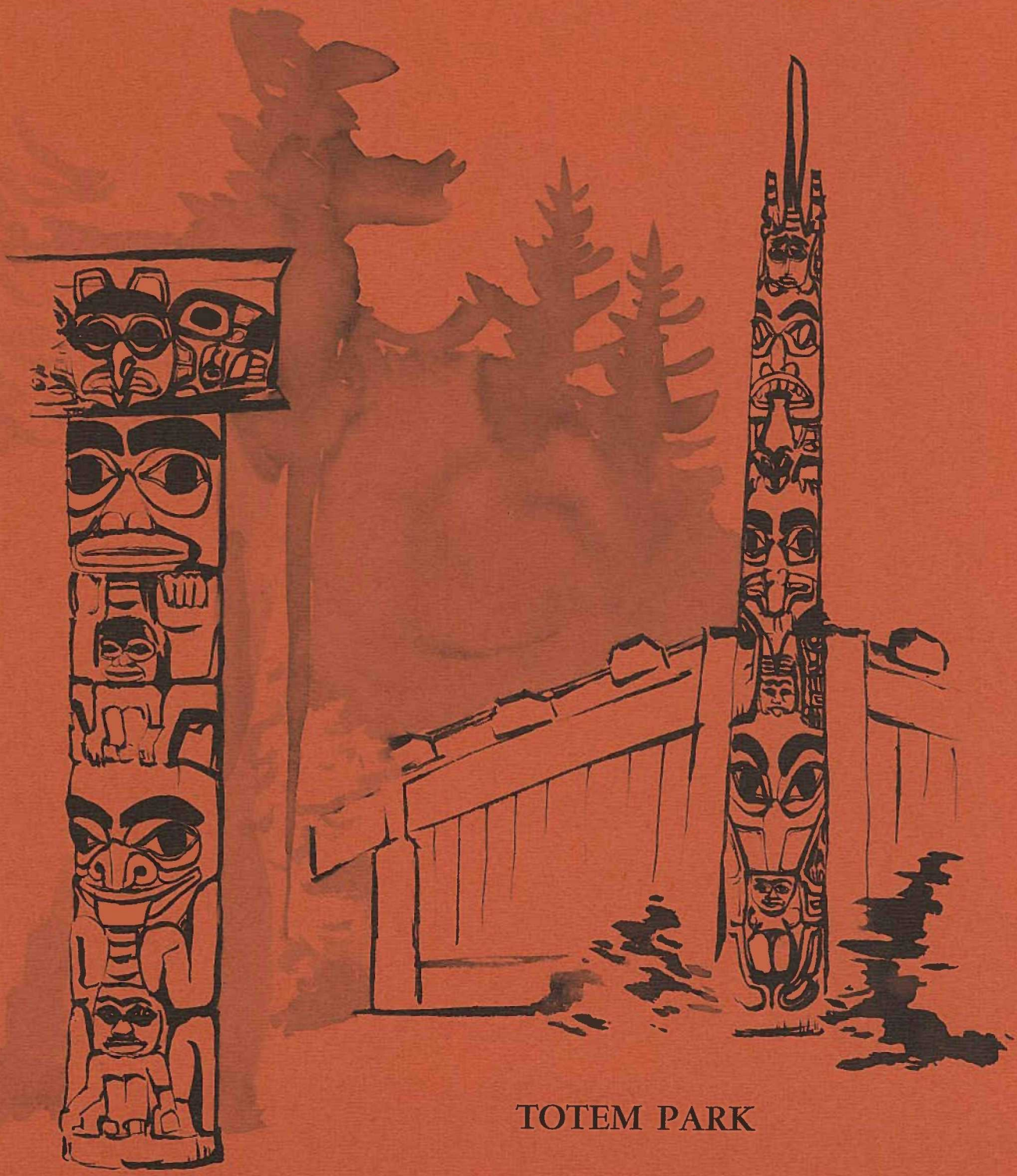
# DAVIDSONIA

*VOLUME 2 NUMBER 2* *Summer 1971*



TOTEM PARK

*Cover*

An ink sketch by Mrs. Lesley Bohm of the Haida Section of Totem Park featuring a single mortuary pole on the left and a dwelling house with frontal pole on the right.

*Haida Sea Wolf holding three whales.*


# DAVIDSONIA

*VOLUME 2 NUMBER 2 Summer 1971*

Davidsonia is published quarterly by The Botanical Garden of The University of British Columbia, Vancouver 8, British Columbia, Canada. Annual subscription, four dollars. Single numbers, one dollar. All editorial matters or information concerning subscriptions should be addressed to the Director of the Botanical Garden.



*Acknowledgements*

Audrey Hawthorn, Curator of the Museum of Anthropology at The University of British Columbia, kindly contributed the article on "The Carvings of Totem Park". Mrs. Hawthorn is an eminent authority on the culture of the Indian tribes of British Columbia. She has been instrumental in helping to develop a keen awareness of the rich culture of our first native peoples through her museum activities and the written documentation of her findings.

The article "Native Economic Plants of Totem Park" was written by Nancy J. Turner, a graduate student in Botany who is associated with the Botanical Garden. Mrs. Turner has conducted ethnobotanical studies of the Salish and Kwakiutl Indians of Vancouver Island and has recently co-authored two papers on her findings. Mrs. Turner is presently conducting pre-doctoral research on Haida plant taxonomy.

The pen and ink illustrations are by Mrs. Lesley Bohm. Photographic credits are as follows: pages 9, 11, 12, 13, 14, 15 and 16, UBC Information Services, all other photographs by Dr. Roy L. Taylor.

# Totem Park - An Introduction

Totem Park is a focal point on the University Campus for people interested in anthropology and botany. It represents a unique feature of the Botanical Garden combining a display of totem poles and plants used by the Indian tribes of coastal British Columbia.

The University of British Columbia began to assist in the collection and care of the massive Indian totem carvings when Chief Justice Sherwood Lett, then President of the Alumni Association, Brigadier William Murphy and others arranged to bring two carved house posts from the Musqueam reserve to the University. These were the last carvings left on the lower mainland of British Columbia. They were erected in the old Japanese Garden on the west edge of the Campus until their decay caused them to be brought indoors.

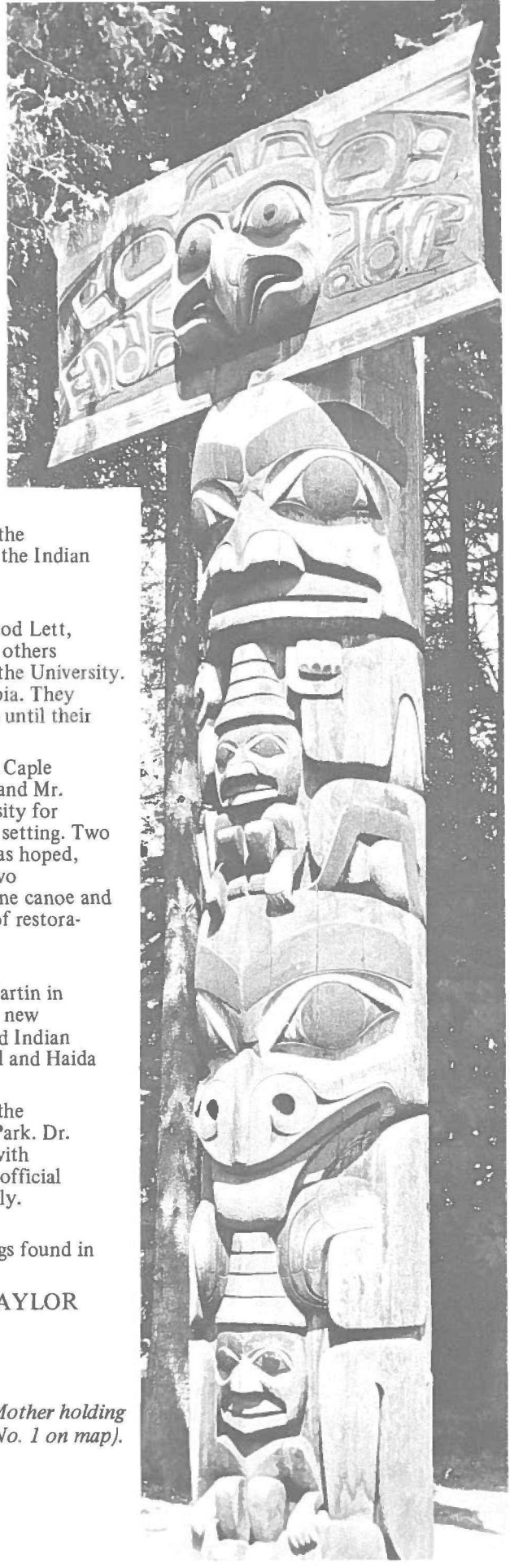
The next development was made by Professor Hunter Lewis, Kenneth Caple and Marius Barbeau. Dr. Barbeau made a visit to the West Coast in 1947 and Mr. Eric Hamber supported the purchase and shipping of poles to the University for placement in a special totem park where they would have an appropriate setting. Two of the poles were purchased by the Alma Mater Society. Eventually, it was hoped, villages of the main tribal cultures of the region might be restored, and two Fort Rupert poles and one complete house frame, one Nass River pole, one canoe and a number of smaller pieces were secured in preparation for the program of restoration and display.

