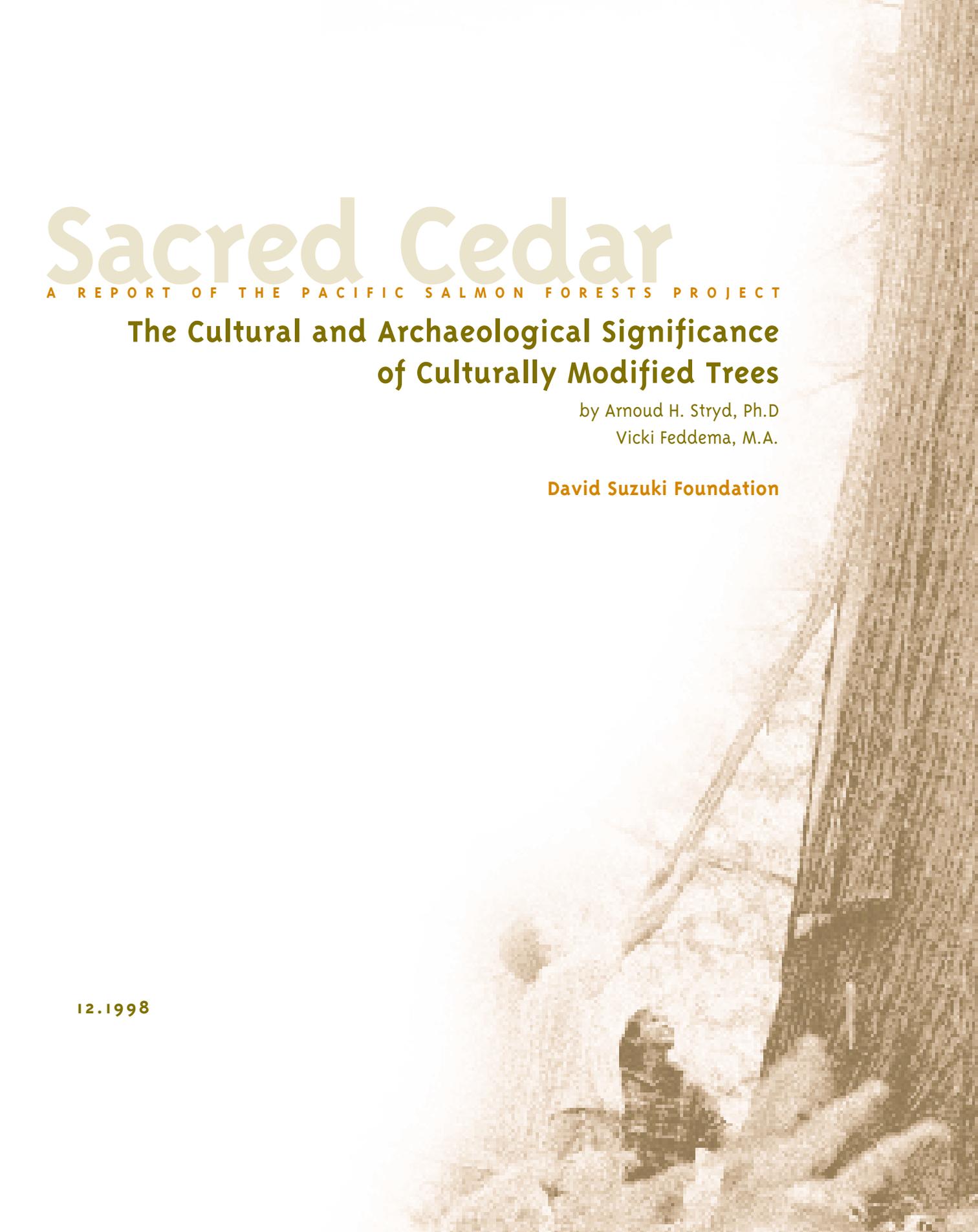


# Sacred Cedar



A REPORT OF THE PACIFIC SALMON FORESTS PROJECT

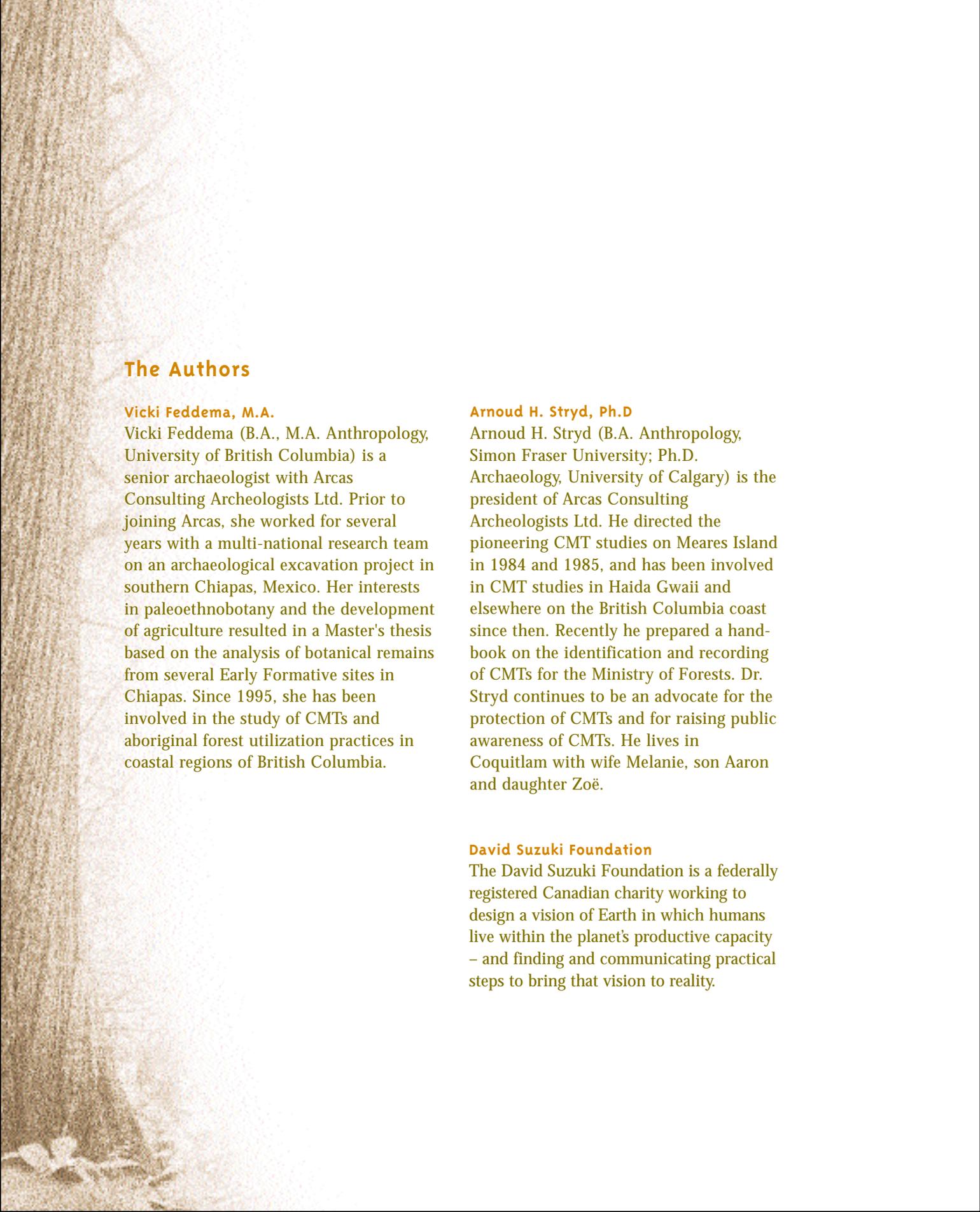
## The Cultural and Archaeological Significance of Culturally Modified Trees

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**David Suzuki Foundation**

12.1998



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### **David Suzuki Foundation**

The David Suzuki Foundation is a federally registered Canadian charity working to design a vision of Earth in which humans live within the planet's productive capacity – and finding and communicating practical steps to bring that vision to reality.

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Figure 1 *Culturally modified tree.* Photo: National Museum of Canada.

Few Canadians know about the archaeological treasures that lie hidden in the old growth rainforests of coastal British Columbia. Covered by moss and other vegetation, and sometimes difficult to reach in the dense forests, these treasures are the places where aboriginal people long ago felled and worked the massive cedar trees that were so critical to their way of life. Only in the last few decades have people become aware of the existence and importance of these ancient sites and the culturally modified trees found there.

**Introduction** The rainforests of the northwest coast have been an unknown land for most Europeans since the time of their first arrival. Early European visitors found the rainforests dark and intimidating, and seldom ventured far from the coast. As expressed by anthropologist Phillip Drucker,

“The woods, seen from the water, seem to form an impenetrable mantle over the irregular surface of the land. After one finally breaks through the luxurious growth along the margin, he finds himself in a dark gloomy moss-covered world . . . It is scarcely to be wondered at, what with the ruggedness of the rockbound mountainous terrain and the dense tangle of vegetation, that the native population for the most part frequented the woods but little.” (Drucker 1951:8-9)

Drucker's fear of the dark was not necessarily shared by the aboriginal residents of the area because, breaking through the “impenetrable mantle” of the forest practically anywhere along the coast, one inevitably stumbles (literally, sometimes) across ancient logging remains: moss-covered stumps with perfectly preserved chisel cut marks, logs with gaping holes where planks were pried off to build the longhouses of the northwest coast winter villages, dugout canoes in various stages of manufacture, and trees with long scars on their trunks where bark was pulled off to make clothing and other items essential to the lives of the native northwest coast peoples.

