THE MIDDEN

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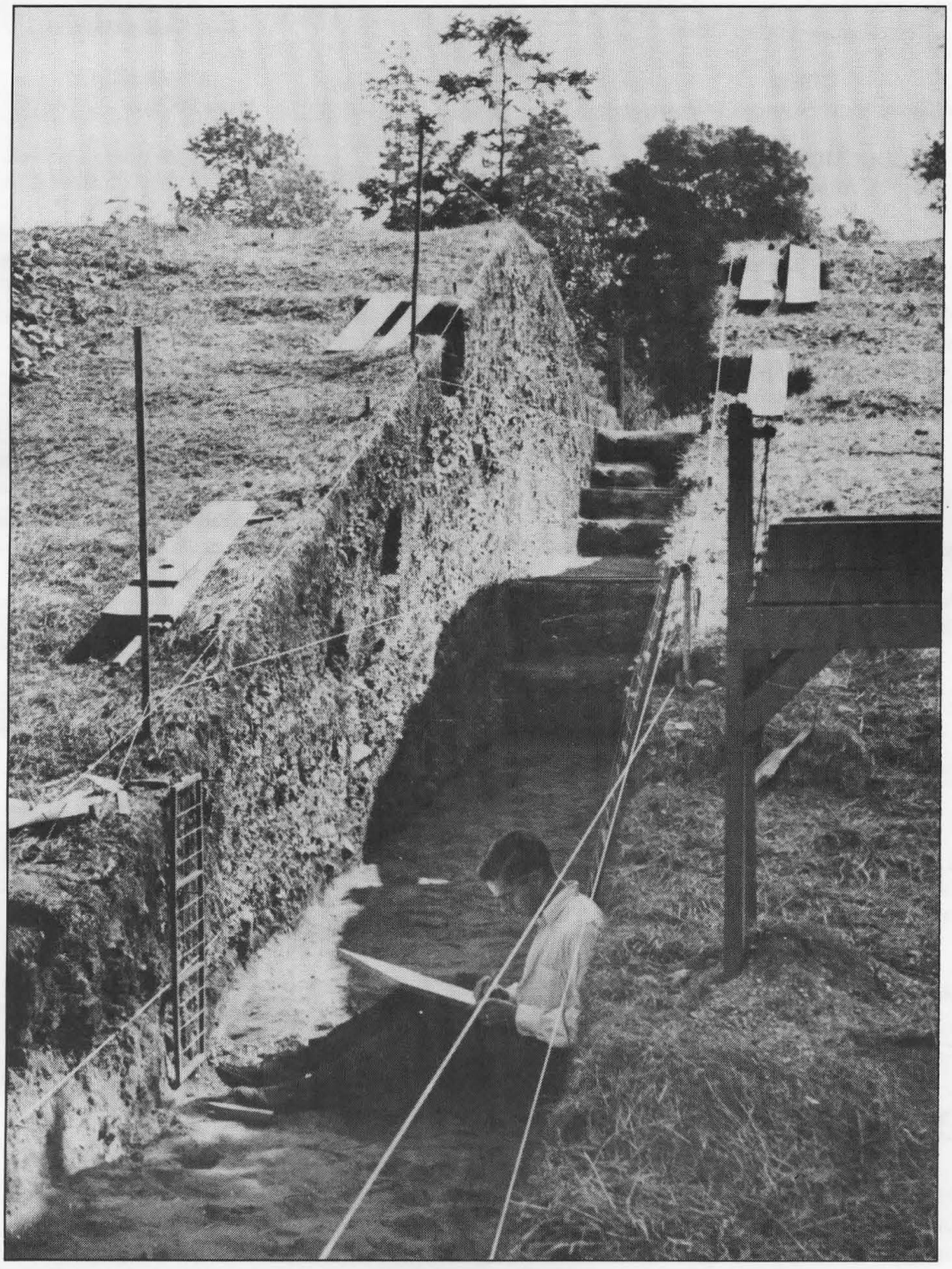

PROFILING IN 1949

THE MIDDEN

Published five times a year by the Archaeological Society of British Columbia. The next issue will appear in February 1993.

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Submissions and exchange publications should be directed to:

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Vancouver, B.C. V6T 1Z1.

We welcome contributions on subjects germane to B.C. archaeology: maximum length 1500 words, no footnotes, and only a brief bibliography (if required at all). Guidelines are available.

Publication of ***The Midden*** is financially assisted by the province of B.C. through the Heritage Trust.

FRONT COVER:

Wilson Duff finishing the profile of the north face of trench I at Whalen Farm (DfRs 3) in 1949. "Borden considered site profiles very important, and great care and attention were taken in drawing them in the field." [from *40 YEARS LATER: WHALEN FARM REVISITED*. See article on page 3] Photo courtesy of UBC Laboratory of Archaeology.

A.S.B.C.

is dedicated to the protection of archaeological resources and the spread of archaeological knowledge.

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

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A.S.B.C. DIARY

All meetings are held at 8:00 pm in the auditorium of the Vancouver Museum, unless indicated otherwise.

1993	(joint meeting with A.I.A.)
Jan.13	**Roderick Millar** "Quarrying in Ancient Lesbos"
Feb.10	**Phil Hobler** "Gothic Cathedrals in B.C. Archaeology"
Mar.10	**Kathryn Bernick** archaeological basketry

THE MIDDEN

Don't Forget . . .

Please remember the suggested "themes" and submission dates for issues of *The Midden* this year. In February we would like to move up into the Fraser Canyon and the B.C. interior plateau (submissions January 2nd). From there in the April issue through northern B.C. out to the coast above Vancouver Island (submissions March 1st). Finally, June should bring us down through Vancouver Island and the lower B.C. coast (submissions May 1st).

If you have anything that you feel would be appropriate, please submit an article. If you have any articles you would like to submit which don't fit into any of these areas, please, by all means, do so. They can be accommodated in any issue. Guidelines are available on request.

Letter to the Editor

As usual, I enjoyed reading the latest MIDDEN and was especially interested in "The Sacred Mounds Of Scowlitz." To keep the record straight, however, re: "the last one excavated was in 1944...," I have to report that I explored mounds in the Comox Valley in the late fifties: Capes: *Contributions to the Prehistory of Vancouver Island*, Occasional Papers of the Idaho State University, Number 15.

Built of pebbles, cobbles and soil, the mounds were characteristically dome-shaped except for one large, oblong-shaped mound that covered a floor completely surrounded by large boulders which extended in a long snake-like appendage. Associated charcoal suggests an age of 2000 years for the Comox Valley mound complex.

Sincerely,
Catherine Capes

A.S.B.C. Charter Member

Aileen Winskill, one of the original founding members of the Archaeological Society of British Columbia, passed away peacefully on Sunday, October 11, 1992. Aileen was a retired teacher and counsellor of Langara College and Vancouver Community College.