In November 1949, the University set aside 3.1 acres as the present site for Totem Park. During the next 13 years, patient work by Mungo Martin in repair of old poles as well as the carving of new poles was combined with new carvings by William Reid and Douglas Cranmer. The work of these skilled Indian craftsmen resulted in the completion of the development of the Kwakiutl and Haida sections of Totem Park.

On June 25th, 1962, Dr. Norman A.M. MacKenzie, then President of the University chaired an opening ceremony of the Haida Section of Totem Park. Dr. Phyllis G. Ross, Chancellor of the University, gave the principle address with remarks by Mr. Kenneth P. Caple and Professor Harry B. Hawthorn. The official opening was performed by Chief William Assu and the Rev. Dr. Peter Kelly.

This issue of Davidsonia attempts to record some of the history of Totem Park and provide information about the plants and massive carvings found in the garden.

ROY L. TAYLOR



*Haida Mortuary Pole with Bear Father and Bear Mother holding children and an Eagle frontal board. (No. 1 on map).*

# The Carvings of Totem Park

AUDREY HAWTHORN

*Ink sketch of Haida Mortuary Pole.*

The totem pole park was conceived by the University in 1947. Plans were made to obtain massive carvings representing seven of the different groups who have inhabited the Northwest Coast since prehistoric times. However, it was possible to approach the completion of only two areas, each displaying the art and architecture of one group, the Kwakiutl and the Haida respectively.

What do the totem poles represent? They are, basically and literally, a family tree. On the pole are carved some of the heraldic animals and humans of each family line. A family traced its origin to a legendary being, bird, animal, sea creature, or human. Each family had different family crests and histories, and the lists of these varied from tribe to tribe. Techniques of carving and painting were also characteristic of each tribe's culture. But common to all tribes and families was the practice of marking a great and important social occasion with the carving and raising of a pole with great ceremony at a gathering of invited guests. Family history was recited, feasting was provided by the family of the host and gifts were given to all the assembled guests. From then on, the totem pole stood in its position before the home of the family which had commissioned its carving. When weathering and decay eventually caused it to fall, it remained there, and the family had to have another carved and gave another feast. (This ceremony was called "Potlatch" from a Chinook wording meaning "to give").

Generally, the figures carved on a pole are easy to distinguish, as tradition has symbolised certain basic features on each character. The beak of each bird differs, as do the teeth and ears of animals. Wings, claws and tails may also distinguish them. But the family legends are known only by its members or other villagers who have heard them recited many times.

We do not know how far back in tradition poles extend because wood does not long survive in the moist climate of this region. Archaeological finds include birds, animals, and other living things carved in more durable materials, and the tradition of a family crest seems to have been a long-established one. But we do know that at the first European contacts in the eighteenth century, wooden poles and house posts were to be seen in the villages visited and recorded by the European artists of the Spanish, French, and English expeditions.

The introduction of iron and steel made possible greater freedom, elaboration and size of the carving. The stone blades of pre-contact days were simply replaced by quicker steel in the same tools and used in the same techniques. The Western red cedar of this region (*Thuya plicata*) was the favoured wood for all large carving, as it had a clean, even grain, easily split and carved.

*The Eagle Crest post of a Kwakiutl family. (No. 7 on map).*



Not only were totem poles carved from these great cedar cylinders but great canoes were made from them, and the large family houses which were built to contain the families and children who were closely related to the head of the family. A family lived in one corner of the large house, with woven screens, benches and mats as furniture. A fire built in the centre of the house gave light for evening conversations and story-telling, and was used for cooking. All families shared the duties of the household; men fished, hunted and made tools and boxes, women cared for children, prepared food, and wove baskets and textiles. All gathered wealth to give feasts and to pay for the carving of the totem pole and house posts, and made the gifts to be distributed.

Those readers who are interested in more detailed ethnobotanical information should consult the reading list at the end of this article.

**Kwakiutl Village**

The Kwakiutl display is in the southern section of the park. This is a group of carvings and the internal frame of an old dwelling house, made by the people who inhabit the East Coast of Vancouver Island, the adjacent islands and the mainland opposite. The plank walls would have been about 20 feet beyond the centre frame, which would have supported a massive gable beam for the roof. Two family crest eagles supported one of the roof beams.

A village consisted of many houses facing the sea by which they lived. Along the sea they travelled to hunt, trade, to fish or to visit. Their dependence on it gave this region a unique and distinctive lifestyle.

All but two of the poles are old ones, from Fort Rupert and Alert Bay. They were obtained for the University as gifts from several donors: Dr. and Mrs. Eric Hamber and Dr. and Mrs. Sherwood Lett, after Marius Barbeau had informed the University that they were available.

Because the poles and house frame were old and needed repairs, a craftsman of skill and traditional

knowledge was needed. Such a carver was Mungo Martin, Chief Nakapenkem of the Fort Rupert Kwakiutl, who had been a carver for most of his life, but who had turned to fishing in order to make a living in a changing world. At 70 years of age he enthusiastically accepted the challenge of returning to the skill for which he had earlier been famous. Installed in 1949 in a small house on the edge of the campus, near a shed set aside for carving, Mungo began to repair the poles and to paint them. He worked easily through an eight-hour day, often carving at night as well. He made use of ordinary carpenter's tools for roughing-out work: axe, chisels and saw; but for carving and finishing touches, he made use of traditional tools: the "D" adze, the elbow adze, the curved knife, and specially tapered paint brushes (See illustration). As was customary, Mungo had made all of his own tools.

