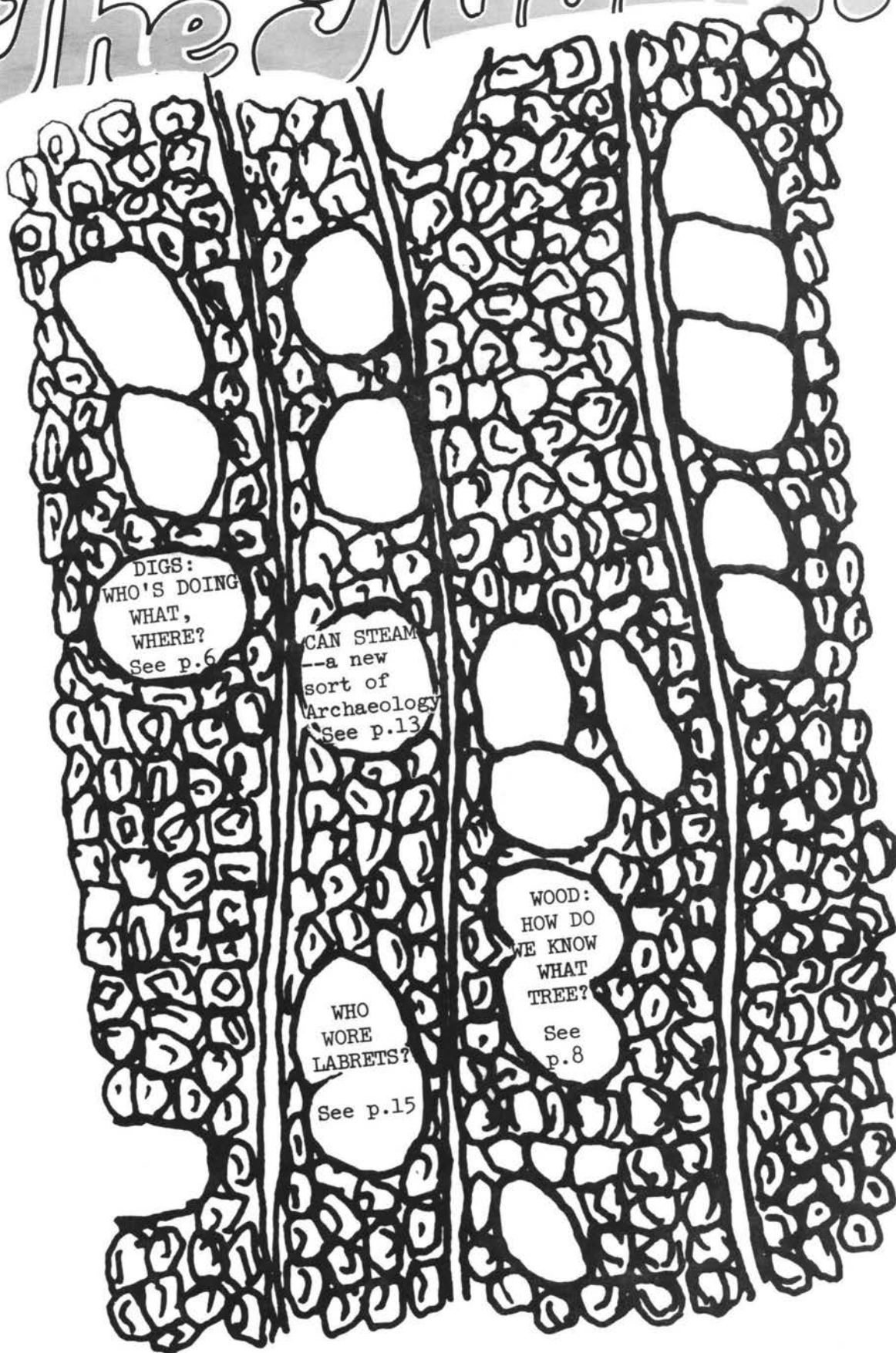


The Midden



DIGS:
WHO'S DOING
WHAT,
WHERE?
See p.6

CAN STEAM
--a new
sort of
Archaeology
See p.13

WHO
WORE
LABRETS?
See p.15

WOOD:
HOW DO
WE KNOW
WHAT
TREE?
See
p.8

THE COVER:

Alder wood under the microscope. Drawing by Kathryn Bernick.
See research report, pages 8-10.

