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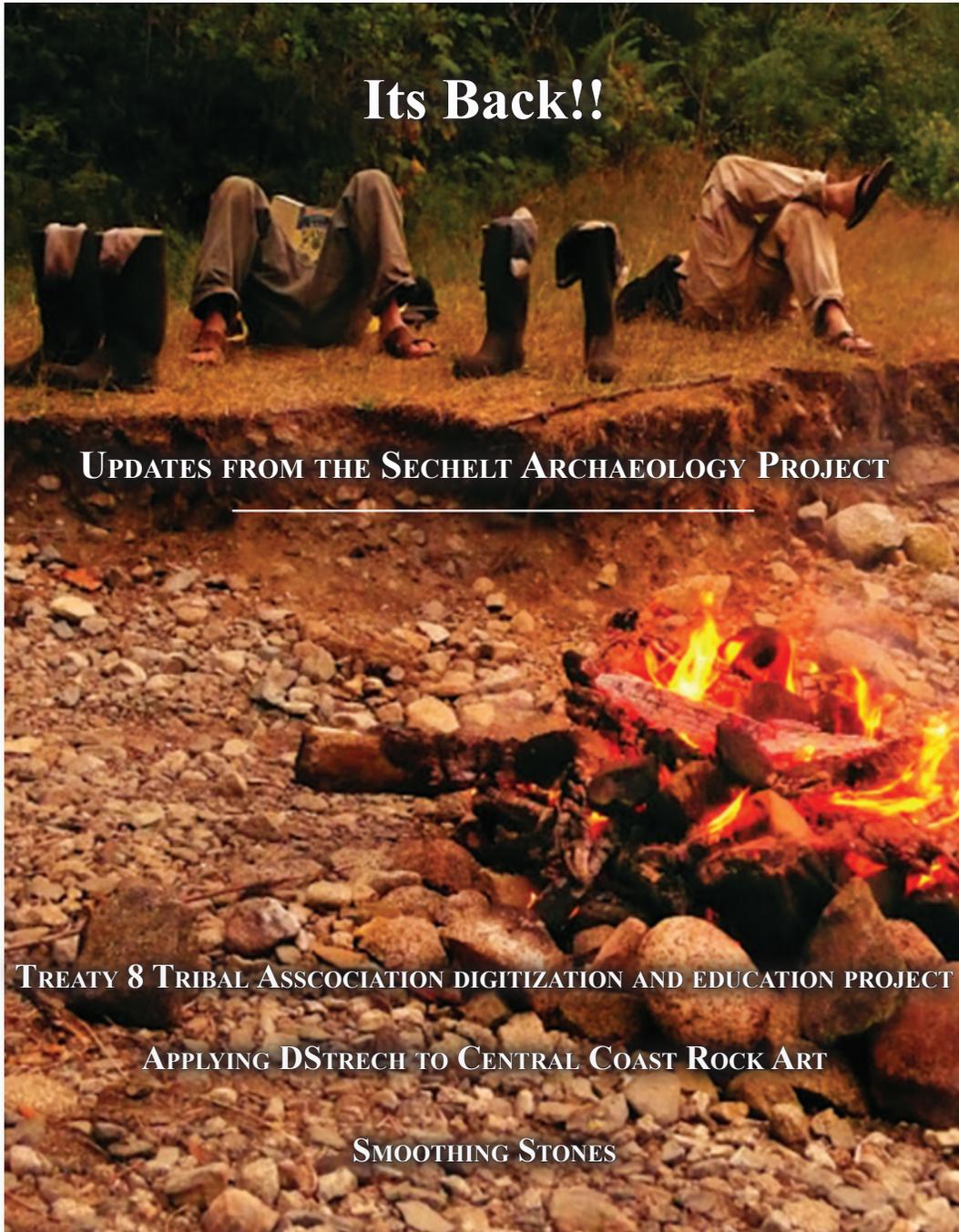
Its Back!!

UPDATES FROM THE SECHELT ARCHAEOLOGY PROJECT

TREATY 8 TRIBAL ASSOCIATION DIGITIZATION AND EDUCATION PROJECT

APPLYING DStrech TO CENTRAL COAST ROCK ART

SMOOTHING STONES





THE MIDDEN

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and the spread of archaeological knowledge.

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ARCHAEOLOGICAL SOCIETY OF BRITISH COLUMBIA meetings in Victoria featuring illustrated lectures are now generally held on the third Tuesday of each month from September to May at 7:30 P.M. at the University of Victoria, Cornett Building, 3800 Finnerty Road, Victoria, BC. Details on lectures are often listed on the *Conferences & Events* page (back cover). New members and visitors are welcome. Admission is free.



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THE MIDDEN Subscriptions

Subscriptions to **THE MIDDEN** are included with ASBC memberships at a price of \$25, \$18 for students, and \$35 for families.

Single copies of most previous issues are available for \$5.00 each, plus postage.

Subscription forms and membership application forms are available on our facebook site www.facebook.com/ASBCVictoria and available upon request from our email asbcmidden@gmail.com. Our regular page asbc.bc.ca is under reconstruction.

Cover image: Days end on the Sechelt Field Project (photo: Jacob Earnshaw).

From the Editor

If you're reading this, then you already know that the Midden is back! We're so glad to be able to bring you this issue, late though it may be.

This issue is brought to you by the executive of the ASBC with the invaluable assistance of several past editors. Our thanks go to Richard Hutchings, Ian Cameron, and Rastko Cvekic. It has been a steep learning curve for some of us, but we're glad to have had the opportunity to work on this issue together. My sincerest thanks to everyone involved.

We'd like to dedicate this issue to the memories of Gerald Merner and Don Mitchell.

The indefatigable Donald Mitchell passed away earlier this year. A notable figure in BC Archaeology, Don was involved in many facets of the discipline, from teaching at UVic, to advising lawmakers and elementary school teachers. Most of you will have known him, met him, or learned from his work, which has had a lasting impact. His obituary (p.3) was written by Becky Wigen and Quentin Mackie, former students and colleagues of Don's. He will undoubtedly be missed by many of our readers.

In 2015, we lost long-time ASBC member Gerald Merner. The society has established a scholarship in his memory, which is designed to assist an undergraduate student attend their first field school. Elisa Moes, an undergraduate in UVic's Anthropology Department, was awarded the first Gerald Merner Memorial Scholarship. A description of her field school experience can be found on p. 29-30 of this volume.

We have been playing catch up with this issue of the Midden. Accordingly, some of the features are present while others will have to wait for a subsequent issue. This installment of "From the Midden Archives" features the 1994 article by Dana Lepofsky about

palaeoethnobotanical investigations at Keatly Creek. Alan McMillan took on the mammoth task of reviewing the 1,120 page *Native Art of the Northwest Coast: A History of Changing Ideas*. We plan to reintroduce the feature "Focus on BC Museums" in the following issue by discussing the significant strides made by the BC Archaeology Repository community during the past year. Thereafter, we plan to pay special attention to individual repositories or particular issues they face.

This issue also contains a number of articles about recent and ongoing research. From a summary of the Sechelt Archaeology Project from 2008 to the present (Bilton & Letham), to the application of digital enhancement techniques to rock art on the Central Coast (Skala), a collaborative effort between SFU and Treaty 8 to repurpose digital assets (McLaughlin & Nilson), and the exploration of a new group of artifacts (Eldridge), the articles in this issue represents only a fraction of the excellent work taking place in BC.

In keeping with the times, we have been digitizing the Midden archive in order to make it publicly accessible. New issues will be made available to members exclusively for one year, at which point they will be added to the digital archive. The University of Victoria's library has graciously agreed to host the journal archive, for which we are deeply grateful.

Going forward, we plan to produce two issues of the Midden each year. We welcome submissions pertaining to BC Archaeology, from fieldwork to artifacts, experience to ideas. Feedback is also warmly welcomed.

Genevieve Hill
Midden Editor



The ASBC Pages

PRESIDENT'S LETTER

The Archaeological Society of BC has reached 50 years!

After a short hiatus the Society and its journal, the Midden, are back up and running. The new executive is now based in Victoria. The transition was aided by the last acting President, Janice Graff, who kept the society afloat through a period of inactivity. Our current executive is as follows: President, Jacob Earnshaw (MA UVic, Golder Associates); Financial Secretary, Tom Bown (BSc RPBio, NRCan and volunteer researcher at Royal BC Museum); Membership Secretary, Nicole Westre (MA UVic, Golder Associates); Midden Representative, Dr. Genevieve Hill (PhD, Anthropology Collection Manager and Researcher at the Royal BC Museum); Recording Secretary, Callum Abbott (MA Candidate UVic); Member at Large, Jenny Cohen (MA UVic, Millenia Research); Member at Large, Shauna Kirby (BA UVic, Golder Associates); Member at Large, Colton Vogelaar (MA Candidate UVic).

Our immediate goal of solidifying the Society's foundations has been partially completed. The ASBC nearly lost its standing as a registered charity which would have meant surrendering our finances and completely starting over. Our application for reinstatement, along with a \$500 penalty, has been submitted and we are hopeful for a positive result.

We are pleased that within the first few months of 2016, we have had 55 members sign up. We are hopeful that by re-establishing the Midden and expanding our services more members will sign up.

This issue of The Midden signifies a return of the journal after a three-year hiatus. The Midden will be published twice a year for the foreseeable future. The journal will be published in PDF format, how-

ever we will print a limited run of hardcopy colour issues for circulation to institutional subscribers and members who are willing to pick them up from our monthly lectures. We are also in the process of digitizing the 50 year archive of Midden Journals and have partnered with the University of Victoria Library to host them. By the end of this year all back-issues will be available online.

Finally, we are in the process of updating the stagnant asbc.bc.ca website. The redesigned website will link viewers to the newest Midden issues, as well as the Midden archive. It will also highlight upcoming talks, workshops, and events, and allow for easier membership renewal. We also hope to host an active blog and multimedia page.

We have conducted a monthly lecture series at the University of Victoria between September and May. In October of last year we participated in the BC Archaeology Forum in Vancouver, and in May of this year we attended the Canadian Archaeological Association Conference in Whitehorse. With the passing of long-time member Gerald Merner, we established the Gerald Merner Memorial Field School award for a student participating in their first Archaeological field school. Elisa Moes, an undergraduate in UVic's Anthropology Department, was the first recipient. Her reflection on her field school experience on the central coast of BC can be found in this issue.

Our short-term goals are twofold: we aim to increase membership and to offer more services and opportunities to members of the Society. We feel there is great interest in the Society but in recent years the Society has not offered enough in the way of hands-on learning opportunities to students, professionals and the public. In the long term we hope to create partnerships with other archaeological and scientific institutions in and around the province and beyond, to

start archaeological projects providing members with opportunities to participate, to resurrect the lecture series in Vancouver, and to encourage the emergence of new society chapters throughout the province. Our aim this coming summer is to seek out external funding opportunities and partnerships to facilitate these changes.