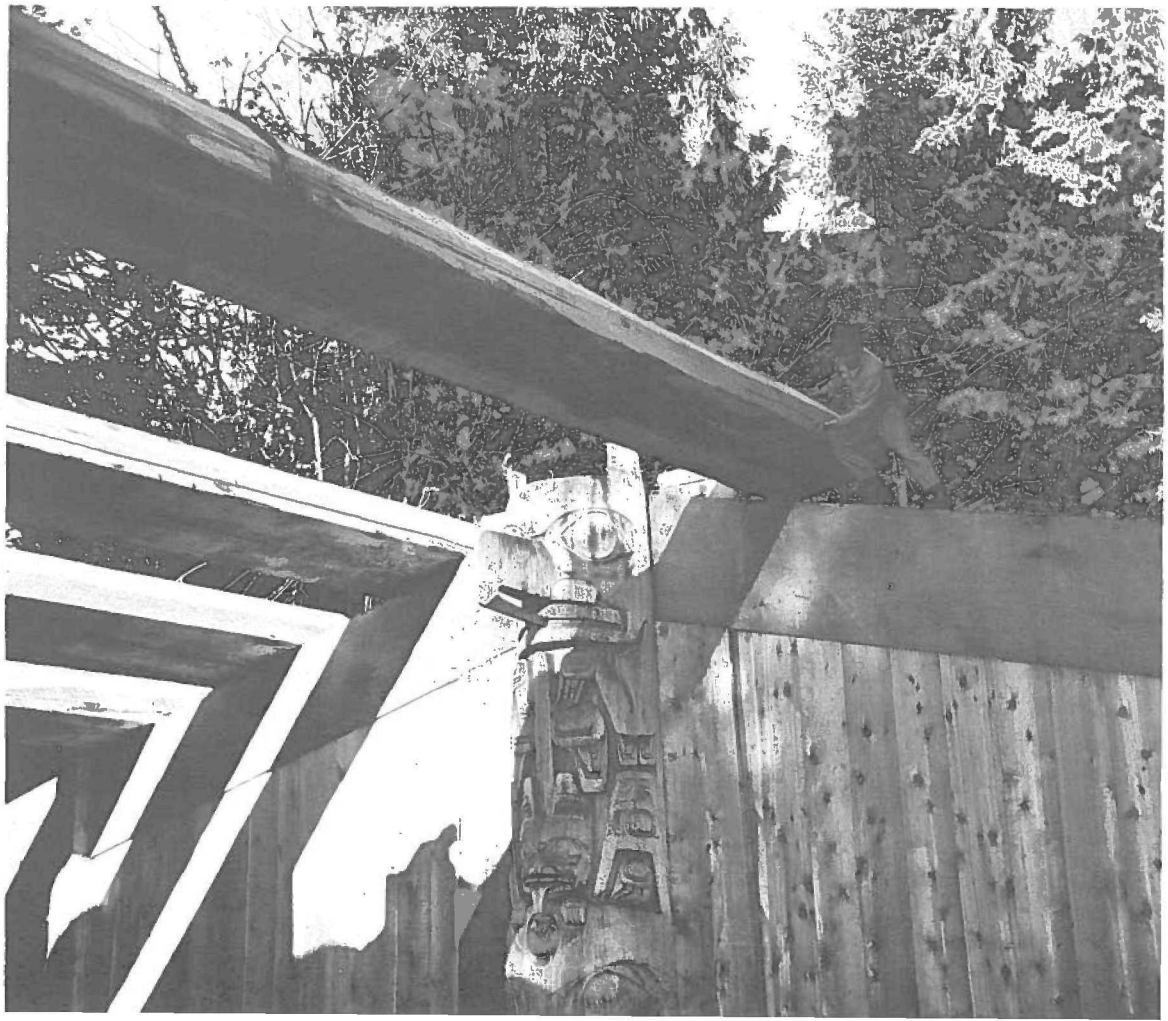
It became evident at once that his skill was too great to waste on carving and repairing old poles, and in 1950 he was asked to carve two new ones. When he began to work on these, he was joined by his wife, Abayah, who travelled to the University to live. The two old people spent all of their time in creative work of some fashion: Mrs. Martin made basketry and textiles and embroidered and crocheted for her grandchildren, while her husband carved and painted. To them, the Department of Anthropology, the Museum of Anthropology, and their many friends here were all indebted, for they took endless pains to explain their culture and its meaning. Mungo was willing to work slowly before the movie camera, and several films were made of his work.[1]

It is of interest to note that Mungo Martin continued his carving career for twelve more years, training several of the finest young Indian carvers now working. He went to the Provincial Museum, Victoria, which employed him until his death in 1968. One of his poles was sent as British Columbia's Centennial gift to the Queen of England in 1957. It is now standing in Windsor Great Park. A duplicate was made for the Vancouver City Centennial Museum and stands in Vanier Park at Kitsilano Beach. Another pole stands at

*Opposite Page: The Base of the Haida Single Mortuary Pole with the child held by the Grizzly Bear Father.*

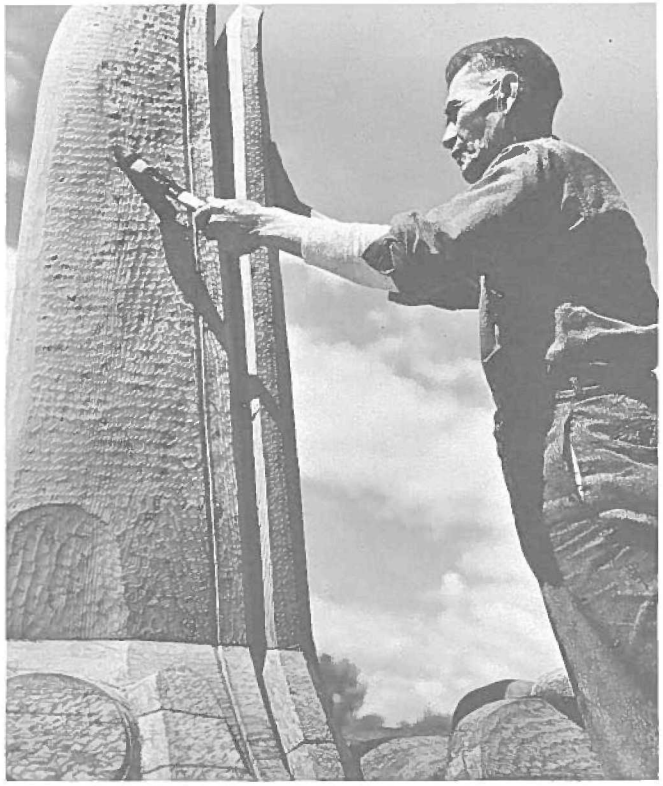
*Below: The interior of the Haida House during construction with the Family Crest Pole in place and the great adzed beams partially installed.*





*Right: Mungo Martin finishing the Raven's beak on the Kwakiutl Raven Pole.*

*Below: Doug Cranmer and Bill Reid carving the frontal board of the Haida Mortuary Pole.*



the border between the United States and Canada in the Peace Arch Provincial and State Park. The others are at the Provincial Museum Park in Victoria.

**Haida Village**

The Haida section of Totem Park of the University of British Columbia is slightly to the North in the forested area. The Haida were a seafaring people, who inhabited the Queen Charlotte Islands. They made canoes as long as 80 feet within which they travelled up and down the whole coastline.

They lived in populous villages facing the sea. Construction of the large plank houses, with their family crest poles before them, were the occasions for the most important ceremonies of their lives. Whenever a head of a family of high rank took a new noble name and position, he caused a new house to be built for himself and his younger relatives. Such a house might take a year to build under the direction of a skilled carpenter, while others were carving the family totem poles and poles to commemorate family heads now deceased. To build a house (which might be as large as 80 ft. long and 100 ft. wide) trees must be felled, planks split for the walls and foundation beams, and cedar shakes split for the roof.

Here in this Park we see a small section of a village, carved by Bill Reid, of Haida descent, with the assistance of Doug Cranmer, of the Nimkish Band of Alert Bay. Working on a Canada Council grant, these skilled carvers worked for three years (1959–62) to create these carvings and houses. Though recent, these reach the great heights of the masterly Haida carvings of the middle of the last century.

The construction of this Haida project demanded a number of cedar logs from Northern forests. Generous support was given by Dr. H.R. MacMillan and the MacMillan Bloedel Company, Dr. Walter C. Koerner and Rayonier Canada, and the Flavelle Lumber Company.

[1] "Making a Totem Pole," UBC Museum of Anthropology (in Audio Visual Collection, Center for Continuing Education); "Making a One-Piece Box," Kroeber Museum, Univ. California, S. Barrett; Record film of the Opening of the House of Chief Nakapenkem, Provincial Museum, Victoria, 1953.

