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THE MIDDEN

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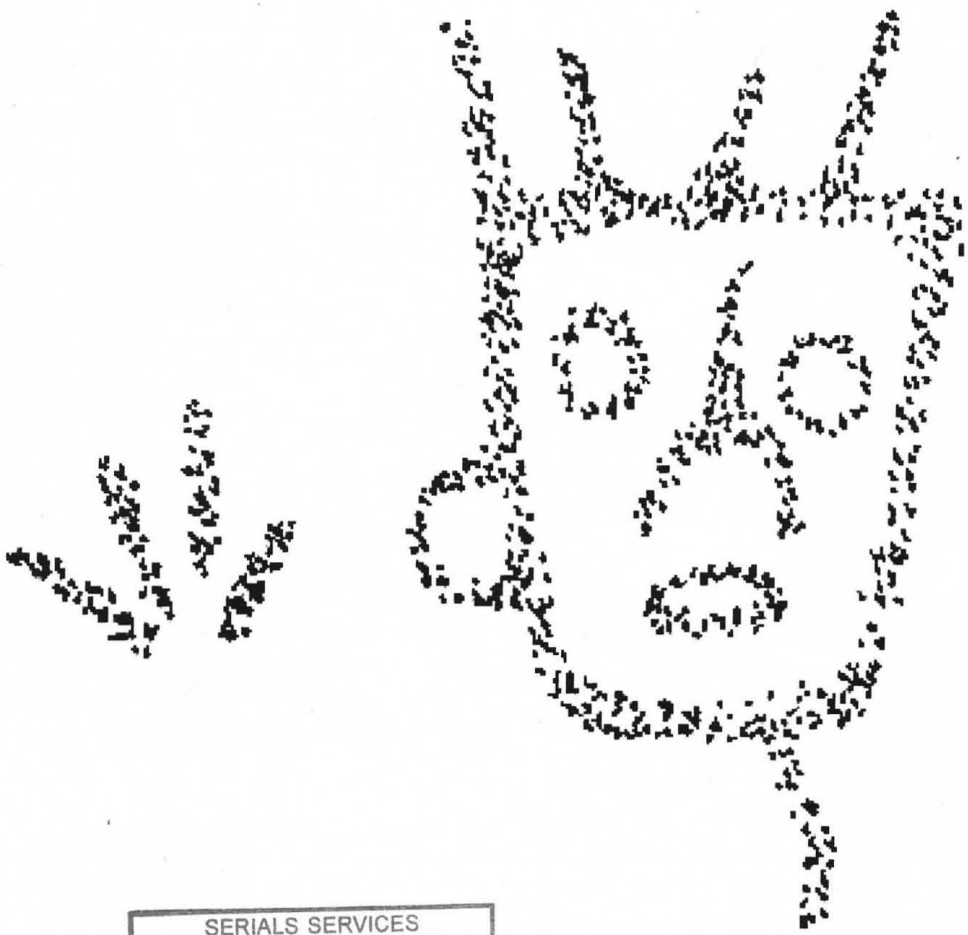

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Chrome Island Petroglyphs – Tsleil-Waututh First Nation
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THE MIDDEN

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THE MIDDEN

Volume 33 No. 1, 2001

In this issue

Cover Page

The cover shows one of Laurie Williamson's sketches from petroglyphs on Chrome Island at the southern tip of Denman Island. See "Archaeological Investigations at the Yellow Rock (Chrome Island) Petroglyph Site" beginning on the following page.

ARCHAEOLOGICAL INVESTIGATIONS AT THE YELLOW ROCK (CHROME ISLAND) PETROGLYPH SITE

by James C. Haggarty and Laurie Williamson

Introduction

Yellow Rock, today more commonly referred to as Chrome Island, has long been recognized as one of the most elaborate and significant rock art sites in the province. The first recorded observations of many of the images carved into the island's sandstone bedrock formation were made by C. F. Newcombe, after a short visit to the site in 1901. Since Newcombe's first visit, numerous scholars, researchers, and those with an avocational interest in rock art have visited the site. Each, in their own way, have added considerable detail to the wealth of information that now comprises the archaeological record for the site. This article summarizes some of the early information available for the site and reports on new information collected recently during an archaeological site inventory and impact assessment study in March of last year.

Chrome Island (Figure 1), measuring approximately 130 m long by 70 m wide, is located off the southeastern tip of Denman Island in the west-central region of the Strait of Georgia (Figure 2). The underlying sandstone bedrock formation is covered by a soil mantle that varies in thickness from a few centimetres near the sloping southern margin, to over a metre in the northern half of the island. The northern and eastern shorelines of the island are steep-sided and, in certain sections, undercut, while the western and southern shorelines consist of moderately to steeply sloping terrain. The island is devoid of trees except for an occasional second growth conifer and a few deciduous trees retained or planted for ornamental purposes. The island is too small to contain even seasonal run-off streams. The intertidal zone of the island is generally rocky and narrow except at the western end where it is more gradual, supporting a greater diversity of intertidal resources. During one of our visits, herring spawn were visible throughout the intertidal areas of both islands. Numerous sea lions, eagles, cormorants, gulls, and other marine birds were clearly enjoying the arrival of herring to this part of the coast.

The name "Yellow Rock" or "Yellow Island" was adopted by Admiralty surveyors around 1860, apparently because of the coloured appearance of the sandstone bedrock (Walbran 1909). Yellow Rock was designated a government reserve in 1876, later surveyed for the provincial Crown (Cokely 1918), and subsequently granted to the federal government for lighthouse purposes. According to Canadian Coast Guard records, a wooden light tower and dwelling were constructed at the eastern end of the island in 1890. Some of the petroglyphs were reportedly destroyed by blasting during the construction of this lighthouse (Graham 1986). A second light tower was built at the western end of the island in 1898. In 1922, the wooden tower at the eastern end of the island was replaced by a steel tower. This steel tower was demolished in 1989 and replaced by the existing fiberglass tower located to the west of the main petroglyph panel. The present lightkeepers' residences and the engine room building were constructed in 1961.

Photo L. Williamson

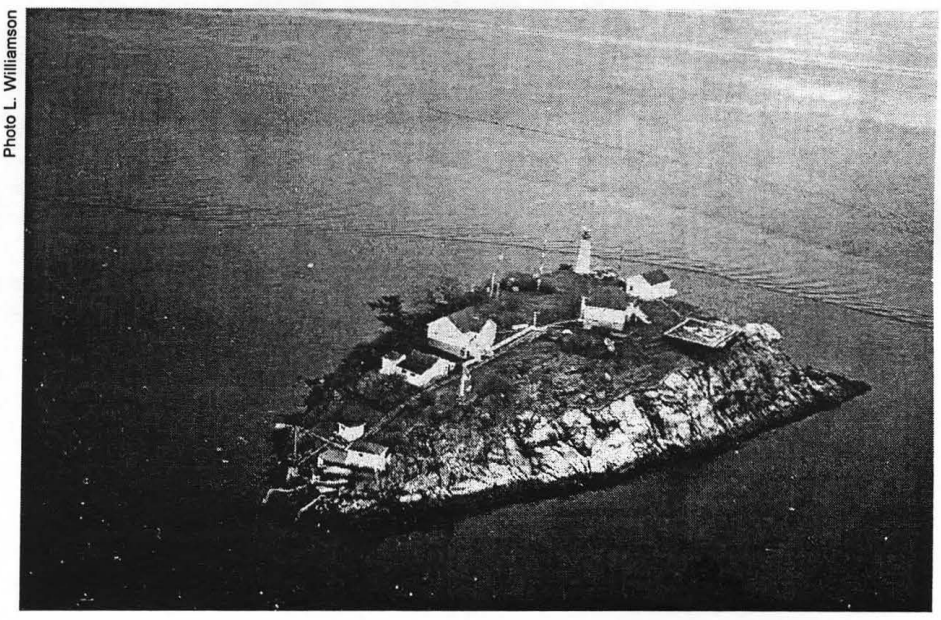

Figure 1. Yellow Island, showing the Chrome Island Light Station.

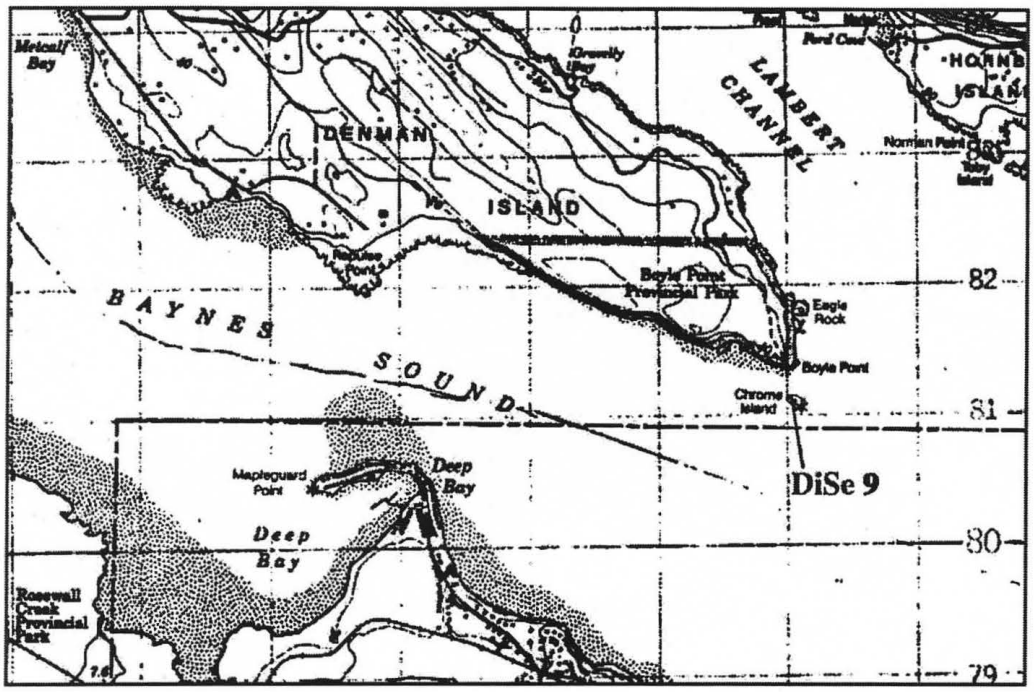

Figure 2. Location map of DiSe 9 on Yellow (Chrome) Island.

Chrome Island has been completely developed as a light station facility, consisting of two residences, an engine room, garden areas, a navigational beacon tower, four outbuildings, pathways, a helipad, and a wharf facility (see Figure 1). During the past 110 years, the entire surface area of the island, not encumbered by light station facilities, has been fully landscaped and, due to initial construction and subsequent development of the light station, much of the subsurface deposits have been subjected to considerable disturbance as well.

Clearly, this small island has played an important and culturally significant role in the lives of Aboriginal people in the region for centuries and, with the establishment of the Chrome Island Light Station in 1890, it continues to play an important and strategic role for marine traffic in the area.

Ethnographic and Historic Summary

Chrome Island lies within an area occupied by the Pentlatch during the late nineteenth century. Their territory also included the eastern side of Vancouver Island from Parksville north to Cape Lazo, as well as Denman and Hornby islands (Kennedy and Bouchard 1990:442-3). One of the four primary winter villages of the Pentlatch at this time was reported to be at Repulse Bay, just north of Chrome Island, on the southwest corner of Denman Island (Duff 1964:25; Kennedy and Bouchard 1990:443). Other Pentlatch groups resided in villages at Comox, Englishman River (Duff 1964:25), and Qualicum (Kennedy and Bouchard 1990:443). The Pentlatch, in addition to the Comox and Sechelt, are part of the Northern Coast Salish division of the Northwest Coast culture area.