Aboriginal peoples of the northwest coast had an intimate relationship with the plants and trees in their environment. The most highly valued trees were the

majestic western red and yellow cedars. The cedar is known as the “tree of life” by various northwest coast peoples. Bill Reid, the renowned Haida artist and carver, paid special tribute to the cedar in his foreword to Hilary Stewart's classic book *Cedar: Tree of Life to the Northwest Coast Indians*:

*“Oh, the cedar tree! If mankind in his infancy had prayed for the perfect substance for all material and aesthetic needs, an indulgent god could have provided nothing better.” (Reid 1984:8)*

The cedar tree played a vital role in the life and culture of aboriginal peoples. From this tree, they obtained most of the raw materials for their basic needs, like clothing, shelter, tools and transportation as well as for their artistic, ceremonial and spiritual activities. Their importance

was such that the red and yellow cedars each have their own creation myths (Stewart 1984:27); they are also believed to have special healing and spiritual powers.

Northwest coast peoples knew the cedar tree intimately, and all of its parts were highly valued. The wood was used to make canoes, paddles, house planks, house posts, crest and mortuary poles, bentwood boxes, bows, masks, bowls and dishes. The fibrous inner bark was fashioned into clothing, hats, mats, masks, rattles, nets, twine, blankets, diapers, towels, and rope. The coarse outer bark was used for roofing material, canoe bailers and canoe covers. The withes, or flexible branchlets that hang down from the main branches, were valued for making heavy-duty rope, fish traps, and baskets. Even the roots were used, to make baskets and cradles (Pojar and MacKinnon 1994; Turner and Efrat 1982; Turner et al. 1983; Stewart 1984).

While western red and yellow cedar were the most important trees to northwest coast peoples, other species like hemlock, fir, pine, spruce, yew and alder were also valued for medicine, wood, dyes, fuel, food, pitch, and bedding (Mobley and Eldridge 1992:95; Pojar and MacKinnon 1994; Turner and Efrat 1982; Turner et al. 1983).