*Haida Village with Dwelling House, Mortuary Poles, Grave House and Sea Wolf.*

## FURTHER SUGGESTED READING


BRITISH COLUMBIA HERITAGE SERIES: OUR NATIVE PEOPLE. B.C. Department of Education, Volumes 1–10. A series of small handbooks for teachers of elementary grades. May be obtained from the Text-book Branch, Department of Education, Parliament Buildings, Victoria, B.C. (OS)

1. Introduction to our Native Peoples . . . . . .50
2. Coast Salish . . . . . .50
3. Interior Salish . . . . . .50
4. Haida . . . . . .50
5. Nootka . . . . . .50
6. Tsimshian . . . . . .50
7. Kwakiutl . . . . . .50
8. Kootenay . . . . . .50
9. Dene . . . . . .50
10. Bella Coola . . . . . .50

INDIANS OF NORTH AMERICA, by Harold Driver. University of Chicago Press, Chicago, 1961. 656 pp. A good survey of the ethnography of the whole continent, suitable for advanced students.

CULTURES OF THE NORTH PACIFIC COAST, by Philip Drucker. Chandler Publishing Co., San Francisco, 1965. A general text-book on the Indian cultures from Alaska to Oregon, by the foremost author in the field.

THE INDIAN HISTORY OF BRITISH COLUMBIA: VOLUME I, THE IMPACT OF THE WHITE MAN, by Wilson Duff. *ABCM*, No. 5, 1964. A comprehensive study of the Indian tribes and bands of the Province, their population trend, and the effects of the arrival of the white men on their ways of life.

ETHNOBOTANY OF WESTERN WASHINGTON, by Erna Gunther. *UWPA*, Vol. 10, No. 1, 1945, pp. 1–62. Published as a separate monograph, this work is an excellent record of the botanical knowledge of the Indians of western Washington.

THE INDIANS OF CANADA, by Diamond Jenness. *NMC–B*, No. 65, A.S., No. 15. First edition 1932, third edition 1955. 400 pages with plates and figures. The most complete general description of the Indian tribes of Canada. Has descriptions of past Indian life by topic and by region, as well as concise descriptions of each tribe. (OS)

PEOPLE OF THE POTLATCH, by Audrey Hawthorn. Vancouver Art Gallery and the University of B.C., Vancouver, 1956. 38 pages of text, 109 plates. A handbook prepared in conjunction with a major exhibit of native arts and crafts at the Vancouver Art Gallery. Available UBC Bookstore.

THUNDERBIRD PARK, by Wilson Duff. B.C. Government Travel Bureau, Victoria. Free on request. A brief illustrated guide to the exhibits in Thunderbird Park, with information on totem poles in general.

MONUMENTS IN CEDAR, by E.L. Keithahn. Anderson Press, Ketchikan, Alaska, 1945. 157 pages with illustrations. A larger and revised edition was published in 1963 by Superior Publishing Company, Seattle. Discusses totem poles in general with emphasis on Alaskan poles. (OS)


Another Bibliography on North West Coast Life and Art is available at The Museum of Anthropology, UBC Library Basement.

# List of Poles - Haida Section - Totem Park

1. *Single Mortuary Pole.*

The pole itself is composed of figures from the Bear Mother story: the grizzly father below and the human mother above, each holding a child. The frontal board represents an eagle, the head carved in the round and the rest split so that the body, wings, and tail appear at either side in the flat surface. Originally the top of the pole behind this board would have been hollowed out to contain a coffin.

2. *Separate Figure.*

This represents a mythical sea wolf holding three whales.

3. *Dwelling House.*

The frontal pole has three main figures: at the bottom a killer whale, in the middle an eagle, and at the top a shark. The killer whale has his tail tucked under him and his flippers at his sides, enclosing a small human figure, which is held around the middle by his split dorsal fin. The eagle holds a sculpin in its claws, frogs emerge from its ears.

The shark, with its characteristic downcurving mouth and gill slits, holds the tail of a small killer whale. On the shark are three watchmen, the central one on the back with the dorsal fin passing through his face and hat, the two smaller ones above the pectoral fins. The shark's asymmetrical tail appears at the very top.

The interior house post – *not shown in the illustration* – consists of two main figures: a thunderbird and its prey, the killer whale. At the bottom, the massive head of the killer holds a small human figure in his mouth. His flippers extend upward at the sides. The center of his forehead is a small inverted human face – his spouthole. Above, a larger face decorates the tail of the thunderbird, but still higher appear the dorsal fin and flukes of the killer whale, the two main figures being interlocked. The thunderbird is somewhat human in form, having the mouth and forearms of a man but the beak, feet, and tail of a bird. Unfortunately, the house is closed to the public because of interior disrepair.



4. *Double Mortuary Pole.*

The poles are uncarved; the board represents a shark, the head carved in the round, the body split and spread out on either side.

Originally, these poles supported a box containing one or two coffins.

5. *Grave House.*

The frontal pole bears four main figures: a wolf at the bottom, above it a squat round-eyed creature (possibly a frog), in the middle a rather human-looking bear, and at the top a raven. The wolf holds a frog in his mouth and a wolf pup between his legs while a second wolf pup peeks out from between his ears. The frog-like creature has a mosquito's face between its round eyes. The bear holds a small raven between his legs. The big raven above the bear has human forearms and hands; a partly human face decorates its tail, which appears between the ears of the bear. At the very top are three little watchmen.

The grave house was used as a repository for the dead.

6. *Memorial Pole.*

The base is a great beaver holding a log in his hands. His tail, upturned between his legs, is decorated with a human face. Between his ears appears the head of a bear cub which forms the base of a tall hat – the smooth segmented portion of the pole. The height of the hat indicates the rank of the wearer. On its top perches a raven.

A path through the forest between the Japanese Garden and the Students' International House, leads to a further Haida carving, a massive bear, carved by Bill Reid for Dr. Walter C. Koerner, who gave it to the University in 1967.

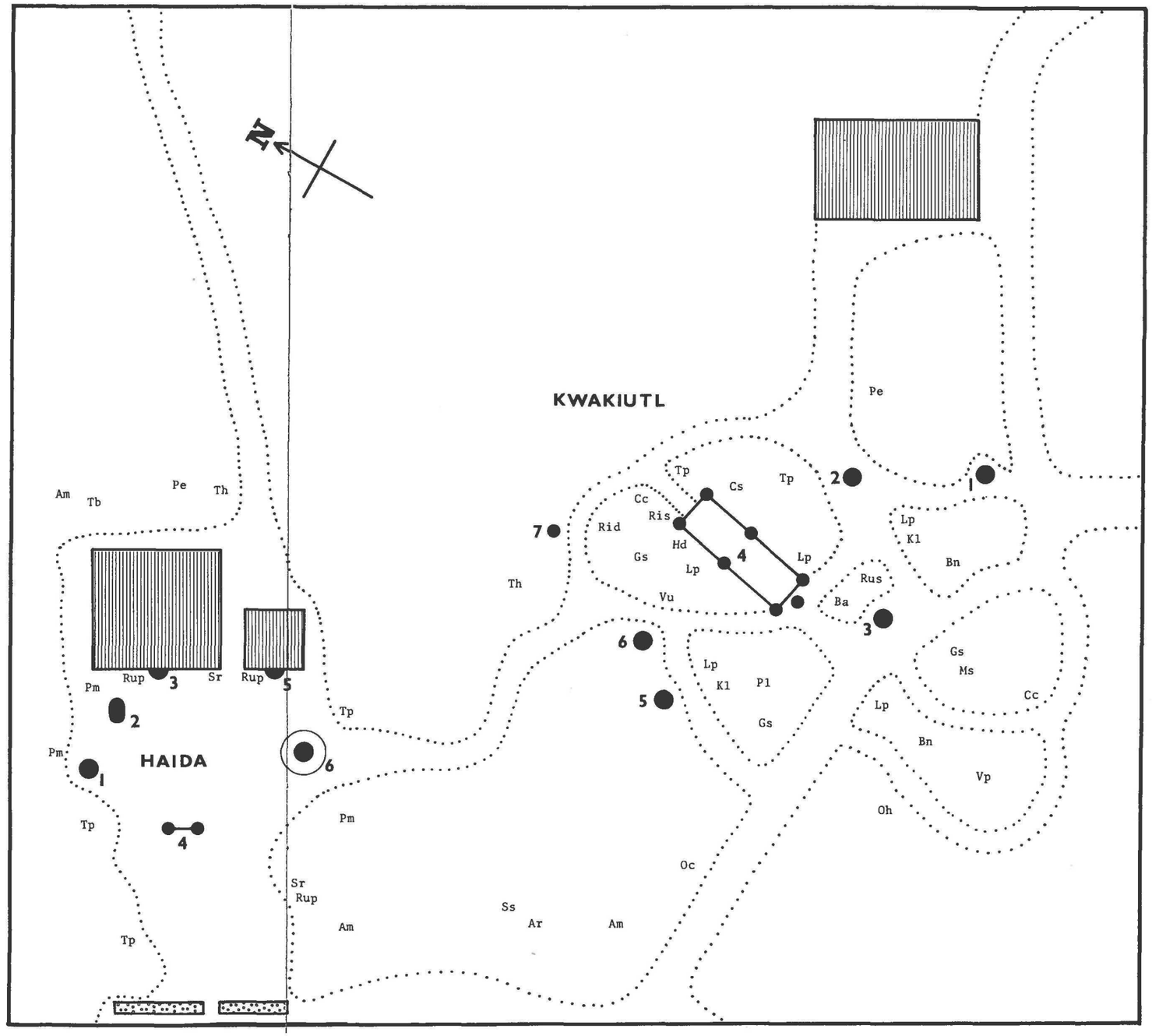
*Traditional Northwest Coast carpentry tools used in carving. Left, top and right: elbow adze. Centre: "D" adze. Bottom: chisel.*