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NEWS ITEMS

SHA

The Society for Historic Archaeology is holding its 1994 Annual meeting at the Hotel Vancouver between January 5th and 9th, 1994. Co-hosts for the meeting are Simon Fraser University's Department of Archaeology and the UASBC [Underwater Archaeological Society of B.C.]. Key organizers are David Burley (SFU, Co-chair and SHA Program Chair), Tom Beasley (USABC, Co-chair), Charles Moore (UASBC, ACUA Program Chair), and Michael Paris (UASBC, Local-Arrangements Chair).

The 1994 programme includes symposia for two days, January 6-7, of organized and contributed papers on any aspect of historical or underwater archaeology. A plenary day follows, January 8, on "Current and Future Applications of Science and Technology in Historic and Underwater Archaeology." The plenary day will incorporate a series of morning sessions—computer developments, remote sensing, underwater technologies, conservation technologies, museum exhibitry, and futuristic considerations—which will be summarized by the individual Chairs in an integrated afternoon symposium. Round table luncheons, the SHA bookroom, an exhibit on new technologies, a variety of social events, as well as organized tours of interest to SHA and ACUA members are also being planned.

The first call for papers has been sent out. Abstracts for proposed sessions and participants is April 15, 1993. All paper/poster abstracts should be submitted by May 1, 1993.

For further information on the conference, contact the Department of Archaeology, Simon Fraser University, Burnaby, B.C., V5A 1S6. Telephone inquiries may be directed to David Burley, SHA Program Chair (604) 291-4196; or Charles Moore, ACUA program Chair (604) 275-5427.

SPNHC

The seventh annual meeting of the Society for the Preservation of Natural History Collections [SPNHC] will be held June 7-12th, 1993, at the Royal British Columbia Museum in Victoria. The SPNHC was formed to deal with issues and concerns involving the collection and preservation of natural history collections including archaeological collections.

The topics that will be covered at the Victoria conference include preservation of natural history collections, archival concerns of natural history museums, collections management and information exchange, and institutional tours.

The call for papers for the conference will be issued in January 1993. For further information on the conference, contact Grant Hughes, Local Conference Committee, RBCM, at (604) 378-5706.

NWAC

The first call for organized sessions and volunteered papers has been issued for the Northwest Anthropological Conference's March meeting. Ideally, sessions would include 4-6 papers and may include discussant(s). Each paper will be scheduled for a 20-minute presentation with 10 minutes for discussion.

Session and paper abstracts must be received by January 29th, 1993. Session organizers should submit a session abstract of 100 words with participant paper abstracts of 100 words each. Volunteered paper abstracts should be 100 words.
Submit to: NWAC Program Coordinator, Anthropology Department, Western Washington University, Bellingham, WA 98225-9083.

CANOE RESTS

On the weekend of September 19-20, 1992, the Underwater Society of B.C. [UASBC] joined Dr. Catherine Carlson of the University College of the Cariboo/Kamloops [UCC] in a project to recover a submerged aboriginal canoe in Seymour Arm of Shuswap Lake. The canoe was originally found by a local Kamloops diver, Don McClean, in the fall of 1991. Carlson received a grant from the UCC Faculty Research Fund to undertake a preliminary investigation with the UASBC. The canoe was brought to the surface, measured, photographed and sampled for wood identification and C14 analysis. Dr. Erle Nelson of SFU is involved with the dating.

The poor condition of the canoe makes it unlikely that conservation is feasible, and for now it rests at 70 feet (20m) in Shuswap Lake. A report for publication on the canoe is being prepared by Carlson and other team members.

Because the canoe received much local and national (CBC) news coverage, there is now a great deal of local interest among divers to set up a Kamloops chapter of the UASBC which Carlson is currently organizing with the hope of eventually undertaking surveys in both Kamloops and Shuswap Lakes.

NEW

Kathlyn Stewart, from the Zooarchaeology Section at the Canadian Museum of Civilization (CMC), has recently started a newsletter called *Canadian Zooarchaeology* that is attempting to pull together information of interest to zooarchaeologists working in Canada. The recent issue (No.2) contains a list of unpublished faunal reports from different provinces, and includes a list from British Columbia.

For further information on the newsletter, inquiries can be directed to Kathlyn stewart, Editor, Canadian Zooarchaeology, CMC, P.O. Box 3443, Sta.D, Ottawa K1P 6P4. Telephone (613) 990-6804, FAX (613) 990-6409.

WHALEN FARM REVISITED

40 YEARS LATER

by Brian Thom

On Monday, June 20, 1949, Charles E. Borden recorded in his field notes the arrival of his crew at the Whalen Farm site (DfRs 3) in the small community of Maple Beach, Washington. Borden and his crew excavated in the shell midden located on Mike Whalen's farm for the 1949 and 1950 field seasons. This site was to provide important but problematic data for his Fraser Delta culture historical sequence which is well known from his classic 1970 article in *BC Studies*, Cultural History of the Fraser Delta Region: An Outline. It was in this article that he best articulated his cultural phase scheme: Locarno Beach Phase, Marpole Phase, Whalen II Phase, and Stselax Phase. Though most of these phases are widely referred to by archaeologists studying Fraser Delta prehistory,the Whalen II phase has fallen into general disuse. I have recently completed a study of the Whalen Farm material and have found that the collection excavated from the Whalen Farm site can be explained in terms of the now well-established culture historical scheme for the Fraser Delta, which excludes the questionable Whalen II Phase.