THE MIDDEN is produced by the Publications Committee of the
Archaeological Society of British Columbia. Editor: Nick Russell.

Submissions and exchange publications should be addressed to the
Editor, P.O. Box 29, Whonnock, B.C., V0M 1S0. Contributions on
subjects germane to B.C. Archaeology are welcomed. They should be
relatively brief, with no footnotes and only a brief bibliography
(if necessary at all).

Subscriptions (\$8.00 a year) should be addressed to Ms. H. Braches,
1020 Lillooet Road, North Vancouver, B.C., V7J 2H8. The next issue
of THE MIDDEN will appear October 1982.

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unlawful to reproduce all or part by any means whatsoever, without
permission of the Society --which is usually gladly given.

APOLOGIES ...

... for misspelling the name of the 1982-3 Borden Scholarship
winner in the last MIDDEN. The S.F.U. graduate student who
won the scholarship is JOANNE CURTIN.

ARE WE ON YOUR MAILING LIST?

The Midden is happy to receive books, monographs, and article
reprints for notice or review.

Items should appeal to readers interested in archaeology,
particularly of the Pacific Northwest.

News items about forthcoming events and future publications
are also solicited.

VOLUNTEERS MOUNT PRAIRIE ARTIFACT SHOW AT UBC

A temporary exhibition of prairie artifacts has been opened in the UBC Museum of Anthropology.

More than 4800 artifacts from southern Saskatchewan comprise the show, titled "On Stoney Ground." They were all surface-collected by an amateur in the dust-bowl era of the 1930s. The collection was acquired by the late Carl Borden, and was recently catalogued and studied by museum volunteers, including active ASBC member Marie Duncan, under the supervision of Dr. David Pokotylo curator of archaeology.

The collection spans the entire prehistoric period, and is displayed so that viewers can learn about the processes of classification, cataloguing, interpreting and dating. The use of many of the tools is demonstrated in a series of sketches by the ASBC's Hilary Stewart.

The show runs through August, and was organized by the volunteer associate archaeology committee as part of their training in museum work.

More information? Ruth Anderson, Museum, 228-5087.

UBC Museum staff are hard at work on a new anthropology show to start September 15, titled "Blood from Stone."

MANAGEMENT OF B.C. HERITAGE BUILDINGS CENTRALISED

The merging of Historical and Archaeological branches into the Heritage Branch in Victoria has brought together under one department the care and management of several heritage properties.

Properties --all under the care of new Operations Section head Neil Wilton-- include not only well-known heritage buildings such as Craigflower Manor, Craigflower School, Point Ellice House and Helmcken House, but als Hat Creek House (near Cache Creek), and the Keremeos Grist Mill.

Archaeological sites include part of the Beach Grove site, the Pender Island midden known as the Pender Canal Site, and the Weldwood Petroglyph Site on Gabriola Island.

News

LANGARA HOLDS FIELD SCHOOL CLOSE TO HOME

The 1982 VCC-Langara archaeology field school is investigating an historic refuse dump on the north bank of the Fraser River. Twenty students under the direction of Stan Copp are digging at the "Marpole/Eburne historic site" at the foot of Angus Drive in Vancouver.

During the early 1900's the site was used as a refuse dump by residents of Point Grey, Marpole and Eburne. The material being recovered dates primarily from the period 1900-1920. Artifacts include window glass, bottles, ceramics and bricks. Most of the ceramics are bone china, many from Staffordshire, England, and others from continental Europe, and the Far East. Excavations to date do not indicate the presence of any earlier archaeological strata-- apparently the historic refuse was dumped directly on top of culturally sterile river sand.

Excavations are scheduled to continue through June 30. Analysis of the material is being done in the archaeology laboratory at the Langara campus of Vancouver Community College.

RAILWAY DOUBLE-TRACKING THREAT INCREASES

The B.C. Heritage Advisory Board has voiced concern about reports that Canadian National definitely plans to double its main line through southern B.C. The Board has made a submission to the federal task force on double-tracking, requesting considerable survey and rescue work if the project is to go through, but has so far not been answered.

Sources suggest the task force itself is trying to put together funding for the vast project--said to be in the neighbourhood of \$1½ billion.