# Map of Totem Park

TOTEM PARK PLANTS USED BY
NORTHWEST COAST INDIANS

| | | | |
|---|---|---|---|
| Am | Acer macrophyllum *Broadleaf maple* | Ph | Philadelphus lewisii *Mock orange* |
| Ar | Alnus rubra *Red alder* | Pm | Pseudotsuga menziesii *Douglas fir* |
| Ba | Berberis aquifolium *Tall Oregon grape* | Ps | Picea sitchensis *Sitka spruce* |
| Bn | Berberis nervosa *Oregon grape* | Rid | Ribes divaricatum *Common gooseberry* |
| Cc | Corylus cornuta *Hazelnut* | Ris | Ribes sanguineum *Red flowering currant* |
| Cs | Cornus stolonifera *Red-osier dogwood* | Rup | Rubus parviflorus *Thimbleberry* |
| Gs | Gaultheria shallon *Salal* | Rus | Rubus spectabilis *Salmonberry* |
| Hd | Holodiscus discolor *Ocean spray* | Sr | Sambucus racemosa *Red elderberry* |
| Kp | Kalmia polifolia *Swamp laurel* | Ss | Salix scouleriana *Scouler's willow* |
| Li | Lonicera involucrata *Black twinberry* | Tb | Taxus brevifolia *Western yew* |
| Lp | Ledum palustre *Labrador tea* | Th | Tsuga heterophylla *Western hemlock* |
| Mn | Montia sibirica *Miner's lettuce* | Tp | Thuja plicata *Western red cedar* |
| Oc | Osmaronia cerasiformis *Indian plum* | Vp | Vaccinium parvifolium *Red huckleberry* |
| Oh | Oplopanax horridus *Devil's club* | Vu | Vaccinium uliginosum *Bog bilberry* |
| Pe | Prunus emarginata *Bitter cherry* | | |





# List of Poles-Kwakiutl Section-Totem Park

The Kwakiutl Indians lived on the Northern tip of Vancouver Island, the adjacent mainland, and the many islands in between.

These poles and carvings were all purchased from the families who owned them, in Alert Bay and in Fort Rupert.

All pole figures are described from the bottom to the top.

1. *New Pole carved by Mungo Martin in 1950-51.*

This pole contains the clan crest figures to which Mungo Martin (as hereditary chief Nakapenkem of Fort Rupert) had claim.

Beaver: This animal is identified as a crest animal by his cross-hatched tail, two prominent front teeth and a stick held in two upright paws.

Killer whale.

Bear.

An hereditary family chief in his blanket and cedar bark neck ring and head ring.

Hok Hok: A mythological bird living on a far away mountain top.

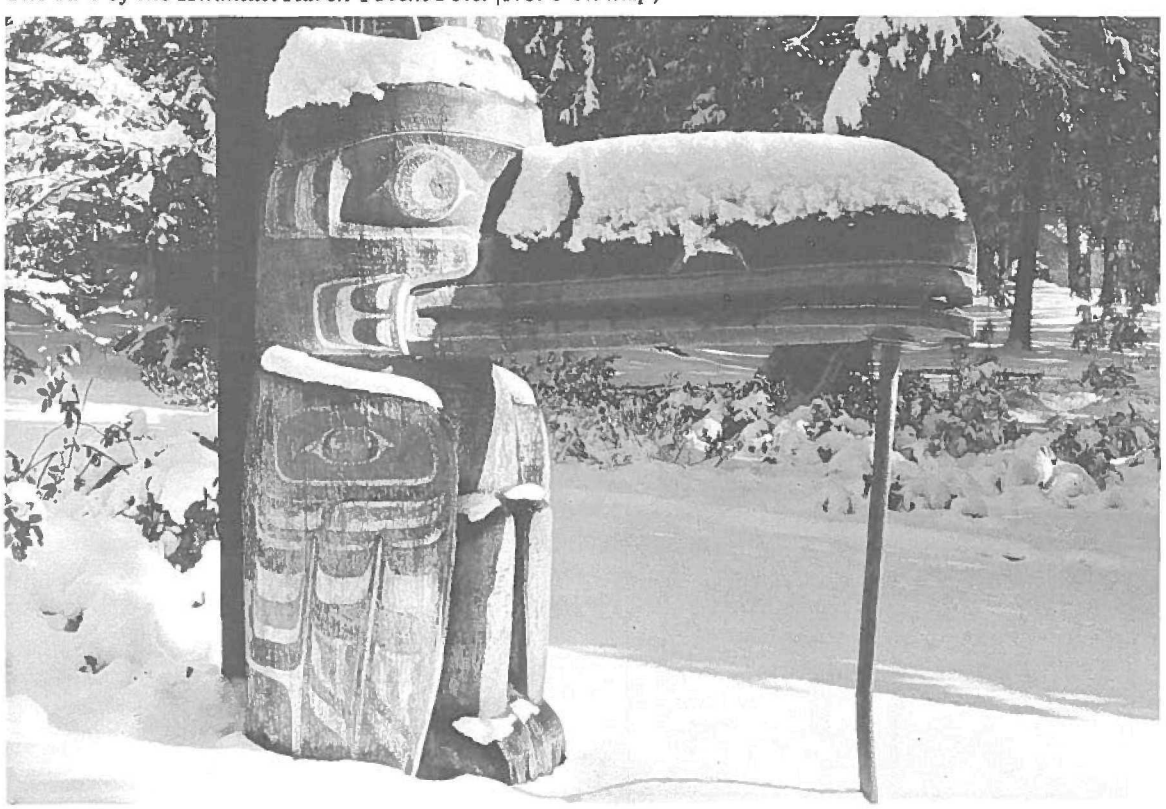
2. *Alert Bay Sea Lion Pole.*

This pole was carved by Mr. Martin when he was a young man of 25 years of age. He was then an apprentice carver, studying under his uncle, a great carver known by the white man as Charlie James.

First is Tsonokwa, "the wild woman of the woods", used as a legend to frighten children into being



*The base of the Kwakiutl Raven Totem Pole. (No. 3 on map).*



good, but whose cry also brought wealth to the children or others who followed her to her woodland home and found treasure.

Above her is a bear (or chief of a bear clan), shown devouring a copper. Among the tribes of the Northwest Coast, the copper shield in this shape was a sign of great riches.

Next above is a sea lion, head downward.

At the very top is a sea gull.