Disease, inter-group warfare, and territorial encroachments from the north and south eventually contributed to the demise of the Pentlatch. By 1886 the few remaining Pentlatch had joined with the Island Comox, a group which had been acculturated into the Kwakiutl by the late 1800s (Kennedy and Bouchard 1990:441). The Pentlatch language, a linguistic subdivision of the Coast Salish, became extinct in 1940 (Kennedy and Bouchard 1990:443). Chrome Island is now claimed by several First Nation organizations, including the Homalco Indian Band, Sliammon Native Council, Comox Indian Band, Nanoose First Nations, Qualicum First Nations, and the Kwakiutl Laich-Kwil-Tach K'omoks Nations Treaty Society (Government of BC 1998).

Our literature and file review revealed only one site recorded for Chrome Island—DiSe 9. It consists of a series of petroglyph panels, which were first visited and documented by C. F. Newcombe in 1901, and again in 1905. His 1901 visit was made in response to reports received from the crew of the *Quadra* that petroglyphs were present on the island. In his 1901 diary, Newcombe recounts how he spent March 14–15 making casts and taking photographs of the main petroglyph panel adjacent to the light tower on Yellow Island (Newcombe 1901). The casts were sent to the American Museum of Natural History in New York (Smith 1907:324). Several duplicate castings also were made for the then British Columbia Provincial Museum in Victoria (Newcombe 1907). In 1905, Newcombe spent the morning of July 25 "whitening carvings and taking photos" on Yellow Island (Newcombe 1905).

Harlan I. Smith's selective field survey of some "earthworks," "shell heaps," and petroglyphs from Victoria to Comox at the turn of the century includes a description of the main panel of Chrome Island petroglyphs (Smith 1907:324-326; 1927). He draws upon Newcombe's notes and observations for his account but it is not clear if Smith actually visited Chrome Island during his years of fieldwork.

Chrome Island was visited in the 1960s by British Columbia Provincial Museum staff (Grant Keddie, personal communication 2000). As a result of this visit, museum staff compiled the first site record for the DiSe 9 petroglyph site in 1968. The island was next visited in 1972 by Beth Hill's Petroglyph Recording Group. Rubbings and photographs from this trip are stored at the Royal British Columbia Museum and a description of the DiSe 9 petroglyphs appears in Hill (1974).

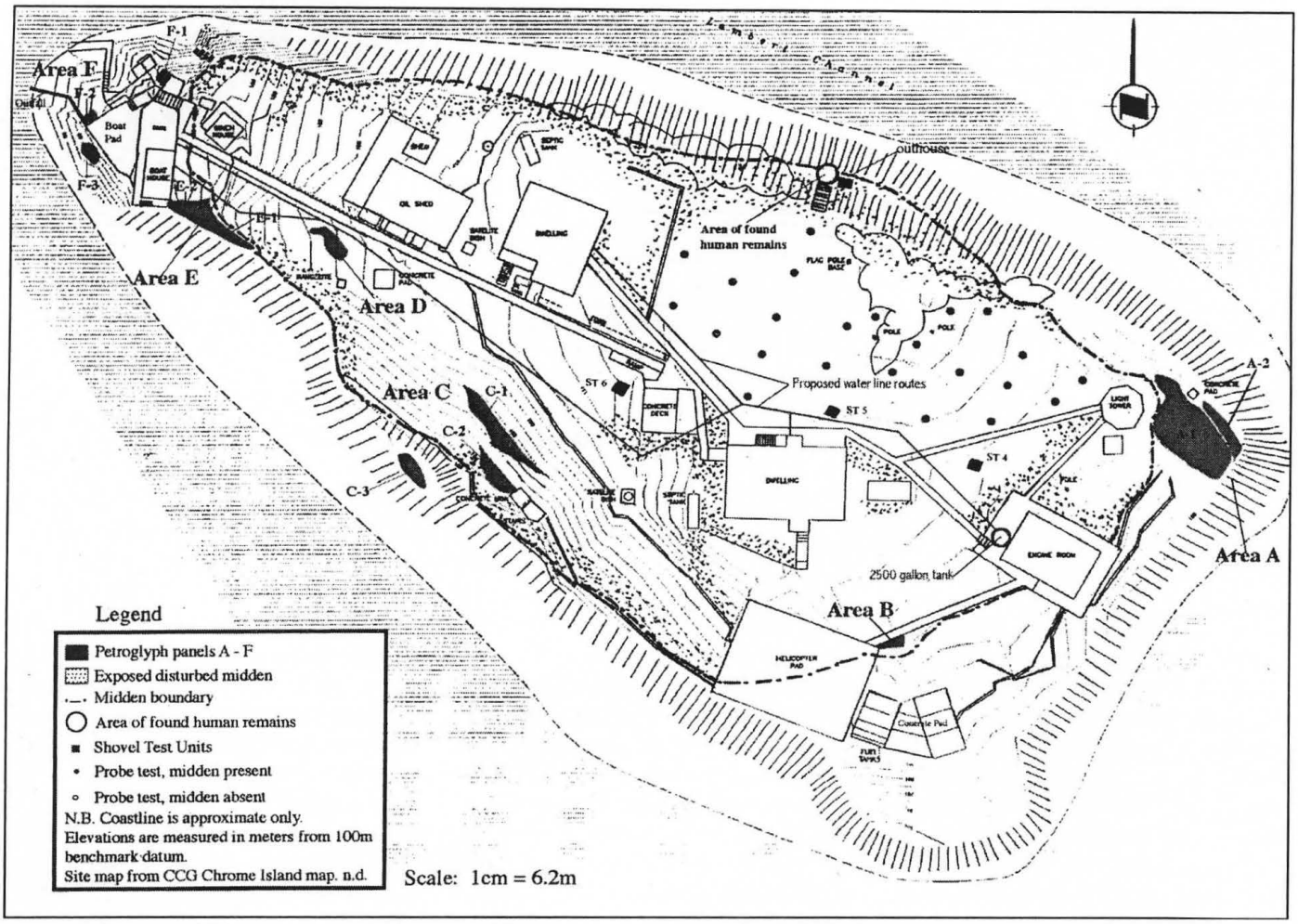

Figure 3. Site map of DiSe 9, showing the location of the six petroglyph areas identified (A-F) and the horizontal extent of the shell midden deposit.

Archaeological Investigations

Current archaeological investigations at Chrome Island were initiated by the Canadian Coast Guard (CCG) due to planned upgrading of services on the Chrome Island Light Station property. As a result, an archaeological inventory and two impact assessments were required prior to development (Haggarty and Williamson 2000; Haggarty 2000). The first assessment was associated with the installation of a 500-gallon above-ground fuel tank, and replacement of the fuel supply line with an above-ground line connecting the new tank with the existing fuel intake facility. The second assessment involved the proposed installation of approximately 100 m of underground water line associated with a new water desalination system, intended to provide potable water for the staff of the light station. The proposed water lines would extend from the above-ground tank located adjacent to the engine room facility at the eastern edge of the property, to the boathouse facility located at the western end of the property. Two additional water lines would connect the main east-west line with the two lightkeeper residences.

The initial field investigation was preceded by a review of archaeological and ethnographic literature and related information for Chrome Island, particularly information on the DiSe 9 petroglyph site. Despite extensive visitation to the site by numerous researchers over the past 100 years, no detailed map showing the precise location of the petroglyph panels was found. Our first task during the initial field assessment was to accurately plot the locations of all known petroglyph panels on the island so that future developments planned by the CCG would not adversely impact these important archaeological resources. In addition, upon our arrival on Chrome Island, we observed numerous exposures of an extensive shell midden deposit over much of the island. None of the published or unpublished accounts of the Chrome Island petroglyph site mentioned the existence of shell midden deposits, yet these deposits cover the entire surface of the island. Given the location and overall structure of Chrome Island (small, flat-topped, and steep-sided), it would be reasonable to expect that the island may have functioned as a defensive or refuge site at some time in the past, and that shell midden deposits associated with this type of site would normally be expected.

Shell midden deposit is evident along the sloping terrain of the western and southern shorelines and at the cliff edges along the northern (Figure 4) and eastern shorelines. Eroded midden deposit is visible in the splash zone all along the northern shoreline. The midden deposits have been subjected to numerous and varied forms of disturbance, including upheaval, removal, compaction, erosion, etc. Some of the areas with petroglyph images also

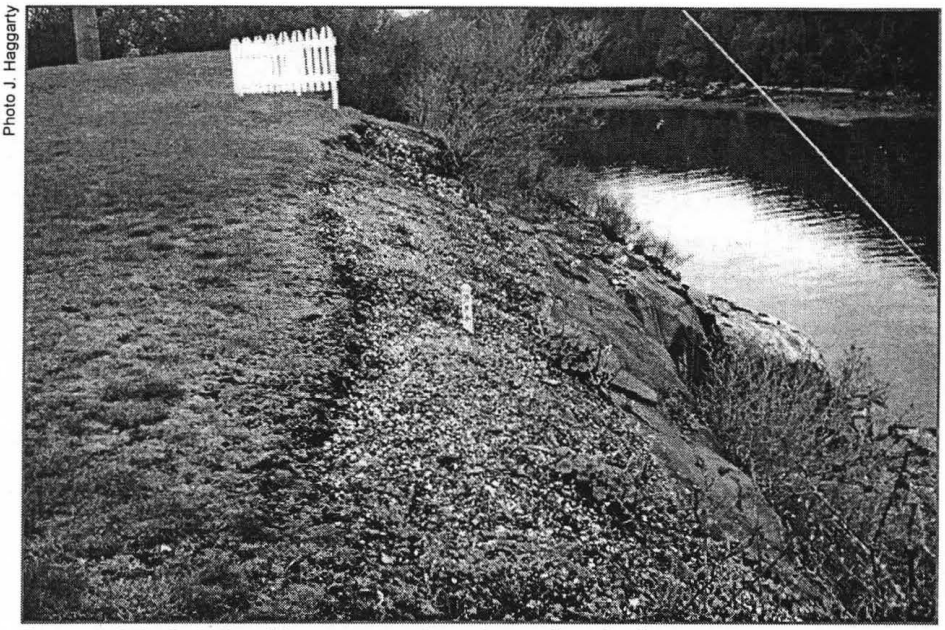
Photo J. Haggarty

Figure 4. DiSe 9 shell midden exposure along the northern bank.

have been affected by past developments. Some images have been covered in the past, only to be recently exposed, while others have only just been covered. Without extensive testing, it is difficult to know how much of the shell midden deposit remains undisturbed. Erosion along the northern shoreline, in particular, and soil slumpage along the southern shoreline continue to adversely impact the midden deposits in these areas.

Current archaeological investigations of the Chrome Island Light Station property involved surveying the remainder of the island for unrecorded petroglyphs and updating the DiSe 9 site record. Six areas of petroglyph clusters (A to F) were located and mapped in relation to permanent light station fixtures (Figure 3). The extent of the shell midden deposit and the location of the many surface exposures also were recorded and mapped. Site DiSe 9, recorded previously as an important petroglyph site, is now known to contain significant shell midden deposits likely associated with use of the island as a defensive or refuge site.

DiSe 9 Petroglyph Features

Six distinct areas of petroglyph images were found along the southern half of the island (see Areas A to F, Figure 3). It was not clear in the existing site record, or in the published and unpublished sources consulted, where exactly any of the petroglyph images were located on the island. Nor was it clear which of the images represented in individual photographs belonged together on the same panel, or were from separate panels. With the exception of Hill (1974), all of the previous documentation for this petroglyph site refers exclusively to the main panel of images located adjacent to the light tower (Area A). The assistance of Chas Thompson, Keeper at the Chrome Island Light Station, was invaluable, both in terms of helping us locate and define separate petroglyph areas and, based on his familiarity with individual images, helping us identify the exact location of specific images represented in individual photographs.