Considerable stretches of the 500-odd miles of track from Valemont to Vancouver have already been surveyed by heritage experts. So, said a Heritage Board spokesperson, "only a couple of hundred miles" remain to be done. But some of the most difficult terrain through the Fraser Canyon is still to be surveyed, and heritage concerns range from "old" archaeology through recent historic sites. The situation is considerably aggravated by unconfirmed reports that the Canadian Pacific Railway also plans to double its trackage through southern B.C.



POPULARITY OF STUDENT JOB PROGRAM SURPRISES OFFICIALS

The Heritage Trust has awarded more than 30 small grants to groups around the province for projects that involve hiring students for the summer.

The Student Employment Program was dreamed up on short notice in April, but nonetheless elicited over 300 proposals--far more than was expected. Board officials whittled these down to 34, each employing one or more students. A Heritage Trust spokesperson said grant emphasis was put on research and inventory, and 3/4 of the successful applications involved projects of that nature. A handful will provide public programs and exhibits, and a couple are for building restoration.

The Program hires students for the summer at monthly salaries between \$1,000 and \$1,300, depending on the students' educational background.

HERITAGE TRUST RENEWS GRANT TO THE MIDDEN

The British Columbia Heritage Trust has renewed its publications grant to the Archaeological Society of B.C., to help underwrite The Midden.

Last year the Trust gave \$800 to subsidize spiralling printing and mailing costs of the publication, which goes to all A.S.B.C. members including most professional archaeologists in the province and to many libraries and educational institutions.

This year the Trust generously agreed to increase the grant to \$1,000.

TRUST ALSO HELPS UNDERWATER WORK

The Underwater Archaeological Society of B.C. is continuing its survey work, with funding support from the B.C. Heritage Trust.

The U.A.S. last fall began a project to record shipwrecks in the Gulf Islands, and members have already located a number of vessels.

NATIONAL MUSEUM CONTINUES WORK IN NORTHWEST

The National Museum of Man is running archaeological investigations at two sites in B.C. this summer.

The Kitselas Project will focus on excavations at the Paul Mason site (GdTc16) in the Kitselas canyon, near Terrace. Last summer, investigations identified a village with two rows of rectangular houses, dating from 3200-3800 years ago. The plan is to excavate half of one of the rectangular dwellings, as well as other randomly chosen units. The 12-person crew, working under Dr. George MacDonald of the National Museum of Man, will work until the end of August under the direction of Gary Coupeland, a graduate student at UBC.

In addition to the excavation, the survey will be continued, with some testing, in the neighboring region, and Derek Smith of Carleton University will conduct some ethno-historical research.

The Greenville Indian Band is continuing its archaeological salvage project, with Dr. Jerome Cybulski of the National Museum directing. Located on the Nass River, the site is a 2000-year-old burial ground on the edge of a shell midden, and is threatened by housing construction. The skeletal remains are apparently similar to those recovered from the Prince Rupert Harbor area. Project is being run at the request of the band, and goes to July 15.

KB

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B.C. HERITAGE CONSERVATION BRANCH PERMITS, 1982

- 1982-1 Noon's Creek Salvage; R. Percy and A. Barton
- 1982-2 Greenville Burials; Dr. Cybulski
- 1982-3 Stanley A. Copp; Excavation of dump site near DhRs 19
- 1982-4 Jean Bussey/Utah Mines - Carbon Creek Coal Development
- 1982-5 Provenance Research/Block Brothers - Boundary Bay Inventory
- 1982-6 Jean Bussey - Kelly Lake/Cheekeye T/L Inventory - B.C. Hydro
- 1982-7 D.L. Pokotylo - Upper Hat Creek Valley
- 1982-8 Phil Hobler - Fort McLoughlin
- 1982-9 Steve Acheson - FaTt 1, Ninstints

MACKENZIE 'GREASE TRAIL' GETS PRESERVATION FUNDS

The federal and provincial governments have agreed to spend \$3 million to protect B.C.'s Alexander Mackenzie grease trail — one of the most historic trading routes in Canada.

The agreement was signed today in Quesnel by federal Environment Minister John Roberts and B.C. Lands, Parks and Housing Minister Jim Chabot.

The two governments will share equally in the estimated \$3 million cost of protecting and developing the 400-kilometre trading route used by Sir Alexander Mackenzie in 1793 on the first recorded continental crossing of North America.

The trail, which is still used in some places by local residents, stretches from the Fraser River near Quesnel westward across the interior plateau through Tweedsmuir provincial park to Bella Coola on the coast.