Time will tell as to how our efforts pay off, but we are optimistic that the Society is well poised to promote and protect archaeology in British Columbia for the next 50 years. We will report back!

Best,

Jacob Earnshaw
President, Archaeological Society of BC.

In Memorium: Professor Emeritus Donald H. Mitchell

Becky Wigen
& Quentin Mackie

Donald H. Mitchell, Professor Emeritus, a member of the Anthropology Department from its inception to his retirement in 1995, died unexpectedly on February 27, at his home in Eastend, Saskatchewan. Don is survived by his brother Howard, his daughter Lisa, and two grandchildren: Paloma and Anand.

Don initially took a BA in History and Economics (1955) and later a BComm (1958) from the University of British Columbia (UBC) with the intention of working in the family publishing business. However, an evening course in Anthropology from Carl Borden led to an MA in Anthropology (1963) from UBC, followed by a PhD in Anthropology from the University of Oregon in 1968 based on his dissertation *Archaeology of the Gulf of Georgia Area: A Natural Region and its Culture Types*. He joined the Anthropology and Sociology Department at UVic in 1965 as the second anthropologist and the first archaeologist in the department. He was instrumental in establishing the anthropology program as a four-field department in the Boasian tradition at both the undergraduate and graduate levels. He served as the founding Chair of the newly independent Department of Anthropology from 1973 to 1975 and Associate

Dean of Arts and Science from 1976 to 1979. A Professor in Anthropology, he retired from the University of Victoria in 1995.

Don did archaeological field work in many areas in the province, but became focused on Salish Sea and other Vancouver Island sites. Many of his articles are considered seminal works in BC archaeology. In particular he was interested in the economic and environmental aspects of archaeology. This led to interest in and collection of non-artifactual materials such as bones, shells, wood and seeds. He and his students were some of the first BC archaeologists to collect and analyze column and soil samples from midden sites. Don was also among the first archaeologists to insist on a meaningful role for First Nations in the archaeology of their long-term history. He was instrumental in developing an archaeological training program for Indigenous youth in the early 1970s and he routinely involved local First Nations band members in his archaeological excavations. His emphasis on detail, clarity of reporting and data-based conclusions was passed along to his graduate students, many of whom work in archaeology today. He was awarded the Smith-Wintemberg Award in 1998 by the Canadian Archaeological Association for outstanding contributions to the discipline of archaeology.

In addition to his academic career, Don was very involved for 28 years in the development of heritage legislation and policy in BC, contributing his expertise to the Heritage Conservation Act, as well as serving on the Archaeological Sites Advisory Board, the Provincial Heritage Advisory and the Heritage Trust. He also served as editor of the *Canadian Journal of Archaeology* and advisor to *Syesis* (a journal produced by the RBCM). In addition, he served on the British Columbia Department of Education's Elementary Social Studies Revision Committee, which introduced Anthropology and Social Science into the Elementary School curriculum. He also produced a variety of public-educational materials, including several slide sets for teaching and a video on basketry.

All of these accomplishments point to Don Mitchell's impressive and lasting impact on BC archaeology and the Department of Anthropology, but say little about the individual behind them. What we remember, as former graduate students and colleagues, is a man of patience and sharp intellect, with a dry, wicked sense of humour. We miss him very much.

The Sechelt Archaeology Project (2008 - present)

David Bilton and Bryn Letham

In 2008, after more than two decades of archaeological research in and around Prince Rupert Harbour, Gary Coupland began a research program in the Sunshine Coast region of British Columbia, in the territory of the *shíshálh* Nation. This project has investigated the organization of complexity among prehistoric hunter-gatherers in this region by excavating village sites, testing smaller sites, and conducting a regional survey (Coupland et al. 2012).

The project proposed two basic research questions: (1) how did *shíshálh* hunter-gatherers organize production, both locally at the level of the household, and regionally; and (2) how did social



Figure 1 - Shishalh and University of Toronto students excavating at DjRw-1. (photo: author)



Figure 2 - Coastal survey through Salmon Inlet (photo: Jacob Earnshaw)

practices, in particular the domestic routines of everyday life, make systems of stratification within the region possible? These questions were to be investigated through the following four specific objectives:

1. Organization of Production: the excavation of archaeological house features - the material correlates of ancient households - to investigate how households were organized to produce, how labour was allocated, how subsistence and prestige economies were structured, and whether or not

organizational variability existed among households.

2. Household Practice: an examination of the ordering of household space in archaeological house features to look at how structures of social stratification were inculcated and reinforced through daily domestic routines.

3. Regional Settlement Patterns: a regional survey examining how *shíshálh* settlement patterns developed in the context of aquatic mobility and how this mobility was linked to emergent complexity.

4. Subsistence Patterns: the identification of the subsistence strategies upon which hunter-gatherer complexity was built amongst the *shíshálh*, whose adaptation was not the same as Coast Salish groups in immediate proximity to the Fraser River. *shíshálh* territory is cut by many deep fjords and has many protected inlets, streams and rivers. How were *shíshálh* subsistence practices organized in this distinctive context?



Figure 3 - Test excavations in Narrows Inlet (photo: author)

This article briefly overviews our field research in the area and reviews key results that are relevant to these research objectives, as well as some that have taken us down somewhat unpredicted research avenues.

In July, 2008, Coupland, Bilton and a small crew were shown sites on *shíshálh* band lands that had been identified as village sites by Peter Merchant, an archaeologist working for the *shíshálh* Nation. *shíshálh* chief and councillors took part in some of these site surveys. In subsequent years, the project has also operated as a field school for University of Toronto undergraduate students and as a training program for *shíshálh* Nation members.

Sites DjRw-1 (Porpoise Bay) and DiRw-28 (Trail Bay) were initially selected as targets for intensive excavation because they were large and had deep sequences of cultural material. Both sites also had visible “house pit” features reminiscent of those found at village sites in the Prince Rupert Harbour region. In the following years, we excavated these sites and four others, and conducted surveys of Narrows Inlet and Salmon Inlet.

DjRw-1, Porpoise Bay

DjRw-1 is one of many identified archaeological sites on Porpoise Bay at the south end of Sechelt Inlet. There was a historic village site known

as *shhalt* here; its location on the inland side of the Sechelt isthmus, the only narrow and low elevation land access to the series of inlets located east of the Sechelt Peninsula, made it a strategically important place. Excavations at this site identified two main prehistoric components.

Radiocarbon dates indicate that the early occupation lasted from around 4000 cal. BP until about 2800 cal. BP. These older deposits are many meters back from the modern shoreline and contain scatters of small stone disc beads and a smaller number of shell disc beads. Present evidence indicates a hiatus in the occupation of DjRw-1 from about 2800-1800 cal. BP. Most likely, human occupation shifted away from DjRw-1 to other parts of Porpoise Bay for a period of time, as there are many other sites recorded in the bay.

By ca. 1800 cal. BP, use of DjRw-1 in the areas we excavated resumed, this time closer to the



Figure 4 - Porpoise Bay excavation (photo: author)

modern shoreline. Radiocarbon dates indicate that the later occupation of DjRw-1 lasted until about 750 cal. BP. However, the upper layers of this site were leveled in modern times and it is entirely possible that the site was occupied right through into the colonial period. Artifacts were not abundant, but were typical of the archaeological cultures represented in the Salish Sea region (e.g., Matson and Coupland 1995).

A rectangular house feature was identified at DjRw-1, partially obliterated by the modern development. This feature is defined by a flat floor area, and raised ridges or berms on the west and north sides. The rectangular floor was oriented parallel to the beach and was about 10 metres wide and at least 10 metres long. Excavations here revealed probable floor deposits, but no architectural or household features such as hearths or posts. Radiocarbon dates indicate that this feature may have been occupied as a house about 3000 cal. BP.

With regards to faunal remains, all assemblages from DjRw-1 are dominated by local fishes – herring, salmon, dogfish, flatfish, and surfperch. In the early component herring are the most common taxon overall but salmon are also abundant while dogfish are a distant third. In the later component

herring become overwhelmingly abundant but the other taxa remain present. Shellfish collecting and processing consistently focused primarily on littleneck clams, butter clams, basket cockles, and bay mussels in both components. There is a noteworthy increase in the proportion of land mammal at the end of the early component (c. 3000 cal. BP) – most of which is probably deer – otherwise, mammals and birds are not strongly represented.

Overall, the faunal remains suggest that this site was used year round – herring in spring; salmon in spring/summer/fall and, if preserved for storage, winter – especially in the earlier

component. The later occupation appears to have been more focused on herring harvesting and processing. Other observed subsistence resources were available locally and year-round.

DiRw-28, Trail Bay

DiRw-28, within the area known as *ch'átlich*, encompasses most of the shore land surrounding Trail Bay, on the outer coast of *shisháhlh* territory, on the Gulf of Georgia. It is somewhat well-known as the recovery location of the “Sechelt Image”, a 50-cm-high granite statuette weighing 32 kg that depicts a mother holding a child. At the southern terminus of Trail Bay, there was an ethnographically recorded large wooden wall surrounding a large oval shaped defensive palisade on a granite dome with a lookout tree (Peterson 1990:28). The site also contains discontinuous shell midden deposits along the shoreline, and dense shell deposits and possible house depressions in a relatively undisturbed area about 25 metres above the high tide line at the centre of the bay. The shell midden here is unusual for its high elevation and distance from the shoreline (about 50 metres). We conducted excavations in the upper shell mound, the house depressions, and in the

shoreline midden (Bilton 2014).

The upper shell mound is oval-shaped, roughly 60 metres in length east to west, and 30 metres in width, north to south. It consists of up to 2 metres of stratified crushed shell and charred/cracked rock (CCR). Artifacts were not abundant but, as at DjRw-1, typical for Salish Sea sites of this age. Six U-shaped depressions, five of which were about four metres wide and five metres long, are located in front of the shell mound. Excavations in two of these features uncovered moderately compacted loamy soil deposits with no evidence of recognizable house floors or floor features. We recovered few artifacts and faunal remains (and no shell) from these excavations. As such, the function of these features remains unknown. We are of the opinion that they were culturally produced but the only evidence that they are the remains of habitation structures is the shell mound behind them, which clearly shows that this upper elevation area of the site was used by the occupants for domestic or, perhaps, feasting purposes.