Area A

Area A, the main area of petroglyph images on the island, extends southeast from the light tower and is separated naturally into two distinct panels (see Areas A-1 and A-2, Figure 3). Area A-1, the largest grouping of images, is contained on an exposed sandstone shelf that faces southeast and slopes toward the eastern cliff face at approximately a 30-degree angle (Figure 5). Many of the images here are obscured by lichen growth and natural erosion. One of the concrete footings of the previous light tower was placed on top of the northwest quadrant of this panel. It has since been removed but its outline is still visible on the panel. No apparent damage to the underlying images appears to have resulted from this intrusion. The images in the A-1 panel include many human figures, rayed circles or suns, as well as fish (possibly whale) figures, birds, and geometric shapes (Hill 1974:126, 128, 129; Newcombe photos 688, 12798-12802; Smith 1907:324-326; Meade 1971:62; RBCM Archaeology Photo Collection: DiSe 1 [the earlier Borden designation for the site], files 1-3).

The A-2 panel is located on a vertical bedrock outcrop adjacent to the east side of the main A-1 panel (Figure 5). There is some exfoliation, lichen growth, and graffiti present on this panel. The images in-

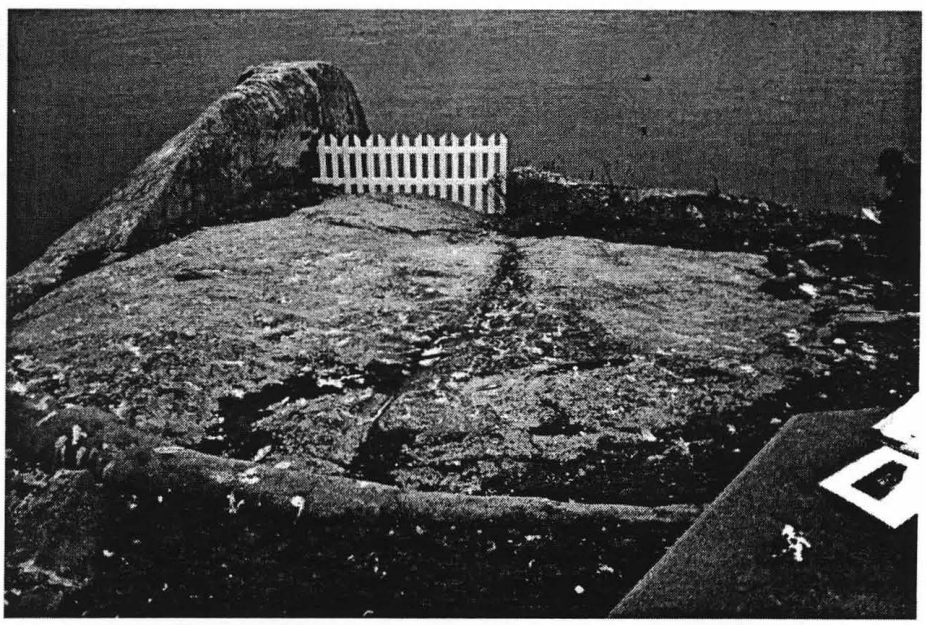
Photo J. Haggarty

Figure 5. General view of Area A petroglyph features, including vertical panel (A-2).

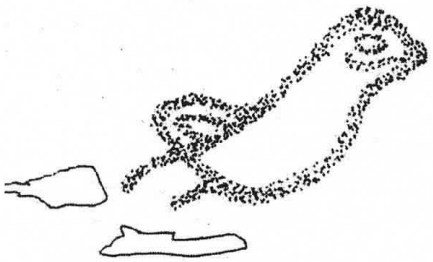

Figure 6. Previously unrecorded bird image, Area A-2.

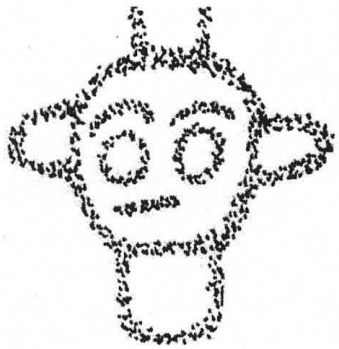

Figure 7. Human head image, Area B.

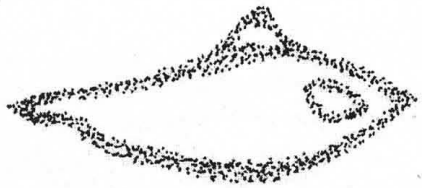

Figure 8. Previously unrecorded fish image, Area C-1.

Figure 9. Previously unrecorded human image, Area C-2.

All sketches by L. Williamson

clude three birds or possible puffins (Lundy 1974), two quadrupeds (Newcombe photo 687; Hill 1974:126; RBCM Archaeology Photo Collection: DiSe1, file 1-3), and a fourth bird or puffin at the southern end of the panel which has not been previously recorded (Figure 6). Additional images are partially visible at either end of the quadruped pair. One previous photograph (RBCM Archaeology Photo, DiSe 1, file 1 of 3) shows a human figure with an upturned right hand at the west end of the pair, but we were not able to confirm this image during our recording.

Area B

Images were found on a small bedrock outcrop at the northeast corner of the helicopter pad, adjacent to the concrete sidewalk (Figure 3). This horizontal panel is now partially covered by the concrete walkway. It contains a single, distinct image of a human head approximately 17 cm wide by 20 cm long and faces east (Figure 7). The head is round with ears, round eyes, line eyebrows, straight line mouth, a neck, and two vertical lines on top of the head. There is also an indistinct, partial image above the head, possibly a fish or other animal image. The location of this outcrop appears to correspond with the number "3" notation on the 1972 site form map. No previous photographs of the images in Area B were found in earlier reports.

Area C

Area C has not been previously recorded. The area includes three small, loosely clustered sections of glyphs located midway along the southern slope of the island (Figure 3). These images were discovered and photographed by lightkeeper Chas Thompson. The first grouping of images (C-1) is found on a vertical, southwest-facing, bedrock outcrop located in the garden slope. The images are difficult to discern because of lichen growth, soil cover, and some exfoliation. A single fish image is visible (Figure 8) and possibly two more fish figures, located above and approximately 1 m west of the first fish image. The second area of images (C-2) is found on a southwest-facing, flat bedrock panel below the C-1 outcrop. The C-2 panel contains a single human figure with lines suggesting stick legs or torso, a roughly squared head with large ears and rounded eyes and mouth (Figure 9). On a lower, horizontal, sandstone shelf in the high intertidal zone, below the C-2 image, there is an image of a single human head. This third area (C-3), reported to us by Chas Thompson, contains an oval-shaped face with rounded eyes and mouth. The glyph was not visible at the time of recording as it was completely covered by seaweed and guano.

Area D

Area D (Figure 3), a small, horizontal bedrock exposure in the lawn next to the sidewalk, south of the oil shed, contains a single image of a fish. The image is partially obscured by moss, grass, and lichen growth. Pecking marks show in the outline of the fish. There are two other indistinct images present: a circle image located above the fish and a rectangular image located approximately 35 cm east of the fish. This area probably corresponds to the number "4" notation on the 1972 site map. No previous photographs or sketches were found of these images.

Area E

Area E is a bedrock outcrop in the southwest corner of the island located just east of the boathouse (Figure 3). Images are present on both the upper E-1 and lower E-2 portions of this outcrop. The upper portion contains a single, squared human head with rounded eyes and nose, and a slightly down-turned line mouth (Figure 10). The image is presently covered with moss and grass vegetation. There is a possible circle below this face. These images were discovered by lightkeeper Chas Thompson and are not previously recorded. The lower E-2 area (Figure 3) contains at least five images: one appears to be the outline of an owl while the remaining four images seem to be human heads. The owl image (Figure 11) appears to be the same image referenced in Hill (1974:127) but the two images are not exactly identical. We were not able to confirm if this figure is the same one photographed and reported by Hill, as the exact location of the image in Hill was not recorded. If they are different images then the E-2 owl image has not been previously recorded. At the west end of the bedrock outcrop, just below the owl image, there are a minimum of four more human heads clustered in two sets. At least one of the

heads is square with rounded eyes, a line nose, eyebrows, and a slightly downturned mouth. Slightly south of this image, adjacent to the vegetation edge, there are at least two other images, one of which has a distinctly rounded head. As most of these images were once covered in vegetation, there may well be more images in the immediate area that still are covered in moss, grass, and salal.

Area F

Area F is comprised of three separate sections (F-1, 2, and 3), loosely clustered in the intertidal bedrock foreshore surrounding the boathouse and pad at the western end of the island (Figure 3). This area probably corresponds to numbers "5," "6," and "7" notations on the 1972 site map. Three images are present on the vertical, west-facing, F-1 panel adjacent to the stairs and cement base of the boat winch. The northernmost image is of a human face with hands. The middle image is a human head with the possible outline of a body. The southernmost image is a human head next to the eye bolt in bedrock. These images are partially obscured by lichen and are somewhat sheltered by the concrete stairs and landing area. The F-2 grouping is found on a vertical, northwest-facing panel in the intertidal zone below the boat pad. This panel contains two human heads located side by side (Figure 12). The northernmost face is oval with radiating lines and rounded eyes. The second face is also oval but less distinct. It has rounded eyes and a hand partly covered by a cement outflow pipe built next to the boat pad in 1994. The F-3 area of images is located on a steep sloping, south facing, intertidal shelf adjacent to the south wall of the boat pad. The image is of a single human head with hands on both sides of the head (Figure 13). The head is squared at the top with radiating lines, rounded eyes and mouth, a line nose, and ears. This area is submerged at high tide. Lightkeeper Chas Thompson recalls seeing other images in this area, including a whale, but we were unable to relocate these images due to heavy seaweed growth and guano cover. It is possible that the images are also partly obscured by construction of the concrete intertidal outflow pipe.

Summary

Many of the petroglyph images on Chrome Island were difficult to discern because the carving is relatively shallow, partly obscured by lichen growth, and undergoing various degrees of natural erosion. A few have been partly obscured by lighthouse construction activity. There are a few discrepancies in the outlines of some images when compared with existing site documents, due, in part, to subjective interpretations of the extent of individual carvings, differential erosion of some images, and variation inherent in the recording methods employed, i.e., rubbings, casts, outlining, photography, etc. Stylistic interpretations of the Chrome Island petroglyph site typically pertain to the images contained in the horizontal and vertical panels adjacent to the light tower (Area A; Figure 3). The Chrome Island images are described as noteworthy for a variety of reasons. They are characterized stylistically by the number of human figures present (Smith 1907) and by the many small, geometric images, particularly the rayed circles or sun figures (Smith 1907; Doris Lundy, personal communication 2000). It has also been suggested that the east and west portions of the Area A-1 panel are stylistically different in their representations of the face and body (Smith 1907). Some of the human figures are considered stylistically similar to images found at Fort Rupert and along the west coast of Vancouver Island (Smith 1907:326). Others have commented on how the Chrome Island petroglyhs resemble the southern Coast Salish style (Doris Lundy, personal communication 2000). Some researchers suggest that the DiSe 9 images on the main panel are comparatively recent, and not typically classical in style (Doris Lundy, personal communication 2000).

New information added to the DiSe 9 site record involved accurately mapping and recording of the six petroglyph areas identified, and documentation of the extensive shell midden deposits observed on the island, particularly the numerous exposures evident over much of the landscaped surface of the site. The detailed, updated site map shows the exact location of previously known and newly recorded information on the petroglyph images present on the island, the horizontal extent of the shell midden deposits ob-

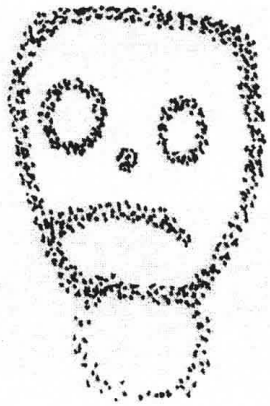

Figure 10. Human head image, Area E-1.

Figure 11. Owl image, Area E-2.