Figure 2 *Small dugout canoe located near Johnstone Strait, Vancouver Island.*

*Photo courtesy of Arcas Consulting Archaeologists Ltd.*

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# Culturally Modified Trees

The use by aboriginal peoples on the northwest coast of products from cedar and other species of trees dates back at least 3,000 years (and probably for much longer), as indicated by wood and bark-working tools recovered from dated archaeological sites.

“Analysis of plant pollen suggests that red cedar became a common forest species in southwestern British Columbia about 6,000 years ago, and on the north-central coast between 4,000 and 5,000 years ago.”

(Mathewes 1991:384).



Figure 3 *Bark stripping a cedar tree.*

*Photo courtesy of Arcas Consulting Archaeologists Ltd.*

Because of the incredible preservation properties of the cedar tree, remnants of trees that were modified hundreds of years ago, in the process of removing bark and wood, are still present on the forest floor where these activities were carried out. These trees are commonly referred to as “culturally modified trees,” or CMTs. A CMT is usually defined as a tree which has been intentionally modified by aboriginal peoples as part of their traditional use of the forest (Stryd and Eldridge 1993; Stryd 1997). This definition does not include CMTs that are the result of non-Native forest use, such as the “springboard notched stumps” left by early European loggers which often date back to the late 19th century. Although these are not considered to be CMTs in the usual sense of the term, they may be of historical and anthropological significance (Mobley and Eldridge 1992:91).

CMTs are found primarily in old growth cedar stands. Stands marked on forest cover maps as not containing cedar trees can, however, include the occasional cedar, and these are sometimes modified. CMT stumps (and more rarely, CMT logs) can be found in clear-cuts and second-growth forests if they were not removed during commercial logging. Non-cedar CMTs are of course found in settings other than cedar stands.

Bark-stripped trees are characterized by distinctive scars where the bark was removed from the tree, exposing the underlying wood. Depending on what the bark was to be used for, and the method by which it was removed, the resulting scars are either long and tapered in shape, or shorter and rectangular.

Tapered bark scars are usually found on western red or yellow cedar. They result from the procurement of the soft, pliant inner bark that was valued for its fibrous properties and use in making clothing, ropes, blankets, and so on. A horizontal cut was made through the bark near the base of a tree, and the loosened bark was pulled away from the tree until the upper end tapered to a point and broke away (Stryd 1997:18-20). Tapered bark-stripped trees are extremely common all along the northwest coast, and are often located long distances inland and at high elevations (particularly yellow cedar, which was highly valued for the exceptional strength and flexibility of its inner bark).

Rectangular bark scars result from the removal of large slabs of outer bark (sometimes called “bark boards” or “bark planks”) from western red cedar trees for such uses as roofing material for houses and for covering canoes under construction in the forest. Horizontal cuts were made through the bark at the bottom and top of the desired length, and the slab was then pried from the tree (Stryd 1997:24-25). Rectangular bark-stripped trees are found primarily in coastal areas, including Haida Gwaii (Queen Charlotte Islands). In some of these areas, traditional dwelling structures were roofed with bark boards, whereas in more southerly coastal areas where large hewn-plank houses were used, rectangular bark-strip scars are absent and plank-stripped trees and logs are more common (Mobley and Eldridge 1992:96) (see below).