Radiocarbon dates indicate that the upper mound was deposited over the same period of time as the shoreline shell midden. An earlier period of intensive occupation dates to about 3000-2500 cal. BP and a later occupation dates to about 1500-600 cal. BP. The site was not likely abandoned during the interim, but areas of DiRw-28 may have been used less or left unused at this time. We did not obtain any dates from the cultural depressions. Unlike DjRw-1, there is little archaeological evidence for the site's use in the late prehistoric or early colonial period, which is corroborated by ethnographic accounts (Hill Tout 1978; Peterson 1990).

Fish account for the vast majority of the faunal remains recovered at DiRw-28, with herring, salmon, and flatfish being the most common taxa. Shellfish, especially bay mussel, were an

important resource throughout the site's occupation. There is very little change through time in the faunal assemblage, but there are some distinctions between the upper and lower shell middens: 1) the overall density of fish is lower in the lower midden; 2) the proportion of herring is much lower in the lower midden; and 3) the proportion of salmon is much higher in the lower midden. These distinctions could be the result of seasonal use of space: the higher density of fish and proportion of herring, possibly accompanied by the consumption of processed (boneless) salmon, could indicate winter/spring occupation at the upper part of the site; the higher proportion of salmon bones (salmon processing?) may indicate a summer/autumn occupation at the lower part. Another possibility is that these middens represent two segments of a village, one of which had privileged access to salmon.

DjSa-48, Madeira Park

DjSa-48, within the area known as *sálálus*, is located just west of Madeira Park in the southeastern portion of Pender Harbour. Pender Harbour is a protected series of bays on the outer coast of the Sechelt Peninsula. Radiocarbon dates indicate that the prehistoric component of *sálálus* extends back



Figure 5 - Stone fish trap in the inlets (photo: author).

~1200 years and seems to have been actively used into the colonial period, when it was a fishing station and garden (Merchant 2012:35). The site consists of an area of shell midden up to 1 m deep along the shoreline of a small peninsula and a canoe skid and a stone fish trap in the adjacent intertidal zone. Two 1 m² test units yielded only a few artifacts, but there was an abundance of faunal remains that includes herring and other small fishes. Salmon were notably rare. Shellfish, especially bay mussels and a variety of clams, were also abundant in the archaeological deposits.

Pender Harbour itself was the centre of the *shishálh* settlement system in the colonial period (Barnett 1955; Hill-Tout 1978). The intensive past settlement and use of Pender Harbour is evidenced by the number of archaeological sites along its shores and its importance in ethnographic records (Barnett 1955; Hill-Tout 1978.) The ethnographically recorded winter aggregation village of *séxw?ámin* is located about 1 kilometre north of DjSa-48 (Barnett 1955). Our crew identified cultural deposits over 3 meters in depth at *séxw?ámin* (DjSa-3) under modern buildings. Many of the settlement and camp sites in Pender Harbour, such as DjSa-48, may have been satellites centered on the main settlement at *séxw?ámin*

Salmon and Narrows Inlet Surveys and Inlet Site Excavations

In 2009 and 2010, we surveyed the shorelines of Salmon and Narrows Inlets, north of the town of Sechelt, to assess the nature of occupation and land-use on the inner-coast area of *shishálh* territory, and to place the intensively excavated sites into a broader context of regional settlement patterns (Johannesen 2010; Letham 2011, 2014). Forty-eight previously unrecorded archaeological sites were identified, combining with 43 previously recorded sites to make

a total of 91 recorded sites on the shores of the inlet system. The majority of the newly identified sites were small habitation sites with shell-bearing components, though site size was mediated by the availability of habitable space along the steep inlet shores. Nearly any place where one could land a canoe and set up a camp has archaeological remains, indicating thorough use of these waterways. The largest habitation sites in the inlets are clustered around limited economically-productive spaces such as large tidal flats and tidal narrows and/or areas that could have been strategically important for monitoring or controlling movement through the narrow inlet system (Letham 2014).

Preliminary seasonality estimates based on several faunal indicators from archaeological bulk samples from the sites suggest spring-through-fall use of the inlets, which would be consistent with the ethnographically-observed settlement pattern in which populations gathered in large villages on the outer coast of the territory (such as *séxw?ámin*) during the winter, and dispersed to smaller camps throughout the territory during the rest of the year (Barnett 1955; Letham 2014). Trail Bay and Porpoise Bay both appear to be large aggregation-type villages on and near the outer coast, respectively, that would have had winter occupations. Ra-



Figure 6 - Letham augers site (photo: author)

diocarbon dates from several inlet sites indicate that these areas were occupied by at least 6500 cal. BP, though the majority of dates fall within more recent millennia.

In 2012, we conducted small test excavations at two newly identified sites, DkRw-22, in Storm Bay, near the mouth of Narrows Inlet, and DkRw-26, near Tzoonie Narrows mid-way up Narrows Inlet. Both of these sites are large (285 m² and 1500 m², respectively) relative to most other habitation sites in the inlets, though significantly smaller than those excavated near the outer coast (>10,000 m²

in many cases). We selected each for excavation because they had rectangular terraces visible on the surface topography that we hypothesized could be house platforms; the sites were likely small seasonal villages with ~3-6 small houses. In six 1 m² units at DkRw-22 we found a hard-packed, clean, flat surface consisting of ash and burnt crushed mussel shell that covered a wide area that we interpret as having been a living surface inside of a small structure. In a single 1 m² excavation at DkRw-26 we found several small (<1 m) circular depressions filled with this distinctive ash and burnt crushed mussel that were stacked on each other and surrounded by

typical shell midden matrix. While consisting of a similar matrix as that which made up the potential house floor at DkRw-22, these features did not cover an area wide enough to logically be a floor surface, though they may have been features within a sequence of more ephemeral floors. Radiocarbon dates place the occupation of the terrace between 500 years ago and just prior to European contact. The terrace that we excavated at DkRw-26 was occupied between 900 and 500 years ago.

At DkRw-22 there was a surprising dearth of vertebrate faunal remains, though of those analyzed, the assemblage was about 50% (land) mammal and 50% fish. Of these fish remains (n=112), almost half were salmon. At DkRw-26 vertebrate faunal remains were much more abundant; in this case over 95% were fish. The assemblage is diverse, with herring, flatfish, and rockfish being the most abundant and salmon being only a minor contributor. This suggests different functions or subsistence practices between these two inlet sites; DkRw-26 was situated for convenient access to the productive Tzoonie Narrows, which likely yielded the diverse set of fish that were found there. Overall, it is apparent that the inlets were an important part of prehistoric settlement patterns and were utilized for a wide range of resource



Figure 7 - Test excavation, Narrows Inlet (photo: author)

gathering.

Furthermore, places in the inlets held immense spiritual importance for prehistoric occupants. One of the most important finds of the inlet survey was at DjRw-14, beneath an abandoned Bible Camp in Salmon Inlet. The site had been previously recorded as a small lithic scatter and shell-bearing component by CRM archaeologists, though we discovered a much larger area of shell midden that extended beneath nearly the entire Bible Camp that had been heavily disturbed by the construction of buildings and roads for that facility. The pre-contact archaeological remains at the site are the most extensive of any observed in the survey; DjRw-14 is the largest shell-bearing site in Salmon and Narrows inlets. During an evening stroll through the abandoned wreckage in 2009, Letham came upon thousands of tiny ground stone disc beads similar to those observed in the early components at Porpoise Bay eroding out from a bank that had been cut into for the construction of a Bible Camp building that no longer stands. These mudstone and shale beads were also observed *in situ* in the exposed profile as a layer about 10 cm thick and 1.1 m wide, leading Letham to realize that there were at least tens of thousands of beads in a single deposit, which he speculated could be associated with a burial. The find was reported to

the *shishálh* Nation, and in 2010 Bilton and Letham were granted permission to conduct test excavations at DjRw-14, and we returned in 2011 and 2012 to continue work at this site. These excavations were conducted in collaboration with a team of archaeological technicians who worked with Kenzie Jesse from the *shishálh* Nation; including Darryl Jackson, Keith Julius Jr, and Tyrone Joe-Mayes.

In 2010, we excavated several test units, including one directly above the bank exposure with the ground stone disc beads. Suspicions of a burial were soon confirmed. After alerting and consulting with the *shishálh* Nation archaeologist, permission was granted to excavate the burial, which was at risk of erosion and destruction by recreational users of the popular beach stopover. The burial included nearly the entire skeleton of an adult male who had been buried with strands of at least 350,000 ground stone and shell disc beads, easily the most bead-rich burial discovered to-date on the Northwest Coast

(Coupland et al. 2016). Remarkably, the individual dated between 3900 and 3600 cal. BP, contemporaneous with several other recently-discovered burials and non-mortuary contexts throughout the Salish Sea and Lower Fraser River region that also contain a large amount of very similar disc beads (Coupland et al. 2016). The dates are also contemporaneous with the early component at Porpoise Bay that contained ground stone disc beads.

In 2011, we were joined by Dr. Terence Clark from the Canadian Museum of History, who directed further excavations at DjRw-14 that uncovered two more burials with relatively large numbers of disc beads as well as a large cache of beads and beautifully crafted ground slate and chipped stone points (Coupland et al. 2016). The other individuals all dated between 3900 and 3500 cal. BP, indicating that this area had been a cemetery for presumably very important individuals during this time. Furthermore, it appears that there were large numbers of ground



Figure 8 - Evening in the inlets (photo: Jacob Earnshaw)

stone disc beads being produced and circulated throughout the region during these centuries, which we argue are indicative of coordinated systems of craft production and pronounced wealth and status inequalities relatively early on (Coupland et al. 2016). The disc bead phenomenon seems restricted in space as well as time; ground stone disc beads have not been found in such large quantities outside of the Salish Sea and Lower Fraser River.

The faunal assemblage from DjRw-14 is unlike those from other *shíshálh* sites. Dogfish are the most abundant fish species in components from 4000-3000 cal. BP, followed by salmon, herring, and rockfish. Around 3000 cal. BP the use of DjRw-14 shifted, seemingly away from being a cemetery site towards being a residential site; shell midden, consisting mostly of clam shell, was deposited across the site. A large stone fish trap constructed on the beach may date from this time. The fish remains, again, indicate a diversified local practice; five of the taxa present (dogfish, salmon, herring, rockfish and perches) each contribute over 10% of the NISP. Deer contributed an NISP greater than any single fish family identified at DjRw-14. Other than some dog remains, there were no other significant mammal remains. The importance of deer at this site is noteworthy and, following the Master's project of Lara McFadden Baltutis (McFadden-Baltutis 2014), this research continues. The construction of the Bible Camp in the 20th Century has heavily impacted the surface of the site, though it is likely that this ideal and important location was used in more recent millennia prior to this disturbance as well.

