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The Midden

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The Midden

Publication of the Archaeological Society of British Columbia

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Submissions and exchange publications should be directed to the Editor. Contributions on subjects germane to B.C. Archaeology are welcomed: maximum length 1,500 words, no footnotes and only a brief bibliography (if necessary at all). Guidelines available.

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The next issue of *The Midden* will appear mid-February, 1985.

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THE COVER: *Two "test holes" in a cedar tree at an aboriginal logging and canoe manufacturing site (FkUb 7) on the Queen Charlotte Islands. The holes were cut with an axe in 1869. Photo courtesy of the B.C. Heritage Conservation Branch.*

The Society

Membership year runs September 1 - August 31. Fees: single - $15; family - $17; senior citizen - $10; student - $10. Address to: A.S.B.C. Membership Secretary, Box 520, Station A, Vancouver, B.C. V6C 2N3.

Meetings featuring illustrated lectures are held on the second Wednesday of each month (except July and August), at 8:00 p.m. in the Vancouver Museum Auditorium. Visitors and new members are welcome!

Coming Topics:	January 9	Dr. James Russell: Archaeological sites in the Galilee.
	February 13	Dr. Hanna Kassis: Byzantine and Islamic Jerusalem.

Open Letter

To the Chairman and Members of the Board of Directors of the British Columbia Heritage Trust:

Those of us in British Columbia who have a particular interest in our province's native Indian history, be it as a professional anthropologist, a member of a special interest group, or as a native Indian, have long felt that this aspect of our heritage has not been given adequate attention by the B.C. Heritage Trust.

The recently released *Annual Report* of the Trust for the year 1983/4, indicates that out of a total budget of $1,759,050 only $64,000 was expended on projects and publications dealing with native Indian subjects. This represents less than 4% of the total operating and grants budget of the Trust! If one examines the amount of funds expended for archaeology by the Trust, the picture is almost equally bleak. A total of $94,000 was allocated for archaeology, representing just under 6% of the total annual budget. This figure includes not only grants relating directly to native Indian archaeology, but also funds for underwater archaeology, historic archaeology, archaeological conference support, and the Borden Scholarship. However, the above total does not include the substantial grant of $56,000 to UBC under your new Historical Archaeology Program, as this project, in its present stage, is clearly not archaeologically oriented and more appropriately belongs in your Planning and Inventory category of programs.

It is hard to conceive that the Board of Directors is unaware of the rapid loss of information and physical records of British Columbia's 10,000 year old Indian history. Although much of this heritage is buried in archaeological sites, an even more vital part of these vanishing traditions, namely the language and other oral traditions, are being lost forever on an almost daily basis as Indian elders pass away. There is an urgent need to not only protect and study threatened archaeological sites in British Columbia, but to also insure that oral traditions are given high priority within the heritage preservation movement. The British Columbia Heritage Trust can, and should, play a major role in this effort. Surely, the level of effort and funding for such programs should be on a par with

program funds presently allocated to the so-called *built environment* which seems to be the continuing obsession of the Trust.

As well as a basic change in its heritage philosophy, the B.C. Heritage Trust can take a number of immediate steps to insure a fair deal for all aspects of our province's heritage. These include the following:

- Initiate a proactive policy toward the encouragement of native Indian heritage projects.
- Provide for native Indian representation on the Board of Directors.
- Increase anthropological representation on the Board.
- Initiate an urgent ethnology and linguistics program for grants assistance.
- Initiate a salvage archaeology program.
- Add a grant program to encourage the development of heritage interpretation displays in public areas (such as airports, shopping malls, etc.).
- Begin an aggressive heritage site acquisitions program.

As the Trust's annual allocation of funds from the provincial government is limited, additional sources of funds may have to be found to accommodate new programs (for example, the private sector). On the other hand, it may be necessary to curtail the level of funding presently allocated to projects and programs which deal exclusively with a narrow aspect of our heritage (the built environment) in favour of new initiatives. Whatever the option, it is time for the B.C. Heritage Trust to take a new direction in the heritage affairs of our province by adopting a more enlightened philosophy and by thoroughly examining its present programs and priorities against the real needs of B.C. heritage.

Bjorn Simonsen
former Provincial Archaeologist

ASBC calls on Trust to do more for archaeology

The B.C. Heritage Trust has been invited to respond in the next issue of ***The Midden.***

HAVING HAD the opportunity to read Mr. Simonsen's letter before publication, we have a few comments on the issues raised.

It does appear that the expenditures on archaeological matters by the British Columbia Heritage Trust form a disproportionately small fraction of their total annual budget. A quick review of their annual reports for 1982/83 and 1983/84 suggests funding in the region of 9% to 15% on native Indian or archaeological concerns. The same reveiw also suggests that projects are approved *ad hoc,* satisfying the general intent of the Trust's objectives, but not necessarily following any cohesive program.