Reconstruction of the Site

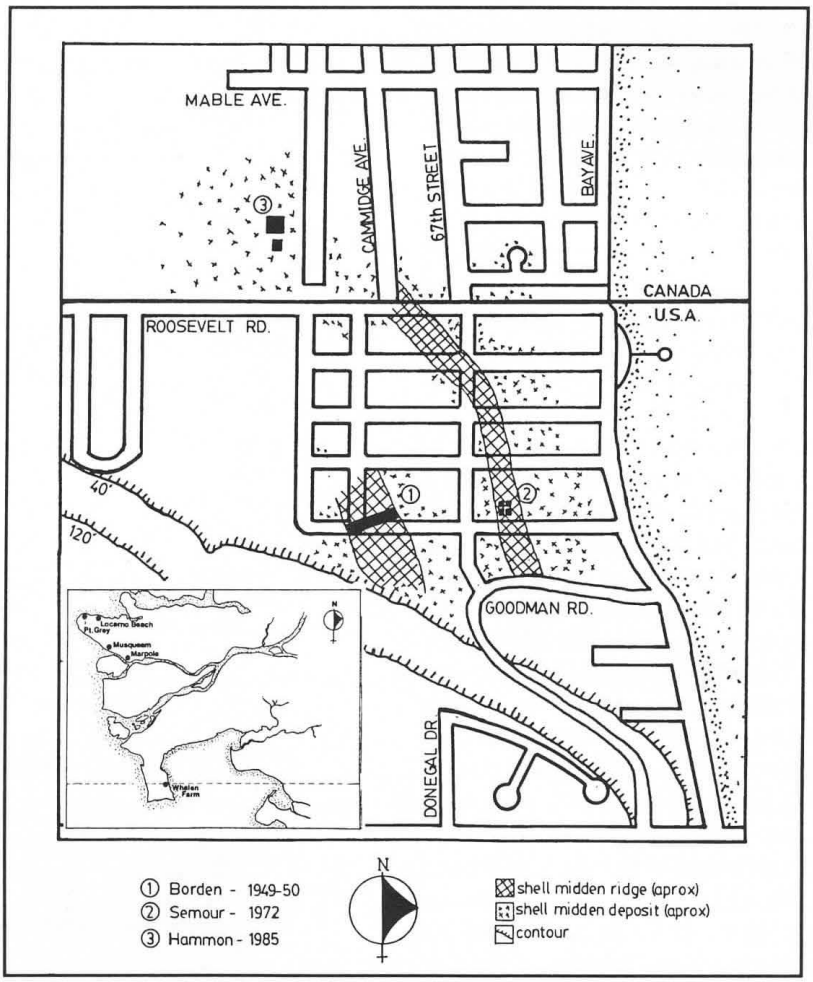
The Whalen Farm site is located on the eastern shore of the Point Roberts peninsula. It extends from the base of the Roberts uplands (Maple Beach, Washington) in the south, and across the international border into the low-lying area of Boundary Bay in B.C. The eastern part of the site is about 75 metres from the high tide mark of Boundary Bay; the western extent is about 500 metres from the shore. A series of midden ridges run almost due north and south for about 800 meters.

The site has been heavily damaged since urban development began in the mid-1950s. When Borden excavated Whalen Farm in 1949-50, the area was largely undeveloped farm land. Since I was unable to locate any map by Borden showing exactly where his excavations were, I went to the site and made a map of the remaining midden ridges and deposits to reconstruct approximately where the excavations took place. An old barn that was noted on one of Borden's contour maps and depicted in an old field photo allowed me to plot the approximate location of his excavation trench. The location of subsequent excavations at the Whalen Farm site by Brian Seymour in 1972 and Dimity Hammon in 1985 are also shown.

Geological studies of the Lower Fraser Delta by W. H. Mathews indicate that the Roberts uplands was an island until about 5000 BP. Another geological study by Harry Williams and Michael Roberts suggests that the sea-level stabilized around 2250 BP in this area. A radiocarbon date [C14] from the lowest level of Borden's excavation trench shows the earliest occupation to have been 2450 ± 160 BP. These dates indicate that this was probably the first time that a settlement occurred in the low-lying area.

Borden's Excavation

Borden set out a trench divided into a total of nineteen 5'x 5' units cross-cutting the largest midden ridge. A fence-post indicated on Borden's field contour map provided the horizontal datum point, while the highest point of the midden was used for the



Map of Whalen Farm showing midden ridges and excavations. Courtesy B. Thom.

vertical measurements. Borden very conscientiously obtained the horizontal and vertical provenience of the artifacts from the midden.

All of the excavated midden was screened using a 1/4" screen in the field. Assorted material was collected and bagged in what Borden referred to as "Assmat" bags. Samples of the matrix, carbon, various faunal material, and stone debitage were kept in the Assmat bags. Samples in the Assmat bags were saved intuitively rather than by statistical sampling methods. Though they are of limited value for faunal or matrix analysis due to their judgemental nature, the bags of carbon can still be used for C14 dating. Careful examination of the contents of the debitage bags revealed 29 uncatalogued artifacts with good 3-dimensional provenience.

Borden considered site profiles very important, and great care and attention were taken in drawing them in the field. The midden was excavated down to sterile beach sand 12 feet below the top of the deposit. Two components were distinguished by Borden on the basis of the difference in the contents of the layers. Whalen II, the upper and more recent component, is distinguished by a general pattern of thick layers of large shell-fish such as horse-clams, butter-clams, and some bay mussels. Whalen I, the lower component, contained far more bay mussels and a few instances of basket cockles. On the original site profile a blue pencil-crayon line distinguishes the Whalen I from the Whalen II component. This line provided my basis for a reconstruction of Borden's artifact assemblages.

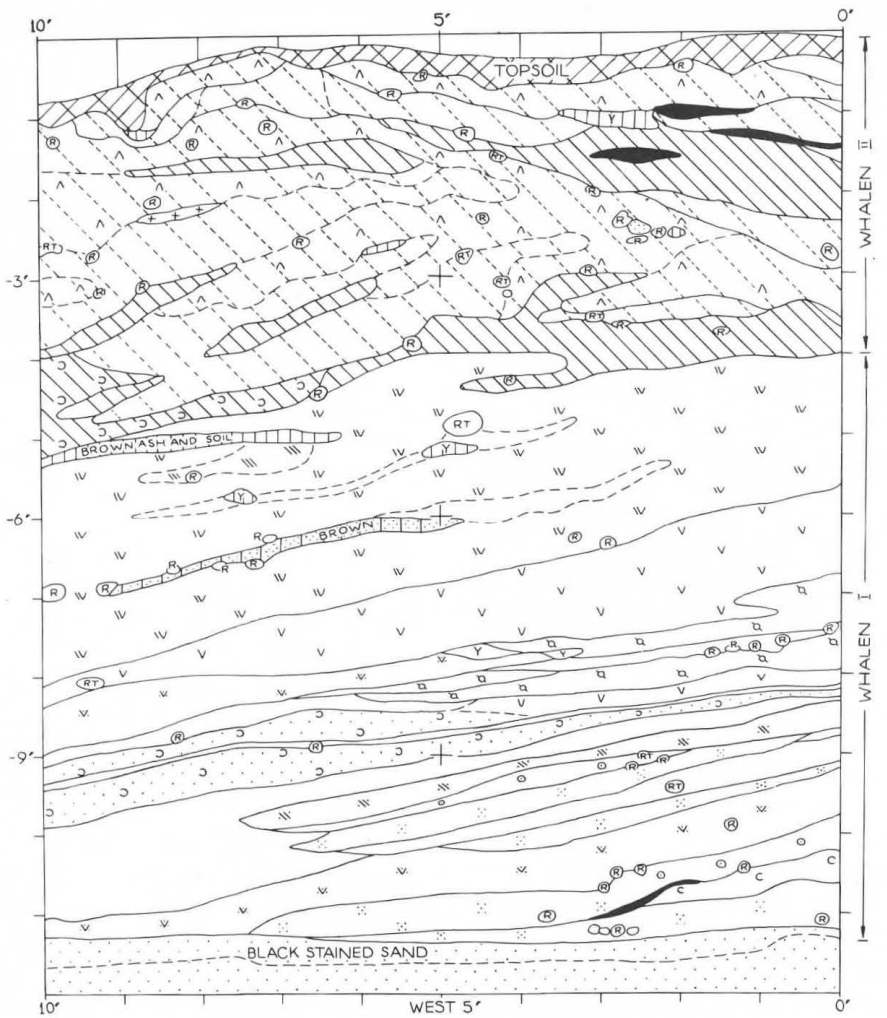
The Artifacts and Other Remains

A total of 449 artifacts made of a variety of chipped, pecked and ground stone, bone, antler and shell were found *in situ* at the Whalen Farm site. A major problem, however, was that Borden never published tabulations of the artifacts which he excavated. This made it very difficult for any kind of comparative analysis to be done without looking at the collection. The table (p.5) gives the first published account of the artifacts found at this site.