***shíshálh* Student Training Program and Future Directions**

In 2012, Coupland and Clark initiated an archaeological training program for youth from *shíshálh* Nation. For the last three seasons, our team has included up to a dozen high-school aged *shíshálh* students who have learned archaeological methods and skills alongside university students from the University of Toronto. This program has also included field trips throughout *shíshálh* territory and visits and lectures from *shíshálh* council and elders, as well as other archaeologists and specialists. *In*

Situ Consulting Inc., a local CRM company with a crew of predominantly *shíshálh* Nation archaeological technicians, has also joined us for guidance and project planning.

In its current form, the *shíshálh* Archaeological Research Project (SARP) exists as a fully collaborative initiative between the Canadian Museum of History, the University of Toronto, and the *shíshálh* Nation. This community-based project works to strengthen archaeological collaboration between academics and local communities, provide cross-cultural training and learning and promote potential careers in the social sciences, and increase our understanding and promote awareness of the archaeological record of long-term land and resource use on *shíshálh* lands.

Conclusion

Returning to the research questions posed at the outset of the project, we note with some irony that we have conducted a household archaeology project that learned very little specifically about houses. Instead, our findings have taken us in other 'larger scale' directions. *shíshálh* territory has proved to hold a truly remarkable archaeological record that sheds new light upon many 'classic' research themes in Northwest Coast archaeology, such as how and when did systems of pronounced social and wealth stratification emerge?, what was the nature of subsistence economies that did not have direct access to the large runs of salmon that early archaeologists considered so important for the development of Northwest Coast cultures?, and what was the regional breadth of different exchange and settlement systems?

The 4000-3500 year old bead-rich burials throughout the region demonstrate that there was an economy based around the mass production and circulation of these beads within the Salish Sea and Lower Fraser River region, seemingly as wealth or ritual items that were buried with high status individuals, though we note their occurrence in domestic contexts and other non-mortuary contexts as well. The extraordinary material wealth buried with individuals at DjRw-14 suggests a stratified political system and demonstrates that there was a place in

society for a significant volume of non-utilitarian craftwork by at least 4000 BP (Coupland et al. 2016).

Our studies of settlement and subsistence indicate that both the inlets and the outer coast of *shishálh* territory were intensively occupied and used, and the diverse range of resources available within the region supported the populations there. The large steep-sided inlets and imposing mountain ranges in the region effectively produce landscapes through which movement can be easily monitored or controlled, and the inhabitants of the area seem to have situated sites to take advantage of this geographical quality, which may have contributed mechanisms for individuals or households to accumulate material wealth or non-material influence and power. Furthermore, our data suggest that the classic model in which systems of pronounced social stratification were built upon a base of economic surplus provided by salmon from the massive Fraser River runs (e.g., Burley 1979; Mitchell 1971) is untenable for this region. The archaeofaunal remains recovered from the sites we excavated indicate that *shishálh* people supported themselves just fine on a locally adapted subsistence economy that was not dominated by salmon (Bilton 2014). Elucidating the processes or events that contributed to the fascinating historical developments in the region continues to be a focus of study for the Sechelt Archaeology Project.

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Authors (left to right) Bryn Letham and David Bilton, hard at work (photo: Jacob Earnshaw).

Bios:

Bryn Letham is currently a PhD Candidate in the Department of Anthropology at UBC, studying the relationship between human settlement and sea level change in the Prince Rupert Harbour region. He has been part of the Sechelt Archaeology Project since 2009, during which he completed his M.Sc. under the supervision of Gary Coupland (University of Toronto) and surveyed the Sechelt Inlet system. Bryn also works on the University of Toronto Wadi Quseiba Survey Project in northwest Jordan, and has previously excavated and surveyed in eastern Jordan, the Broken Island Group, and the Dundas Islands.

David Bilton is a teacher at Central Park Public School in Markham, Ontario, and has been a part of the Shísháhlh Archaeology Research Project since its inception. His PhD research focused on fishing practices in the Salish Sea region over the last 5000 years. He is the father of two wonderful children.

Applying DStretch to Central Coast Rock Art

Aurora Skala

Introduction:

In 2013-2015, I worked closely with Wuikinuxv Nation and Heiltsuk Nation to select the study area within their territories and design the research and objectives for two regional studies of rock art. This project is identified as a short-term study as it was instigated by me to fulfill the requirements of a two-year MA program. Deliverables and community goals included: accurately-plotted GPS locations of rock art sites (thus updating Heiltsuk Nation's and Wuikinuxv Nation's respective databases); hiring within the community; identifying "new" archaeological sites which had not been previously recorded as sites (though some of these were recorded by oral history); and high resolution photographs and post-processing contrast adjustment. Fifty-eight rock art sites were used in the analysis of my MA thesis (viewable at UVic's DSpace). The two study areas were: Roscoe Inlet (the Heiltsuk portion of this project) and Owikeno Lake/Eastern end of Rivers Inlet (Wuikinuxv portion of this project).

This research focused on documenting petroglyph and pictograph sites, using GPS and high resolution photography (which were then post-processed to bring out images not visible with the naked eye). DStretch, a plugin, created by archaeologist and rock art researcher Jon Harman (Harman 2013), was used to do this.



Figure 1: Map of MA study area, Roscoe Inlet and Rivers Inlet/Owikeno Lake. Created by Aurora Skala using Google base layer in QGIS.

During this research I sought to answer 5 questions:

1. Can the existing record of rock art sites be verified? By attempting to revisit these previously-recorded sites it will be possible to record or refute the sometimes unclear or incomplete information about their location.
2. Are there additional, previously unrecorded-by-archaeologists, rock art



Figure 2: EkSr-11 (recorded as a site during this research). Photo by Aurora Skala.

sites within the study area to be recorded during this study. Community members have retained knowledge of sites which have not been visited by archaeologists. During previous time spent on the Central Coast, I have recorded rock art in locations where it had not been reported. It was found because we were in areas not frequently visited.

3. How can DStretch best be applied to the study of pictographs in Heiltsuk and Wuikinuxv territories? Innovative new techniques are available to rock art researchers which were not when rock art in this area was last studied. By using digital contrast-adjustment software (DStretch), new information regarding these sites is anticipated. DStretch was specifically developed in 2005 by Jon Harman for rock art research (Le Quellec et al. 2013:178). It is akin to programs such as Adobe Lightroom used to manipulate images.

4. By revisiting recorded and previously unrecorded rock art sites can the current typology of rock art in this area be expanded? Some typological groupings have been proposed for coastal BC rock art, but specific concerted research on rock art has not been done for the two locations in this study.

5. Can the application of underwater research techniques be of

benefit in studying rock art in this area? Some rock art in the area is not visible because it is covered by water (i.e., seasonal changes, or because of sea level change) (Skala 2015).

Roscoe Inlet (the Heiltsuk portion of this project) and Owikeno Lake/Eastern and Rivers Inlet (Wuikinuxv portion of this project) are essentially deep fjords (which in the Wuikinuxv project area gives way to a vast freshwater lake). They both include steep cliffs and what could be thought of as high-probability locations

for rock art (though, in fact, the

results of this project indicate that rock art is not only to be found in highly visible locations). In addition, they are both known for having an abundance of rock art. Archaeologists and visitors have been documenting rock art in this region since the 1930s, with the majority of sites being recorded in the late 1960s and early 1970s. However, many of these sites have not been reported since that time and frequently have no details associated with them (e.g. what the design depicts, how well preserved they are, precise location data). No academic study which focused on rock art was ever done on these two areas. However, Doris Lundy's remarkable work (Lundy 1974) which covers rock art of the entire Northwest Coast does

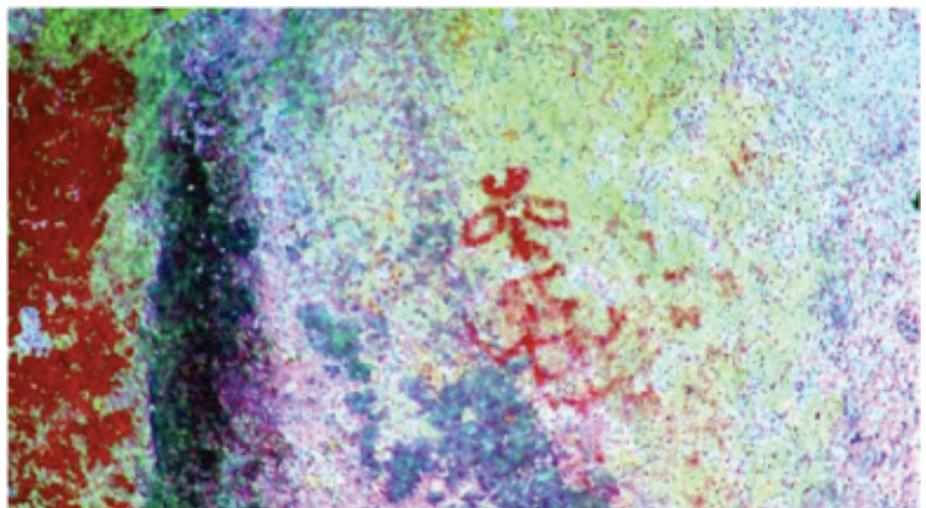


Figure 3: EkSr-11 with DStretch applied. Photo and contrast-adjustment by Aurora Skala.



Figure 4: FcSx-5, grouping #3. Photo by Aurora Skala.



Figure 5: FcSx-5, grouping #3, with DStretch applied. Photo and contrast-adjustment by Aurora Skala.

include this area. She had to rely on others' reports and sketches. She did not get to see photographs of many of the sites in these two study areas until I began this project. Additionally, Beth and Ray Hill's work (Hill and Hill 1974) recording petroglyphs did include a couple of the Roscoe Inlet petroglyphs. Roscoe Inlet and Owikeno Lake have more pictographs than petroglyphs. The petroglyphs in Rivers Inlet, though known to the Wuikinuxv community, were not recorded as archaeological sites until this project. Therefore the Hills' project only provided direct information on 2 of the 58 sites.

Method:

The nature of this community-engaged research project meant that even before field work began a lot of information was gained by talking to community members and people with knowledge of the rock art, as well as the literature which was surveyed for mention of rock art.

Field surveys were conducted mostly by boat, slowly cruising past the shore to look for sites. This method omits sites not visible from the water, but in the interests of time constraints and not putting the crew at risk of wildlife encounters (such as grizzly bears!) it was the method decided upon. This method helped in locating pictograph sites, but because many of the petroglyph sites are intertidal it was not effective for locating new petroglyph sites as we did not always survey at low tides. After returning to the lab, DStretch was used on the computer to adjust the contrast in the images.

Other aspects of the research included scuba diving to locate submerged petroglyphs, but for this article I will showcase DStretch which was the primary method used.