The British Columbia Heritage Trust's mandate is to "support, encourage, and facilitate the conservation, maintenance and restoration of heritage property in the Province." It can assist with or undertake research, but it seems reluctant to do so when archaeologists are employed by a consulting firm which derives a profit or supports an overhead through their employment.

The serious down turn in economic development in British Columbia has substantially lessened the impact on archaeological sites. As a result, impact assessments by consulting archaeologists have been curtailed, diminishing the opportunities for archaeological investigations.

The Heritage Conservation Branch has, generally, granted a permit for archaeological work only where a competent archaeologist was available to direct it. As a result, groups interested in sponsoring such activities usually require direction from professionals (such as consulting archaeologists). These mostly work for pay. Good archaeology in British Columbia

requires careful research, analysis, and competent reporting. The delay between the first and the last is long, often many years, with a low probability that reports will ever reach other than professional or academic archaeologists—if completed.

On the other hand, funding for restoration of heritage buildings has generally been provided when needed to augment the efforts of the sponsoring heritage society. The Trust's money is not the sole support of the effort. In such cases, the expenditures by the British Columbia Heritage Trust yield readily apparent and verifiable results which can be appreciated by members of the community at large.

The British columbia Heritage Trust, which relies on the goodwill of its supporters for its financing, must maintain a visible public profile. In essence its constituents are members of heritage societies which, although including the ASBC, are mostly interested in objects which can be seen, touched, or continued in use, or which reinforce public interest in "Heritage." By its very nature, that which existed 4,000 years ago excites less interest than what existed 80 years ago.

Despite the readier visibility of historic restorations, and the consequent public interest in them, there should be greater emphasis on the native and prehistoric. The historic component reflects a common European heritage found all over the colonial frontiers of the world, whereas the native is unique to our area. The native cultural remains are more evanescent and harder to preserve but, because of their uniqueness, the reward is greater. The reward, however, is philosophical, not material.

We recognize that the Trust has no easy task, and that it would have difficulty in instituting all of Mr. Simonsen's proposals. They do, however, merit consideration. For our part, we recommend that the Trust establish broad regional goals for conservation of both historic and prehistoric sites. These goals should include research, ethnographic study, and public involvement. We suggest that the Trust could allocate a greater share of its funds to public interpretation facilities, particularly for prehistoric sites. The St. Mungo Interpretive Program and the interpretive trail signs at the Seton Lake Viewpoint are examples of the Trust's interest in such projects—but more could be done. Finally, we suggest that the Trust could consider funding archaeological investigations, including excavation and research, under circumstances where—as with many of the restorations of historic sites—much of the work is carried out at cost. Additional avenues for funding could be accepted without precluding the Trust's assistance.

- Don Bunyan, President
- Colin Gurnsey, Vice-President
Archaeological Society of British Columbia

News Bits

HCB assembles another list

The Planning, Research and Interpretation Division of the Heritage Conservation Branch is putting together a new list of heritage consultants: a registry of those who will be considered for contracts involving historical research, architectural inventory, interpretation programming, display design, etc. This is a separate list than that maintained by the Impact and Assessment Division of the Branch. For more information contact Pat Frey at the HCB (Tel. 387-1011).

Old bear bones dated

Bones of a black bear, recently recovered by speleologists from a cave on northern Vancouver Island, have been radiocarbon dated as 9830 years old. Grant Keddie (BCPM) is eagerly awaiting results of further analysis. The cave deposits include bear and deer skeletons and preserved pollen, and should add significantly to our knowledge of the early post-glacial environment.

Ottawa gets a new chief

Dr. Ian Dyck was recently appointed Chief of the Archaeological Survey of Canada, replacing Dr. J. V. Wright. Dyck is former Curator of Archaeology at the Museum of Natural History in Regina, Saskatchewan.

Book Review

***CEDAR: Tree of Life to the Northwest Coast Indians* by Hilary Stewart. Douglas & McIntyre, Vancouver. 1984. 192 pp., illustrations by the author, foreword by Bill Reid. $24.95 (cloth).**

SOME BOOKSELLERS have shelved it, I'm told, among the Do-It-Yourself books, somewhere in the alphabetical gap between "Beekeeping" and "Winemaking". The mistake is almost understandable. Those two topics excluded, this fascinating book is so comprehensive that nearly every letter of the alphabet would find a heading for it.

Take "M", for example: Magic, Medicine, Midwifery, Millinery, Mortuary Practices, Music . . . they're all there. From conception to coffin, the Northwest Coast Indians were so surrounded by cedar that it really was the Tree of Life, included in every activity. So clear are Stewart's accounts of those activities, and so vivid are her myriad drawings and photographs, that the reader is tempted to believe that he or she could thrive in the coastal wilderness by using ***CEDAR*** as a Do-It-Yourself survival manual.

In the foreword Bill Reid calls it a wonderful book, quotes an early rhapsodic passage of his own about the cedar, and then goes on to say, "Now Hilary Stewart has performed the much more difficult feat of telling of the wonder of the cedar tree with the same loving awe experienced by us for whom it forms a constant part of our lives . . . " High praise, and well deserved. Although the author's prose is disciplined, clear, and concise, it is never dull, and it conveys in full, without hyperbole, her feeling for the people of the Coast and her fascination with their tree.