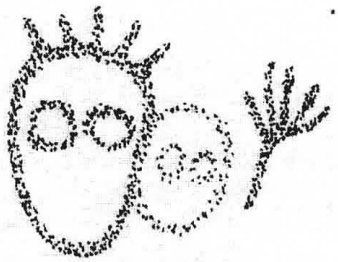

Figure 12. Human head images, Area F-2.

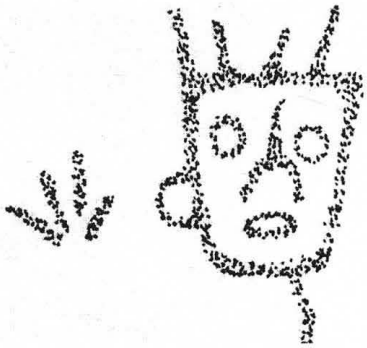

Figure 13. Human head image with hand, Area F-3.

served, and, as a result, the spatial relationships that exist between both types of archaeological resources. Additional research is required at this site before definitive answers are forthcoming regarding the existence of any cultural relationship between the numerous petroglyph images and the extensive shell midden deposits present on the island.

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James C. Haggarty owns Shoreline Archaeological Services, Inc. and is a co-owner of Traditions Consulting Services, Inc. Jim has a PhD from Washington State University (1982) and has spent the last 30 years engaged in archaeological and anthropological research on the west coast of British Columbia and Alaska.

Laurie Williamson has worked on numerous archaeological projects in BC over the past 25 years, as well as projects in SE Asia and Spain. Laurie has a BA in anthropology from the University of Victoria.

ACADEMIC FIELD NOTES

Simon Fraser University, Douglas College, and Coast Heritage Consultants

Alan McMillan (Douglas College and Simon Fraser University) and Denis St. Claire (Coast Heritage Consultants) continued their long-term research in Barkley Sound, on western Vancouver Island. In 2000, the crew returned to Benson Island, one of the outer islands of the Broken Group, today within Pacific Rim National Park Reserve, to continue excavation at the large shell midden tested in 1999. This was the major village of Ts'ishaa, and according to their oral traditions is the origin place of the Tseshaht people (a Nuu-chah-nulth group today at Port Alberni). The project, supported and funded by Parks Canada and the Tseshaht Nation, provided employment and training for a group of Nuu-chah-nulth young people, as well as other youths hired under the Young Canada Works Program through Parks Canada. Ian Sumpter represented Parks Canada on the project and undertook detailed shell analysis.

Two trenches were excavated through the shell midden deposits of the main village, one reaching depths of up to 3.2 m. A radiocarbon date of 1230 ± 90 BP came from the base of the trench, although several dates obtained previously indicate that the village was occupied over the past two millennia. The shell deposits are fauna-rich, with fish and sea mammal elements predominating. Gay Frederick and Susan Crockford (Pacific Identifications, Victoria) examined the faunal remains from selected excavation units. Several large stacks of whalebone were uncovered, including one with a mussel shell harpoon cutting blade still deeply embedded in the back of a skull, confirming Tseshaht traditions of the great whalers who once lived at this site. Artifacts are primarily of bone and are typical of the West Coast culture type, considered to be the archaeological reflection of Nuu-chah-nulth culture prior to European contact.

In a search for earlier materials, a 4 x 2 m unit was excavated on a raised terrace at the back of the site. A radiocarbon date from the top of the original surface below the relatively shallow midden deposits is 5050 ± 60 BP. This corresponds to a time when sea levels were approximately 3 m higher than present. Sitting directly on this surface were the rocks of a large burial cairn. Charcoal from within the rocks yielded a date of 3580 ± 80 BP. The few artifacts, consisting largely of crudely flaked lithics, are markedly different than those from the later deposits of the main village. Further work in this area is planned for the summer of 2001.

—Alan McMillan

ACADEMIC FIELD NOTES

Langara College

Langara College operated its 2000 Archaeology Field School in the Upper Similkameen Valley near Hedley, BC. We conducted site surveys of several sections of the Valley for the Upper Similkameen Indian Band, as well as archaeological impact assessments (AIAs) of property at Allenby Lake (near Copper Mtn.) and the Princeton Golf Club. The Princeton Golf Club Springs site (DiRc 67) provided evidence of Plateau Microblade Tradition (8000–1800 BP), as well as a potential Cascade Horizon (8000–4500 BP) occupation.

We are currently engaged in the 2001 Archaeology Field School where we are conducting AIAs of six Ministry of Forests' recreation camps in Lower Similkameen Indian Band territory on the Ashnola River, as well as another on our camp near Hedley for the Upper Similkameen Band. In addition, we are continuing to survey and record pictograph sites along Old Hedley Road between Hedley and Princeton.

—Stan Copp

Secwepemc Education Institute-Simon Fraser University

Dr. George Nicholas has been appointed Editor-in-chief of the *Canadian Journal of Archaeology* (CJA). He is an Associate Professor of Archaeology at Simon Fraser University, and is based at the Secwepemc Education Institute - Simon Fraser University campus located on the Kamloops Indian Reserve, where he also directs the Archaeology Program. His many publications include books, book chapters, and journal articles on indigenous peoples and archaeology, wetland archaeology, and prehistoric human ecology, among other topics.

The address for CJA correspondence and manuscript submission is: Department of Archaeology, Simon Fraser University-Secwepemc Education Institute, 365 Yellowhead Highway, Kamloops, British Columbia, Canada V2H 1H1

Office: 250-828-9799; Fax: 250-828-9864

Email: nicholas@sfu.ca

Simon Fraser University

Phil Hobler is currently teaching the Simon Fraser University (SFU) Archaeology Field School for 2001 in Bella Coola. Two field schools are being offered for summer 2002. David Burley will run a South Pacific field school in Fiji in coordination with the Fiji Museum and the University of the South Pacific. George Nicolas will also offer the SCES-SFU Archaeological Field School in Kamloops. For a broad account of all SFU faculty field activities, research, and publications, etc., the SFU Archaeology Department Annual Report for 2000 can be found on the Web at www.sfu.ca/archaeology.

The SFU Archaeology Department now serves as the home department for First Nations Studies. David Burley, the Department Chair, is head of the program. The Department is also in the process of designing an undergraduate stream towards a certificate in Cultural Resource Management. The proposal for that program will be submitted to the University Senate for approval in 2002. In addition, the Department, in conjunction with the School of Criminology, is in the process of proposing an SFU Centre for Forensic Studies.

In the past year, the Archaeology Department has added three new faculty appointments. These include: Ross Jamieson (Historical Archaeology, Mesoamerica), Dongya Yang (Physical Anthropology, ancient DNA, China), and Eldon Yellowhorn (indigenous archaeology, western Canada; cross appointment with First Nations Studies). Jon Driver has been appointed SFU Dean of Graduate Studies for a five-year term. And in September, 2001, Philip Hobler will retire.

SFU Archaeology Press recently published a second volume of material about the Keatley Creek archaeological site. *The Ancient Past Of Keatley Creek Volume II: Socioeconomy,* edited by Brian Hayden, 2000, focuses on the social, economic, and political organization of the prehistoric community at Keatley Creek.

This year's BC Archaeology Forum will be held at SFU on October 26th and 27th. The organizing committee consists of Robbin Chatan, Monica Karpiak, Doug Brown, Nicole Oakes, and Mike Brand. For further information, their contact email address is bcarch1@sfu.ca.

—David Burley

University of British Columbia

David Pokotylo, along with Mark Papineau (MA student and Teaching Assistant), took the University of British Columbia (UBC) summer archaeology field school to the Spirit Camp site, a 7,000-year-old village in Scowlitz traditional territory. The field school is working closely with members of Scowlitz Nation and Stó:lō Nation to test the site, first discovered in 1994. It is located on the banks of the Fraser River, just about one km downstream from its confluence with the Harrison River. The camp and lab are set up at the Old Harrison Mills School near Kilby. The project ran into July, as David continued with a private research project.

Also in July, David Pokotylo assumed the position of Head of the Department of Anthropology and Sociology at UBC. Prior to the field school, David had spent another six weeks in Kenya during February and March with the Langara-McGill-Dalhousie-UBC African field school.

Several awards were granted to students in the UBC Department of Anthropology and Sociology over the past year. The D. Geordie Howe Prize is awarded to an UBC undergraduate student each year by Arcas Consulting Archeologists in recognition of Geordie's many contributions to consulting archaeology in BC. The 2000/01 award was received by Andrew Roddick for his paper entitled "Social Evolution in the Casma Valley, Peru." Li Min, who talked to the ASBC this year, was chosen as UBC's Governor General's Gold Medal Master's recipient for this academic year. The award distinguishes him as the best in the MA graduating class this year. And in December 2000, Tony Vanags completed his MA, his thesis topic being "An Archaeological Perspective on Alpine/Sub-Alpine Land Use in the Clear Range and Pavillion Mountains, South Central British Columbia."

—Michael Blake and Joyce Johnson

THE TSLEIL-WAUTUTH FIRST NATION COMMUNITY ARCHAEOLOGY PROJECT

by Monica Karpiak

During the summer of 2000, the Tsleil-Waututh First Nation and the Simon Fraser University (SFU) Department of Archaeology collaborated on an archaeological project in North Vancouver (Lepofsky and Karpiak 2001). The project came to be known as the Tsleil-Waututh First Nation Community Archaeology Project or CAP.

CAP was a unique project in several respects. First, the project sought to blend the goals of the Tsleil-Waututh Nation to expand its cultural heritage program, with the SFU Department of Archaeology's goal to provide its students with opportunities to work closely with First Nations communities while learning archaeological field techniques. An intensive three-month program, the project was carried out in conjunction with the SFU archaeological field school. Under the direction of Dr. Dana Lepofsky and myself, 12 students and two Tsleil-Waututh community members acquired a variety of practical archaeological skills. The students, nine from SFU and three from UBC, and the Tsleil-Waututh community members learned how to conduct an archaeological excavation from beginning to end by working on the Strathcona Park Site (DhRr 18), located in the heart of Tsleil-Waututh traditional territory. In addition, the students gained practical archaeological surveying skills through practice surveys and an actual ground surface reconnaissance of Burrard Inlet Indian Reserve Number 3. The students also received Resource Inventory Committee certification for Archaeological Inventory Training for Crew Members, something that may assist them in securing employment in archaeological consulting in the future.

The urban location of the site also contributed to the uniqueness of the project. DhRr 18 is situated in a small park in the community of Deep Cove. Homes surround the park on three sides, and a calm, sheltered cove borders the other side. We received regular, casual visits from the neighbours who wished to keep abreast of what we were learning about the history of the site. They contributed community memory and knowledge, which helped us to better understand the historic deposits we uncovered, while we offered them the opportunity to watch an archaeological excavation unfold. Members of the Tsleil-Waututh community also visited regularly, and helped us to understand the pre-contact strata which made up most of the deposits at the site. We will never forget the day that canoeists from the Nation paid us a visit in their war canoe. Their songs and drumbeats echoing throughout the cove, all we had to do was close our eyes and allow ourselves to be transported through time.

Not only did we receive casual visits throughout the summer, we also had the opportunity to conduct more formal tours. Prior to breaking ground at the site, Dr. Lepofsky sent out notices to the local schools about the upcoming excavation, asking that teachers bring their classes to the site to learn about the history of the Tsleil-Waututh. Tours began with an in-

troduction to the history and oral traditions of the Tsleil-Waututh by Leah George or her sister, Carleen Thomas. With assistance from field school students, Dr. Lepofsky then demonstrated to the children how important archaeology is for understanding the past. Emphasis was placed on context, not on artifacts. We hoped that the children would leave with a better appreciation for how multiple lines of evidence can be brought together to yield a fuller picture of how people lived, rather than an appreciation for the aesthetics of particular types of stone and bone tools. The children were enthralled by the presentations, but got really excited when they were allowed to operate the screens. It became clear to me that children up to a certain age are inherently attracted to dirt, and I realized that this is the age that we should probably be focusing on to attract more people to the study of archaeology. The field school students also developed a number of visual displays to supplement the presentations and a brochure that visitors could take home with them to look over later.