For some 8,000 years before Mackenzie was guided over it, the trail was used by coastal Indians to transport goods for trade with interior tribes. Among the trade goods was oolichan oil that leaked from the cedar containers

and slicked the trail with grease — hence its name.

The agreement will cover a period of four years and its management will be developed by a committee with an equal number of federal and provincial representatives. The committee will involve native peoples and local residents in the planning, managing and operating of facilities along the trail.

Much of the work to achieve the agreement has been done over several years by John Woodworth of Kelowna, past chairman of the Nature Conservancy of Canada, and Halle Flygare of Parks Canada.

Flygare first rediscovered parts of the trail in 1975 using CPR survey maps dating back to 1844.

Both governments hope the signing of the agreement will open up the trail to more hikers and stop vandalism along the route.

"I've been working on this project for eight years," said Woodworth in a telephone interview Thursday. "It's a great day for me and for the people in the area that this agreement is finally being signed."

Research

MICROSCOPIC ANALYSIS AIDS FIRM IDENTIFICATION OF WOOD SPECIES

By Kathryn Bernick

Microscopic wood identification is one of the latest technical specializations to invade Northwest Coast archaeology, coming as it were in the wake of wet site excavations. Knowing the particular species of tree from which a basket or a wooden wedge has been made provides another kind of clue that has previously not been available to the archaeologist. Moreover, the conservationist should have that information in order to determine suitable preservation treatment.

Wood consists of a complex arrangement of interconnected cells, resembling an intricate plumbing system. The types of cells, their arrangement, and the connections between them have evolved differently in the various botanical families, genera, and species. It is thus theoretically possible to identify the tree species of any piece of wood by carefully examining its internal structure. This is often the only way of determining species for wood recovered by archaeologists, where characteristics such as colour, odour, and texture have not survived.

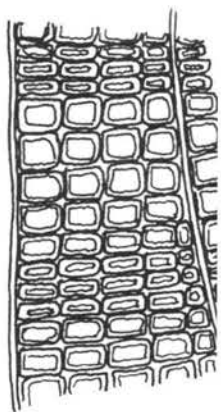
The process of identifying wood species by microscopic examination is basically straightforward. There are three steps: 1) preparing sections of the unknown specimen which will afford a clear view of the appropriate structural features; 2) examining the sections at high magnification and noting which of various characteristics are present; 3) making the identification on the basis of one's knowledge of the structure of various woods and the distinctions between the species.

Preparing the Sections

To be seen under a microscope, wood sections must be very thin, ideally just "one cell thick." They can be cut with a microtome, or by hand with a razor blade: archaeological specimens often must be cut by hand in order to minimize damage to the artifacts.

First, the specimen is carefully examined to see where the appropriate surfaces are, and where it can be cut with the least amount of damage. Then, with a sharp razor blade (single edge for safety reasons) several very thin translucent sections are sliced from the selected spots. The locations of the cuts should be noted on the artifact record for future reference. Although it is not necessary, sectioning under a dissecting microscope at anywhere from 10X to 40X magnification can be helpful. It allows for easy orientation, that is,

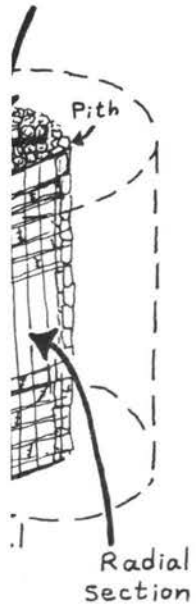
Fig. 1
Vi



Cross- sect
View of
ceda

schematic
of wood

trans-section



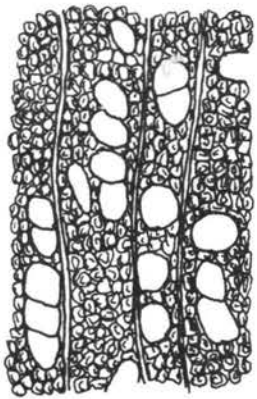
finding the desired surface, as well as enabling one to cut smaller and thinner sections.