Actually, two different trees. As the author states in a short botanical section, there are in the forests of our coast two species of conifer popularly called cedars. Neither of them is a true cedar. The "red cedar", *Thuja plicata,* is an arborvitae (tree of life) and the "yellow cedar", *Chamaecyparis nootkatensis,* is a yellow cypress. The two are members of the same family, the Cupressaceae, but their uses often differed. Red cedar was preferred for canoes, yellow cedar for paddles. Red cedar withes made stronger rope; yellow cedar bark, shredded, made softer cloth.

The book is full of fascinating items: Do you want to cure a carbuncle? Recover from rheumatism? Comfort a kidney? Barbecue a salmon? Spear a sea urchin? Make paint? It's all done with the aid of one or other of the cedars. Every aspect of the cedar is described and illustrated in great, and greatly interesting detail. The section headings indicate the range: *People of the Cedar; Cedar the Tree; . . . the Wood; . . . the Bark; . . . the Withes; . . . the Roots; . . . Spiritual Realm.* If not exhaustive, the account is very full indeed.

Anyone who likes trees, people, good writing, or good drawings, is bound to enjoy this beautiful book. (Archaeologists will delight in seeing the variety of ways in which many of the mysterious objects they find were used.) Don't, however, make the mistake of buying copies as gifts for your friends without buying one extra, because you'll never be able to give the last one away. You'll want it for yourself.

- Don Bunyan

Faunal Analysis Course Announced

Sea mammal bones are the subject of an intensive laboratory and seminar course planned for May-June 1985 (inter-session) at the University of Victoria.

For more information contact Becky Wigen, Dept. of Anthropology, Univ. of Victoria, P.O. Box 1700, Victoria, B.C. V8W 2Y2. Tel.: 721-7053.

Stone Bowl V: The Meares Island Example

A UNIQUE, culturally significant zoomorphic stone bowl (see Figure) was removed from the intertidal zone on the western shoreline of Mosquito Harbour, Meares Island, in front of the historic Sutton's Mill site (DhSk 8), probably in late June of this year, and transported illegally across the Canada-U.S. border.

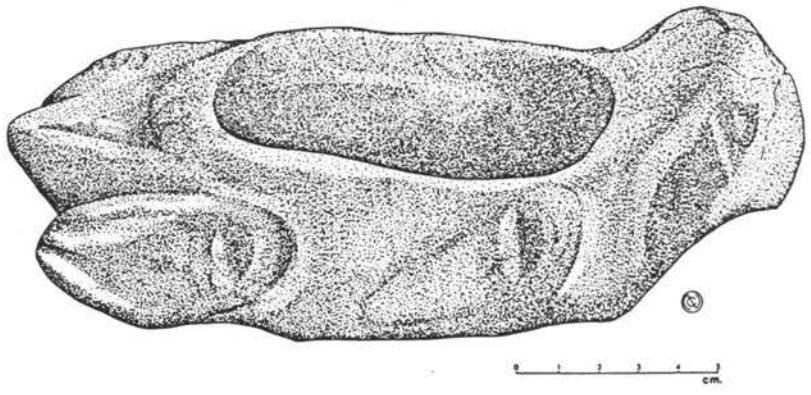
Several Tofino/Ucluelet residents who had information regarding this incident, including two photographs of the bowl, reported it to the B.C. Provincial Museum. Initial efforts to retrieve the bowl were unsuccessful, and the matter was turned over to personnel responsible for administering the Cultural Property Export and Import Act. Shortly after the R.C.M.P. became involved, the individual responsible for illegally exporting the piece contacted me directly. Arrangements were made to transfer the bowl to the B.C.P.M. It is currently held by the Archaeology Division in trust for the Nuu-chah-nulth (Nootka) people.

The export of Northwest Coast stone bowls, legal and otherwise, has caused a great deal of concern among the Canadian archaeological community and the federal agency responsible for administration of the Act. The problem centres on the concept of "fair market value" which is the only mechanism provided by the Act to control cultural property.

The majority of Canadian archaeologists, represented by the Canadian Archaeological Association, argue that archaeological specimens—their chain of ownership having been broken—are a common cultural heritage, not private property to be bought and sold. Any officially sanctioned market in antiquities clearly contradicts this basic premise. One result of such a market would be the looting of archaeological sites to find objects for sale.

Although the issue is clear, the solution is not. A committee of the C.A.A. is currently considering ways by which the present impasse might be resolved. In the case of the Meares Island bowl, the legislation did not prevent the bowl from leaving the country but was used to effect its return. What, one might ask, would have been the scenario if the bowl had been returned to Canada only to be subsequently exported under permit? In many respects, the central issue in this controversy concerns the question of private ownership versus public stewardship of all Canadian archaeological artifacts.