Results:

We found 47 of the 51 previously-recorded sites in the RAAD database, 3 of the 8 sites remembered by the community (but not recorded in RAAD), and 8 sites we found by surveying the inlets. I do not think these 8 additional sites are ones remembered/recorded (they do not fit the descriptions given by community members or the location information on site forms). Some sites we only conclusively identified as rock art after I had applied DStretch to the image. For example, the design is under 0.5 metres and was only faintly visible when we were right in front of it. The use of DStretch, besides defining the design, confirmed that there was, in fact, a design there.

In the case of the next example, a site inventory form existed, however the site's location was mis-plotted. A drawing existed, but not all of the images were visible, either in 1969 (by the original recorders J. Stoutamire, J. Anthony Pomeroy, K. Conover, and M. Finnegan) nor in 2014 by myself and my team. Only with DStretch were we able to see the second face and hand in the below design. This entirety of the design in the photo is ~0.75 metres by ~1.5 metres. These are but two small examples of how DStretch increased the number of recognizable images at rock

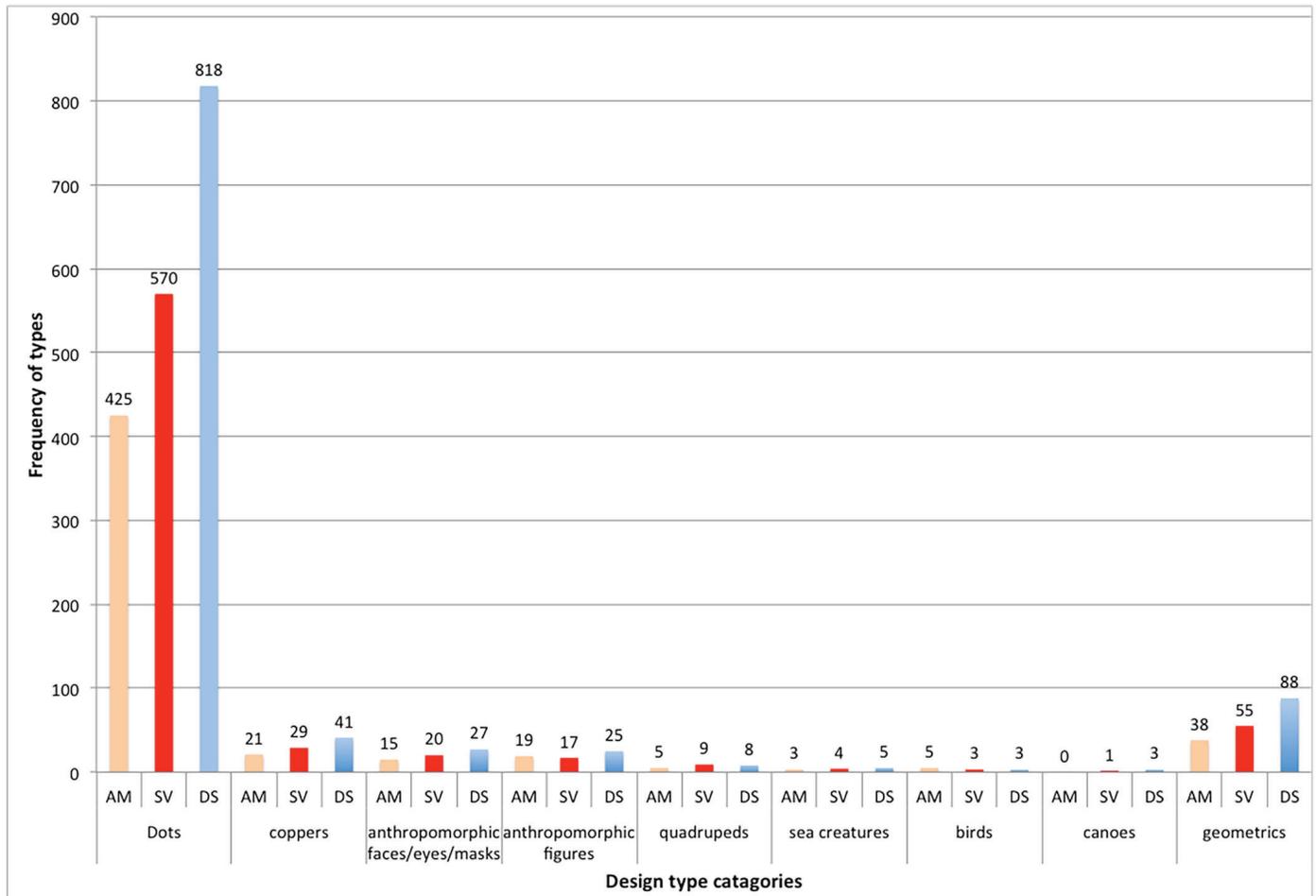


Figure 6: Graph indicating the dramatic difference between what was visible based on archival material (AM), contemporary field visits in 2013-2015 (FV), and post-processing use of DStretch (DS).

As is indicated by the above graph

art sites and added to the number of recorded rock art sites in the area. Below I have combined the data from both the study areas to show what a difference the use of DStretch can make to recording rock art sites. The bars in the graph are ordered temporally by the earliest archival material in the form of rubbings, photographs, and site inventory forms (AM), field visits conducted during this research 2013-2015 (FV), and DStretch which was applied to photographs after the fieldwork (DS). Overall, DStretch enhanced visibility of the rock art images compared with what was visible during the contemporary field visits or reliance on the original site inventory forms and other archival material. These increases are illustrated by design type categories. When these categories were combined this totaled a 44% increase in designs between the field visits and DStretch, or a 92% increase between designs identified in the archival material and current photos where DStretch had been applied.

As is indicated in Figure 6, certain designs recur on the Central Coast. However, this graph was created to showcase the use of DStretch and does not indicate which of the two study areas the designs are in, for example some categories of designs do not appear in both study areas.

Conclusions:

Partnerships and collaborations are essential for this type of research project to occur. The information obtained by talking to band members including elders and the knowledge provided by the team (in particular the boat operators who had vast knowledge of the landscape: Chris Corbett, Johnny Johnson, Wesley Vickers) added immeasurably to the success of this project.

Designs recur and are persistent. As is to be expected, the Central Coast rock art has salient differences in artists' choices than other British Columbia rock art. The persistence of designs continues to be



Figure 7: Spray-painted design outside Bella Bella Airport.
Photo by Aurora Skala

evident in both communities which participated in this research project. For example, while material has changed to spray paint in some cases, a design I saw outside the airport in Bella Bella reminded me of this continuity of design. It seems taken straight from the corpus of images also used in rock art of the area, reimagined with contemporary materials.

DStretch is a valuable addition to the tools available to contemporary documenters of rock art. It can turn back the clock, making visible images that were once clear but have become too degraded to view with the naked eye. Unlike many other techniques we use as archaeologists, such as excavations, digital photography techniques (e.g. DStretch) can serve as powerful tools, which do not physically damage a site therefore documenting in a non-invasive way.

Acknowledgments:

I am grateful to have been able to work in such amazing locations with such inspiring people. Thank you to Heiltsuk Nation, Wuikinuxv Nation, University of Victoria, The Tula Foundation, Hakai Institute, my team members: Chris Corbett, Johnny Johnson, Cecilia Porter, Wesley Vickers, Andrea Walkus, Elroy White. My supervisors: Dr. April Nowell, Dr. Duncan McLaren.

Bio:

Aurora Skala is an alumna at Hakai Institute and University of Victoria where she recently completed her MA. Her research passions include documenting rock art and underwater archaeology.



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A Sneak Peek: Repurposing Digital Assets for Relevant Educational Purposes with the Simon Fraser University Museum of Archaeology & Ethnology and the Treaty 8 Tribal Association

Kristen McLaughlin and Mandy Nilson
Revised authors August 20, 2016

Project Team: Barbara Winter, Karen Aird, Mandy Nilson, Kristen McLaughlin, and Denee Renouf

The Simon Fraser University Museum of Archaeology and Ethnology (SFU MAE) has partnered with the Treaty 8 Tribal Association (T8TA) and the Tse'K'wa (the Charlie Lake Cave site) Heritage Society (THS) for an exciting collaborative digitization and education project. The project consists of repurposing original digital assets; digital assets are images, multimedia, and text files in digital format. In this case, we are including two webpages from the original SFU MAE website and combining them with a new online exhibit of the Tse'K'wa Collection. This collection is made up of over 1000 lithic artifacts recently acquired by the SFU MAE from a farmer in the Peace River region for the purpose of organizing and cataloguing, before repositing the collection with the Tse'K'wa Interpretive Centre near Fort St John. From these resources, interactive educational modules will be created to illustrate that digital assets can be edited and repurposed for continued use. The project will provide updated resources for educators, students, and heritage workers and create a unique educational resource for First Nations in Northeastern British Columbia. We believe that repurposing of older digital assets that still touch on important aspects of history are helpful to future generations and interactive education. They extend the availability of primary sources in the form of objects and photos to encourage First Nations students and researchers in the writing of their histories in their own voices. It is the important connection

with T8TA and the THS that has allowed this project to progress in a responsible and respectful manner.

Several aspects of this project are already underway, such as: releasing the new SFU MAE website to the public to replace the original from the 1990s and archiving three of the original webpages created in 1993. These heritage pages were among the first web pages to be published by a museum, anywhere, during the first years of the web. The *Charlie Lake Cave* webpage, written by John Breffitt, and the *Journey to a New Land* website, an award-winning website created by the SFU MAE as part of an investment from the Virtual Museum of Canada, will be repurposed. The *Charlie Lake Cave* webpages examine the archaeological site of Charlie Lake Cave in Northeastern B.C. *Journey to a New Land* is an interactive website that focuses on the peopling of North America. These two digital assets are integral to this project because they demonstrate not only how museums can archive webpages for historical record-keeping but also how they can be utilized for present-day informative purposes, such as the history of First Nations in B.C. Complementing the archived site will be a new online exhibit of the Tse'K'wa Collection, developed in collaboration with the T8TA and THS.

We are creating an interactive and engaging new resource available on the revised SFU MAE website. We are making primary sources of site, excavation, and artifact photos from both the Tse'K'wa Collection and Charlie Lake site available and creating new games for different school grades which will integrate easily with our website platform. The elements of the games will reflect the three main facets of the

project: The *Charlie Lake Cave* webpage, the *Journey to a New Land* website, and the new Tse'K'wa Collection online exhibit.

This is a work in progress and is planned in accordance with SFU web capacity and capabilities, as well as the existing accessible technologies that work in rural northern BC schools and communities. Because our museum website is contained within SFU's wider website-building platform, we are using their program and must adapt and create our education modules to work within this system. These are digital compromises many institutions must plan for and resourcefully work within!