The Strathcona Park site (DhRr 18) itself is a shell midden site. Although the site was initially recorded in 1972 and revisited in 1979, little was known about DhRr 18 prior to CAP. What we did know was that it consists of a subsurface shell midden deposit and two surface lithic scatters. However, we did not know the extent of the site or what it was used for in the past. From the excavated material, we were able to draw several conclusions. First, the Strathcona site was most certainly a habitation site. Our preliminary conclusion about the seasonality of the Strathcona site is that the upper pre-contact layers that we excavated represent a summer occupation. The ephemeral structural remains are consistent with Suttles' (1990:462) description of Coast Salish summer temporary dwellings, which were constructed of a pole framework and then covered with mats, bark, poles, or branches. The relative abundance of artifacts associated with fishing, such as toggling harpoon valves, further supports this conclusion. The on-going analysis of the faunal and floral remains will allow us to more definitively determine the season of occupation of this portion of DhRr 18. However, the preliminary faunal and palaeoethnobotany results indicate that people were utilizing a range of terrestrial (land mammals, berries, and birds) and marine resources (fish and shellfish).

Though the extant data do suggest a temporary occupation of the upper layers, this does not fit well with the size estimates for the overall site. Even if our estimates of the shell-bearing portion of the site are exaggerated, DhRr 18 is still a large site in comparison to others in the inlet. Though we cannot make assumptions about contemporaneity of the shell deposits, a reasonable assumption is that the upper deposits extend beyond what we have excavated onto the equally flat and accessible land to the east. This would make for a very large short-term occupation, and a kind of settlement not described in the ethnographies. It is entirely possible, of course that more permanent summer dwellings were constructed elsewhere on the site. The burials from the eastern side of the site that were noted in the 1979 site form also suggest greater permanency at DhRr 18.

Though not part of our original research design, the discovery of two previously excavated deep excavation units (by person or persons unknown), gave us some insights into the lower deposits at the site. These disturbed areas were dug out to sterile, which allowed us to look at the full stratigraphy of these portions of the deposits. Diversity of artifacts, postholes, and compacted surfaces suggest permanent houses. Based on stylistic grounds, these deposits likely date to sometime within the Locarno Beach phase (3500-2400 BP). As Locarno Beach phase houses are unknown, it is worth going back and conducting areal excavation of the deposits at DhRr 18.

The second component of CAP was to survey the main Tsleil-Waututh reserve (Burrard Inlet I.R. 3). This served two purposes. First, it contributed to the Tsleil-Waututh First Nation's land development plans by providing data about what sorts of archaeological remains are likely to exist on the reserve. Secondly, it gave the students an opportunity to conduct archaeological survey that is consistent with the type of work they would do if they were to seek employment in archaeological consulting.

Field crews recorded one archaeological site, consisting of two culturally modified trees, on the reserve. In addition, field crews surveyed several areas of the reserve taking detailed notes about the terrain and vegetation. Using this data, we were able to report areas that did not contain archaeological remains. Most significantly, the students had a chance to discover whether archaeological survey was right for them.

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Monica Karpiak is currently working toward her Master's degree in Archaeology at Simon Fraser University. Her interests include the archaeology of pre-contact coastal British Columbia, especially in terms of cultural landscapes, public archaeology, and contemporary issues affecting aboriginal communities in this province and throughout Canada.

DEBITAGE

The Museum of Anthropology (MOA) recently announced a new member to their staff. Sue Rowley will join the museum as Curator of Public Archaeology. Dr. Rowley is appointed jointly with the UBC Department of Anthropology and Sociology, and will begin her tenure in autumn 2001.

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MOA curators Bill McLennan and Karen Duffek were honoured with awards by the British Columbia Historical Federation and the Canadian Museums Association for their publication *The Transforming Image: Painted Arts of the Northwest Coast First Nations.*

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In April, Millennia Research Limited opened a new office in Vancouver. It is located at: 2520 Graveley Street, Vancouver, V5K 3J6, telephone/fax (604) 215-9430, e-mail: millennia.van@telus.net, and the contact person is Jennifer Lindberg.

FIELD NOTES

GOLDER ASSOCIATES LTD.

THREE of the five British Columbia offices of Golder Associates Ltd. (Burnaby, Victoria, and Kamloops) conducted archaeological impact assessments (AIA), monitoring, and mitigative excavations in several regions of British Columbia last year, including Terrace, Hazelton, Lillooet, the Fraser Canyon, the Lower Mainland, and Vancouver Island. Together with our Calgary office, BC staff participated in excavation projects in Fort McMurray and High Level, Alberta, as well as a major inventory project in southern Idaho. Three BC projects are profiled below.

Lytton Bridge Replacement: In the Spring of 2000, Golder Associates and the Lytton First Nation conducted a systematic data recovery program in Lytton, BC. Highway construction associated with the replacement of the Lytton Bridge over the Thompson River was in conflict with archaeological site EbRj 154 (also known as *Lkamtci'n*), a Nlaka'pamux village site with a post-contact component. Controlled excavations showed that much of the area was significantly disturbed. Two radiocarbon dates obtained from samples taken from apparently undisturbed contexts yielded dates of 490 ± 40 BP and 930 ± 50 BP, placing the site within the Kamloops horizon (ca. 1200 to 200 BP) of the Plateau Pithouse Tradition. The lithic assemblage included large numbers of projectile points, the majority of which are typical of the Kamloops horizon. One obsidian artifact was found and submitted for trace element "fingerprinting" using x-ray fluorescence; however, the trace element composition was determined to be unlike any other obsidian known to the lab, and the origin of the stone remains unknown.

Following the excavation, several highway construction activities were monitored at EbRj 154, as well as at site EbRj 1, located on the north side of the Thompson River. The EbRj 1 monitoring documented numerous deeply buried pit features, some of which contained preserved birch bark and faunal remains. Human remains were recovered from apparently undisturbed deposits nearly six metres below surface. Radiocarbon dates on one of the human bones and on a buried wooden feature are pending.

Gorge Waterway Park Expansion: Construction plans associated with the expansion of Gorge Waterway Park in Saanich required an AIA due to the presence of shell midden site DcRu 7. In Summer 2000, Golder Associates conducted the AIA with assistance from the Songhees and Esquimalt First Nations. Field investigations combined standard shovel and probe testing with borehole drilling being used for geotechnical investigations, which were being undertaken by Golder Associates engineers. The AIA helped to better define the boundaries of DcRu 7, which had been previously known from numerous assessments of limited scope. One of the recommendations of the AIA was that certain construction activities be monitored, primarily to check for human remains in the midden.

Human remains were uncovered during activities related to house demolition. Following discussions with the Songhees and Esquimalt First Nations, Saanich Parks, and the Archaeology Branch, the remains were recovered and preliminary analyses were completed by physical anthropologist Sara Yoshida. The remains will be reburied at a location to be determined by the First Nations.

Artifacts recovered from DcRu 7 over the past 30 years suggest the site dates from the Marpole and Developed Coast Salish periods, between about 2,000 and 200 years ago. Additional monitoring and a small mitigative excavation will take place in the coming months, and it is hoped that one or more radiocarbon dates can be obtained. The archaeological data will also contribute to interpretive signage to be erected at the park.

Departure Bay: In the fall and winter of 2000, Golder Associates, working with the Snuneymuxw First Nation, conducted an archaeological impact assessment program in Departure Bay, Nanaimo, within a portion of previously recorded archaeological site DhRx 16 - location of the Snuneymuxw village of *Stl'ip*. Given the sensitive nature of archaeological deposits recorded on adjacent properties, the assessment attempted to limit subsurface impacts to as small an area as possible, while ensuring sufficient information was gathered to assess the nature of archaeological resources. The results of the impact assessment suggested the area contained both disturbed and intact cultural materials, including human remains. Recommendations for monitoring subsurface excavations were made. Some notable artifacts recovered from DhRx 16 include a whalebone club fragment (thunderbird image), a pecked stone bowl, an anthropomorphic pendant, a decorated drinking tube fragment, fishing tools (i.e., net weights, ground slate knives, bi-points, and points), and woodworking tools (i.e., antler wedges and chisels). Final results of the project are forthcoming.

—GAIL WADA

I.R. WILSON CONSULTANTS LTD.

In 2000, I.R. Wilson Consultants Ltd. carried out 73 projects of various sizes and types throughout British Columbia. The field season saw an ongoing diversification in our client base. We also saw a dramatic increase in site returns in the Interior. This is attributed to the enormous beetle salvage operations that dominated the forest industry in the BC Interior. Project types are summarized in the accompanying table.

Presently, I. R. Wilson Consultants Ltd. employs 15 full-time staff including office administration and support. Throughout the calendar year 2000 we employed 24 archaeologists, three support staff, and 46 First Nation assistants. Many of the First Nation assistants have been working with us on a regular basis over the past five field seasons.

Our firm has provided numerous training programs and informational seminars. The training programs have focused on CMT identification and management. The seminars have been general archaeological information sessions for industry and government employees who encounter archaeological issues during their operations. These have been conducted for forest companies, Ministry of Transportation and Highways, and on an ongoing basis for the Canadian Coast Guard.

One of our most interesting projects in 2000 was the impact assessment of the Coquitlam Reservoir System. The Coquitlam-Buntzen Water Use Planning Project (WUP) is a BC Hydro initiative to

better understand the heritage, cultural, and archaeological resources affected by ongoing hydro operations. To address these issues, an archaeological assessment of Buntzen Lake, Coquitlam River, and Coquitlam Lake was conducted. In the course of this study, 15 new archaeological sites were recorded, and knowledge of one previously recorded site was significantly increased. Based on typological similarities with other sites in the region, the age of these sites may range from as old as 11000 to as recent as 2500 BP, though most indications suggest great antiquity.

—Jenny Chomack

ARCAS CONSULTING ARCHEOLOGISTS LTD.

The editorial committee apologizes for having inadvertently republished Arcas's year 1999 report in the previous issue.

In 2000, Arcas Consulting Archeologists employed 10 full-time archaeologists, 11 seasonal archaeologists, a draftsperson, and administrative staff. Field assistants representing nearly 50 First Nations groups were also employed. About 75 projects were conducted, including impact assessment and field reconnaissance surveys, overviews, monitoring and salvage excavations, training seminars, and CMT-dating contracts.

Approximately 100 separate development areas were assessed on the west coast of Vancouver Island, in Johnstone Strait, and at Owikeno Lake for forest-industry clients. About 75 CMT sites were identified during these projects. Impact assessments were conducted for residential and recreational developments in Vancouver and near Squamish. A stemmed projectile point, reminiscent of early styles from the Pacific Northwest, was found at one of the sites discovered in a high-elevation subalpine setting on the Garibaldi at Squamish ski-hill property. Archaeological monitoring was carried out for residential developments in Vancouver, Tsawwassen, and Surrey. An intact burial recovered from a property on the Tsawwassen Beach site (DgRs 9) was turned over to the Tsawwassen First Nation for reburial. At site DgRq 31 on Panorama Ridge in South Surrey, several flaked cobble tools were recovered; some exhibit a patina that matches underlying weathered sediments, suggesting that they could be quite ancient. A GIS-based archaeological potential model was developed for the Capilano, Seymour, and Coquitlam watersheds, and a "cultural heritage" management plan was begun for the Lower Seymour Conservation Reserve; both projects were done for the GVRD.

Arcas was also involved in a cross-border underwater archaeology project with Historical Research Associates (a consulting firm from Seattle), the UASBC, and some noted Pacific Northwest maritime historians. The project was done for BC Hydro and Williams Gas, who are proposing to lay a submerged natural-gas pipeline from Cherry Point (WA) to Cowichan Bay (BC). The sea floor along the route across Georgia Strait and through the Gulf Islands was surveyed with remote-sensing equipment and deep-sea coring. Some promising targets were observed beyond the pipeline right-of-way, but no historic or prehistoric archaeological remains were identified within the impact zone.