- James C. Haggarty
Archaeology Division
British Columbia Provincial Museum

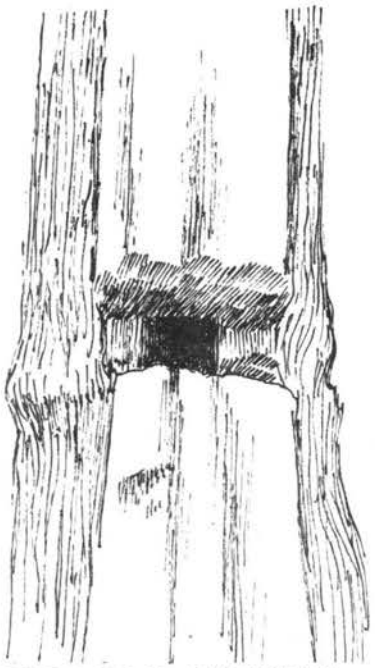


The Meares Island stone bowl.
Drawing by Nancy Condrashoff.

Culturally Modified Trees

by Hilary Stewart

Drawings by the author



TEST HOLE - RANKINE I.
QUEEN CHARLOTTE ISLANDS

POSSIBLY START OF
TREE FELLING

MANY OF THE OLD abandoned native village sites of the Northwest Coast still contain sturdy houseposts, massive roof beams, gable boards, and retainer planks. Museums house crest poles, dugout canoes, bentwood boxes and chests, and a variety of clothing and baskets, all made from western red cedar *(Thuja Plicata).* Although many of these date only to a hundred years ago, it is well evidenced that such items were an established part of the coastal cultures long before early explorers arrived.

The cedar is a long-lived tree, growing, under favourable conditions, to a height of 70 m and with a diameter of 4 m, occasionally more. The wood contains *thujaplicin,* a toxic substance which acts as a fungicide to resist rot in mature trees. Because many giant cedars are several hundred years old, some carry the scars of quite early woodworking and bark stripping—mute evidence of their use.

Little attention was paid to this aspect of ethnology (or its association with archaeology) until relatively recently, when widespread logging operations brought increased awareness of this most interesting subject. In one area of the Queen Charlotte Islands alone, 123 Haida utilized trees have been documented by Richard Wilson (Wanagun), a Haida from Skidegate. These include the stumps and tops of felled trees (the trunk having been removed for use); trees with adzing, test holes, bark stripping scars; as well as canoe blanks—and an almost finished canoe.

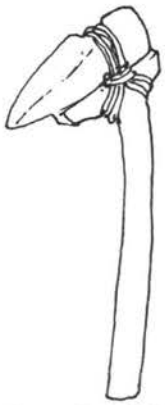
One label given to a tree displaying evidence of use is culturally modified tree, abbreviated to *CMT* for convenience.

In the course of researching my recently published book, *CEDAR: Tree of Life to the Northwest Coast Indians,* I became deeply interested in CMTs of cedar. With each visit to the Queen Charlotte Islands and other coastal areas, I found, or was shown, trees with evidence of adzing and chiselling. They include examples of plank splitting, test holes, random adzing at the tree base, and chiselled cavities above the base.

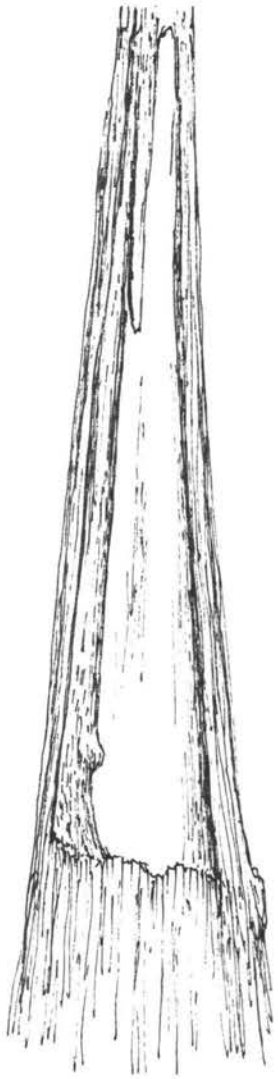
CHISEL WITH IRON BLADE

Close inspection of the length, shape, and cleanness of the cuts in the wood suggested that, in all cases, a sharp metal-bladed tool had been used. Adzes and chisels with iron blades were already in use when Cpt. James Cook, the first explorer known to have landed on this coast, arrived in 1792, and he noted the eagerness of native people to trade for iron.

To my knowledge, no examples of woodwork done with stone tools are available for study. The grooved stone adze of the northern cultures does not have the fine bevelled edge of the southern elbow adze, and may have been a splitting tool rather than a cutting tool.



NORTHERN GROOVED ADZE - STONE BLADE



BARK STRIPPING SCAR, WITH NEW BARK GROWING IN OVER SAPWOOD. INITIAL NARROW STRIP AT LEFT - MONAS ISLAND.