3. *The Raven totem pole. (of another Family House Line.)*

A great raven with a long beak.

A chief holding a copper (sign of wealth).

Above him is a Sisiutl, a double headed dragon, with a head at each end, and one in the centre of the body. This mythical serpent was important to warriors, and also was a very high-ranking family crest animal.

At the top is an early ancestress of the clan, who had important visions and gave gifts to her family.

4. *This is the internal frame of a Family House.*

This house was inhabited by an important chief, head of a family line, and four or five families of younger related brothers, with their wives and their children. Each family lived in a different corner of the House.

The great upright beams supported the roof frame. The outside walls (about 10 feet further out than the frame) were of cedar planks. Here they were not preserved, but we see the six great upright posts which support the square roof frames.

At the front are two sea lion crest carvings, and at the back are two family crest thunderbirds with outstretched wings. The great roof supports were poles, adzed smooth by the carpenters. These roof poles supported a heavy gabled roof made from long split cedar shakes. The shakes in the center of the roof could be moved, to let out the smoke from the great central fire built in the earthern floor. In the original house, this fire was kindled and burned for most of the winter months, especially for the dances and feasts which took place within the house during the long rainy winter months.



The House was entered by family and visitors through the curved doorway of an "entrance" pole. This one, showing further crests of this family, was composed of a killer whale with an eagle above.

5. *A new totem pole carved by Mungo Martin in 1950-51.*

This pole, carved for the University of British Columbia, is of new cedar. This one has crest figures belonging to Mr. Martin's (chief Nakapenkem) family history.

At the bottom is a chief in his ceremonial cedar bark cape, neck ring and head ring.

Above him is a killer whale, a very important crest of the Kwakiutl.

A raven.

Another important ancestral chief.

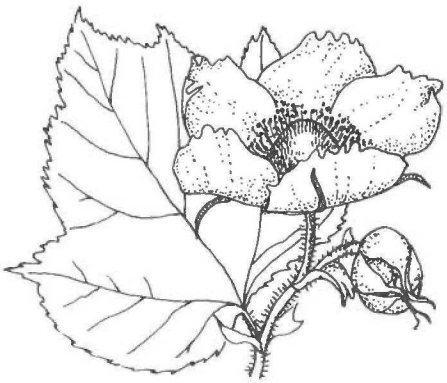
A thunderbird. His curved ears make his appearance different from other birds. In legend he was so great that his flight caused the sound of thunder, and his eyes flashed lightning.

6. *Another Frontal Pole.*

This pole was an entrance to another family house not represented here. The house was decayed with years of use, and was not brought down to the University of British Columbia.

7. *An eagle crest post.*

This family bird character with outstretched wings was placed on the beach in front of the house.



# Native Economic Plants of Totem Park

NANCY J. TURNER

*Rubus parviflorus*, 'Thimbleberry'.

The resourcefulness of the Northwest Coast Indians is recognized by all those familiar with their culture. Without the aid of agriculture or domesticated animals, they developed a highly complex culture, in many ways unique in its richness. Many anthropologists feel that this remarkable culture was made possible largely by the ability of these people to efficiently utilize the numerous natural resources in their environment. Certainly their ingenuity in using plants and plant products in their culture supports such a contention.

While some plant species were more important than others in the Northwest Coast economy, virtually every common tree, shrub, flowering plant, and fern was put to use in some way by one or more Northwest Coast groups, whether for food, manufacture, or medicine. Furthermore, plants, especially those important in the material culture, played a significant role in the language, religion, mythology, and even art, of these people. Each linguistic group developed a system of botanical nomenclature and classification reflective of its perception of plants and of the cultural roles of plants in the society.



Unfortunately, in the past, little interest has been taken in the field of ethnobotany on the Northwest Coast, and with the rapid acculturization of the Indian people in the present century, information on the uses of plants and their Indian names is rapidly disappearing. It is impossible to determine how much has already been lost. However, with the help of some of the elderly Indians who remember back to the days when native plants were still widely used, it has been possible to collect a substantial amount of ethnobotanical information for some Northwest Coast groups (Turner and Bell, 1971a & b). It is hoped that more work in this field will be carried out in the future.

The flora of Totem Park offers a variety of economically important native plants, many of which were widely used on the Northwest Coast. These plants, some growing naturally, and others planted in more formal garden areas, provide an ideal background for the totems and buildings in the park. The uses of some of these plants in Northwest Coast cultures are outlined below.

*Trees*

Of all the plants used by the Northwest Coast Indians, Western red cedar (*Thuja plicata*) is probably the most universally important. The cambium layer was dried and eaten by some groups, although it was not a highly regarded food. The easily molded, rot-resistant wood was used to manufacture canoes, houseboards, totems, and numerous smaller items, such as boxes, cradles, animal traps, fish weirs, firetongs, masks, paddles, canoe bailers, and ceremonial drums. The wood was also valued as a fuel, and was often used as the drill or hearth in making friction fires.

Cedar bark also had a multitude of uses. It was collected from living trees by cutting it around the base and pulling it upwards and outwards until it broke at the top. Haida women sang a lively song as they pulled off the bark – *We want a long strip, go up high, go up high*! Bark strips were sometimes as long as 20 or 30 feet. Large pieces of bark were flattened and used for roofing. For other purposes, the outer bark was

*Oplopanax horridus*, the Devil's Club common in the understorey of coastal forests in British Columbia.
*Corylus cornuta*, the 'Hazelnut'.

broken off and the fibrous inner bark was bundled and carried home. This inner fiber was split into several layers and used to make ropes, fishlines, nets, hats, mats, baskets, and ceremonial head-dresses and neck-rings. The bark was often dried for towelling, bandages, diapers, and tinder for starting fires. Among some groups it was considered a crime to peel all of the bark from a tree. The tree would die, and the offender would be cursed by nearby cedar trees.

Slender young cedar branches, or "withes", were twisted together to make nets and ropes, some of which were as thick as a man's wrist. Cedar roots were split and used in basketry, although Sitka spruce roots (*Picea sitchensis*) were more commonly used for this purpose. Cedar played an important role in Northwest Coast Indian mythology and religion. It was believed that cedar trees were formerly human beings, transformed because they were wicked and quarrelsome into the most useful of all trees.

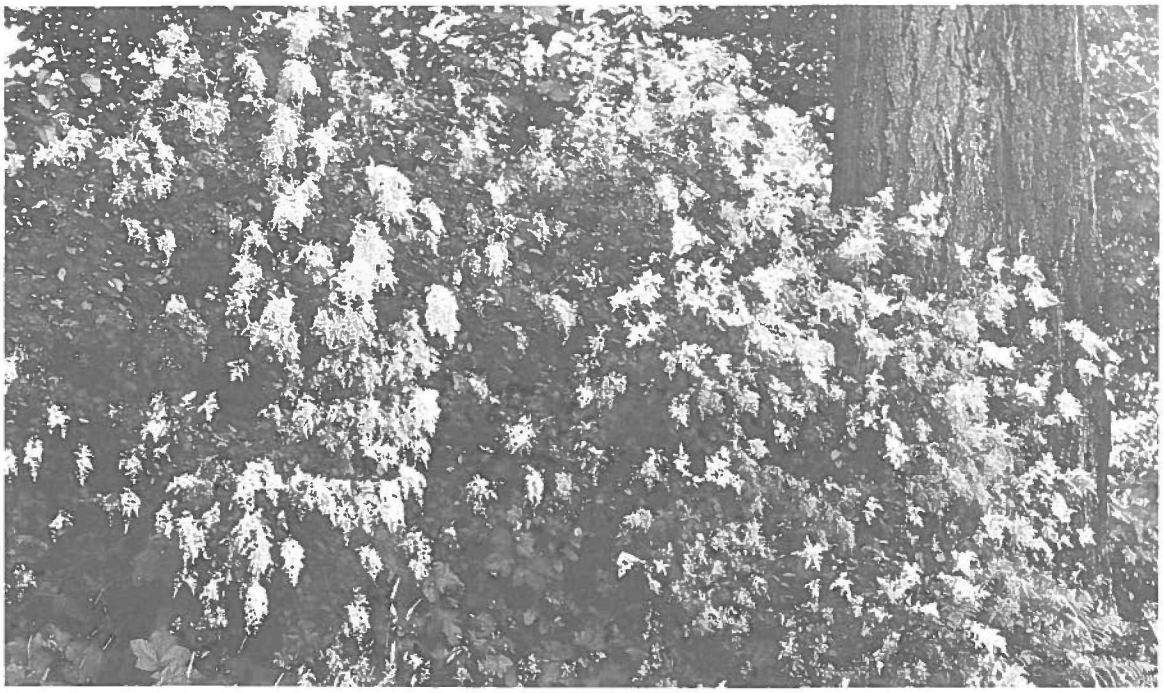
Western hemlock (*Tsuga heterophylla*) is another important economic tree found in Totem Park. Hemlock cambium was collected in large quantities in the spring, formed into cakes, and dried for winter food. Before use, it was soaked overnight. It was often mixed with berries. The branches were placed in the water in estuaries to collect herring spawn. A reddish brown dye was obtained from the bark, and the pitch was regarded as a wonderful healing substance for wounds, burns, and skin ailments. When a Haida girl reached puberty, hemlock boughs were hung above her bed, and the falling needles symbolized the property which would fall on her when she married.