Bark was also collected from species such as western hemlock, spruce,

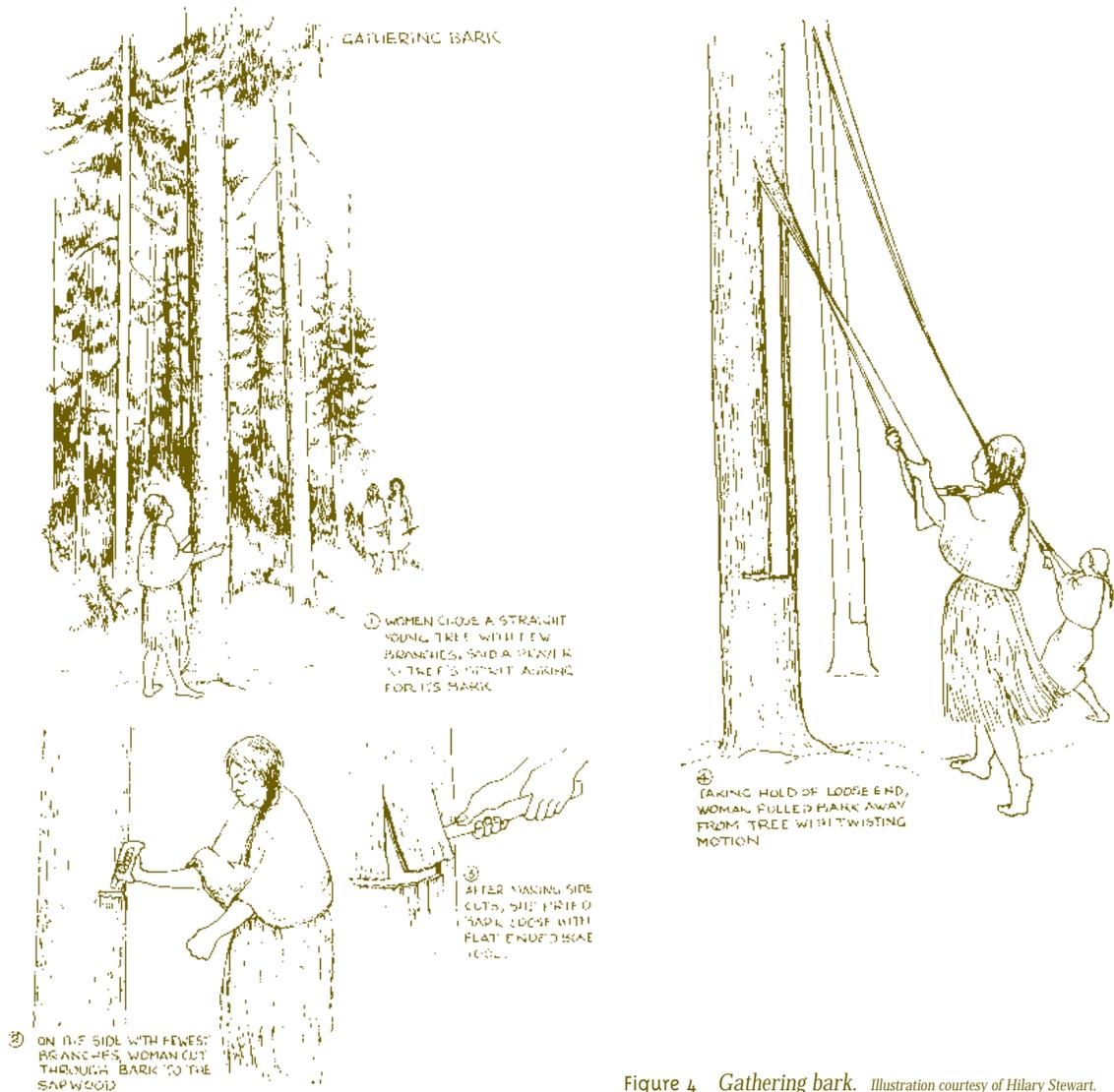


Figure 4 Gathering bark. Illustration courtesy of Hilary Stewart.

Douglas fir, yew, and some deciduous species, and used for a diversity of purposes including: food, medicine, dye, and fuel. CMTs of these species are relatively rare because, compared to cedar, they have lower resistance to infection and shorter life spans. The scars on CMTs from these varieties are

mainly small rectangular scars that heal to oval or lenticular shapes (Stryd 1997:27).

The second main group of CMTs consists of trees which have been modified by native people as part of the traditional procurement of logs, posts, planks, canoes and other pieces of wood. They are often

called “aboriginally-logged trees,” although not all “logged” trees were actually cut down. For example, a “test-hole” tree is a standing tree with one or more rectangular holes chopped into the trunk. It is thought that these holes were made to determine the soundness of the heartwood and the suitability of the tree for use as a canoe, house post, totem pole, house planks, and so on. In the days

and the tree was left partially chopped, but still alive and standing. Another type is a “planked” tree, where notches were chopped in the trunk at the bottom and top of the desired length of a plank, and the plank was then pried or levered off with wedges and/or crossbars. It was also a common practice to take planks from windfall trees, which is not surprising, considering the work that would have

In the days before crosscut saws and chainsaws, an enormous amount of energy was required to fell these massive, ancient trees, and the process probably involved work parties of several people, lasting several days.

before crosscut saws and chainsaws, an enormous amount of energy was required to fell these massive, ancient trees, and the process probably involved work parties of several people, lasting several days. Before beginning work on a tree, therefore, loggers would want to be certain that the selected tree was suitable for the intended purpose. Canoemakers ritually fasted and prayed that they would select the right tree. Before they began to fell the tree, they prayed to the spirit of the tree and asked that it fall in the right direction (Stewart 1984:39).

There are other types of standing “logged” trees. One is an “undercut” tree, which has a wedge-shaped area of missing wood and bark that was removed as part of the initial stage of felling the tree. For some reason, the work was abandoned after the undercut was made

been involved in felling an entire tree. This practice conserved, on the one hand, a great deal of time and energy and, on the other, the life of a tree. Good-quality windfall trees would not always have been available, or may not have been suitable for canoes, mortuary poles, house construction and so on. At such times, it would have been necessary to fell trees. The best trees for these purposes were large-diameter, straight, western red cedar with clear-grained wood and few branches (for relatively knot-free wood). Because of the work involved in skidding log sections or partially-finished canoes to the water, suitable trees were generally located relatively close to the shore of a navigable waterway, although logged CMTs are sometimes found long distances inland.

Evidence of felled trees is plentiful in coastal forests. A felled tree consists of a

stump and/or a log. Sometimes the log displays no sign of modification, other than at its butt end where it was chopped. In other cases, the log was cut into two or more sections: sometimes notches were chopped into the log or log sections (usually representing either the first stage of plank removal or further sectioning of the log, or sometimes planks were removed from them. Frequently, a section of log was hauled away from the logging site, presumably for use as a canoe, a housepost, or a pole. In rare cases, a “canoe blank” (a log or log section in the initial or intermediate stage of shaping into a canoe) is present. It has been suggested that large numbers of abandoned logs and canoes may be related to epidemics of smallpox and other European-introduced diseases that decimated aboriginal populations in the

large numbers of slave labourers (Stewart 1984:40). A second technique involved a massive unidirectional undercut in the tree at a relatively steep angle to produce a flat-bottomed hole with a sloping top. The tree was then left to fall of its own volition, leaving a spire of sheared wood along the part of the trunk that was not cut; the resulting stump is often called a “barberchair” stump (Stryd 1997). A third felling technique involved an initial undercut and then a backcut (similar to modern logging techniques), resulting in a “stepped” stump, with two relatively level planes separated by a vertical step. Fire was sometimes used to help fell a tree, either by setting hot rocks in a chiseled-out cavity, or by setting fire to the base of the tree and putting wet clay on the trunk above the fire to prevent it from spreading (Stewart 1984:39).

Groups of CMTs are known by the archaeological term ‘forest utilization sites’ since they constitute physical evidence of the traditional aboriginal activities of wood and bark procurement.

19th century (Arcas Consulting Archeologists Ltd 1991:31).

There are several different types of CMT stumps, depending on the technique that was used to fell the tree. For example, “flat-topped” and “basin-topped” stumps are the result of a traditional felling technique that involved the complete girdling of the tree with chisels, wedges and stone mauls, sometimes by

Because the trees were cut above the root flare, ladders or scaffolding platforms were often used to elevate the workers to the required height. The resulting stumps are generally two to three metres above the ground surface, making them easily visible on the forest floor.