CEDAR WITH SCAR OF PLANK SPLITTING - BELLA COOLA.

A fairly rare type of CMT is the tree which has had planks split from it by the use of wedges—particularly interesting if the tree is still alive. One "plank-split" tree I studied in Barkley Sound appeared to have fallen with age, a long time ago, but it still retained a series of cut marks at one end of the face from which the plank had been split. The face measured an astounding 3 m long and 1.3 m wide.

Another category of CMT, one more often found, is the cedar with bark stripping scars. One type takes the form of a long, fairly narrow scar running several meters up the trunk; the base is a horizontally cut line, and the top tapers to a point. One I saw on Monas Island (off Tofino) had the scar of the initial very narrow strip of bark which had been pulled to test its straightness. (Alice Paul, a Westcoast basket maker, has described doing this: if the first strip is short, or if it twists, she rejects it and tries another tree.) Adjacent to the narrow scar was a much wider one that ran up higher. The bark puller must have approved of the qualities of the first strip and so taken one of full width, to use for making baskets, matting, rope, clothing, baby bedding.

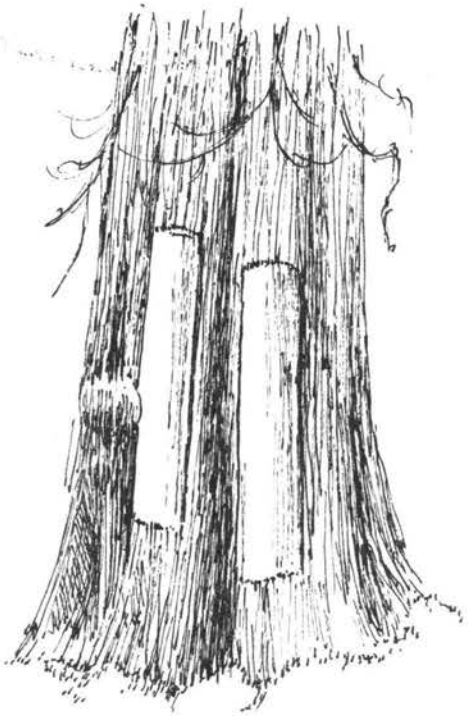
Continued on next page.

Continued . . .

On the Queen Charlotte Islands one can frequently find a cedar tree scarred from removal of a bark plank, sometimes two or three from the same trunk. These scars measure close to 1.5 m long by about 0.3 m wide, but it should be remembered that the sides have partially grown over, narrowing the original width. The Haida once used these as planks, threading sticks of salmonberry through the width, between the inner and outer bark, in order to keep them from curling. The bark planks were lightweight and easily transported for use in building a temporary shelter. They were also traded to the Tsimshian people on the mainland.

The more one consciously looks for CMTs, the more they come to light. In areas once well populated with native peoples, one can walk into almost any forest where there are cedars and find a CMT of one type or another. Last week, in Vancouver's Stanley Park, I noticed a bark scarred tree, complete with adzing, only a stone's throw from the Public Aquarium.

Much more survey, study, and research need to be done before logging destroys many of these important specimens—specimens which can shed light on early woodworking. This brief article is written in the hope that it will alert more people to be on the lookout for culturally modified trees, and to report them to this author or to the Archaeological Society of B.C.



SCARS OF CEDAR BARK PLANK REMOVAL - EACH ABOUT 1·5m x 0·3m. WINDY BAY - QUEEN CHARLOTTE IS.

RANDOM ADZING AT BASE OF TREE - BARKLEY SOUND

SHOW TIME / Current Exhibits:

UBC Museum of Anthropology

CEDAR THE GREAT PROVIDER: USE OF THE CEDAR TREE IN THE LIFE OF THE NORTHWEST COAST INDIANS. Guest Curator Hilary Stewart; through Feb. 1985.

Also, look for the four panel display depicting seasonal activities of prehistoric peoples in British Columbia; and a new Welcome Figure by carver Joe David.

SFU Museum of Archaeology and Ethnology

THE DAY-GRIMSHIRE COLLECTION - 35 pieces from a recently acquired collection of Indian basketry and carvings; on display until Spring 1985.

British Columbia Provincial Museum

ARGILLITE - a new permanent exhibition put together by Peter Macnair, Ethnology Curator; showing the history of Haida argillite carving.

VICTORIA STILL STUMPED BY TREES

by Kathryn Bernick

"WHAT IS YOUR POSITION on culturally modified trees?"

Provincial Archaeologist Art Charlton was not available to answer my question, so I asked Brian Apland, Acting Head of Impact and Assessment:

"What is the current policy of the Heritage Conservation Branch?"

Apland replied that "there is no hard and fast policy" regarding CMTs (culturally modified trees), and that the Branch is "trying to establish a mechanism to set up a predictive model for use and distribution of this resource type for all areas of the coast." It will facilitate data collection in "impact situations," Apland said, adding that the Branch might also try to do something about preserving some CMTs—for example, those that are in parks, ecological reserves, etc.