The majority of this project is volunteer driven by Research Associates (RAs) at the SFU MAE. The Research Associate program is a great way to not only acquire but also refresh museum skills; it allows for the individual development of projects throughout the museum. The SFU MAE is always looking for new RAs to help add their creative spirits and unique perspectives to the museum! Of the RAs on this project, Denee Renouf has been organizing the new website and archiving the original webpages. Mandy Nilson is busy creating the Tse'K'wa Collection online exhibit. She is currently selecting and photographing diagnostic artifacts. Kristen McLaughlin is researching curriculum and planning education modules. This planning must take into account the website platform and its capabilities. Karen Aird is the T8TA and THS representative, who is voluntarily guiding all aspects of this project. Dr. Barbara Winter has 20+ years' experience creating digital assets, including award winning websites, which allows her to give invaluable oversight to this project. The rest of the spring and summer 2016 will consist of research, finishing the archiving process, writing, and testing our education modules and games. We will also be writing a technical 'how-to' paper for publication. This will be a resource for anyone wanting to pursue a similar project.

This is a keystone project in the collaborative efforts between the Treaty 8 Tribal Association and Simon Fraser University's Museum of Archaeology and

Ethnology. This project recognizes the value of primary sources in First Nations historical and archaeological research and interpretation. By preserving digital access to original documents and assets and expanding the primary sources available to searches on the web in a form that is accessible to First Nations youth and university students in northern BC, we believe this demonstrates how museums can repurpose archived material for continued, relevant engagement with First Nations, communities, and researchers.

Author Biographies:

Dr. Barbara Winter is the Director of the SFU Museum of Archaeology and Ethnology. She has 20+ years of web design and museum management.

Karen Aird is the Cultural Heritage Advisor from the Treaty 8 Tribal Association and the Tse'K'wa Heritage Society archaeologist, with significant technical writing experience and educational program development.

Mandy Nilson is the Project Manager and Archival Research Associate at the SFU MAE. She is a fifth year English/Humanities Major with an extended minor in Archaeology at SFU. She specializes in turning analog formats into digital and taking museum-quality photos.

Kristen McLaughlin is the Policy/Protocol Research Associate at the SFU MAE, revising and updating all policies and procedures for the museum. She is a recent graduate in archaeology from SFU with a Cultural Resource Management certificate.

Denee Renouf is the Website and Social Media Research Associate at the MAE. She creates website content and guides SFU MAE's social media presence. She is a recent graduate in archaeology graduate from SFU with a minor in First Nations Studies and a certificate in Cultural Resource Management.

Smoothing Stones

Roger Eldridge

eventually joined by small dendritic drainages, originating in side valleys and directed by moraines, the stranded terraces, and isostatic tilt. Throughout the climatic changes of the Holocene, the environment changed too, eventually becoming a forested

This article describes an artifact type recently identified in the Rocky Mountain Trench in northeastern BC. These tools, dubbed ‘smoothing stones’ for their possible intended function, are markedly different from typical abraders. It is suspected that this tool may be represented in the wider region but examples were not found during a cursory desktop search. It is hoped that this description of the setting, context, and tool features will encourage discussion and that additional examples in the archaeological record may come to light.

The setting for these tools is the Finlay Valley, now the Finlay Reach of the Williston Reservoir. The present day landscape of the Finlay Reach was shaped by a complex series of geomorphological changes. Following several late Pleistocene glacial advances, deglaciation events 12,000 years ago resulted in the formation of one or more large glacial lakes and deposited deep layers of glaciolacustrine silt and sand in the Finlay Valley (Rutter 1977; M. Eldridge, Parker, Clague, et al. 2013). Wave cut benches, representing paleolake shorelines, were formed in these glaciolacustrine sediments during a succession of glacial lake stands, around the time that people likely first entered the Trench (Eldridge, Eckert, Ramsay and Parker 2014). The lake shores were stranded as the lakes drained, becoming long, low (1-2 m high) terraces within the study area (several larger glaciolacustrine terraces are also present in some areas at much higher elevations). The Finlay River, meandering southwards, cut down through the deep glacial silt and was

valley of spruce, poplar, peat bogs, and wildlife typical of the modern Boreal environments of northeastern BC. People lived along these lakeshores, drainages and throughout these environmental changes, and left much evidence of their life. In 1824, the earliest European-led party met with Sekani peoples inhabiting the Finlay Valley and surrounding area and through to the present day, Sekani people continue to live in this section of the Rocky Mountain Trench (Black 1955).

Through the late 19th and early 20th centuries, the region also saw establishment of an Hudson’s Bay Company (HBC) fur trading fort, a minor gold rush, and industry including forestry. In the late 1960s, the Williston Reservoir was constructed and lower sections of the Finlay River were inundated, becoming the largest man-made lake in BC. The reservoir has an elevation similar to that of the glacial lake(s) which once lay in the valley. Since then, as a result of continued seasonal cycles of reservoir drainage



Figure 1. Ground facets visible on smoothing stone HdSd-369:467 (photo: R.Eldridge).



Figure 2: Smoothing stone HdSd-372:9. Ground facet and darkened worn areas indicated by arrows. (photo: R. Eldridge)

and recharge, the flat expanses of glaciolacustrine sediments have become de-vegetated and continue to erode down to the oxidized C horizon and beyond in most areas of the reservoir drawdown zone (Eldridge, Parker, Clague, et al. 2013). While erosion and re-deposition have resulted in many topographic changes within the drawdown zone, many of the pre-reservoir macro and microtopographic features of the landscape remain identifiable, sometimes only through 3D GIS modelling.

Cultural Resource Management work in the last two decades within the drawdown zone of the Finlay Reach has revealed a landscape-wide archaeological assemblage of over 15,000 artifacts across a nearly 10,000 hectare study area (Arcas Consulting Archeologists Ltd. 2004, 2007; Begg 2008; Eldridge, et al. 2008; Eldridge, et al. 2011; Eldridge, et al. 2010; Eldridge, et al. 2009; Eldridge and Eckert 2013, 2014; Eldridge, Eckert, Ramsay and Gretzinger 2014; Eldridge, Eckert, Ramsay and Parker 2014; Eldridge, Parker, Ramsay 2013; Howe and Brolly 2008; Ramsay 1996; Western Heritage Services 1997). The archaeological assemblage demonstrates use of the landscape by people from the terminus of the Pleistocene through the historic period. The archaeological lithic assemblage could be considered typical of those left by people with a mobile, seasonal

hunting-gathering subsistence strategy. Common artifact types include, but are not limited to, flake debitage, retouched or utilized flake tools, projectile points, bifaces, scrapers, and spall tools. The most common material types are high quality chert and obsidian, which account for approximately 75% and 10%, respectively, of the lithic assemblage; other materials include chalcedony, quartzite, schist, and sandstone. Identified archaeological features include hearths containing fire-altered rock, calcined bone, and lithic caches.

The smoothing stones are rare in the artifact assemblage, and are made of uncommon material types. Six complete or broken smoothing stones with a distinctive use pattern have been identified as schist, shale, or slate (Figure 1). The form of the stones varies from long sub- rounded and subangular boulders or cobbles to narrow ‘fingers’ of stone. The six schist/slate examples share traits including use wear patterns, material type, and context. The artifacts are characterized foremost by their use wear which is represented by a flat or faceted surface, with shallow, thin, parallel striations on most examples. Other examples, including HdSd-371:645, exhibit use-wear only as darkened, polished areas. Other artifacts with similar wear, but made of different material types, such as HdSd-371:606, have also been observed including



Figure 3. Smoothing stones found in 2015. Top to bottom HdSd-371:645, HdSd-369:635, HdSc-45:225. Arrows indicate facets or other areas of wear. (photo: R. Eldridge)

a well rounded, flattened diorite boulder with similar wear.

The striated facets appear to be related to the use of the finished tool rather than to its shaping; the striations are always unidirectional on their own facet and the form of the original cobble is not otherwise modified. Polish is common on the striated facets, sometimes to a gloss, and is often also present on the ends, edges, ridges, and prominent areas. The facets suggest use of a very focused area of the stone, while wider darkening and polish suggests use of more expansive areas.

Further notes on use wear

The parallel striations of facets on the smoothing stones suggests repetitive unidirectional use (Figure 4, Figure 5). The resultant wear is different than the wear seen on sandstone abraders common in other parts of BC, particularly along southern coastal regions. Wear on 'typical' abraders is often characterized by relatively extensive flat or dished areas which are

smoother or more polished than unmodified parts of the stone. A very small number of sandstone abraders have been found in the Finlay Reach, including a shaped sandstone atlatl shaft smoother, but these are markedly different than the smoothing stones.

Rounding or abrasion on tools made of silicate materials (chert, obsidian) has been attributed to repetitive use on soft materials such as hide (Tringham, et al. 1974; Wiederhold 2004) and the smoothing and polish on the stones may be similarly consistent with contact with a soft material. The deepest linear striations on some examples are, however, more consistent with use on hard materials. Experimentation with schist or slate on different material types (e.g., hide, wood) could aid the interpretation of use for these artifacts. Artifact HdSd-371:606, composed of diorite stone, lacks facets but exhibits wear as rounding and polish, mostly on prominent areas of the stone. A seam of hard quartz or similar on the highest point of one face also shows abrasion with parallel striations (Figure 5).



Figure 4. Areas of wear on smoothing stone HdSc-45:225 as indicated by striations (left) and facet (right). (photo: R.Eldridge)

The diversity of forms, from small ‘fingers’, to long rectangular blocks and boulders suggests that these tools were being utilized on different scales. Alternatively, similar looking wear was created by different functions. The characteristics of the stones are similar enough that they were likely chosen for their surface texture and hardness.

Artifacts from the Finlay Reach not classified as smoothing stones, but with a similar polnes, have been edge modified through percussion to create roughened areas. These artifacts are similar to those used by Tahltan people in the later stages of hide preparation, during the dressing stage when the smoked hide was softened and made pliable (Albright 1984). Specially flaked coarse grained basalt tools with a dull edge were utilized and would become highly polished with repeated use (Albright 1984). While the Finlay Reach examples (e.g. HdSd-370:589) exhibit similar smoothing and poli9) to observed ethnographic examples (e.g. Albright (1984), RBCM public display), they do not appear to exhibit the striated, flat facets of the smoothing stones.