Many CMTs have cuts, striations and other marks that indicate the types of tools and technologies that were used to

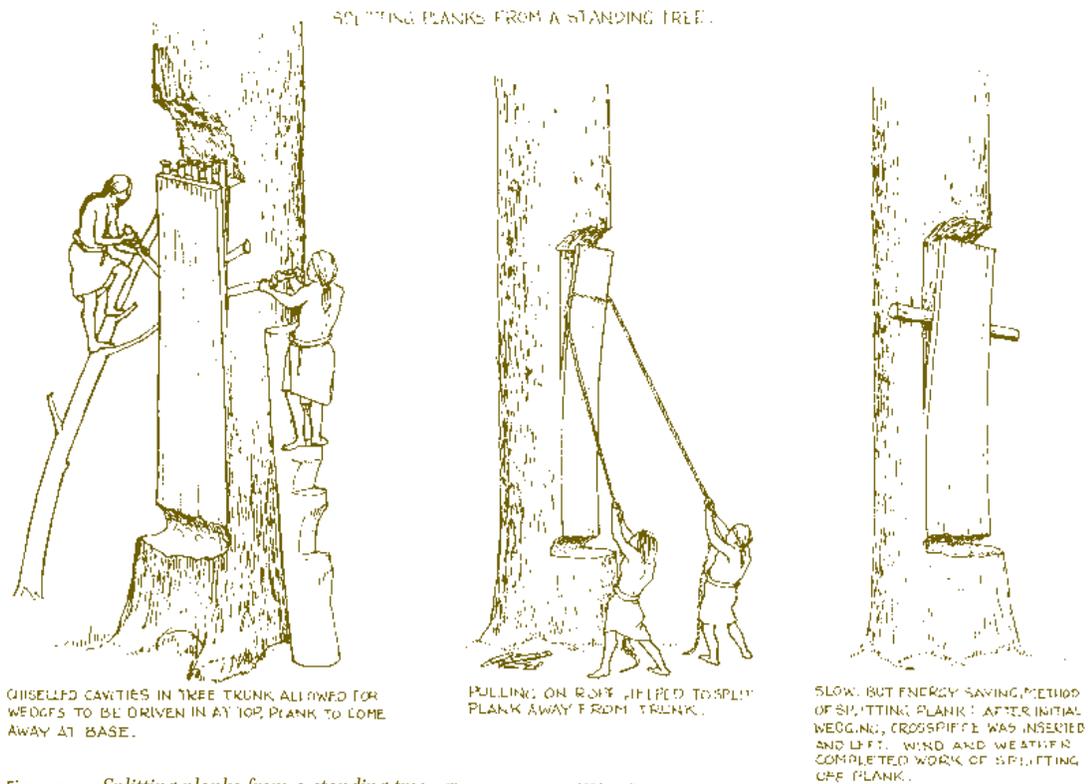


Figure 5 *Splitting planks from a standing tree.* Illustration courtesy of Hilary Stewart.

cut or modify the trees. Prior to European contact, the main tools were chisels, adzes, wedges and hammers. Chisels and adzes had bits made of stone, bone or shell. Cobbles and stone handmauls were used as hammers. Wedges were made of wood, bone and antler. By the 16th Century (and possibly earlier), metal was available in some areas and became the preferred material for chisel bits, but the basic technologies did not change until the mid to late 19th Century when the steel axe and knife were introduced. Later, the crosscut saw and backcut-undercut felling methods were used.

The third group of CMTs includes trees that were modified for purposes other than bark and wood collection, such as the collection of kindling, pitch and small pieces of wood suitable for making tools. Some trees were modified for ceremonial and spiritual purposes, while others were modified to mark trails, assert tree ownership, facilitate passage on streams, serve as support posts for shelters and food drying frames, and provide alcoves for the placement of trapsets in winter.

Groups of CMTs are known by the archaeological term 'forest utilization sites' since they constitute physical evidence of

Aboriginal people  
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the traditional aboriginal activities of wood and bark procurement. Like other types of archaeological sites in British Columbia, forest utilization sites are protected by the Heritage Conservation Act (1996) if one or more of the CMTs were modified prior to 1846 or, if the ages of the CMTs are not known, there is a reasonable possibility that some of the CMTs date to 1846 or earlier. British sovereignty over British Columbia was established by the Oregon Boundary Treaty of 1846; the date of this event was arbitrarily chosen as the “cut off” point between protected and unprotected archaeological sites when the Heritage Conservation Act was revised in the 1980s.

In many cases, the date of modification can be established through tree-ring dating. The exact year of modification can be determined on some living CMTs (such as bark-stripped, planked or test-hole trees) but, even after death, minimum ages can be obtained by counting annual rings on trees that take root and grow on CMT stumps or logs. CMTs in British Columbia have been dated as far back as 1137 AD (Eldridge 1997a), and contemporary aboriginal peoples continue

to modify trees as part of their traditional use of the forest.

CMTs have certain limitations that other types of archaeological remains do not have, or at least not to the same degree. In particular, they lack the age of other types of archaeological materials, which can be many thousands of years old. On the one hand, they generally occur in old-growth forests which are increasingly encroached upon by the logging industry; on the other, they cannot be preserved indefinitely because of their natural life spans and subsequent decay.

Aboriginal people continue to use the trees of coastal British Columbia for traditional purposes, and continue to create new CMTs. Most noticeable are bark-stripped cedars where modern bark collectors obtain their weaving material. Traditional canoe making also is practiced, but chainsaws and modern felling methods are now largely used, leaving stumps and log remnants difficult or impossible to distinguish from the remains of other kinds of forest activities by either aboriginal or non-aboriginal people.