As in years past, most field projects were done for the forest industry in the Southern and Central Interior of BC. The ongoing pine-beetle infestation crisis in this part of BC prompted much of the forestry work done in 2000. Hundreds of development areas were assessed, and employed nearly all of the Arcas staff from early May until late November. About 185 archaeological sites were recorded: in order of frequency, 98 lithic scatters, 68 CMT sites, 12 cultural depression sites, six trails, and one historic site were found. Monitoring was conducted at three sites affected by forestry developments (FhRs 35, FhRt 3, and FhRu 19). The most interesting discoveries were a number of thin, stemmed projectile points with edge-ground, concave bases from FhRu 19, near the Blackwater River. These artifacts resemble Early-Nesikep points from the Thompson Plateau, rather than the Western Subarctic "Northern Fishtail" points which might have been expected at this site in Central BC.

Other kinds of Interior archaeological projects were limited, but included an AIA for a new road to a DFO property on the Babine River, which conflicted with GiSq 4, a very large site with hundreds of cultural depressions, surface lithics, a petroglyph, and burials. Two lithic scatters and two CMT sites were found during an AIA of proposed range-fences near Vanderhoof. Abundant, scattered historic remains were observed during an AIA of the International Wayside Mines project at Wells, near Barkerville. An AIA of proposed park improvements at Strawberry Lake in the Marble Range resulted in the discovery of a lithic scatter, roasting pits, and CMTs in this high-elevation setting. Six sites were revisited during the AIA for a CN Rail siding extension near Chu Chua, in the North Thompson River valley. Monitoring was conducted at EiRb 17 and EiRb 19, affected by rail-cut expansion here. A survey was also carried out on some BCAL properties at Tunkwa Lake, and several known sites on the Osoyoos IR#1 were revisited for a cultural/environmental planning study.

A small-scale excavation was carried out at FfRo 23 for the MoTH. The site is a lithic scatter on the north side of Dragon Lake near Quesnel. Three units were excavated, and 62 artifacts recovered (including an obsidian microblade, a large basalt biface, and a unifacial scraper). A radiocarbon date of 1870 ± 40 BP was obtained from the base of the site.

A second brief excavation took place at EfRl 62, a lithic scatter on McKay Creek north of Lillooet. This project was conducted in advance of road construction by Ainsworth Lumber Company. Nine excavation units and four smaller tests were excavated. A radiocarbon date of 1710 ± 40 BP was obtained from charcoal recovered in a hearth feature. Only 18 lithic artifacts were recovered, including three formed tools and 15 debitage elements. Despite these modest results, EfRl 62 appears to be the first high-elevation site excavated in the mid-Fraser region.

A minimal amount of fieldwork was conducted in NE BC in the past year. No sites were identified during a brief December survey of four oil/gas developments in the Great Lone Land northeast of Fort Nelson. More tolerable conditions were experienced during early-summer excavations of two sites disturbed by pipeline construction just north of Charlie Lake. Analysis and reporting is not complete, but 19 excavation units were dug at HcRg 36. Cultural materials recovered from this site include 280 waste flakes, a scraper, and 16 bone fragments. At nearby HcRg 37, about 41 flakes were recovered from 10 excavation units.

—Richard Brolly

BOOK REVIEWS

Sampling In Archaeology

by CLIVE ORTON

Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge, 2000. 250 pp., illus., index, bib. Price: ISBN 0521562260 (Hc) $115.95; ISBN 0521566665 (Pb) $41.95.

IF YOU are hoping this book will provide you with cookbook solutions on using sampling in archaeology then you will be disappointed. What Orton does provide is a step-by-step methodology of incorporating sampling into archaeological research. Thus, this relatively thin book (only 250 pages including index, appendix, and bibliography) should provide you with an overview of the subject and a guide to the use of sampling in archaeology.

Orton approaches the subject, whether intentionally or not, in a post-processual manner. Chapters 1, 2, and 3 are all essentially introductory chapters. Chapter 1 deconstructs what sampling means to archaeologists and the historical roots of these meanings. From this Orton concludes that archaeologists have not been making the best use of sampling and this provides his reason for writing the book.

In Chapter 2 he continues deconstructing sampling by delving briefly into the history of sampling theory, its relevance to archaeology, and the language of sampling. In the latter he discusses briefly types of variables, bias, sampling designs, and the problems associated with sampling terms such as significance. He also briefly introduces and defines different sampling strategies. Finally, he provides a 12-step template for how archaeologists should use sampling in their research. He follows this template while discussing the use of sampling in archaeology at different levels through chapters 4 to 8.

Chapter 3 delves in more detail into archaeological sampling theory and particularly how it relates to archaeological inference and interpretation. Orton emphasizes how taphonomy affects sampling and the relationship between surface and subsurface artifact assemblages. He concludes by noting that sampling theory does not provide answers to archaeological questions but does provide a language with which to articulate such questions.

Chapters 4 through 8 look at the different levels of sampling in archaeology. Each chapter provides a brief history of sampling at that particular level, and a section on applied theory with at least one case study example. Chapter 8 differs slightly from chapters 4 to 7 in that it deals with sampling from museum stores as opposed to sampling in archaeological research.

Chapter 9 provides a brief summary of the book and re-emphasizes several points about the centrality of sampling to archaeological theory and practice, and stresses that although sampling provides no definite answers it does contribute to debates on archaeological inference. Orton's final hope is that the book has pointed out that sampling theory is not static, and that the unique situation of archaeological data may require modifications to sampling theory to make them more applicable. He stresses that archaeologists need to take up the challenge of researching sampling method and theory as they apply to archaeology.

Unlike most other books on statistics or sampling all algebraic formulas are placed in a separate appendix at the end of the book. This makes the book, as the author states, an "algebra-free zone". At first I thought flipping back and forth from text to formula would be distracting, but the number of formulae and references to them are quite few for a statistics book and this turned out not to be a problem. However, the importance of formulae to sampling makes it imperative that they be clear and accurate. Although I did not check every formula, I did notice a small but significant typographical error in Orton's description of his formula notation. He states that "The population total is called $\overline{y}$ and its mean ; its variance is denoted by S^2" (p. 210). As stated this contradicts what his first formulae are meant to determine and such an error could confuse the novice user from the start. I believe the sentence should read "The population total is called Y and its mean $\overline{y}$; its variance is denoted by S^2." I presume the remaining formulae are correctly stated and properly used. The user should check with the original sources before using them.

Although the post-processual approach may put some potential readers off before even opening the book, I actually found it constructive (not deconstructive), informative, and positive in nature. In summary this book provides useful historical and theoretical facts on archaeological sampling. It also provides interesting archaeological samples (case studies) and challenges archaeologists to look beyond random sampling. It would make a worthwhile addition to any archaeologist's bookshelf.

Tom Arnold

Tom Arnold is a PhD student in the Department of Archaeology, Simon Fraser University. He is currently sitting in a cold Ontario basement trying to finish his dissertation on the Ice-Free Corridor.

DEBITAGE

The VANCOUVER MUSEUM is always looking for enthusiastic dedicated people to volunteer with the public, children, special events, and other areas of the museum. If you are interested in working with the public and would like to learn more about history, education, and museums please contact Phylliss McIntyre, Coordinator of Volunteer Services tel. (604) 736-4431 ext 351. volunteer@vanmuseum.bc.ca.

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THE MIDDEN is currently looking for a News Editor to compile information on archaeological conferences, lectures, exhibits, courses, and related archaeological news items. If you are interested in assisting with the production of the ASBC's quarterly publication please contact Heather Myles, *Midden* Editor, for more information at (604) 274-4294 or e-mail: heathermyles@home.com.

PERMITS

ISSUED BY THE ARCHAEOLOGY BRANCH JANUARY TO MAY 2001

The assistance of Ray Kenny (Manager, Assessment and Planning Section) and Alan Riches (Administrative Clerk) in providing this information is gratefully acknowledged.

Glossary of Abbreviations: A number of recurrent abbreviations may not be familiar to many readers of *The Midden*, and the most common of these are explained here. *Permit types*: ALT = Alteration; INS = Inspection; INV = Investigation; *Archaeological project types:* AIA = Archaeological Impact Assessment; AIS = Archaeological Inventory Study; SDR = Systematic Data Recovery; *Forest industry terms:* CMT = Culturally Modified Tree; CP = Cutting Permit; FD = Forest District, FL = Forest Licence; FSR = Forest Service Road; MoF = Ministry of Forests; SBFEP = Small Business Forest Enterprise Program; TFL = Tree Farm Licence; TL = Timber Licence; TSA = Timber Sales Area; TSL = Timber Supply Licence. *Other government agencies*: DFO = Department of Fisheries and Oceans; DINA = Department of Indian and Northern Affairs; MELP = Ministry of Environment, Lands and Parks; MEMPR = Ministry of Energy, Mines and Petroleum Resources; MoTH = Ministry of Transportation and Highways; *First Nations concerns*:_ ATT = Asserted Traditional Territory; FN = First Nation; *Legal title descriptions:* DL = District Lot; LD = Land District; Rge = Range; R/W = right-of-way; P/L = pipeline; Sec = Section, T/L = transmission line; Tp = Township

2001-001	Mike Rousseau	INS	AIA of proposed BCALC residential subdivision and park development of Jamieson Creek property, Blocks A and B (SE ¼ of Sec 22, Tp 22, Rge 17, and SE ½ and Fraction SW ¼ of Sec 23, Tp 22, Rge 17, W6M, KDYD) located W of the North Thompson River, N of Heffley Creek
2001-002	Ian Franck	INS	AIA of Old Celista Ranger Station (Lots 18-22, Block 1, and Lots 18-21, Block 2, SE ¼ Sec 9, Tp 23, Rge. 10, W6M, KDYD), located on Shuswap Lake
2001-003	Lonn Friese	ALT	Alterations to DcRt 069 by excavation and installation of footings, foundations, and ancillary works for an addition to existing residence at 37 Macquinna Street, at Harling Point, District of Oak Bay
2001-004	Monty Mitchell	INS	AIA for MoF/SBFEP forestry operations within Timber Harvesting Blocks Y13, Y-15, Y6, and Y-17 on Yeo Island, within Asserted Traditional Territory of the Heiltsuk Nation, Mid-Coast FD
2001-005	Michael Mitchell	ALT	Alterations to DiSe 009 by excavation and installation of a desalination system consisting of a 2,500 gallon above-ground tank and associated water lines for the Chrome Island Light Station facility, Lot 126, Section 1, Nanaimo LD
2001-006	Ian Wilson	INS	Inventory and AIA of proposed 7-lot residential subdivision and 2-lot park reserve for Lots 1 to 3, DL 2792, Gp. 1, NWD, located on the W coast of Francis Peninsula, W of Madeira Park, Sechelt Peninsula
2001-007	Andrew Mason	INS	AIA of proposed residential development in the vicinity of EaQu 042 at 16080 Carrs Landing Road, E shore of Okanagan Lake
2001-008	Frank Fugger	ALT	Alterations to EfQw 004 by excavation and installation of a septic tank, septic field, and connecting pipe on "Lot 18" of the Dorian Bay residential development, SE shore of Adams Lake, near Chase
2001-009	Ian Wilson	INS	Inventory and AIA of proposed 7-lot residential subdivision of DL 3964, except Part in Plan 15098, Gp 1, NWD, located on the S shore of Gunboat Bay, Pender Harbour
2001-010	Charles Stanley	ALT	Alterations to lithic scatter site temporarily recorded as HiRo t003, by construction of proposed Coastal Oil and Gas Canada pipeline from c-40-J, 94G/8 to compressor site in unit 62, block E in NTS 94G/8
2001-011	Monty Mitchell	INS	AIA of MoF/SBFEP forestry operations within TSL A45330 Blocks J-1, J-2, & J-3 on Dean Channel, and TSL A62721 Blocks 121, 122, 134, 135, 136, 137, and 138 on Greaves Island, Mid-Coast FD
2001-012	Peter Dady	INS	AIA of proposed sewer pumping stations at Amity Drive, Bazan Bay, and Reay Creek, in North Saanich
2001-013	Tanja Hoffmann	INS	AIA of BC Hydro's proposed Port Alberni Power Project, including TEBO plant site (2 alternate locations), a gas pipeline, and a power transmission line (2 optional routes), within the City of Port Alberni
2001-014	Clinton Coates	INS	AIA of MoF/SBFEP forestry operations solely within map sheet 103I/6, 103I/7 and 103I/16, vicinity of Terrace within the Asserted Traditional Territories of the Kitamaat, Gitxsan, Kitsumkalum, Lax-Kw'alaams, and member nations of the Allied Tsimshian Tribes Association, Kalum FD
2001-015	Sandra Witt	INS	AIA of forestry operations within Woodlot License 1557 in the Koksilah area near Duncan, South Island FD