As they are cut, the sections are put into a drop of water on a glass slide. With a cover slip on top they are ready for microscopic examination. Wood sections will keep in water for a short period of time, long enough to identify most specimens. To preserve them for longer they have to be put in a suitable medium which will not evaporate, such as glycerin. Making truly permanent slides requires dehydration of the sections (for example in a series of ethanol baths) and then mounting them in resin: it is relatively time consuming and would not normally be done as part of the identification process. If desired the sections can be coloured with a botanical stain such as safranin which produces a dark pink colour. Staining increases the contrast in the visual field and makes it easier to observe the relevant features. In their "natural" state the sections have the colour of dirty dish-water.

The Microscopic Examination

The microscope used for viewing the sections has a mounting platform (with a clip to hold the slide in place) which moves back and forth, and sideways. The instrument needs to have a range of magnification powers from about 60X to 500X. Familiarity with the microscope is an obvious prerequisite to any further work, as one must be able to position the sections under the lens, select the proper magnification power for the features to be examined, and have ready control of the fine focusing.

2.



Cross-section

View of
alder

In order to determine the species of the wood, it is necessary to examine the features displayed in cross-section, and in each of two longitudinal surfaces: the radial section which provides a view along the radial axis of the wood, and the tangential section which is cut along the circumference of a ring of cells (see Fig. 1).

Viewing the slide under the microscope, one begins by identifying which section is which, and then proceeds to search for particular features in particular sections. For example, the arrangement of the cells in cross-section (seen at about 60X) is very different in coniferous trees than in broad-leaved trees (Fig. 2). Some conifers, such as spruce, pine, and Douglas fir, have resin ducts which should be visible in tangential sections at about 200X magnification (Fig. 3). To differentiate red cedar from hemlock one must look at the shape of the end walls of the long horizontal cells as seen in the radial section at about 400X (Fig. 4). And so on.

Species Determination

Recognizing particular species from the minute features of the wood as seen under the microscope involves knowing what to look for and

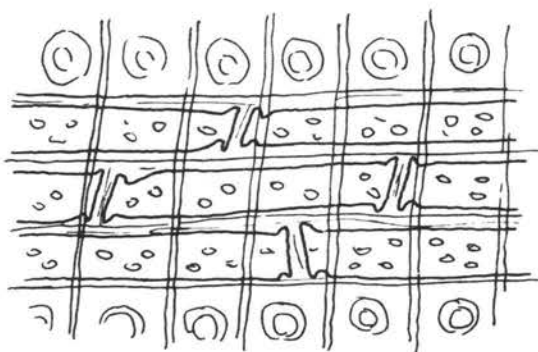
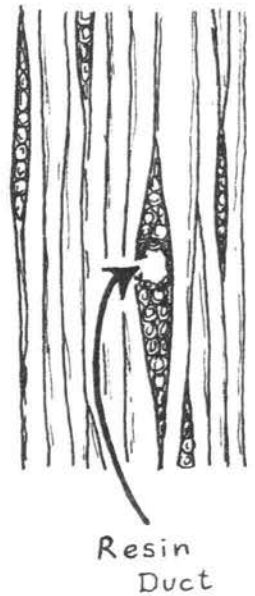
how to interpret what can be seen. Obviously, increased familiarity with the wood or woods under observation allows decisions to be made quicker and with greater confidence. As with any kind of scientific observation, there is a certain amount of subjectivity inherent in the method, and the accuracy of the identifications is directly dependent on the skill of the analyst.

There is no easy "cook book" approach to learning microscopic identification of wood species. Identification keys and brief descriptions that single out a few select features are useful to someone who already has a basic knowledge of wood anatomy and of the particular species being examined. It is imperative to have available for reference a set of comparative slides (standards) as well as verbal descriptions, photomicrographs, and line drawings of the several sections of various species. Although one need not be a botanist or a wood technologist, to learn how to identify at least the more common species, one does need to know the specialized vocabulary in order to understand the technical literature.