# The Cultural Significance of CMTs

The coastal rainforest is a living testimony to the strength, skill and knowledge of aboriginal woodworkers and barkworkers of the northwest coast. In a sense, it is a living museum that displays evidence of the tools, technology, and raw materials that shaped the lives of the people who used them. These remains, and the forests within which they are situated, have special significance for the descendants of the people who created them.



Figure 6 An example of the third type of CMT. An archaeological treasure from the Mamalilaculla Village, off the north coast of Vancouver Island. Photo courtesy of G.W. McIntyre.

Statements made by aboriginal people regarding the significance of these archaeological treasures often stress the link between CMTs, their ancestors, and living aboriginal culture. For Guujaaw, a Haida carver from Massett, CMT sites are sacred memorials to “. . . our ancestors who worked in the forests and created the canoes and totem poles for which the Haidas are known worldwide”, and they provide “. . . a sense of communion with the old canoe makers.” (Guujaaw 1990:2, 6). The CMTs at the S’yaal (Collision Point) site on Haida Gwaii are considered to be “. . . ‘living archaeology’ [that] presents a unique opportunity to get close to the activities of our ancestors in a live and dynamic setting” and “to our people the spiritual effects of being in the footsteps of our ancestors is the primary significance of the site.” (Guujaaw and Wanagun 1991:2).



Figure 7 *Example of cutmarks made by a metal axe on a test-hole tree. Located near Rugged Point, Kyuquot Sound on the west side of Vancouver Island. Photo courtesy of Arcas Consulting Archaeologists Ltd.*

For many aboriginal people, CMT sites have spiritual significance. In Nuuchah-nulth culture on Vancouver Island, for example, the connection to the land is the foundation of their spiritual identity; activities that are carried out on the landscape (such as the harvesting of cedar bark and wood) are part of that connection (Clayoquot Sound Scientific Panel 1995:67-68). For the Heiltsuk First Nation near Bella Bella, resource gathering sites (including CMT sites) are of spiritual significance because the resources were believed to be a gift from the Creator (Heiltsuk Tribal Council 1994; Millennia Research Ltd 1997:112). Some CMTs are associated with sacred and spiritual practices. The Ahousaht of Clayoquot Sound consider some planked and burned trees to have been used for sacred purposes (Atleo 1997), and the Huu-ay-aht of Barkley Sound have indicated that spiritual bundles used in certain rituals were stored in cedar trees, and cedar bark was used in cleansing bathing rituals. Cedar bark was also considered to have supernatural qualities (Neary 1997).

CMTs are considered to be an important source of knowledge for wood-working procedures and techniques. CMT sites can provide information on the types of cedars that were chosen for canoes, the methods of felling a tree to cause the least damage to the log, and specific techniques used in canoe building (Guujaaw 1990; Guujaaw and Wanagun 1991). Except for oral traditions, CMTs are often the only source of knowledge of certain techniques. On Haida Gwaii, Guujaaw studied canoes abandoned in various stages of completion

in an attempt to learn the ancient craft of carving canoes from cedar trees. As he describes, “I was instrumental in establishing the design, choosing the cedar log, and laying out the initial carving plan of the canoe “Luutaas”. Luutaas is a seaworthy craft, that has been taken on many voyages, including a well-published trip on the River Seine, in Paris, as part of the 1989 Bi-Centennial celebration of the French Revolution. I would not have been able to accomplish any of that if I had not had the opportunity to study the remains of partially built canoes found in the culturally modified cedar tree groves on Haida Gwaii.” (Guujaaw 1990:8).

In addition to their value as teaching tools for carvers, CMT sites are also considered to be important places for demonstrating the cultural achievements of their ancestors to school children and adults, and instrumental for passing on knowledge of their culture to future generations. As Wanagun stated, “while cedar archaeology is still alive we have a chance to record the knowledge . . . after all it is our history.” (Wanagun 1983). In particular, sites that have high densities of CMTs and are easily accessible for students, adults and elders are considered to be good for teaching purposes (Guujaaw 1990:10). Because so many sites have been destroyed, and so much information has already been lost, the remaining sites are considered to be highly significant. Most First Nations believe that they have an obligation to their ancestors to protect their land and heritage, as expressed in their traditional use sites.

“It appears to me that the dates when many of the canoes were left unfinished correspond to the dates of the smallpox epidemics which decimated the population of Haida people in the Nineteenth Century.” (Guujaaw 1990:6).

CMTs often have great time depth, and are therefore of value in providing easily accessed information about the nature of aboriginal society (Yahgulanaas 1998). As the Heiltsuk Tribal Council points out, CMTs preserve a partial, but compelling, record of aboriginal presence on the land and utilization of forest resources. In essence, they are “. . . a time capsule – one of the few remaining windows on a rich cultural heritage and ancient historical past” (Heiltsuk Tribal Council 1984). They can also provide information about events that may have occurred in more recent times, as Guujaaw suggests: “It appears to me that the dates when many of the canoes were left unfinished correspond to the dates of the smallpox epidemics which decimated the population of Haida people in the nineteenth century.” (Guujaaw 1990:6).



Figure 8 *Bark stripping a cedar tree.*

*Photo courtesy of Arcas Consulting Archaeologists Ltd.*

Because of their ability to provide precise dates, CMTs have the potential to play a very important role in helping First Nations establish claims to both aboriginal rights and aboriginal title.

# Significance of CMTs to British Columbians

CMTs are also of interest to non-native British Columbians, even though there may not be any direct link with the people who created them. For anthropologists, archaeologists and other students of aboriginal culture, they provide a means of understanding the history and nature of traditional forest use, an aspect of aboriginal culture that is not well documented in existing anthropological reports.

An understanding of traditional forest use has a great deal of potential to shed light on other aspects of native culture, such as the ways in which societies were, and are, organized at the social, political and economic levels, and how this organization may have changed over time.