The skeletal remains of 13 individuals were excavated by Borden at the Whalen Farm site. All of the 10 burials attributed to the Whalen II component were buried in a flexed or semi-flexed position, with six of them on their right side facing east. One burial was partially burned and faced northeast. The final three were largely disturbed. Four of the Whalen II burials contained grave goods. The three burials found in the Whalen I component were also in a flexed or semi-flexed position, but were facing west and contained no grave goods.

In 1952 Borden submitted to the then-new University of Saskatchewan Radiocarbon Laboratory, charcoal samples from Whalen Farm. Two dates were obtained. The date of 2450 ± 160 BP from the lowest level of the Whalen I component, and the artifact assemblage that goes with it, is considered Locarno Beach Phase. The other sample, taken from mid-way through the Whalen II component, yielded a date of 1580 ± 140 BP. Borden considered the assemblage of artifacts from this component to represent a unique phase in Fraser Delta culture histor, at this period between the Marpole and later Stselax Phases. He called this the Whalen II Phase.

I recently submitted a third sample of charcoal taken from the Assmat bags to the Washington State University Radiocarbon Dating Laboratory. The Assmat bag was recorded to have come from the lowest reaches of the Whalen II component, and provided a date of 2110 ± 65 BP. This



WHALEN FARM SITE - MAIN TRENCH

PROFILE SECTION OF NORTH FACE AT NORTH 25' FROM 0' TO WEST 10'

SCALE: 0 1 2 FEET

KEY:

- CLAM
- CLAM WITH SOME MUSSEL
- CLAM AND COCKLE
- CLAM AND MUSSEL
- CLAM AND MUSSEL WITH DARK MATTER
- MUSSEL
- MUSSEL WITH DARK MATTER
- MUSSEL WITH DARK MATTER AND CLAM
- MUSSEL WITH SOME CLAM
- MUSSEL WITH SAND
- MUSSEL WITH DARK MATTER AND SAND
- MUSSEL WITH CLAM AND SAND
- SAND WITH SOME MUSSEL
- MUSSEL WITH CLAM AND BARNACLE
- MUSSEL WITH BARNACLE
- SEA URCHIN
- TOPSOIL
- CHARCOAL
- ASH (Y = YELLOW)
- SAND
- SAND AND ASH
- ROCK
- ROOT

CM

Illustration by Moira Irvine

"new" radiocarbon date indicates that the Whalen II component of the site was occupied from early Marpole times.

Borden's Interpretations

Borden's interpretations of Fraser Delta prehistory went through major changes throughout his career. His initial interpretations of the Whalen Farm site were published by the B.C. Provincial Museum in 1950. In this analysis Borden attempted to trace the cultural ancestors of the prehistoric inhabitants of the Fraser Delta to Alaska by the technological evolution of harpoon styles as represented in his excavations at Locarno Beach and in the Whalen I component. The appearance of the toggling harpoon in these sites suggested a diffusion of Eskimo culture south into the Fraser Delta.

The presence of wood-working implements and an emphasis on the chipped stone industry caused Borden to hypothesize that the Whalen II component was introduced by a different migration of people from the Interior to the Fraser Delta. Borden noted a difference between his Whalen II component and the material from the Marpole site—specifically an absence of ground slate tools and barbed harpoons in Whalen II; and the presence there of obsidian blades, Olivella beads and toggling harpoon heads.

In a 1962 article Borden changed his interpretations of the Whalen I component. New dates and data from Alaska and from the Fraser Canyon caused Borden to shift his hypothesis. He no longer thought that an Eskimo culture diffused down the coast, but instead that the southern Northwest Coast had developed a marine adaptation *in situ* and subsequently these traits spread north to Alaska. He still explained the Whalen II component, however, by a migration of Interior populations to the Coast.

ARTIFACT TABULATION FOR WHALEN FARM 1949-50 EXCAVATIONS BY BORDEN

Artifact Type	*Whalen I (L.B.)*	*Whalen II (Wh II)*
CHIPPED STONE		
biface medial frag	-	2
bottom notched biface	-	1
biface proximal fragment	-	1
bifacially retouched flake	1	1
corner notched biface	1	2
core	4	1
contracting stem biface w/ shoulders	-	2
cortex spall	-	1
chipped stone narrow-angled biface	-	1
contracting stem biface no shoulders	3	1
leaf-shaped biface	1	7
microblade	1	11
unifac. arrow-angled retouched flake	1	-
quartz crystal microlith	1	-
side notched biface	-	2
utilized flake	-	3
steep-angled retouched flake	-	1
Total	(13)	(37)
Percent of component	(7%)	(15%)
PECKED AND GROUND STONE		
adze	3	6
anvil stone	2	-
abrasive stone	22	48
decorated ground stone	1	1
formed abrasive stone	10	12
facetted ground stone point	6	1
Gulf Island complex	-	2
ground stone point medial fragment	1	1
ground stone point proximal fragment	2	1
ground stone disk bead	2	2
ground slate knife	1	3
hammerstone	3	8
leaf-shaped ground stone point	3	3
handmaul	-	1
miscellaneous ground stone	8	7
mortar	2	2
unfinished sinker	2	2
worked sedimentary stone	2	7
Total	(70)	(107)
Percent of component	(36%)	(42%)
BONE		
birdbone awl	2	1
bone chisel	1	-
bone bipoint	1	1
decorated bone object	-	2
formed split bone awl	6	3
metapodial awl	-	1
bone needle	1	-
non-facetted bone pt w/o cntrl cavity	-	3
faceted bone pt w/ central cavity	-	2
net gauge	1	-
bone knife slitting instrument	1	1
pointed bone object fragment	-	2
perforated bone pendant	1	-
rodent incisor tool	-	3
splinter awl	1	3
tooth pendant	2	1
bird bone tube	4	3
ulna awl	3	2
unidentified worked bone fragment	4	7
worked bone end fragment	10	14
worked bone medial fragment	14	15
worked dogfish spine	25	3
bird bone whistle	2	8
Total	(79)	(75)
Percent of component	(40%)	(30%)
ANTLER		
antler foreshaft	2	-
frag unilat. barbed fixed antler point	-	3
socketed harpoon valv	-	1
toggling composite harpoon valve	2	6
worked antler end fragment	3	4
worked antler medial fragment	2	1
antler wedge	1	-
Total	(10)	(15)
Percent of component	(5%)	(6%)
SHELL		
dentalium shell	-	4
shell bead	-	1
miscellaneous ground shell fragments	10	5
olivella shell bead	-	4
Shell adze blade	10	3
ground shell pendant	3	1
side notched shell point	1	1
Total	(24)	(19)
Percent of component	(12%)	(8%)
TOTAL	**196**	**253**