2001-016	David McIntyre	ALT	Alterations to FhUa 052 by demolition of existing Queen Charlotte City High School and construction of a new school, as well as ancillary developments, within: Lots 1 to 24, Block 16, DL 16, Plan 943, and Lots 1 to 24, Block 21, DL 16, Plan 943; Queen Charlotte LD
2001-017	Jim Stafford	INS	AIA for J.S. Jones Timber's proposed construction/expansion of a log sort on the S side of Lagins Creek, Long Inlet, Skidegate Channel, Graham Island
2001-018	Roderick Christie	ALT	Alterations to CMTs within DfSf 016 and DfSf 021 by forestry operations in Proposed Cutblock Opening 8688, Sarita Lake, South Island FD
2001-019	Trevor Selbert	ALT	Alterations to a portion of FaRn 036, including systematic surface collection, covering with geotextile cloth and capping with up to 2 m of imported fill, on Lot A, DL 6483, Cariboo District, PGP4144
2001-020	Doug Brown	INS	AIA for a proposed 3.5 km powerline along Weaver Creek Road, NE of Harrison Mills
2001-021	Doug Witala	ALT	Alterations to CMTs within GiSp 10 and GiSp 11 by Pacific Inland Resources' forestry operations in CP 614, Blocks 10 and 11, Bulkley/Cassiar FD
2001-022	Kevin Twohig	INS	AIA of Lignum Ltd. forestry operations within the 100 Mile House, Horsefly, and Williams Lake FDs
2001-023	Kevin Twohig	INS	AIA of Weldwood of Canada Ltd.'s forestry operations within the Quesnel, Horsefly and Williams Lake FDs
2001-024	Duncan McLaren	INS	AIA for Streamside Environmental Consulting's fishery enhancement projects on the E bank of Stave River, near the Ruskin Recreation Area
2001-025	Mike Pezel	ALT	Alterations to DiSc 035 by placement of trailer and associated excavations of waterline trench and septic line, at Rem. DL 9, Nanaimo LD, near Qualicum Beach
2001-026	Kevin Twohig	INS	AIA of UBC Alex Fraser Research Forest forestry operations within the Knife Creek and Gavin Lake Blocks, Williams Lake and Horsefly FDs
2001-027	Kevin Twohig	INS	AIA of Ainsworth Lumber Co. Ltd.'s forestry operations within the 100 Mile House, Horsefly, and Williams Lake FDs
2001-028	Peter Merchant	INS	AIA of International Forest Products (Southern Operations & Campbell River Operations), Weyerhaeuser - Stillwater Timberlands, Canadian Forest Products, Terminal Forest Products, and other licensees' forestry operations within the Asserted Traditional Territory of the Sechelt FN, Sunshine Coast area
2001-029	John Maxwell	INS	AIA of DhSe 015, located at 4986 Josephine Street, Port Alberni
2001-030	Michael Mitchell	ALT	Alterations to EfSw 001 by removal of the existing light tower at the Pine Island Light Station, located between N tip of Vancouver Island and the mainland
2001-031	Roderick Christie	ALT	Alterations to CMTs within DfSf 019 and DfSf 023, by forestry operations in Proposed Cutblock Opening 9659, Ritherdon Creek, South Island FD
2001-032	George Ralph	ALT	Alterations to DgRi 002 by construction of footings for a planned foot bridge, and development of a walking trail, in Chilliwack Lake Provincial Park at the W end of Chilliwack Lake
2001-033	Ian Franck	INS	Site inventory of a yet-to-be-selected 100 ha. area within Stó:lō Nation Asserted Traditional Territory located within the Chilliwack FD, to assist the MoF with "ground-truthing" the District archaeological overview model prior to implementation
2001-034	Tim Sutherland	ALT	Alterations to CMT #4 within DhSl 118 by International Forest Products Ltd.'s forestry operations in cutblock W1, TFL 54, Catface Range, Whitepine Cove, South Island FD
2001-035	George Nicholas	INS	Archaeological investigation of possible fish weir site on the South Thompson River near Kamloops
2001-036	Monty Mitchell	INS	AIA of Pacific Cascade Consultants Ltd.'s forestry operations within TSL 53411 in Kootenay Inlet and TSL 54791 in Clonard Bay, Queen Charlotte Islands FD
2001-037	Clinton Coates	INS	AIA for proposed telephone cable trenching on the W side of Adams Lake by Telus Outside Plant Engineering
2001-038	Tim Sutherland	ALT	Alterations to CMTs # P-10, P-13, P-15, P-17, P-20 within DhSl 096 by International Forest Products Limited's forestry operations in cutblock P10, TFL 54, Pinettle Creek, Catface Range, South Island FD
2001-039	Malcolm Makayev	ALT	Alterations to S margin of EjRn 018 by construction of a stabilizing wall for the eroding Churn Creek Road cut face, within DL 674 approximately 7 km SW of Dog Creek, Cariboo District
2001-040	Robert Ziegler	ALT	Alterations to CMTs 1 to 4, 6 to 13, 15 to 18, 18B, 19, 22 to 40B, 41 to 48, and C1 to C9 within GdTc 057, by Skeena Cellulose (Terrace Woodlands Operations) forestry operations in Cutblock 611500, approximately 8 km E of the Copper (Zymoetz) River - Skeena River confluence, Kalum FD
2001-041	Chris Bicknell	ALT	Alterations to CMT 12, C1, C3, C4, and C5 within EkSt 014, by Translake Services Ltd. airstrip clearing within Lot 162 on the W shore of Owikeno Lake, Mid Coast FD
2001-042	Liz Jones	ALT	Alterations to EcRq 001 by slope stabilization measures on the Birkenhead River
2001-043	Gary Bertrand	ALT	Alterations to the Cranbrook Petroglyph Site (DiPw 001), by construction of a 0.25 ha. logging landing on the extreme SE corner of Block 5, DL 4836, "Plan B-67" Kootenay District

2001-044	Ian Wilson	INS	AIA of International Forest Products Limited (Campbell River Operations), forestry operations within the Wakeman Sound, Charles Creek, Bell Isle Sound, Broughton Island, Gilford Island, and Bond Sound areas, Port McNeill FD
2001-045	Stephen Smith	ALT	Alterations to CMTs within EkSp 014, EkSp 016, EkSp 021, EkSp 028, EkSp 029, EkSo 001, and EkSo 002, Oweekeno Lake, Mid Coast FD
2001-046	Kevin Twohig	INS	AIA of Lignum Ltd.'s forestry operations within the Chilcotin and Williams Lake FDs
2001-047	Robert Vincent	INS	AIA of Weyerhaeuser Canada Ltd. (Doc Creek Operations) forestry operations within TFL 39, Mid-Coast FD
2001-048	Greg Pearson	ALT	Alterations to CMTs AD2, AD4 to AD27; V1, V1a, V2 to V5; G1a, G1b, G2a, G11, G12, and G14 to G34 within GdRx 001, by Canadian Forest Products Ltd.'s forestry operations in FL A40873, CP B05-87, Fort St. James FD
2001-049	Karen Brady	INV	Systematic surface collection of archaeological materials from portions of FaRv 003 affected by MoTH/Cariboo District proposed construction of drainage swale adjacent to the Chilko-Newton Road near the "Siwash Bridge" crossing of the Chilko River
2001-050	Peter Dady	INS	AIA for the Holland Point to Clover Point path relocation and the Dallas Road sidewalk installation between Montreal and Niagara Streets, Victoria
2001-051	Greg Pearson	ALT	Alterations to GdRw 012 (Duzcho Trail), by construction of three, 5 m-wide road crossings by Canadian Forest Products to access CP CAR Blocks 301 and 304, FL A40873, Fort St. James FD
2001-052	Kevin Twohig	INS	AIA of MoF forestry operations within the 100 Mile House FD
2001-053	Greg Pearson	ALT	Alterations to CMTs within GgSh 001 and GgSh 002, by Canadian Forest Products Ltd.'s forestry operations in FL A40873 CP HO4-182, Fort St. James FD
2001-054	Andrew Mason	INS	AIA for the proposed River Road (East) Corridor Improvement Project (Phase 2), running E along River Road for approximately 2.1 km from Nordel Way to Nelson View, Delta
2001-055	Bonnie Campbell	INS	AIA of Weldwood of Canada Ltd., and other licesees' forestry operations within the 100 Mile FD
2001-056	Kevin Twohig	INS	AIA of Riverside Forest Products Ltd.'s forestry operations throughout the Asserted Traditional Territories of Alexandria, Esketemc, Canim Lake, Canoe Creek, Clinton, North Thompson, Pavilion, Red Bluff, Soda Creek, Whispering Pines, and Williams Lake FNs, E of the Fraser River within the 100 Mile House, Horsefly, and Williams Lake FDs
2001-057	Stephen Vinnedge	ALT	Alterations to CMT #s M3, M4, M16 to M21, M23 to M26, M28 to M30, M32 to M40, M46 to M98, M100, M106, M109 to M129, M131 to M138, R30 to R33, 98-1 to 98-23, 98-25, 98-100 to 98-102, 98-105, 98-106, and 99-A1 to 99-A3 within FlTe 018; CMT #s 2 to 7 from FlTe 019; and CMT #s 8 to 42, 44, and 46 to 48 within FlTe 020, by West Fraser Mills Limited (Skeena Sawmills Division) forestry operations in FL A16885, Blocks M-100-6 and M-M-3, near Bish Creek on the W side of the Kitimat Arm of Douglas Channel, Kalum FD
2001-058	Ian Wilson	INS	AIA for residential and/or commercial gas service line development and/or upgrades for Centra Gas in the greater Victoria area
2001-059	Melanie Hill	INS	Inventory and AIA of the Tuchodi-Gathto-Kluachesi Trail corridor between the Tuchodi Lakes and Kluachesi trailheads, and evaluative testing of IbSd 001 and IbSc 002 within the central Muskwa Kechika Special Management Area of the Northern Rocky Mountains Protected Area, NE BC
2001-060	Robert Howie	ALT	Alterations to CMTs #1, 5 and 6 within DgSi 17, by forestry operations in Block 9918, FL A19234, near Toquart Bay, South Island FD
2001-061	Peter Merchant	INS	Inventory and AIA for a recreational trail proposed by BC Parks (Garibaldi/Sunshine Coast District), at the top of Mount Daniel near Garden Bay on the Sunshine Coast
2001-062	Shawn Hedges	ALT	Alterations to FiTm 004 and FiTm 005, by SBFEP forestry operations in TSL A53187 Block 2, on Banks Island, North Coast FD
2001-063	Richard Brolly	INS	AIA of Lot A, Section 2, Esquimalt District, Plan 31051 - Bowater Plywood Site, Township of View Royal
2001-064	Vicki Feddema	INS	AIA of Weyerhaeuser (West Island Timberlands), forestry operations within DL 363 near the village of Ahousaht on Flores Island, South Island FD
2001-065	Heather Pratt	INS	AIAs of TFL Forest Ltd. (Johnstone Strait Operations) forestry operations within TFL 47, Campbell River FD
2001-066	Jean Bussey	INS	AIA of Canadian Hunter Exploration Ltd.'s oil/gas developments in NE BC
2001-067	Sandra Witt	INS	AIA for a proposed multi-family housing development located at 3065 - 3175 Capilano Road, North Vancouver
2001-068	Laurence Brown	ALT	Alterations to CMT 1 within FbTa 005, by forestry operations in Block 4H, TFL 25 on Yeo Island, Mid Coast FD
2001-069	Heather Pratt	INS	AIA of Western Forest Products Limited's forestry operations within portions of TFL 19 and FL A19231 located on Vancouver Island and Nootka Island, Campbell River FD
2001-070	Antony Hewer	INS	AIA for proposed re-installation of a Canadian Coast Guard's radar beacon ("RACON") tower at Rose Spit, on the NE tip of Graham Island, QCI