Trees are a different kind of heritage site than what resource managers usually deal with. Because, Apland pointed out, with trees it is the actual heritage resource that the "developers" are after. Yes, of course. Are the logging companies, I wanted to know, putting pressure on the Branch to approve cutting permit applications? No, said Apland. But the companies do want to know what the HCB's position is.

Every time there's an upswing in the market for red cedar, hungry fallers come across culturally modified trees. What should they do? The Heritage Conservation Branch, operating with a steadily diminishing staff and reduced budget, has a lot of other things to think about in addition to trees. They are hopelessly behind—but they're working on it.

A year ago (Dec. 1983) several Branch staff members met with archaeologists who had been involved in recording CMTs. I wasn't there, but all the researchers I know who did participate emphasized the need to consider CMTs as "legitimate" heritage sites, *and* to find out more about them. The resource managers agreed that they needed to know more about CMTs.

So, pending the availability of more information, the HCB put on hold all newly recorded CMT sites. That is, they are keeping the records in a separate file and are not going to assign site numbers until the definition of a CMT site is worked out. For now, they are referring to them as "culturally modified tree *areas,*" and are instructing survey projects NOT to record them on site inventory forms. The fact that none of the new tree information is being entered into the computer file is academic, considering the backlog in data entry (several thousand site forms). However, the result of not using standard inventory forms is that information deemed necessary by the Branch for effective management of heritage resources is not being recorded.

Meanwhile, the HCB arranged for two studies of culturally modified trees—one on the Queen Charlotte Islands and one on Meares Island. Both were in areas where logging is imminent (or already in progress) and where there has been vocal public denunciation of logging plans. I don't believe it is a coincidence. Money is apparently forthcoming for research that is disguised as an impact assessment of an area for which interested parties (industry, government) need some good press.

To my knowledge, the Branch has not commented, publicly or otherwise, on the results of the two CMT studies. They are "reviewing" the matter: they have not yet met to discuss among themselves the implications of the research reports—let alone to work out the definition of a "CMT site."

Understanding the procrastination is easier if you've seen the reports—which I have (in fact, I wrote one of them). Both studies demonstrated that culturally modified trees can potentially provide a wealth of information about aboriginal culture in early historic times as well as during the late prehistoric period.

It would have been simpler if the research results indicated that CMTs were expendable as far as heritage is concerned. Consider the millions of dollars worth of lumber they comprise, and the fact that technically neither trees nor tree sites are protected under the Heritage Conservation Act. No wonder the Branch keeps hoping that they're not "really" sites, and is planning yet another meeting with archaeologists to discuss CMTs.

Nevertheless, the HCB will, sooner or later, have to take a position. That is, if it survives the next round of reductions in the civil service . . . (there are rumours).

Precontact Dates Revealed by Ring Counts

Archaeological data from culturally altered trees

by Russell Hicks

THIS REPORT summarizes briefly my graduate work during the period between July 1976 and October 1977. The accompanying field work and analysis had as objectives the testing of a method to sample the annual growth increments following cultural alterations to western red cedars *(Thuja plicata),* and assessing the value of these dendrochronologies to archaeology. An additional objective was to demonstrate the presence of these kinds of culturally altered tree sites in spatially separate locations of the Northwest Coast.

CATs (Culturally Altered Trees) yielded 55 usable increment samples, slabs and wedges, that were sawed out of 49 trees at bark and wood gathering sites in the study areas. The information is summarized in Tables I and II.

In this work I was assisted by a friend, James Bennett. Our equipment consisted of a 90 cm bow saw with 20 cm clearance, a heavy wood chisel, a hatchet hammer, a spray can of pruning paint, measurement and identification tools, an increment borer, and a camera. We used a canoe, and chartered a boat to do the Bella Bella district.

It was in the Bella Bella district near the south end of Campbell Island that we sampled and recorded a *CAT* increment slab sample which yielded a ring count that proved the alteration to be from the year A.D. 1688 or earlier—84 years before Martinez made his first contact with the Nootka. This precontact date was supported by three other *CAT* samples that yielded dates of A.D. 1726, 1739, and 1772. All the above are minimum dates with errors of no more than five years.

Culturally Altered Trees

The trees described as "bark stripped, triangular" have tool marks near the base of the tree, at various heights above the ground, clearing root irregularities (see Figure). The tool marks are adze marks in most cases, but some trees cut in the historic era, appear to have been cut with an axe. The bark is cut at right angles to the trunk and is the only person-made cut on the tree. The bark was apparently pulled away and up to a point, forming a triangle.

The trees described as "bark stripped, rectangular" have tool marks at the top of a rectangular scar, and again near the base of the tree. The sizes of the bark stripping alterations vary.