Borden's 1970 paper outlining the history of the Fraser Delta region was the most complete description of the Whalen Farm material. His interpretation had not changed much since the 1962 article where he proposed important traits of the Whalen II Phase (ca. A.D. 350-800) to be microblades, Olivella beads, side- and corner-notched points, and the lack of ground slate, stone bowls and stone-carving.

The period from 1970 to 1983 was a time of great expansion in the knowledge of Fraser Delta prehistory. Both the Whalen II phase and Borden's diffusion theories received heavy criticism from other scholars working in the area. Borden's final article in 1983 addressed some of these criticisms.

Crew at work, 1949

Nowhere in this article did he mention a diffusion or migration of people from the Interior to the Coast during the Whalen II Phase. Borden argued instead that the most important aspect which distinguishes the Whalen II Phase is the fusing of traits of the Locarno Beach culture and the Marpole culture which developed into the Coast Salish culture as known in ethnographic times.

Present Interpretations & Conclusions

Although the Whalen II Phase has been questioned, and, to a large extent, dismissed, no one has gone to the original collections to see how the Whalen Farm material fits into Fraser Delta archaeology. As the focus of my reexamination of the Whalen Farm material, I tested the Whalen II phase hypothesis as presented by Borden.

Looking at the tabulation of artifacts from the Whalen Farm site, we find that the Whalen II assemblage is not as unique as Borden thought. One of the distinguishing factors of the Whalen II Phase was the lack of ground slate. In fact, the Whalen II component shows three ground slate knives as well as seven pieces of miscellaneous ground stone.

The lack of stone-carving cited for the Whalen II Phase is also problematic, as a beautifully carved "miniature pestle" comes from this component. Borden also notes in his field record a carved stone bowl found in a cut in the midden near the excavation site.

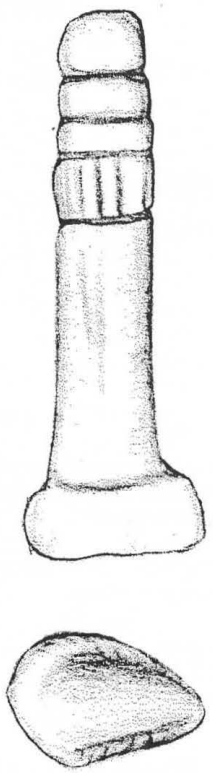
The presence of microblades, side- and corner-notched projectile points in the Whalen II component is no longer anomalous in light of findings by David Burley and Donald Mitchell, both of whom record these items at other similarly dated sites. The relative lack of chipped stone, especially flaked tools from the Whalen II component can be explained by the excavation methods used when Borden was doing field work. Utilized and retouched flakes recovered from the Assmat bags indicate it is likely that only a small sample was retained.

Rather than the cultural "fusion" proposed in Borden's 1983 paper, the new C14 date recently obtained from the original material from the Whalen Farm site now shows an excellent example of *in situ* cultural evolution. Population movements from the Interior no longer need explain the assemblage from the Whalen II component of the site.

The final, and most important criticism of the Whalen II Phase, is the fact that no other Whalen II-like components have ever been found. This is the main reason why the Whalen II Phase has long been rejected by other archaeologists working in the area.

An alternative hypothesis is that the Whalen II component does not represent a unique culture type, but rather is a variant of the Marpole phase. I believe that the variation in this assemblage is due to the seasonal nature of the site, which would have utilized key abundant resources available in the Boundary Bay region from the early fall to late spring.

The artifact assemblage in the Whalen II component is similar to the three seasonal, late-winter components found at Deep Bay, Shoal Bay and Crescent Beach discussed by Leonard Ham in his doctoral dissertation (1982). These sites also have wood-working tools, two piece toggling harpoons, chipped stone tools and a relative lack of ground stone—all distinguishing features of the Whalen II component. Although not conclusive evidence for seasonality, the comparison provides a plausible explanation of the Whalen II assemblage.



Miniature pestle (Wh 534) drawn by C.E. Borden, 1949

All photos and illustrations courtesy of U.B.C. Laboratory of Archaeology unless noted otherwise.

Brian Thom is currently a first-year graduate student at UBC working on his Master's thesis.

NEW PUBLICATIONS

A Complex Culture of the British Columbia Plateau: Traditional Stl'atl'imx Resource Use
BRIAN HAYDEN, editor

UBC Press: Vancouver, 1992.
400 pp, 21 b/w photos, 38 figs. $75 (hardcover).

Traces the prehistoric development of complex societies among the Lillooet and Shuswap using evidence from the Fountain and Pavilion sites near Keatly Creek.

Disease and Demography in the Americas
JOHN VERANO and DOUGLAS UBELAKER, editors

Smithsonian Inst: Washington, 1992.
352 pp, 49 illus & photos. US$52.00.

Twenty-five essays reconstuct precontact and contact patterns of disease and demography in the aboriginal population.

Hunter-Gatherers: Archaeological and Evolutionary Theory
by ROBERT L. BETTINGER

University of California: Davis, 1991.
276 pp, illus. $42

Examines a wide-range of general theories detailing their fundamental assumptions and applications to hunter-gatherer research.

Nature Power: Stories from an Okanagan Elder
by HARRY ROBINSON, compiled and edited by WENDY WICKWIRE

Douglas & McIntyre: Vancouver/Toronto; University of Washington Press, Seattle, 1992.
272 pp. $18.95 (paper)

A second book of stories by the late Okanagan storyteller, Harry Robinson. The stories describe the power animating the natural world and the nature helpers that guide humans.

Our Chiefs and Elders: Words and Photographs of Native Leaders
by DAVID NEEL

UBC Press: Vancouver; University of Washington Press, Seattle, 1992.
160 pp, 60 duotone photos. $35.95 (hardcover).

Portraits and conversations with B.C. First Nations leaders and elders.