The study of CMTs, undertaken with the cooperation and support of contemporary First Nations peoples, may yield such information, and may do so in a much less destructive and costly manner than archaeological excavation, which is the more traditional means of collecting information on past human culture and society. An increased understanding of traditional resource use and management, which was based on selective and sustainable logging, could also have possible implications for current forestry practices.

Because there was no written language in pre-contact times, aboriginal oral histories are an essential tool for researching the past. CMTs have the potential to corroborate oral histories that may contain descriptions of trail and traditional-use locations. In addition, they can help clarify inaccurately mapped locations of trails and sites documented in early historical times. Until relatively recently, it was thought that most activities of coastal First Nations peoples took place either on the ocean, on the shore, or at river mouths. CMTs demonstrate the extensive use that native peoples also made of inland areas. Because CMTs are often highly visible and easily recognizable, they may help in locating other types of less visible inland archaeological sites, which sometimes occur in association with CMTs.

One of the most significant properties of CMTs, in a scientific sense, is their ability to be dated. Precise dates can be used to establish when specific lands were occupied and used. Dates of occupation and use are also of great

importance in addressing research questions concerning changing demographic and settlement patterns. They can provide potential information about when population shifts occurred, when villages may have been settled or abandoned, and possible correlation of these events with outbreaks of smallpox and other diseases. Studies of aboriginal tree use on Meares Island in Clayoquot Sound (Arcas Associates 1984, 1986) provided a total of 485 tree-ring dates spanning a 350-year period between AD1642 and 1984. The dates indicate that the trees of Meares Island were used almost continuously during this time, but that tree use varied in intensity. Periods of low intensity use may be linked to decreased bark and wood procurement as a result of acculturation and/or local depopulation; high intensity use may indicate greater demands for bark and wood for competitive potlatches, larger populations, or the resurgence of traditional ceremonies and other activities (Stryd and Eldridge 1993:218).

Specific dates can also be linked to technological innovations. They have shown, for example, that iron and other metals were being used in woodworking tools on the northwest coast well before the first Europeans actually made their appearance, as demonstrated by cut marks made by metal chisels on CMTs dating to pre-contact times. They have also shown that aboriginal people, while quick to adopt metal as a material for making tools, were not as keen to adopt European technology and continued to use traditional methods of felling and modifying trees.

From CMT dates, we have a recorded 861-year history of aboriginal forest utilization on the northwest coast while artifacts related to wood- and bark-working activities push this history back to at least 3,000 years. Aboriginal cultures have experienced profound change during this period, particularly after the arrival of the Europeans in the 18th century. CMTs therefore represent a means of investigating traditional aboriginal lifeways before, during, and after this extreme cultural upheaval, reflecting a continuum of aboriginal culture and forest use.

The general public has also demonstrated interest in achieving a better understanding of aboriginal culture. The high profile of native art (paintings, masks, sculpture, and jewelry, for example) in contemporary society indicates that the more non-native people learn and understand of native culture, the more they appreciate it. At this time, the public at large knows little or nothing about forest utilization sites and their importance to

First Nations, scientists, and others. The visibility of CMTs gives them high interpretative value and makes them ideal for teaching purposes. As people become aware of CMTs and what they represent, they will undoubtedly come to admire the ingenuity of their creators and the quality of their workmanship. They will also be more inclined to respect the desire of First Nations peoples to remain close to their ancestors and their culture.

Stanley Park, in the heart of downtown Vancouver, contains numerous CMTs, although very few people are aware of the fact that native loggers used that forest long before the historic settlement and logging of Vancouver. Forest utilization sites such as this are easily accessible and contain a number and variety of well-preserved CMTs. They have high potential for development as tourist sites, with possible economic benefits to the adjacent communities through such things as guided tours, boat access, trail creation and maintenance, and local accommodation.



Figure 9 Kwakwaka'wakw transformation mask; carved in cedar by Simon Dick and family. Photo courtesy: D. Taylor.

**Concluding  
Remarks**

Culturally modified trees were defined earlier as trees which have been intentionally modified by aboriginal peoples as part of their traditional use of the forest. They are a true archaeological treasure of the northwest coast rainforest, one that is finite in numbers, non renewable in nature, and subject to continued impacts from commercial logging, park development, and other activities. The CMTs in the remaining old growth cedar forests need to be located and managed appropriately if significant numbers of these archaeological trees are to be saved for future generations.

Strategies for managing CMTs are still being developed. For forest management purposes, CMTs are often rated in terms of their perceived significance to the scientific community. For several reasons, some First Nation peoples and others are uncomfortable with this practice (Eldridge 1997b). First, many aboriginal people consider all CMTs to be highly significant because they represent their ancestors' presence.

Second, the act of ranking individual CMTs or CMT sites obscures the unique inter-relationships of archaeological sites to each other and to the land. We believe a more holistic approach is needed, one that views CMTs, the lands they are on, and the people who created them, as being interrelated. Third, CMTs may also constitute legal evidence in cases dealing with land claims, aboriginal rights and aboriginal title. By ranking some CMTs as less significant than others, there is a possibility that they may be cut down and potentially useful evidence will be lost.



Figure 10 *Planked tree. Located near Work Channel on the north coast of British Columbia.*

*Photo courtesy of Arcas Consulting Archaeologists Ltd.*

The full significance of CMT sites is still not completely understood, nor can it be understood solely on the basis of the physical remains in the rainforest. There is another source of data that should be consulted, one that Michael Nicoll Yahgulanaas (1998) calls “kitchen table culture”, or the trans-generational exchange within kin groups of information that is relevant to members of the group. An understanding of the cultural values attached to CMTs helps put scientific values in perspective and provides a better understanding of First Nations people and cultures. To achieve this understanding, it is essential that we recognize the importance and relevance of the discussions taking place at the “kitchen table”. By connecting living aboriginal culture with archaeological sites, we will, as Yahgulanaas eloquently states, arrive at “... a more sophisticated understanding of Indigenous sciences [that] will pull us away from the imaginary Indian, a contemporary mythology carried aloft by those who don’t sit around the table, yet are anxious to describe the texture and flavour of our meals” (Yahgulanaas 1998:7-8).

