on plant foods must have varied from year to year depending on the availability of both the plant species utilized for food and of sea mammals, the basic food source. We would estimate, admittedly on the basis of very little evidence, that in prehistoric times perhaps 4-5 percent of the diet was derived from plants on a year-round basis.

Hughes (1960:160-5) presents the only statistical data available on the consumption of vegetable products during recent years:

Year	Month	Approximate % of total food-meal units[2]
1940	June	2
	August	7½
1954-55	November	4
	January	5
	March	5
	late June	1½
	late August	3½

Young's casual observations during the summers of 1966-67 indicates that the percentage importance of vegetable products in the diet has continued to decline. Gathering of wild plant foods is of diminishing importance to the St. Lawrence Islanders.

There is no doubt that some of the older St. Lawrence Island Eskimos have knowledge of the dietary and medicinal

[2] A "food-meal" is that unit constituted by one type of food eaten at one meal.

uses of the native plants that Young did not have time to record. The list of plants given here is far from complete. A definitive ethnobotany of St. Lawrence Island is still to be done. It seems to us that the relationship between the Eskimo and his environment was more encompassing than investigators in the Arctic usually acknowledge. Future research should emphasize the way Eskimos view and catagorize the plant world as well as delineating the extent of plant usage in given areas.

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