Pacific Salmon Life Histories
CORNELIS GROOT and LEO MARGOLIS, editors

UBC Press: Vancouver, 1991.
608 pp, 16 colour photos, 197 figs. $65.00 (hardcover).

Detailed descriptions of the geographic distribution, migration, and life cycles of the Northwest's seven salmon species.

PUBLICATIONS

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The Tlingit Indians
by GEORGE EMMONS, edited with additions by FREDERICA DE LAGUNA

University of Washington Press: Seattle, 1992.
530 pp, 65 illus, 127 photos, maps, tables. US$65 (hardcover).

De Laguna has organized and annotated Emmons unpublished manuscripts on the Tlingit, and added information from more recent research.

Where the People Gather: Carving a Totem Pole.
by VICKIE JENSEN

Douglas & McIntyre: Vancouver/Toronto; University of Washington Press: Seattle, 1992.
176 pp, 125 b/w photos. $29.95 (hardcover).

Documents Nisga'a artist, Norman Tait, and his apprentices carving and erecting a totem pole.

Volume I: House Structure and Floor Midden. Reports of investigations, Department of Anthropology

Washington State University: Pullman

Presents history of discovery, excavation and analysis of the Ozette site on the Olympic Peninsula in Washington State. Ozette was a Macah winter village excavated between 1970 and 1981 with village materials preserved by protohistoric clay slide.

DEBITAGE

The CAA's Daniel Weetalktuk Student Paper Competition was awarded this year to **Rick Schulting**, a grad student at SFU. His paper, "The Hair of the Dog: The Identification of a Coast Salish Dog-Hair Blanket from Yale, British Columbia," will be published in the *Canadian Journal of Archaeology*. Rick gave a talk on the same subject to the ASBC at their meeting last June. . . On November 2nd another SFU archaeology graduate student, **Lindsay Oliver**, successfully defended her Master's thesis, "The Golden Pioneer Cemetery: Health and mortuary practices of the Golden pioneers 1882-1894, archaeological site DhOf 3." The thesis was based on two years of field excavation at a pioneer cemetery in Golden, B.C., conducted by Lindsay and **Mark Skinner** of SFU with a crew of archaeologists recruited from SFU... Two seven-person crews from UBC were digging around at the Scowlitz site again during the last week of October. **Dr. Mike Blake**, assisted by **Dr. Gary Coupland** from University of Toronto, led the crew in the "dry" part of the site (DhRl 16) which was up the hill on a terrace overlooking the Fraser and Harrison Rivers. **Kitty Bernick**'s crew worked down at the river (and in it) at the "wet" site (DhRl 16w). A small piece of cordage was recovered the first day before the river started rising. . .At just the right time, in connection with an archaeology course dealing with Collection's Management and First Nation's issues that will take place at SFU this spring . . . **Judy Logan**, a senior conservator from CCI and a specialist in the conservation of waterlogged materials, will be lecturing at SFU in January. In February, **Dr. Gerald Conaty**, an archaeologist for the Glenbow Museam, will follow up on the issues of Museums and First Nations People. . . Anthropology curators at the RBCM have now moved back to the Fanin Building which they vacated during the last year for asbestos removal and refit. The anthropology collections are back in place and should be accessible by January. . . With one big project completed, another is underway at the **RBCM**. They are currently undertaking to reduce the thousands of boxes of stored materials collected from numerous museum and non-museum field projects over the years. . . An **RBCM** Futures Committee has begun a major re-examination of the role of the museum. This will determine to a large extent what sort of activities the anthropology unit will be undertaking in the coming years... **Grant Keddie,** Curator of Archaeology at the RBCM, has been busy lately and is currently writing up the results of several projects: the discovery of a house feature with evidence of postholes at a defensive site in **Beacon Hill Park**; the recovery of butchered faunal bones (mostly the now-endangered Vancouver Island marmot) from a cave site over 1200 metres high on **Mariner Mountain** in southern Strathcona Park; and a project with the Victoria ASBC involving the separation of artifacts and bones from 700 cubic metres of mixed midden and historic debris that had been improperly removed from a house development on the **Tseheum Harbour site** (DeRu 1).

THE PARK FARM SITE

OBSIDIAN WITHOUT VOLCANOES

by Terry Spurgeon

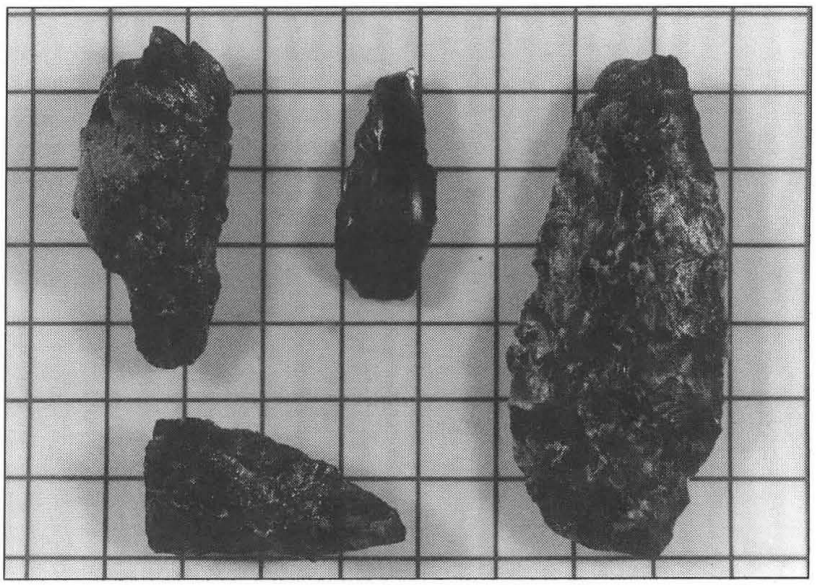
EXCAVATION OF THE PARK Farm site (DhRq 22), located on the northern edge of the Pitt Meadows highland, occurred between 1984 and 1986 (see The Midden, *October 1984). This multi-component site contains cultural materials covering the period from the Charles Phase to the Marpole Phase (ca 5000-1500 BP). The cultural materials recovered include four obsidian artifacts. A radiocarbon date of 4170 ± 120 years BP was obtained from concentrated fire pit charcoal from near the base of the site.*

Obsidian is a natural volcanic glass resulting from the rapid cooling of viscous granitic magma. The term "obsidian" is used as a general name for a variety of silica-rich glassy rocks. Obsidian fractures in a typical conchoidal pattern producing extremely sharp cutting-edges. Because of its flaking and cutting properties obsidian was valued by prehistoric peoples for tool-making.

Obsidian has been found in archaeological sites throughout the Pacific Northwest at considerable distances form the known source-quarries. Sources for obsidian in the Pacific Northwest include the Stikine Volcanic Belt, the Anaheim Volcanic Belt, and the volcanoes of the Cascade Range. The latter include the volcanoes of Washington and Oregon, and the Garibaldi Volcanic Belt. Since the sources for obsidian are limited to specific locations, the broad distribution of obsidian artifacts suggests widespread trade took place.