## References

- Arcas Associates
- 1984 Meares Island Aboriginal Tree Utilization Study. Report on file, Culture Library, Ministry of Small Business, Tourism and Culture, Victoria.
  - 1986 Native Tree Use of Meares Island, B.C. (Four volumes). Report on file, Culture Library, Ministry of Small Business, Tourism and Culture, Victoria.
- Arcas Consulting Archeologists Ltd
- 1991 Archaeological Impact Assessment, Bligh Island Development Plan. Report on file, Culture Library, Ministry of Small Business, Tourism and Culture, Victoria.
- Atleo, Shawn Quees-hai-cheetl
- 1997 Ahousaht First Nation Confederacy Culturally Modified Tree (CMT) Guidelines. Presented to the Ahousaht First Nations Hawiiah, Chief and Council.
- British Columbia Ministry of Forests
- 1997 Culturally Modified Tree Management Procedure. British Columbia Ministry of Forests, Vancouver Forest Region, Nanaimo.
- Clayoquot Sound Scientific Panel
- 1995 First Nations' Perspectives Relating to Forest Practices Standards in Clayoquot Sound. The Scientific Panel for Sustainable Forest Practices in Clayoquot Sound.
- Drucker, Phillip
- 1951 The Northern and Central Nootkan Tribes. Bureau of American Ethnology, Bulletin 144. Smithsonian Institution, Washington, D.C.
- Eldridge, Morley
- 1997a Julia Passage CMTs: Dendrochronology Dating Analysis. Report on file, Culture Library, Ministry of Small Business, Tourism and Culture, Victoria.
  - 1997b The Significance and Management of Culturally Modified Trees. British Columbia Ministry of Forests, Vancouver Forest Region, Nanaimo.
- Guujaaw
- 1990 Affidavit sworn 28 May, 1990, for Massett Band et al., v. Stejack Logging Limited et al., Supreme Court of British Columbia, Victoria Registry, No. 901244.
- Guujaaw and Wanagun
- 1991 S'yaal Aboriginal Forest Utilization, Collison Point. Report prepared for the Ministry of Forests, Queen Charlotte City, B.C.

Heiltsuk Tribal Council

- 1994 Heiltsuk Heritage Policy Draft. Heiltsuk Cultural Education Centre / Heiltsuk Tribal Council.

Mathewes, Rolf W.

- 1991 Connections between Palaeoenvironments and Palaeoethnobotany in Coastal British Columbia. In *New Light on Early Farming, Recent Developments in Palaeoethnobotany*, edited by J. Renfrew, pp. 378-387. Edinburgh University Press.

Millennia Research Ltd.

- 1997 Heiltsuk Traditional Territory Archaeological Overview Assessment, Volume 3: Final Report Appendices. Report on file, Culture Library, Ministry of Small Business, Tourism and Culture, Victoria.

Mobley, Charles M. and Morley Eldridge

- 1992 Culturally Modified Trees in the Pacific Northwest. *Arctic Anthropology* 29(2):91-110.

Neary, Kevin

- 1997 The Sacred Mountain: A Report Prepared for the Huu-ay-aht First Nations. Appendix 3 in *Assessment of Aboriginal Use in Opening 9692, TFL 44, Spencer Creek Area, Huu-ay-aht Traditional Territory: A Report Prepared for the Huu-ay-aht First Nations* by James C. Haggarty and Kevin Neary, Shoreline Archaeological Services, Inc, Victoria.

Pojar, Jim and Andy MacKinnon (compilers and editors)

- 1992 *Plants of Coastal British Columbia including Washington, Oregon and Alaska*. British Columbia Ministry of Forests and Lone Pine Publishing, Vancouver.

Reid, Bill

- 1984 Foreword. In *Cedar: Tree of Life to the Northwest Coast Indians*, by Hilary Stewart. Douglas & McIntyre, Vancouver.

Stewart, Hilary

- 1984 *Cedar: Tree of Life to the Northwest Coast Indians*, by Hilary Stewart. Douglas & McIntyre, Vancouver.

Stryd, Arnoud H. (Arcas Consulting Archeologists Ltd)

- 1997 *Culturally Modified Trees of British Columbia: A Handbook for the Identification and Recording of Culturally Modified Trees*. British Columbia Ministry of Forests, Vancouver Forest Region, Nanaimo.

Stryd, Arnoud H. and Morley Eldridge

- 1993 *CMT Archaeology in British Columbia: The Meares Island Studies*. B.C. Studies 99:184-234.

- Turner, Nancy J.  
1975 Food Plants of British Columbia Indians: Coastal Peoples. Handbook, British Columbia Provincial Museum, Victoria.
- Turner, Nancy J.  
1979 Plants in British Columbia Indian Technology. Handbook No. 38, British Columbia Provincial Museum, Victoria.
- Turner, Nancy J. and Barbara S. Efrat  
1982 Ethnobotany of the Hesquiat Indians of Vancouver Island. Cultural Recovery Paper No. 2, British Columbia Provincial Museum, Victoria.
- Turner, Nancy J., John Thomas, Barry F. Carlson, and Robert T. Ogilvie  
1983 Ethnobotany of the Nitinaht Indians of Vancouver Island. Occasional Papers of the British Columbia Provincial Museum, No. 24. Victoria.
- Wanagun  
1983 Council of the Haida Nation Aboriginal Forest Utilization Study. Report on file, Culture Library, Ministry of Small Business, Tourism and Culture, Victoria.
- Yahgulanaas, Michael Nicoll  
1998 Sitting at the Table. Paper presented at the 31st Annual Conference of the Canadian Archaeological Association, Victoria.

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