The smoothing stones are spatially correlated with relatively dense and diverse clusters of archaeological material at the edges of dendritic creeks. None of the smoothing stones were considered isolated finds. All stones have been found on the flat tread of terraces above a creek, within approximately 50 m of the terrace edge. A GIS based search for artifacts within an arbitrary 50 m radius from all individual smoothing stones was conducted to

determine the general composition of nearby artifact types. Between four and nine additional artifact types were present in each of these areas (more types on average than for randomly selected artifacts). All smoothing stones were within 50 m of flake debitage and flake tools and four were associated with projectile points, scrapers, abraders and bifaces. Spall tools, cores, blades, and choppers were nearby in some instances. The general association with more diverse clusters of artifacts could indicate that these were used at longer term living areas, or are at least related to places on the landscape more often frequented by people.

The scarcity of smoothing stones in the overall assemblage could have several possibilities such as a



Figure 5. Close-up of wear on diorite smoothing stone HdSd-371:606. (photo: R. Eldridge)

narrow temporal period, or a tool that was disposed of/deposited differently than other tool types. It is also possible that these tools are not as often recognized as artifacts during survey as the subtle wear patterns are easy to overlook. The increase in identification of these tools in recent years suggests the latter, although they remain a rare tool type of Establishing a chronology for the creek courses and stabilization of the terrace edges as they existed prior to reservoir inundation would provide a more narrowed range for the age of the smoothing stones found along the creeks. The creeks intersect one particular long glacial lake strandline which was found to be significantly correlated with Alberta and Cody Complex artifacts, which date to 11,000 and 8700 cal BP (Knell and Muniz 013)). These relationships suggest a terminal age for the strandline, and a maximum age for the creeks and at least some of the smoothing stones (R. Eldridge, Eckert, Ramsay and Parker 2014).

In summary, the smoothing stones do not represent a common tool in the Finlay Reach, but one that has been found at multiple sites. The wear is distinctive and the material types appear to have been selected for their characteristics. While the wear is similar to that seen on hide dressing stones, other wear is clearly different and the specific function of the tools is unknown. The stones are probably mid to late Holocene, but no refined dates can be offered at this point. It is hoped that more examples of, or information about these artifacts will come to light, particularly those in the broader northeast region.

Bio:

Roger has been involved with BC archaeology since 2004 and he received a BA in Anthropology at the University of Victoria in 2011. His area of interest is in lithic technology and landscape archaeology and he has been conducting archaeology work in the northern Rocky Mountain Trench for nearly a decade.

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On Commercial, Compliance, or Contract Archaeology

Richard Hutchings

How neoliberal states steward heritage landscapes—particularly Indigenous heritage landscapes—is the subject of the winter issue of the *International Journal of Historical Archaeology*. The special issue, titled “Contract Archaeology,” is guest edited by Cristóbal Gnecco and Adriana Schmidt Dias and includes eleven articles that contribute significantly to our understanding of the late modern heritage environment, particularly as it concerns the institution of cultural resource (or heritage) management (CRM/CHM) in North and South America. Focusing on capitalism and the resource-state nexus, the authors make the case for ending archaeology as it most commonly practiced today. The general consensus is that archaeology/CRM is a technology of government designed to clear heritage from the landscape to make way for economic development. Rich Hutchings and Marina La Salle conceive of the discipline/practice as neoliberal statecraft and disaster capitalism. The *IJHA* special issue (Volume 19, Issue 4) can be found online here: <http://link.springer.com/journal/10761/19/4/page/1>.

It contains the following titles:

- On Contract Archaeology (Cristóbal Gnecco, Adriana Schmidt Dias)
- Archaeology as Disaster Capitalism (Rich Hutchings, Marina La Salle)
- Archaeology and the Logic of Capital: Pulling the Emergency Break (Yannis Hamilakis)
- *Contratiempo*: Contract Archaeology or a Trench in the Battle for the Dead (Alejandro Haber)
- Contract Archaeology in South Africa: Traveling Theory, Local Memory and Global Designs (Nick Shepherd)
- Mega-Mining, Contract Archaeology, and Local Responses to the Global Order in Argentina (Ivana Carina Jofré)
- Neoliberal Multiculturalism and Contract Archeology in Northern Chile (Patricia Ayala Rocabado)
- Dystopian Archaeologies: the Implementation of the Logic of Capital in Heritage Management (Nicolas Zorzin)
- Development Projects, Violation of Human Rights, and the Silence of Archaeology in Brazil (Loredana Ribeiro)
- At that Edge: Archaeology, Heritage Education, and Human Rights in the Brazilian Amazon (Marcia Bezerra)
- Contract Archaeology and Indigenous Peoples: Reflections on the Brazilian Context (Fabíola Andréa Silva)

Access to these articles necessitates a prohibitively costly subscription or one-time user fee; readers lacking but desiring access should contact the Institute for Critical Heritage and Tourism at icht.bc@gmail.com.

Bio: Rich Hutchings directs the Institute for Critical Heritage and Tourism (ICHT) and just completed his posting as Research Fellow with Vancouver Island University’s Institute for Coastal Research. His book *Maritime Heritage in Crisis: Indigenous Landscapes and Global Ecological Breakdown* is set to be published later this year by Routledge.

Gerald Merner ASBC Fieldschool Scholarship Winner 2015

Elisa Moes

I would like to preface the story of my field school experience by thanking the University of Victoria Department of Anthropology for the nomination, and the Archaeological Society of BC for awarding the Gerald Merner Archaeological Society of BC scholarship.

On April 20th, four UVic students, including myself, ventured to our field school taught by Dr.

teams of four or five set out each day with their task at hand. I spent my first week in the inter-tidal zone, alternating between (loving and hating) chasing and being chased by the tide. It was here that I found my first piece of shiny obsidian- tiny but heavy with inference. The next week I found myself deep in the dense, steep forest on some of the islands across Fitzhugh sound, taking notes, belaying buckets of soil to the



Figure 1 - Dr. Darcy Mathews giving a tutorial on CMT recording. (photo: E.Moes)

Duncan McLaren of University of Victoria, and located at the Hakai Institute's Calvert Island field station on BC's central coast. For the first two weeks, we had the amazing experience of being involved with Dr. McLaren's ongoing research into the deep history of human habitation on the central coast. Because of the specific scheduling of field work, we found ourselves in the field before having taken the lecture and lab portion of the field school. This resulted in a bit of learning on the fly, but with patience of our team leaders and a hard work ethic it was an easy to integrate. Four

crew down at the ocean side and screening auger samples. My third week telescoped us into the more recent history of habitation in the area and with guidance from UVic professor, Dr. Darcy Mathews, we recorded culturally modified trees, scouted for clam garden sites, and mapped shoreline gardens and rock rings.

I realize that the Hakai Institute experience does not represent the average field school event. My more seasoned team members assured me that having two chef inspired meals per day, room cleaning, and hot showers might not materialize on my next foray into the field. The place is inspiring- not only for its west coast style accommodations and beautiful environs but for the company it attracts.

You may have breakfast with a geologist studying the Kwakshua Channel coastal watersheds, have lunch with students from the Bella Bella high school and dinner with a group of biologists studying otters and their relationship to kelp. In the evenings we gathered for presentations by the visiting researchers. UVic graduate student, Aurora Skala, discussed her work with Heiltsuk and Wuikinuxv rock art using D-stretch technology, a group from Japan introduced their comparative studies between Jomon and prehistoric Pacific Northwest cultures. Dr. McLaren presented a summary

of his research and the results of the field work we were currently working on. The highlight was the 13,000+ year-old footprints located a half meter deep where the sand meets clay at the tideline of EjTa-4 on Calvert Island. I wasn't a part of the crew that worked on that excavation unit, but I did have an opportunity to visit the site. There was a moment that took my breath away when I registered the child's footprint in the dark sandy soil– it refocused my field experience back on to the People who lived on the central coast and not just to the objects they left behind. I knew what I expected from a field school- the opportunity to apply some of the theory we work so hard to memorize and recite while at university. The gift of this field school has been my heightened awareness of the anthropology behind the archaeology. Thank you!

Bio: Elisa is currently a fourth year Anthropology major with a focus on archaeology of British Columbia and South America. She will graduate August of 2016. The field school has affirmed her love of archaeology and her future will be spent integrating this passion with a new career.



Figure 2 - Excavation site tidal flats at- EjTa- 15 site Pruth Bay, Calvert Island (photo: E.Moes)

Native Art of the Northwest Coast: A History of Changing Ideas

Edited by Charlotte Townsend-Gault, Jennifer Kramer, and Ki-Ke-In

UBC Press, Vancouver. 2013. xxxvi+1,081 pp.

ISBN 978-0-7748-2050-9 (paper). \$75.00.

Alan McMillan

This massive tome of over a thousand pages brings together a very diverse range of articles, with cited selections that span nearly 250 years. Consisting of an introduction and thirty chapters, it presents the work of twenty-eight contributors drawn from various fields, including Indigenous artists and scholars, as well as non-Indigenous anthropologists, archaeologists, historians, art historians, and others. It is a monumental effort, “years in the making” according to the book’s back cover, shepherded into print by the three editors: Charlotte Townsend-Gault (professor of art history at UBC), Jennifer Kramer (associate professor in anthropology and curator at UBC’s Museum of Anthropology), and Ki-ke-in (also known as Ron Hamilton, a Nuu-chah-nulth artist, poet, ritualist, and historian). These editors provide a thoughtful introduction, critiquing the idea of Northwest Coast art and setting up the dynamic that flows through the following pages.

The purpose of this volume, as the editors explain, is to “unsettle the conventions” that have shaped our understanding of Northwest Coast art. The book takes as its premise that our perceptions of Northwest Coast art have been constructed over time through written observations and analyses as much as the objects themselves. The shaping of these ideas has privileged some voices, particularly those of non-Indigenous academics. Thus, this book “responds to Aboriginal critiques of colonial knowledge formation” (p. 3) by bringing together a wide range of voices, experiences, and perceptions to show how the present body of knowledge has formed and to provide historical and cultural context for broader

understanding. This volume is far from the typical Northwest Coast art book with glossy images of impressive art objects; instead it questions the basic idea of Northwest Coast art and how that has developed, offering a wide range of often competing viewpoints. As such, the editors present a “work of critical historiography” (p. 2), allowing readers to evaluate the historical underpinnings of our present understandings of the art form.

The following chapters, including two each by Ki-ke-in and Townsend-Gault, and one by Kramer, are highly diverse. Most consist of a short essay by the chapter author, followed by selected excerpts from previously published (and in a few cases unpublished) sources. Brief introductions are provided for most excerpts, allowing the authors to contextualize each within the chapter theme. However, not all chapters contain excerpts from previous works: several Indigenous scholars (Daisy Sewid-Smith, Ki-ke-in, Gloria Cranmer Webster) provide short personal reflections or reminiscences, while Michael Nicol Yahgulanaas offers “a series of visual notes” in his characteristic “Haida manga” style (and thus fits with the editors’ earlier reminder that “knowledge does not necessarily reside with the printed word” [p. xxxvi]). Chapter lengths vary widely, from only a few pages to substantial treatments of a theme followed by numerous excerpts from other sources.