X-ray fluorescence (XRF) analysis can be used to identify the sources for obsidian artifacts found in archaeological contexts. Variations in specific trace-element concentrations in obsidian from different volcanic sources give a characteristic "fingerprint". The technique is non-destructive, and compares trace-element spectograms of obsidian from known geological sources to trace-element spectograms produced by obsidian recovered from archaeological sites, until a match is obtained.

The four obsidian items recovered from DhRq 22 are all black in colour. Three were recovered on the surface and one was recovered *in situ* from a test pit at 18.5 cms in depth. This bladelike flake is a shiny black glass with no impurities. The three surface items include a complete projectile point, a projectile point tip fragment, and a single thick flake. They are a duller colour of black glass with gold-coloured impurities, or phenocrysts.



Four obsidian objects recovered at Park Farm site. 1 cm grid.

XRF analysis reveals that the three surface finds originated in the area surrounding Mount Garibaldi, 72 km from DhRq 22. Garibaldi obsidian has only been recovered from glacial tills in the park area. The location of the exact geological bedrock source is actively sought, but has not yet been located.

Two possible routes are suggested for the DhRq 22 Mount Garibaldi obsidian being brought into the Pitt Meadows area. One is from the Squamish area, along Howe Sound and into the Fraser Valley. The other is from the headwaters of the Pitt River, which originates in Garibaldi Park, down the river and along Pitt Lake directly into the Pitt Meadows area.

The obsidian item recovered from the subsurface context was identified by XRF analysis as coming from the Three Sisters quarry source located in Central Oregon. Three Sisters is 566 km from DhRq 22.

The distance of the Three sisters source from DhRq 22 strongly supports the argument for the existence of prehistoric obsidian trade over long distances into the Fraser Valley.

There are many other obsidian occurrences in archaeological sites in the Gulf of Georgia region. The XRF analysis of the obsidian artifacts from DhRq 22 in the Fraser Valley gives us another glimpse into the trading activities of prehistoric peoples of the region.

ASBC member Terry Spurgeon is an avocational archaeologist who works in the aviation industry as Civil Aviation Inspector.

BOOK REVIEW

NOT A CONCISE CULTURAL CHRONOLOGY

A Theory of Northern Athapaskan Prehistory

by JOHN IVES

University of Calgary Press: Calgary, 1990.
403 pp. $34.94 (paper)

One of the intriguing aspects of archaeology is trying to enhance the understanding of what's *in* the ground with ideas about what people were actually doing *on* the ground. In many cases, the archaeological visibility of social situations is meagre, resulting in generalizations about "cultural complexity" and "complex societies"—often as not a mixture of guesswork and speculation. Ives' book seeks to address such problems, and deals with the archaeological visibility of northern Athapaskans, a term applied to linguistically related aboriginal groups in northern B.C., the Prairie provinces, Yukon, Northwest Territories, and the interior of Alaska.

Ives' argument is that two major types of social systems exist amongst the northern Athapaskans, and that these types produce different archaeological records. One type, represented by the Beaver or Dunne-Za of the Peace River region, have what Ives calls "local group endogamy," which means that people tend to marry within a specified group. The other type, represented by the Slavey, are "local group exogamous," which means that people find spouses outside their own local group.

Ives asserts that those groups with a system like the Dunne-za will tend to produce an archaeological record which show extended use of an area by the same group. The Slavey social pattern will tend to show a more dispersed and flexible use of the land by different small groups which have intermarried, but which get together at least once during the year.

The author takes the reader along a fascinating but detailed and complex path. He weaves in material from fur-trade journals, archaeological work, and recent studies of hunting, trapping, and fishing groups. Many of the studies Ives has used are only available as theses or dissertations, and one of the important aspects of the book (to me, as one of those anthropologists whose PhD lies unpublished) is that a lot of relatively inaccessible material is summarized and reinterpreted (including my Carrier data).

Ives also comments on the necessary relationship between archaeology and ethnology. There are eight chapters: three deal extensively with the Dunne-za and Slavey, and one sums up the relationship between local group composition, group size, marriage patterns, intergroup relations, and contrasting archaeological patterns.

This book is not for the casual reader or for someone looking for a concise Athapaskan cultural chronology or list of sites. Sections of it require a knowledge of kinship theory. I would recommend it to someone who wants to see how far Lewis Binford's ideas can be pushed, and has an interest in the dynamic processes linking northern Athapaskan social organization, kinship, economic activities with the archaeological record of the subarctic.

Douglas Hudson

Hudson is an instructor at University College of the Fraser Valley in Abbotsford. He received a PhD from the University of Calgary in 1983 after completing an ethnographic study of the Carrier of Stuart Lake.

FOCUS ON SHELL MIDDEN SITE FORMATION PROCESSES

Deciphering a Shell Midden

JULIE K. STEIN, editor

Academic Press: San Diego, 1992. 375 pp, illus, bibl. $US89.95 (hardcover).

Deciphering A Shell Midden details several years of investigations of the British Camp shell midden located on San Juan Island in Washington State. Offering analyses of material remains, detailed reviews of research on shell-bearing archaeological sites and geoarchaeological concepts, and insights into the formation and post-depositional disturbance of shell-be aring sites, this book should have a wide readership among archaeologists interested in Northwest Coast prehistory and site formation processes.

The book is divided into 15 chapters. In addition to serving as the editor, Stein is the author or co-author of six chapters. The introductory chapter reviews shell midden research and stratigraphy, and describes the history of the British Camp site. Chapters 2 and 3 reconstruct the site using sea level and geophysical data. Chapter 4 outlines the historic disturbance at the site. General concepts of archaeological and geological stratigraphy are explored in Chapter 5, while Chapter 6 describes the stratigraphy of the British Camp shell midden and Chapter 7 describes the analysis of sediments from the site. An analysis of lithic technology is provided in Chapter 8; with size distributions of lithics considered in Chapter 9; and fire-cracked rock analysis is presented in Chapter 10. Chapter 11 describes the archaeobotanical record and Chapter 12 looks at the effects of recovery techniques and the post-depositional environment on wood charcoal. The grain-size distributions of shell are examined in Chapter 13 while the preservation and analysis of bone are covered in Chapters 14 and 15.

While the results of the analyses add to the knowledge about prehistoric cultures on the Northwest Coast, and many researchers will find the detailed and up-to-date reviews of shell midden research and geoarchaeological concepts valuable, the most significant contribution of the book is the focus on the depositional and post-depositional processes affecting shell-bearing sites. Not content with the normative approach which has guided the investigation of most sites of this type, Stein and her colleagues have made a significant contribution to the growing body of literature concerned with the formation of shell-bearing archaeological sites. Examples of the focus on site formation include explicit and detailed considerations of the effects of groundwater percolation, post-depositional transport of microartifacts, post-depositional fracture of rock, shell taphonomy, and bone preservation. Those archaeologists interested in site formation processes, particularly as they affect shell-bearing sites, will undoubtably appreciate the book the most.