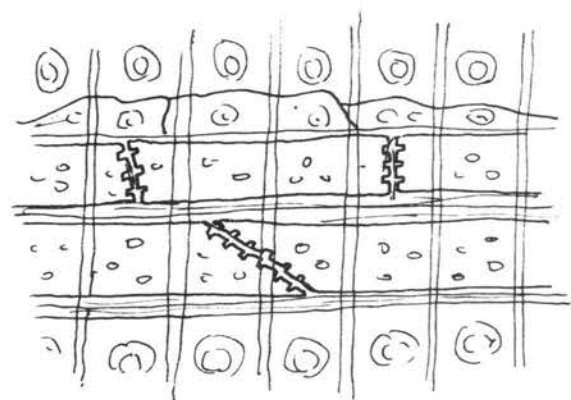
Archaeological specimens present special problems for identification. Often the internal structure of the wood is distorted: cells are crushed and twisted, parts of the cell walls erode, fungi obscure the features, etc. In addition, there is the challenge of cutting sections off a delicate wooden artifact, carved on all surfaces, without leaving noticeable scars; and the need to obtain adequate sections from wood which is severely eroded on all exposed surfaces-- without breaking it in half. Clearly, what is difficult under ideal conditions, here becomes much more so. Nevertheless, with enough patience and time, some information regarding the wood type is forthcoming. The ultimate satisfaction comes from looking at a chip of soggy wood and knowing that it is cedar. Or rather Thuja plicata, since we want to be scientific about it all.

Fig. 3.

Tangential View of Spruce



Radial View of Cedar



Radial View of hemlock

Fig. 4.

Events

TO LOOK FORWARD TO....

Guest speakers already confirmed for the fall include:

- September - Dr. GEORGE MacDONALD, National Museum of Man (Ottawa),
on Trade and Warfare on the Northwest Coast.
- December - RICK PERCY, S.F.U., about the Noons Creek Site
Excavation in Port Moody, which was carried out during
April/May of this year.

WATCH FOR....

"Great Lovers of the Past" will be the title of VCC Langara's
noon-hour lecture series at Robson Square this fall. The lectures
(approximately 9) will be on Thursdays, starting the second half of
September --the exact date is not available yet.

"The Mozarabs" - November 18/19/20.

Dr. Hanna Kassis of the Department of Religious Studies at U.B.C.
will conduct a Continuing Education workshop dealing with the inter-
action of Christians and Moslems in Spain in the Middle Ages. An
introductory lecture to the workshop is scheduled for September.
Details will be available later on from the Department of Continuing
Education.

Opinion

H.C.B. CATCHES UP ON 1978 ANNUAL REPORT

The Heritage Conservation Branch published its Annual Research Report #1 early this spring.

The attempt to clean up loose ends by publishing five preliminary reports and some regional resource management reports is admirable. But the report is sub-titled "Activities of the H.C.B. for the year 1978," and the question arising is, just how useful are four-year-old preliminary reports?

For instance, the report on Duke Point was probably made obsolete a year ago when Rebecca Murray finished her thesis. And Morley Eldridge's preliminary report on the Hope Highway salvage work must be superseded by the final report he is just now finishing.

The H.C.B. Publications Committee is reported to have been re-assessing its position recently, and will not publish theses in future. Perhaps it should, as a yardstick (and to catch up on the four-year time-lag), only publish preliminary reports on long-term projects or on projects whose final report is known to be a long way off.

However, this publication could be seen as usefully contributing to the history of archaeology in B.C., and includes a well-illustrated 30-page report of a pictograph survey of southeastern Stuart Lake.

NR

DETRITUS, PIECES ESQUILLES & OTHER FRAGMENTS

- * Parks Canada has begun a dig at Fort Rodd Hill, near Victoria, necessitated by washroom construction.
- * The Prince Rupert Museum has funding for a project which may include some archaeology.
- * Final word--yay or nay--is expected any day now on the proposed St. Mungo Cannery excavation. Dig was scheduled to start in early spring, but approval by E.C. Treasury **Board** was postponed during spending freeze.
- * UBC's Dick Pearson will go to Yale for six months next year, as visiting professor.

SOME ASPECTS OF INDUSTRIAL ARCHAEOLOGY GETTING
INCREASING INTEREST

The Canadian Steam Preservation and Industrial Archaeology Society very sensibly has a short title: Can Steam.

The discreet little group was founded in 1978 as an off-shoot of the B.C. Society of Model Engineers, and has a definite bent towards steam engines.

But the Group is also interested in the broader aspects of industrial archaeology, and is keeping its eye out for any B.C. buildings that may need its care.

Meantime--president David Jackson told The Midden in an interview--the group meets on the second Tuesdays of each month in the Burnaby Heritage Village railway station...has restored New Westminster's steam roller...is servicing the Samson V for New Westminster pending final decision on its future...and is negotiating with Port Moody for possibly building an operating steam museum.