Douglas fir (*Pseudotsuga menziesii*), although not as useful as cedar or hemlock, was considered an excellent fuel and molded into curved halibut and cod hooks. The pitch was used to patch canoes and water vessels.

At the north end of the long house is a single western yew (*Taxus brevifolia*). Yew wood was regarded as the strongest and most resilient of all trees. In the Haida, Halkomelem Salish, and Lillooet Salish languages, the word for yew is synonymous with the word for "bow", a good indication of how it was used. Other items requiring special strength and flexibility, including digging sticks, harpoon shafts, clubs, spears, wedges, fish hooks, and paddles, were also made of yew. A Haida medicine for rheumatism was prepared by



*Berberis nervosa,* 'Oregon grape'.



*Holodiscus discolor,* 'Ocean spray'



boiling yew wood for an entire day and drinking the wine-colored liquid. The berries, reputed to be toxic, were used as a contraceptive.

Of the deciduous trees in Totem Park, Broadleaf Maple (*Acer macrophyllum*), Red alder (*Alnus rubra*), Bitter cherry (*Prunus emarginata*), and Scouler willow (*Salix scouleriana*) are notable. Maple wood was valued, especially among the Salish, for its hardness. It was used to carve spindles, dishes, spoons, combs, paddles, and rattles. Red alder wood, slightly softer, was used by all groups for carving dishes, and was also valued as a fuel. The bark, as the name implies, yields a red dye, which was used throughout the region for coloring fiber and wood and for making fishnets invisible in the water. A decoction of alder bark was used as a medicine for tuberculosis and for eye ailments. The cambium layer of both maple and alder was eaten in the spring. The bark of willow and Bitter cherry, especially the latter, was peeled off horizontally and used in basketry for imbrication. Because the bark was tough, fibrous, and waterproof, it was used for binding such implements as harpoons, spears, fishing lines, bows and arrows. Salish children were bathed in a solution of Bitter cherry and Gooseberry roots by their grandparents to make them intelligent and obedient.

*Fruits*

Numerous types of berries and fruits were available to the Northwest Coast Indians. Among those represented in the Park are salmonberry (*Rubus spectabilis*), Thimbleberry (*Rubus parviflorus*), Salal (*Gaultheria shallon*), Red elderberry (*Sambucus racemosa*), Oregon grape (*Berberis nervosa*) and Tall Oregon grape (*B. aquifolium*), Hazelnut (*Corylus cornuta*), Indian plum (*Osmaronia cerasiformis*), Red huckleberry (*Vaccinium parvifolium*), Bog bilberry (*Vaccinium uliginosum*), Swamp gooseberry (*Ribes lacustre*), and Red flowering currant (*Ribes sanguineum*). Many of these were stored for winter by being cooked, mashed, and dried in wooden frames into flat cakes. Before eating, these berry cakes were soaked in water and mixed with the grease of the candlefish, or oulachen. Often they were mixed with other types of food, such as salmon spawn or hemlock cambium.

Most of the plants listed above had additional uses. In the spring, the tender sprouts of Salmonberry and

Thimbleberry were eaten raw or cooked. They are sweet and nutritious, and were one of the few vegetable foods available early in the year. The inner stem and root bark of the Oregon grape is a brilliant yellow colour; the Salish Indians boiled it in water to obtain a yellow dye. The stems and roots were pounded and boiled to make a decoction drunk as a general tonic, and as a remedy for skin diseases. The sucker shoots of Hazelnut were sometimes used to make arrows, and Red elderberry stems were used to make blowguns for children. The Kwakiutl especially regarded elderberry as a powerful medicine. The bark was used to make steam baths and was mixed with Black twinberry bark (*Lonicera involucrata*) to make a footbath for aching feet. An extract of the bark rubbed in water was drunk to induce vomiting. Gooseberry roots were also a powerful medicine to the Kwakiutl, and were used to poultice boils, blisters, mouth sores, and other skin ailments. In the old days, the Haida would place a thorny gooseberry branch above the entrance to a house to protect the occupants against witchcraft.

*Ferns*

Bracken fern (*Pteridium aquilinum*) and Sword fern (*Polystichum munitum*) are the two major fern species found in Totem Park. The long underground rhizomes of bracken were an important source of starch to most Northwest Coast Indian groups. They were generally roasted in embers, peeled, and eaten with salmon roe or oil. The Coast Salish used to pound the roasted roots into flour and make a type of bread, but the name of this bread, *sabeli*, the Chinook jargon word for 'flour', suggests that it had a post-contact origin. Some groups, such as the Nootka on the west coast of Vancouver Island, also ate the young shoots, or "fiddleheads". The Sword fern plant has large fleshy clumps of rhizomes at its base, which resemble bananas or sweet potatoes. These were a popular food of the Kwakiutl and Haida. They were gathered by the sackful, steamed in large pits lined with rocks and covered with leaves, seaweed, and earth, then peeled and eaten at feasts. The Kwakiutl used the Sword fern plant as a charm to call the northwest wind, because it was believed that in mythical times the Sword fern was a hairy-faced human who controlled the weather. The Haida associated Sword ferns with shrews, and believed that if one followed a shrew to a clump of Sword ferns, he would be led to the underground house of a supernatural being, who would give him powerful medicine. The Haida name for shrew means 'Sword fern mother'.



*Rubus spectabilis*, 'Salmonberry'.

*Philadelphus lewisii,* 'Mock orange', a native plant which makes a very attractive garden shrub.



*Other Plants of Interest*

Throughout the Totem Park area, a small pinkish-flowered herb called Miners' lettuce (*Montia sibirica*) can be found. As the common name implies, the succulent stems and leaves were used as a green vegetable by the early prospectors, who undoubtedly learned of its use from the Indians. The Haida were especially fond of chewing the stems. This herb was also used as a headache remedy.

Two shrubs found in the garden area,Ocean spray (*Holodiscus discolor*), and Mock orange (*Philadelphus lewisii*) were commonly employed by the Salish Indians for making arrows. Both are sometimes called "arrow-wood". Ocean spray was also used to make digging sticks, harpoon shafts, bark scrapers, and mat making needles. The long straight stems were often hardened by scorching them. Another shrub in the garden, Red-osier dogwood (*Cornus stolonifera*), was used to make a cleansing medicine or emetic for Salish canoe pullers to give them strength in races. The bark was soaked in warm water, and the extract was drunk in large quantities to cause vomiting. This medicine is still used at the present time.