When stripped of bark the wood which is exposed is the growth ring that would indicate in cross-section the age of the tree when it was stripped. It is referred to here as the *'n'* ring. The surface of the *'n'* ring is called the cambium layer by botanists. It is over this layer that the sap flows to feed the annual growth. On trees that have been bark stripped this exposed surface can become damaged or badly decayed. But if even a small portion adjacent to the growth lobes is intact, and the wood growing over it is sufficiently sound to analyze and count the rings, then the alteration can be dated. Tapping the tree with a tool will give you some idea of the soundness of the wood covering the alteration.

A tree that is "plank peeled" has had not just bark, but also a wood plank removed from between two deeply cut notches. It is possible to determine the *'n'* ring only when a portion of it

remains recognizable. A difficulty can arise when a previously "bark stripped" tree has had its inner wood removed at a later date. It should be borne in mind that the only thing dated by this method of dendrochronology is the removal of the bark.

Methodology

Because of the constraints of time a systematic search for *CAT* sites was not conducted. Instead, we were guided by informants, by my knowledge, and by just exploring places where we expected such sites to be. The job actually requires a systematic survey.

Once a *CAT* site was located and the trees for sampling were selected, we had to acquire the sample doing as little damage to the living tree as possible. I have come to the conclusion since my field work, that a chain saw is a much more efficient tool for this task than the bow saw. A chain saw with a long enough bar can cut without difficulty into the largest lobes adjacent to the alterations. This is important because often the size of the lobe is an indication of the number of rings, and older alterations may have thicker lobes. The bow saw is limited by the clearance of the bow.

Our sampling procedure was first to photograph and identify our subject trees, then to saw two parallel horizontal cuts into the growth lobes adjacent to the alteration, in a place where the wood sounded solid. The cuts would be about five centimeters apart. A little leverage through the lower cut with a wood chisel would then cause the sample to split out. The same method of splitting out a sample could be done after cutting with a chain saw.

I would like to comment on this. An alternative is to saw into the tree nose first, that is, with the nose of the chain saw cutting behind the parallel cuts. According to what I have read this is extremely dangerous as a kickback is probable. A kickback propels the bar into the forehead of the saw handler, and even a saw brake does not fully protect the sawyer from it. If sawing the back of a sample seems to be necessary, I would recommend a "user-friendly" chain saw. There is such a saw now available from Asplundh (see *Harrowsmith*, Aug./Sept. 1984 (No. 56), pp. 76-82).

Sawing out a wedge is another alternative, but it requires a good deal of accurate judgement to know where one cut will meet the other. Some of our samples were wasted because the meeting place did not include the *'n'* ring, and could not be dated.

The trees sampled were recorded with as much information as was reasonable to acquire—about its environment, location, size of the alterations, and the distance from any known site. The girth of each tree was measured and its height was estimated.

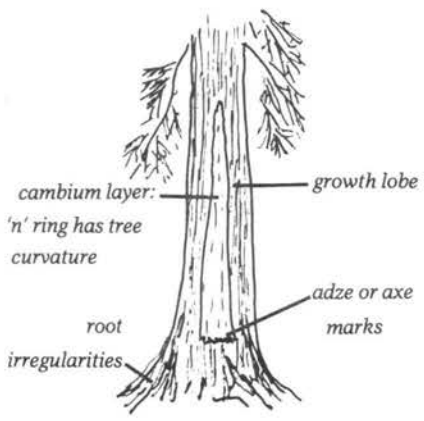
The samples were packed in an airy space in our Land Rover and packed with wet newspapers to keep them from drying out too fast and cracking.

At the lab, they were sanded with progressively finer grained sandpapers until a

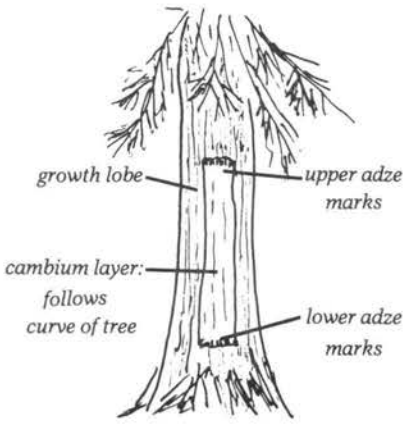
Table I

Dendrochronology Samples by Type of Alteration

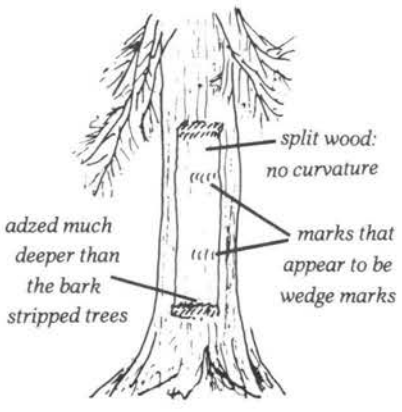
Type of Alteration	*Number of Samples*
bark stripped, rectangular	28
bark stripped, triangular	18
plank peeled	5
bulldozer altered	2