Not all archaeologists will agree with the research strategies used by Stein and her colleagues. Interpretations of the site stratigraphy, for example, are based on the Harris Matrix, a controversial method of describing stratigraphy, which many archaeologists may find disconcerting. Some researchers may also find the use of key terms problematic. Interestingly, Stein has chosen to retain usage of the term "shell-midden" despite the current trend in archaeological literature to use more meaningful terms such as "shell-bearing archaeological sites."

For its focus on site formation processes, I suspect that this book will find its way onto the bookshelves of most archaeologists interested in shell-bearing archaeological sites. The fact that a Northwest Coast site was utilized as an example is an extra benefit to those interested in this region. At $US $89, a major drawback may be the cost.

Bob Muckle

Muckle is an archaeology instructor at Capilano college. His SFU M.A. thesis describes "Archaeological Considerations of Bivalve Shell Taphonomy."

PERMITS

Issued by the B.C. Archaeological Branch, September-October, 1992

1992-107	Mike Rousseau: impact assessment, Kemess South Mine, Cassiar District.
1992-108	Ian Wilson: impact assessment of logging developments and inventory of traditional use areas, Gribbell Island, Coast District.
1992-109	Grant Keddie: evaluative excavation and monitoring of construction, Finlayson Point (DcRu 23), Victoria.
1992-110	Robert Muir: impact assessment, subdivision at confluence of Falls Creek and Shuswap River.
1992-111	Sandra Zacharias: inventory of Annacis Channel West Bridge and Jacob Haldi Bridge.
1992-112	Richard Brolly: impact assessment, Lot A, Section 3, Comox District.
1992-113	Catherine Carlson: test excavation, Monte Creek, Kamloops District.
1992-114	Sandra Zacharias: impact assessment, subdivision at Lac Des Roches, near Bridge Lake, Lillooet District.
1992-115	Mike Rousseau: impact assessment, B.C. Parks proposed recreational developments at Bush Creek, SW shore of Adams Lake, Kamloops District.
1992-116	Ian Wilson: overview of Naikoon Provincial Part, Queen Charlotte Island.
1992-117	Kathryn Bernick: recovery of perishable materials from DhRl 16, near Harrison Mills.
1992-118	Ian Wilson: inventory of residential subdivision, near Mill Bay, Malahat District.
1992-119	Wayne Choquette: impact assessment, Swansea Ridge Ballast Quarry, at confluence of Palmer Bar Creek and Moyie River, Kootenay District.
1992-120	Keary Walde: inventory of HbRd 10, Peace River District.
1992-121	John Dewhirst: impact assessment, proposed Point Mercer subdivision development, Qualicum Beach.
992-122	Bjorn Simonsen: impact assessment, proposed Nanaimo Inner Route Highway between Beck Creek Crossing and Harewood Mines Road.
1992-123	Sandra Zacharias: overview assessment of sections of the proposed Cottonwood and Northern Freeway alignments, Maple Ridge and Langley District.

LAST-MINUTE GIFTS FOR THE ARCHAEOLOGIST
Inexpensive, Creative, Educational

Do-it-yourself comparative faunal collection. Perfect for the zooarchaeologist (especially if the species or size is unusual) and the aspiring archaeologist in need of a specialty (any species will do). The well-prepared will have buried (several years ago, in the garden—but check municipal bylaws lest you get in trouble) a road kill or the fish that putrified in the freezer, and can save on gift wrap. Draw a map (for elegance, on the back of a card with a picture of the wildlife subject) with appropriate directions, including depth below surface.

Optional supplements: compass, tape measure, trowel. Last-minute shoppers can deposit the beast in the freezer and supplement the gift with a sauce pan. Perfect repeat gift—one can never have enough skeletons...

Do-it-yourself comparative seed collection. Burying in the garden not recommended. The complicated thing here will be proper identifications, but the pictures and labels on commercially available packets help. Look for seeds of wild plants (flowers, berries, cones, etc.).

Supplement with a supply of extra-small self-sealing plastic bags or clear plastic vials, and labelling materials. For an added touch, give charred examples of each type.

DATES TO REMEMBER

EXHIBITIONS

1993

to April 4 — **The Transforming Image.**
UBC Museum of Anthropology

Hundreds of faded, often invisible, traditional paintings of Northwest Coast cultures have been recovered by infra-red photography and reconstructed by First Nations artists. This exhibition presents the process and results.

LECTURES

April 16 — **Professor John Luce**
RBCM's Super Series (ticket information 386-6121)
8:00 pm, University Centre Auditorium, University of Victoria.

Illustrated slide lecture examining the mysteries surrounding the Trojan War and the site of legendary Troy in light of recent geomorphic and archaeological findings.

CONFERENCES

1993

March 26-28 — **N.W.A.C.** 46th Northwest Anthropological Conference
WESTERN WASHINGTON UNIVERSITY, **Bellingham, WA.**
Contact: NWAC Program Coordinator, Dept. of Anthropology MS-9083, Western Washington University, Bellingham, WA 98225 USA

April 14-18 — **S.A.A.** Society of American Archaeologists, 58th Annual Meeting. ST. LOUIS, Missouri.
Program Chair: Jay Custer, Dept. of Anthropology, University of Delaware, Newark, DE 19716

May 5-9 — **C.A.A.** Canadian Archaeological Association,
26th Annual Meeting. Holiday Inn - Crown Plaza, Metro Centre
MONTREAL, Quebec.
Coordinator: Francoise Duguay, Association des archeologues du Quebec, 4061 rue Saint-Hubert, Montreal, Quebec H2L 4A7

June 7-12 — **S.P.N.H.C.** Society for the Preservation of Natural History Collections, 7th Annual Meeting. Royal British Columbia Museum, VICTORIA
Contact: Grant Hughes, Local Conference Committee, RBCM, Parliament Buildings, Victoria, B.C. V8V 1X4. Tel (604) 378-5706.

1994

January 5-9 — **S.H.A.** The Society for Historic Archaeology. Annual meeting. Hotel Vancouver, VANCOUVER. ACUA Program Chair: Charles Moore, Tel.(604) 275-5427
SHA Program Chair: David Burley, Dept of Archaeology, S.F.U. Burnaby, B.C., V5A 1S6. Tel.(604) 291-4196

April 18-24 — **S.A.A.** Society of American Archaeologists, 59th Annual Meeting.
DISNEYLAND Hotel, Anheim, California

THE MIDDEN

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