The organization also owns one or two little machines--such as a 50-ton steam crane--and would welcome new members...providing they don't mind getting their hands dirty.

For more information, attend a meeting, or call Mr. Jackson (594-1970, home).

Somewhat akin to Can Steam is the Saanich Historical Artifact Society, whose sign is a familiar sight on the highway from Schwartz Bay to Victoria. That group also has a special interest in steam machines, particularly from agriculture and logging.

SPETIFORE FARM SITE GETS SECOND LOOK

The important Whalen Farm site --part of the controversial property known as Spetifore Farm in South Delta-- is to be given renewed study by B.C. Heritage archaeologists.

According to a spring issue of the Regional Advisors Newsletter, Steve Cassidy was to do a surface survey to get a tentative idea of the limits of the huge site, so that effective conservation measures can be taken to protect site deposits if they are threatened by proposed development.

"Staff are hopeful the site can be preserved as a dedicated park," noted the Newsletter.

Reading

NEW BOOK TO LOOK FOR

Parks Canada has recently published the 3rd volume of studies on the history and archaeology of Nootka Sound. The research is based on excavations conducted in 1966 by Folan and Dewhirst at Yuquot on the West coast of Vancouver Island.

The Yuquot Project Vol. 1. The Indigenous Archaeology of Yuquot, a Nootkan Outside Village, by John Dewhirst. History and Archaeology Pub. No. 39 (1980; \$15.00).

The Yuquot Project Vol. 2. Contains studies by specialists on the geology of the region; lithology of stone artifacts; zooarchaeological analyses of bone and tooth artifacts, mollusc remains, barnacle remains, and bird remains; and osteology of human remains. History and Archaeology Pub. No. 43 (1980; \$11.25).

The Yuquot Project Vol. 3. Contains studies on the historic remains: glassware, glass beads, clay tobacco pipes, ceramics and Mexican sherds. History and Archaeology Pub. No. 44 (1981; \$10.25).

Available by mail from the Canadian Government Publishing Centre, Supply and Services Canada, Hull, Quebec, Canada K1A 0S9.

Simon Fraser University currently lists nine of its 10 archaeological publications as still in print.

Available from the Archaeology department are:

Salvage '71. \$3.50.
Current Research Reports. 1976. \$8.00.
A guide to Basic Archaeological Field Procedures.
1978. \$10.00.
Bella Bella Prehistory. 1978. \$10.00.
Settlement Patterns of the Draper and White Sites.
1979. \$10.00
The Archaeology of Kamloops. 1980. \$12.00.
Marpole: Anthropological Reconstruction of a Prehistoric
Northwest Coast Culture type. 1980. \$8.00.
The Belcarra Park Site. 1980. \$8.00.
Studies in Central Coast Archaeology. 1982. \$?

(Prices do not include handling, packing and postage.
Mailing address is S.F.U., Burnaby, B.C. V5A 1S6.)

WHO WORE LABRETS, WHEN, WHERE AND WHY?

The wearing of labrets may have been a much more widespread phenomenon than perhaps thought, according to a fascinating article by Grant Keddie in Vol. 14 of Syesis.

While some may tend to think of labret-wearing as being peculiar to Haida women, Keddie demonstrates that the practice extended throughout many parts of the world and was common amongst either or both sexes at various times over the last 4,000 years.

The article, titled "The use and distribution of labrets on the North Pacific Rim," concentrates on that geographic area, but indicates that "labretifery" --as he calls it-- was also practised in other parts of the Pacific Rim, including the coast of Japan, the Aleutians, Alaska, B.C., Mexico and South America. He also notes it in central Africa and eastern India.

However, Keddie concentrates on the Northwest Pacific, tracing distinct patterns of use over four millenia. He also advances some interesting theories on origination and significance of labretifery.

The article includes an extensive bibliography (though it's remarkable how irritating it is to find one's own name and Tsawwassen misspelled in one entry! The presence of at least one other misspelled name and several typographical errors suggest the problem lies with the Syesis editors.)

The article is, then, a useful one, filling a significant gap.

SOMETIME TYPIST SOUGHT

The Midden will require some modest typing help this fall --a maximum of 14 quarto pages every two months.

If anybody with fast fingers and access to a good typewriter (preferably carbon-ribbioned and with changeable type-balls) would be willing to help out, a call to the editor would be most welcome.

Nick Russell -- 324-5335 (office)
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