Bark Stripped, Triangular



Bark Stripped, Rectangular



Plank Peeled

Table II

Dendrochronology Results Summarized

Location	*Borden Designate*	*No. of Usable Samples*	*Types of Alterations*	*Range of Dates (AD)*
B.C. North Coast				
Bella Coola	FcSp, FsSq	6 2	bark stripped, triangular bulldozer altered	1921-1941
Bella Bella	FbSx, FaTb, ElTb, FaTa	17 5	bark stripped, rectangular plank peeled	1688-1908
Kitimat	GaTd	2 10	bark stripped, triangular bark stripped, rectangular	1772-1889
Vancouver Island				
Fort Rupert	EeTu	4	bark stripped, triangular	1928-1939
Nimpkish Lake	EcSr	3	bark stripped, triangular	1827-1858
Zeballos	DlSr	3	bark stripped, triangular	1829-1834
Marble River	EcSu	1	bark stripped, rectangular	1954
NW Washington				
Anatu Bay (behind Ozette)	45CA 24B70*	2	bark stripped, triangular	1911-1920
Total Usable Samples:		*55*	*Spanning 266 years:*	*1688-1954*

**U.S. Designate*

polish appeared on the wood, and all the rings were easily discernable. The count was then taken. In this I was assisted by my sponsor Marion Parker, then of Western Forest Products, who is an expert on dendrochronology. The count was taken from the outermost ring inward, to but not including the '*n*' ring.

Discussion

The results of this study do confirm the potential of this kind of research to produce dendrochronologies of prehistoric and ethnohistoric forest use.

A decision on the preservation of these sites calls for full evaluation. First it is necessary to assess the data potential that such sites have beyond this study. My data, sparse as they are in relation to the trees and sites yet to be explored and recorded, suggest that there is a difference in the way that trees are stripped, and that the difference may be correlated with either language territory or time of alteration.

Ethnographers do describe different methods of bark stripping for different language areas. This and the work I have done suggest that it may, for example, be a northern tradition to strip a tree "rectangular" and a southern tradition (including Vancouver Island and the Bella Coola area) to strip a tree in a "triangular" fashion. Admittedly my study is insufficient for conclusions about this, but it points out that studies should be done before the key sites are logged off and forever lost.

If these alterations can be associated with particular language groups, then the presence of the groups may be reflected in the *CAT* sites. This means a single *CAT* could be a key source of information. It certainly suggests that all *CAT* sites that date from before the early twentieth century should be secured for at least a preliminary study.

The logging companies, who have to date been very cooperative in this matter, should be restrained from destroying *CAT* sites before the

information about them has been thoroughly recorded. Many of these sites may have already been destroyed.

* * *

In conclusion, I would like to make a recommendation to the Government, and to all interested parties. A committee should be formed to mark for preservation those sites that have a potential as archaeological or ethnohistoric sites. Such a committee should include an archaeologist, an ethnohistorian, a botanist, a coastal native Indian, and of course a representative of the logging industry.

Volunteer Openings on Lower Mainland

There are two openings in the volunteer Regional Advisor Program: for Vancouver and for the Fraser Valley. To apply, contact Jim Weston, Coordinator of the Regional Advisor Program, Heritage Conservation Branch, Parliament Buildings, Victoria, B.C. V8V 1X4. Tel. 387-1011 (local 331).

Fraser Delta Archaeology Featured in New Exhibition

The UBC Museum of Anthropology's next travelling exhibition *Changing Tides* looks at the development of archaeological research in the Fraser delta region. This exhibition draws upon the Laboratory of Archaeology's collections to illustrate nearly one hundred years of shell midden research, from the late nineteenth century work of Harlan I. Smith, through the contributions of Charles E. Borden, to recent developments in local archaeology.

Changing Tides also examines the Coast Salish seasonal round of activities and the environmental factors which affect both site location and the nature of midden remains. The exhibit ends with a look into the future of archaeological research in the region. Photographs, illustrations, and graphics are contained in each section. Sites highlighted in the exhibit include Marpole, Glenrose Cannery, and Crescent Beach.

Changing Tides opens February 27, 1985 and continues until late August. A lecture series will be held through March in conjunction with this exhibition. For more information on this series please call the Museum, in February, at 228-5087. The national tour will commence in Halifax in early 1986 with stops across Canada, returning to B.C. in early 1987.

Changing Tides is made possible by generous grants from B.C. Heritage Trust and the National Museums of Canada. The curator of the exhibit is Ann Stevenson, an M.A. candidate in Anthropology at UBC. Dr. R. G. Matson is project coordinator.

- Ann Stevenson

Archaeology Conferences

C.A.A.

The Canadian Archaeological Association will be holding its annual conference in Winnipeg, April 24-28, 1985. For further information contact Elizabeth Snow, 621 Academy Rd., Winnipeg, Manitoba, R3N 0E7.

S.A.A.

The 1985 meeting of the Society for American Archaeology will be held in Denver, Colorado, May 1-4. Details are in the April 1984 issue of *American Antiquity.*