2001-071	Robert Muir	INS	AIA of MoF, Tolko Industries, Slocan Forest Products, Chiltech Forestry, Jackpine Engineered Forest Products, C & C Wood Products, and other licencees' forestry operations within the Quesnel FD
2001-072	Karen Brady	INS	AIA of Tsi Del Del Enterprises Ltd., Riverside Forest Products Ltd., Lignum Ltd., and other licensees' forestry operations within the Chilcotin FD
2001-073	Rob Lackowicz	INS	AIA of Pope and Talbot Ltd. and other licensees' forestry operations within the Boundary FD
2001-074	Rob Lackowicz	INS	AIA of Tolko Industries Ltd. and other licencees' forestry operations within the Salmon Arm FD
2001-075	Chris Engisch	INS	AIA of Tashwin Resource Management, Coulson Group of Companies, and other licensees' forestry operations within the South Island FD
2001-076	Antony Hewer	INS	Site inventory and AIA of Pacific Beach Investments' proposed residential subdivision at 4053 Gordon Head Road, Victoria
2001-077	Joel Kinzie	INS	AIA of Southern Nlaka-pamux Forest Resources Ltd. and JS Jones Timber Ltd.'s forestry operations in cut blocks SNFR-A47273-CB A2 and Y2, within the Chilliwack FD
2001-078	Robbin Chatan	INS	AIA of Western Forest Products Ltd.'s forestry operations within those portions of TFL 6 and TFL 25 in the ATT of the Quatsino FN, Port McNeill FD
2001-079	William Prentiss	INV	Archaeological excavations at EeRl 007, Keatley Creek, near Lillooet, BC
2001-080	Martin Handly	INS	AIA of MoF, Atco Lumber Ltd., and other licensees' forestry operations within the Arrow, Kootenay Lake, and Columbia FDs
2001-081	Doug Brown	INS	AIA of a proposed log sorting yard within DL 6797, New Westminster LD, on Ten Mile Bay, W side of Harrison Lake, Chilliwack FD
2001-082	Martin Handly	INS	AIA of Gorman Brothers Lumber Ltd. and other licensees' forestry operations within the Penticton FD
2001-083	Rob Lackowicz	INS	AIA of Gorman Brothers Lumber Ltd., Tolko Industries Ltd., MoF/SBFEP, and other licensees' forestry operations within the Vernon FD
2001-084	Chris Engisch	INS	AIA of Western Forest Products Ltd. and other licensees' forestry operations in Oweekeno Nation ATT, Mid-Coast FD
2001-085	Gail Wada	INV	Archaeological investigations and monitoring of proposed expansion and servicing of the X̲á:ytem Longhouse (DgRn 023), in the community of Hatzic, Fraser Valley
2001-086	Douglas Hudson	INV	Site inventory and research excavations at DkRn 001 and DkRn 005 (Six Mile Site), located on the W side of the Lillooet River, 5 to 8 km upstream from the head of Harrison Lake
2001-087	Normand Canuel	INS	AIA of Canadian Forest Products and other licensees' forestry operations within the Fort St. James FD
2001-088	Normand Canuel	INS	AIA of proposed forestry developments by Canadian Forest Products and possibly other licensees within the Morice FD
2001-089	Gail Wada	INS	AIA for proposed mushroom-composting facility on DL 2582s, SDYD, E side of the Similkameen River near Princeton
2001-090	Clinton Coates	INS	AIA for proposed residential subdivision and access road on DL 1060, except Plans 9062 and H10420, LLD, S of Clinton
2001-091	Peter Dady	INS	AIA for a residential redevelopment at 9498, 9488, and 9484 Lochside Drive, Sidney, near DdRu 004
2001-092	Roderick Schoof	ALT	Alterations to EbRj 154 located between Fraser and Main streets, and N of Seventh Avenue within the Town of Lytton, and associated alterations to EbRj 001 by construction of a new bridge crossing and approaches over the Thompson River
2001-093	Normand Canuel	INS	AIA for proposed subdivision of Lot 1, DL 5440, CLD Plan 22493, Cariboo LD, on the E side of Dragon Lake near Quesnel
2001-094	Ian Franck	INS	AIA of the SE corner of Onni's Mayfair Place, near Katzie Slough, Pitt Meadows
2001-095	Doug Meske	ALT	Alterations to CMTs 1-4 and 9-27 within DkSn 002, CMTs 5-8 within DkSn 003, and CMTs 1-3 within DkSn 004 by Western Forest Products Ltd.'s forestry operations in Blocks F92 and F93, near McMurdy Creek in the Campbell River FD
2001-096	Normand Canuel	INS	AIA of Canadian Forest Products and other licensees' forestry operations within the Lakes FD
2001-097	Veronica Cadden	INS	AIA of Plateau Forest Products Ltd., MoF, Woodlot Holders, and other licensees' forestry operations within the Vanderhoof FD
2001-098	Jennifer Lucuyer	ALT	Alterations to CMTs within FjSk 008 and FjSk 009, by West Fraser Mills Ltd.'s forestry operations in CP 430, Block 137A, FL A16826, located 7.5 km S of the E end of Ootsa Lake, Lakes FD
2001-099	Bjorn Simonsen	INS	AIA for International Forest Products (Mid-Coast Operations & Heli-logging Group) forestry operations in the Rivers Inlet and Smith Inlet areas, Mid-Coast FD
2001-100	Keary Walde	INS	Pre- and post-AIAs of oil/gas developments by Anderson Exploration Ltd., Canadian Natural Resources, Coastal Oil & Gas, Penn West Petroleum Ltd., Suncor Energy Inc. and other petrochemical companies, within the Fort St. John FD

ANNUAL INDEX TO *THE MIDDEN* VOL. 32, 2000

Compiled by Heather Myles

*indicates illustrated article

BOOK REVIEWS

CONFERENCES 2002

January 3-6 **Archaeological Institute of America (AIA), 103rd Annual Meeting**
Philadelphia, Pennsylvania, USA
The AIA Annual Meeting brings together professional and avocational archaeologists from around the world to learn about the latest developments from the field. It provides a forum for archaeologists to present the latest results of their work, and share information at workshops and roundtable sessions. Information regarding the AIA Annual Meeting will be posted on the AIA Web site as details are finalized.
Contact: Jennifer Moen, Conference Manager, Archaeological Institute of America, 656 Beacon Street, Boston, MA, 02215-2006; tel. (617) 353-9361; fax (617) 353-6550; email: aiamtg@bu.edu; Web site: www.archaeological.org

March 20-24 **Society for American Archaeology (SAA), 67th Annual Meeting**
Denver, Colorado, USA
Deadline for submissions is September 5, 2001. On-line individual and symposium submission forms are available at the SAA Web site. The preliminary program will be posted on the SAA Web page at the end of December 2001.
Contact: SAA Headquarters, 900 Second Street NE #12, Washington DC, 20002-3557, USA; tel. (202) 789-8200; fax (202) 789-0284; email: meetings@SAA.org; Web site: www.saa.org

EXHIBITS

Museum of Anthropology: Continuing Traditions

Gallery 3
Through April 30, 2002

This new exhibit module, *Continuing Traditions,* features Coast Salish baskets. It was prepared by UBC Anthropology MA candidate Sharon Fortney in collaboration with Museum staff and representatives from the Squamish, Klahoose, Stlíatlíimx, and Nlakaípamux First Nations. Continuing Traditions focuses on the evolution of Coast Salish basketry over the past 50 years.

CONFERENCES 2001

September 20-23

5th Biennial Rocky Mountain Anthropological Conference, "Rocky Mountain Archaeology in the 21st Century"
Waterton Lakes National Park, Alberta
This conference provides opportunities to discuss anthropological, archaeological, and paleoenvironmental topics of interest to researchers throughout the Rocky Mountains. The Plenary Session is entitled "Ascending New Peaks: Archaeology, Paleoecology, Traditional Knowledge and Rocky Mountain Ecosystem Management in the 21st Century." Proposed Symposia include: Issues in Rocky Mountain Climate Change; The Rocky Mountain Experience: White 19th-20th Century Resource Exploitation and Development; Hunting the High Country: Pre-contact Rocky Mountain Alpine Hunting Patterns; First Nations, Roots, Routes & The Rocky Mountain Corridors; Real People Ate Meat?: Problems/Perspectives in Rocky Mountain Paleoethnobotany; First People: Early Holocene Occupancy and Environments of the Rocky Mountains; Pleistocene Holocene Transition in the Rockies: Synthesis and Current Research.
Contact: Brian Vivian, Program Chair, Rocky Mountain Anthropological Conference, 107-811 Manning Road NE, Calgary, AB, T2N 7L4; email: rmtnac@telusplanet.net; Web site: www.rm-ac.com/lifeways/information.html

October 26-27

10th Annual BC Archaeology Forum
Burnaby, British Columbia.
This year's BC Archaeology Forum will be held at Simon Fraser University. The organizing committee consists of Robbin Chatan, Monica Karpiak, Doug Brown, Nicole Oakes, and Mike Brand.
Contact: email: bcarch1@sfu.ca

November 14-18

34th Annual Chacmool Conference, "An Odyssey of Space"
Calgary, Alberta
The concept of space and how it is perceived from the archaeological record is the central theme of the Chacmool 2001 conference. Cultures past and present have defined and utilized space in many diverse ways. This conference will examine a broad range of topics including: Definitions of Space—boundaries, enclosures; Uses of Space—ways in which space is divided in households and communities; Landscape Approaches in Archaeology; Mapping Space—remote sensing, GIS, and GPS; Ideological Concepts and Constructs of Space; Sacred Space—perceptions of space, creation myths; Archaeoastronomy—e.g., the Nazca Lines; Geoarchaeological Investigations; Spatial Relationships in Mortuary Settings; the Temporalization of Space—the relationship between space and time; Ethnographic Studies of Space; Ancient Maritime Utilization of Space—underwater archaeology; and Spatial Data Management within CRM.
All undergraduate and MA students presenting papers at the conference are urged to submit their papers for consideration of the Bea Loveseth Prize. This is an award of $200 for the best paper presented by an undergraduate or a Master's student at the Chacmool Conference. The award is made in memory of Bea Loveseth, a former President of Chacmool. Papers must be submitted no later than November 1, 2001 to: the Bea Loveseth Prize Selection Committee, Department of Archaeology, University of Calgary, Calgary, Alberta, T2N 1N4.
Contact: 2001 Conference Committee, Department of Archaeology, University of Calgary, 2500 University Drive NW, Calgary, AB, T2N 1N4; tel. (403) 220-7120; fax (403) 282-9567; email: chacmool@ucalgary.ca; Web site: www.ucalgary.ca/UofC/faculties/SS/ARKY/Dept_Files/chacmool.html

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