Labrador tea (*Ledum palustre*) and Swamp laurel (*Kalmia polifolia*) are two heath shrubs planted in the garden. They are very similar in outward appearance, and habitat, and are called by the same name in many Northwest Coast languages. For example, in Haida they are both called *xilkagan*, or 'cold medicine', but when it is necessary to distinguish between them, the former is called "*xilkagan* used for tea", and the latter "*xilkagan* used for medicine". Both are used to make a cold medicine, and often they are mixed together for this purpose, but only *Ledum* is drunk in quantity as a tea. The young leaves are picked and dried in bags over the stove. In the old days, a handful of leaves in a pot of water was left boiling on the stove for days at a time, so that people could help themselves whenever they wanted some. Nowadays, it is not drunk as often, although it is still used. Most people prefer it with sugar. A common Haida name for it, derived from English, is "*xaida tai*". It is also called "Hudson's Bay tea". Kalmia contains a poisonous compound, andromedotoxin (Kingsbury, 1964), which is undoubtedly its medicinal principle. Haida hunters used to drink a decoction of it for luck before they went out to hunt. Both of these plants were widely used on the Northwest Coast and throughout Canada.

One of the most important ritual and medicinal plants on the Northwest Coast is Devil's club (*Oplopanax horridus*). A single large plant is found along the path leading to the garden area. It's spiny stems and maple-like leaves are very distinctive. All of the Northwest Coast groups used and respected it, but to the Haida, its powers were almost limitless. Called *djitlindjau*, it was employed as a medicine for almost every conceivable illness. A person suffering from rheumatism would fast for several days and then for nine consecutive days would drink with large quantities of water a decoction made by boiling the inner bark from nine elbow-length pieces of *djitlindjau* in salt water. This medicine is apparently a powerful laxative, and is so strong one can smell it from his joints. If this treatment is not effective, it should be repeated for another nine days. For a bad cold, the cleaned bark is chewed and the juice swallowed. It is so strong that one cannot taste anything for two days. This treatment is still used at the present by many Haidas. The oily berries of this plant were rubbed into the hair of children to get rid of lice and dandruff. The principle of counter irritation was often used by Northwest Coast Indians to combat disease. A common treatment for sore limbs was to beat them with Devil's club stems.

Devil's club was also used in purification rituals to gain supernatural power. As an example, among the Haida, shamans, hunters, gamblers, and others requiring extreme purity would undergo the following ritual. A person would sit on the ground between two stakes beside 40 pieces of Devil's club stem. He would gnaw four circles around each piece and return it to the pile. He soon became very sleepy, and the medicine had a powerful effect on his bowels. After he had followed this procedure he would be pure enough to seek a supernatural helper. A sweatbath with Devil's club bark was also effective in purification.

These plants are representative of the variety of types used by the Northwest Coast Indians. In all, over 200 species can be included as native economic plants in this area. Aside from being interesting to many people and reflective of the ingenuity and resourcefulness of our native Indians, information on the uses and names of plants in native cultures can give valuable insights applicable in many fields of study. Such information can lead to the discovery of new medicines and drugs, new natural manufacturing materials, and new agricultural products. It can be used in archaeology to infer subsistence patterns and migration routes, and in linguistics to trace linguistic relationships and inter-group communications. In anthropology it can indicate degrees of cultural change and levels of perception in a group of people. In botany, it can increase our knowledge on the distributions and ecological requirements of native plants. Above all, ethnobotanical knowledge is important because it is part of the heritage of a group of people, and it provides a common field of interest and pride for people of different cultural backgrounds.



REFERENCES

Kingsbury, J.M. 1964. Poisonous Plants of the United States and Canada. Prentice-Hall, Inc., Englewood Cliffs, New Jersey.

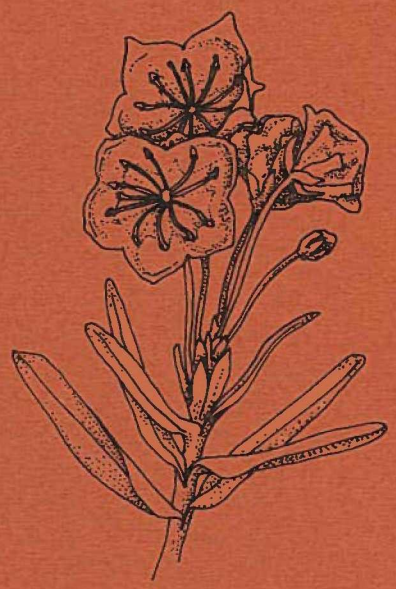
Turner, N.C. and M.A.M. Bell. 1971a. "The Ethnobotany of the Coast Salish Indians of Vancouver Island". Economic Botany, 25 (1):63-64.

----------.1971b. "The Ethnobotany of the Southern Kwakiutl Indians of British Columbia". Economic Botany. (In press).

# Plant Labels - What They Mean

You will no doubt notice in visiting Totem Park the plant labels which are coloured red. Two basic colours of labels are used in the Botanical Garden at the University of British Columbia. Red labels are used for those plants which are native to British Columbia, black labels for all other plants. On the label the Latin name is followed by the common name used in the Pacific Northwest. Special uses of the plant are often indicated e.g., medicinal, fibre, beverage, ceremonial and fruit. The multiple number found on each label is the Botanical Garden accession number. When a plant or a group of similar plants are incorporated in the Botanical Garden collection they are assigned a specific number which comprises the first set of five figures of the accession number. The second group of three numbers refers to the source of the material. Each source is coded. The last two numbers refer to the year in which the plant was accessioned by the Botanical Garden. A complete record of all the material found in the Botanical Garden is maintained on a computer based system.

Flowers of *Kalmia polifolia,* 'Swamp Laurel', a common bog plant of the Pacific Northwest, used by Indians as a cold medicine.



## *Botanical Garden Staff*

*Director*
Dr. Roy L. Taylor

*Supervisor of Operations*
Mr. Kenneth Wilson

*Research Scientist (Cytogenetics)*
Dr. Christopher J. Marchant

*Research Scientist (Horticulture)*
Dr. John W. Neill

*Research Assistants*
Mrs. Marilyn G. Hirsekorn
Mrs. Sylvia Taylor

*Secretary to the Office*
Mrs. Morag L. Brown

*Seed Exchange Program*
Miss Evelyn Jack

*Plant Accession System*
Mrs. Annie Y.M. Cheng

*Senior Gardener*
Mr. James O'Friel

*Gardeners*
Mr. Harold Duffill
Mr. Leonard Gibbs
Mr. Sam Oyama
Mr. Tomomichi Sumi
Mr. David Tarrant
Mr. Isao Watanabe

## CLIMATOLOGICAL SUMMARY *

| *Data* *1971* | *April* | *May* | *June* |
|---|---|---|---|
| Mean temperature | 47.0°F | 53.10°F | 55.4°F |
| Highest temperature | 66.0°F | 74.0°F | 70.0°F |
| Lowest temperature | 34.0°F | 39.0°F | 45.0°F |
| Grass minimum temperature | 25.0°F | 28.0°F | 37.0°F |
| Total rainfall/No. days with rainfall | 2.10"/17 | 1.60"/9 | 2.84"/18 |
| Total snowfall/No. days with snowfall | nil | nil | nil |
| Total hours bright sunshine/possible | 161.6/404.02 | 270.0/468.03 | 131.2/482.29 |
| Mean mileage of wind at 3' | 84.4 | 86.4 | 83.0 |
| Mean mileage of wind at 40' | 120.8 | 119.7 | 117.0 |

** Site: The University of British Columbia, Vancouver, B.C., Canada.*
*Position: lat. 49°15'29"N; long. 123°14'58"W. Elevation: 342.6'*

Sea Gull at the top of the Alert
Bay Lion Sea Lion Pole. (No. 2 on map).

**DAVIDSONIA**

Volume 2 Number 2 *Summer 1971*

Contents

Totem Park – An Introduction 9
The Carvings of Totem Park 10
Map of Totem Park 18
Totem Park Plants used by Northwest Coast Indians 18
Native Economic Plants of Totem Park 22
Plant Labels – What They Mean 28