After the first few chapters, a chronological flow is evident. Andrew Martindale provides the only section specifically tied to archaeology. He addresses considerations of “meaning” in Northwest Coast art, using excerpts from many of the discipline’s early

practitioners in British Columbia to examine changing theory and perceptions. Ira Jacknis presents the observations of early non-Indigenous explorers and ethnographers to 1870, while Andrea Laforet discusses the written accounts and collecting practices of ethnographers from 1880 to 1930. Bruce Granville Miller examines shifting paradigms in the anthropology of art from 1870 to 1950. The papers that follow include such topics as Northwest Coast art and the surrealist movement (Marie Mauzé), missionary perspectives (John Barker), the role of the art in developing Canadian national identity (Leslie Dawn), and the art/craft distinction in the early 20th century (Scott Watson). Later chapters address such recent issues as the Northwest Coast art market (Karen Duffek), art and law (Douglas White), and museums and collaborations (Aldona Jonaitis, Martha Black). Townsend-Gault examines the political nature of Northwest Coast art “in the age of Delgamuukw,” noting that the art is “inseparable from rights-based claims over land and sovereignty” (p. 865). Also addressed are Aboriginal media production (Kristin Dowell) and Internet art (Dana Claxton), both recent developments that confound any neat categorization of “Northwest Coast art.” Some themes and excerpts in this diverse collection do not directly address Northwest Coast art at all, but are included to provide historical and/or cultural context.

Several themes run through multiple chapters. One of the most pervasive, addressed specifically in a chapter by Aaron Glass, but touched upon in many other places, involves the oft-invoked idea of a Northwest Coast art “renaissance.” This narrative, with its assumption of a long decline followed by a rebirth by the end of the 1960s, held considerable currency for some time but is heavily criticized today, largely for ignoring the considerable continuity in art production in many areas of the Northwest Coast. That narrative also placed undue emphasis on Haida artist Bill Reid’s monumental achievements, at the expense of the many artists who had continued their artistic output, often for traditional uses in In-

digenuous communities, through the presumed period of decline. Rather than a “rebirth” of ancient traditions, the so-called “renaissance” is better viewed as a shift of art production to external markets and new agendas, creating a context that allowed artists such as Reid to flourish. Glass’s chapter ends with a long and rather bitter poem by Ki-ke-in that sharply rebukes non-Indigenous academics who have created the frameworks in which we view Northwest Coast art, including the idea of a “renaissance.”

Many authors, Indigenous and non-Indigenous, challenge “academic authority” and question the role of outside “experts” in interpreting the art. In a chapter on formal analysis in Northwest Coast art history, Kathryn Bunn-Marcuse traces the history of that approach from Franz Boas to Bill Holm and beyond, noting that the attention to form has tended to downplay the object’s cultural context. In his voluminous descriptive works, Boas documented form and iconography in an attempt to find order and “read” Northwest Coast art. Such an approach is strongly criticized by Marjorie Halpin in an excerpt in Alice Marie Campbell’s chapter. In contrast to “the Boasian rule-based paradigm,” Halpin characterized Northwest Coast art as “ambiguous, imaginative, unstable, poetic, [and] endlessly variable” (p. 584). She charges Boas with attempting to impose a set of rules without understanding the relationship between crest art and the oral histories that gave such works meaning and calls into question any interpretations that are not based on the cultural context that led to the object’s creation. Bunn-Marcuse makes the related point that if an object was created to document family and territorial prerogatives, then placing it in the category of “art” could be seen as “an act of suppression” (p. 410). In a chapter titled “Art for Whose Sake?” Ki-ke-in attacks Holm and others for analyzing Nuu-chah-nulth objects outside their context of use, noting that formal analysis serves to detach valued objects from their community of origin and ignores the rich associated knowledge still held in that community.

Several papers address the important role

played by Indigenous community members who provided insider knowledge on the context in which the art was created. Judith Berman discusses such “Aboriginal cultural experts” (p. 166) in a chapter that focuses on Louis Shotridge, a Tlingit man who worked as a museum collector and ethnographer. She places Shotridge in a category with George Hunt, who worked closely with Boas to compile extensive texts on the Kwakwaka’wakw, and William Beynon, who collected detailed information on his Tsimshian heritage for anthropologist Marius Barbeau. Others, of course, could have been included; Alex Thomas, for example, played much the same role in Edward Sapir’s study of the Nuuchahnulth, as Hunt had earlier played with Boas. In another chapter, Marianne Nicholson, a Kwakwaka’wakw artist and anthropologist, examines the long history of what she calls “auto-ethnography” among her people, presenting excerpts from individuals such as Hunt, Charles Nowell, and James Sewid. Nicholson and Jonaitis separately criticize Boas’ focus on reconstructing an earlier “traditional” culture rather than documenting Kwakwaka’wakw life as he and Hunt observed it. In contrast, as Nicholson notes, Nowell and Sewid directly addressed recent changes wrought by colonialism when telling their life stories to anthropologists.

A book of this size and diversity, by its very nature, is uneven in its coverage. Not all chapter themes or cited excerpts are of equal strength or value. The sheer volume of such material gives the impression of a somewhat “bloated” compendium. Doris Shadbolt’s catalogue foreword for the important *Arts of the Raven* exhibition, given in Judith Ostrowitz’s chapter, includes her original acknowl-

edgements, which are surely unnecessary here. Also in that chapter, a rather lengthy dialogue between Bill Reid and Bill Holm features several small items that are not illustrated, nor are most objects discussed in an excerpt from *The Legacy* catalogue. Figure references are given for the original publications, although it seems to defeat the purpose of this massive compilation if the reader is forced to other sources. Also regarding illustrations, the few colour images placed together in a short section all also occur in black and white elsewhere in the volume, which seems unnecessary duplication (or a missed opportunity to feature additional images).

In summary, this important book compiles in one place historical writings and contemporary thoughts from a wide range of time periods, disciplines, and perspectives that have shaped how we perceive Northwest Coast art. This collection broadens understandings and forces critical re-evaluation of established views. The editors have ensured that diverse voices are presented, and that Indigenous perspectives are incorporated and valued. The Federation for the Humanities and Social Sciences awarded this book the 2015 Canada Prize in the Humanities. However, it should be noted that it is addressed primarily at an academic audience. The sheer size, as well as the lengthy theoretical examinations and dense academic phrasing that characterize some articles, make it impenetrable for any casual reader. For those willing to make the effort, however, and as a handy reference guide to the history of ideas related to Northwest Coast art, this book merits careful attention.

ASBC-Nanaimo Branch:

The end of an era

Lorrie Hayden

This past May, the Nanaimo branch of the ASBC ceased operations after more than 22 years. Founded in 1992, following “The Dig” at Stl’ilep (Departure Bay, DhRx 16), the Nanaimo branch was -at one time and for many years- the most active among the four chapters. Unfortunately, the group succumbed to the steady and rapid decline in volunteerism, most notably at the executive level. After struggling for several years to keep the chapter alive and active, the decision was made to fold when only three individuals volunteered to sit on the executive board during the 2014 Annual General Meeting. The writing was on the wall, and the remaining four active members took the reluctant initiative to dissolve the Nanaimo branch.

A social event was held to thank the mem-

bership for its continued patronage and loyalty. The branch’s library, reusable commemorative shopping bags, pins, newsletters, Middens, etc., were offered free to members. Leftover library books were donated to the local rotary club. The remaining funds were used to create three \$500 financial awards for Archaeology students at Vancouver Island University in memory of Dorothy Young, a long-time member and active volunteer who passed away in March 2015. As well, a \$100 donation was made to the Nanaimo Community Archives in appreciation for housing ASBC-Nanaimo Branch materials through the years, and for posterity. Several members have agreed to remain vigilant and watchful of Nanaimo and area archaeological resources. This is truly the end of an era.



<http://nanaimohomes4sale.com/blog/brief-history-nanaimo>

PALEOETHNOBOTANICAL INVESTIGATIONS AT THE KEATLEY CREEK SITE: PLANTS AND PITHOUSES

(This article appeared in *The Midden* Vol. 26, No.3, in June 1994)

Dana Lepofsky received her Ph.D from the University of California (Berkeley) in 1994, and is a professor of archaeology at Simon Fraser University.

The Keatley Creek site is a large pithouse village where researchers at Simon Fraser University have been studying the prehistoric socioeconomy of the Southern Interior Plateau. The site is located about 25 km upstream from the modern community of Lillooet (Fig. 1) on benchlands above the Fraser River gorge. Walking across the site you have the feeling that you are walking on the moon—the landscape is covered in sagebrush and grasses, and is marked by 115 circular pithouse depressions ranging in size from 5-25 metres in diameter.

The Keatley Creek project is unique in British Columbia archaeology because it is the first large-scale project to actively incorporate paleoethnobotany into the research design. Paleoethnobotany has been used throughout the eight years of the Keatley Creek project to answer a variety of research questions concerning site formation processes, site seasonality, paleoenvironment, and prehistoric plant use.

In this paper I discuss the socioeconomy of the Keatley Creek village as reflected in the paleoethnobotanical record recovered from the living floors of a small, a medium, and a large housepit. In particular, I examine whether size differences in residential structures correlate with differences in housepit socio-economic organization.

The three housepits used in the comparison were

ideally suited for examining the paleoethnobotanical correlates of socioeconomic behaviour. Each of the three living floors dates to approximately 1100 BP.

The numerous hearths, and the fact that each of the structures was burned after abandonment, resulted in a relatively large sample of charred plant remains. Further, results of the botanical and other artifact analyses indicate that the floors are relatively intact and undisturbed, and that the patterning across the floors represents the accumulated effect of repeated activities in discrete areas.

Excavators collected bulk flotation samples for the paleoethnobotanical analysis from designated 50 x 50 cm sampling subsquares within the structures (Fig. 2). All samples were measured to a standardized volume of 1 litre, and then floated using the “garbage can” technique. Over 150 flotation samples were examined for archaeobotanical remains. Seeds, charred wood and conifer needles comprised the bulk of the botanical remains recovered. These remains represent 25 identified plant taxa, and many other taxa which have yet to be identified.

The detailed sampling strategy permitted me to map the frequency and distribution of plant remains across the floors of the structures.

Figure 2 displays the distribution of plant remains across the floor of the large housepit; similar maps were also generated for the medium and small structures. High concentrations of needles, charcoal, seeds (divided into food and non-food species based on

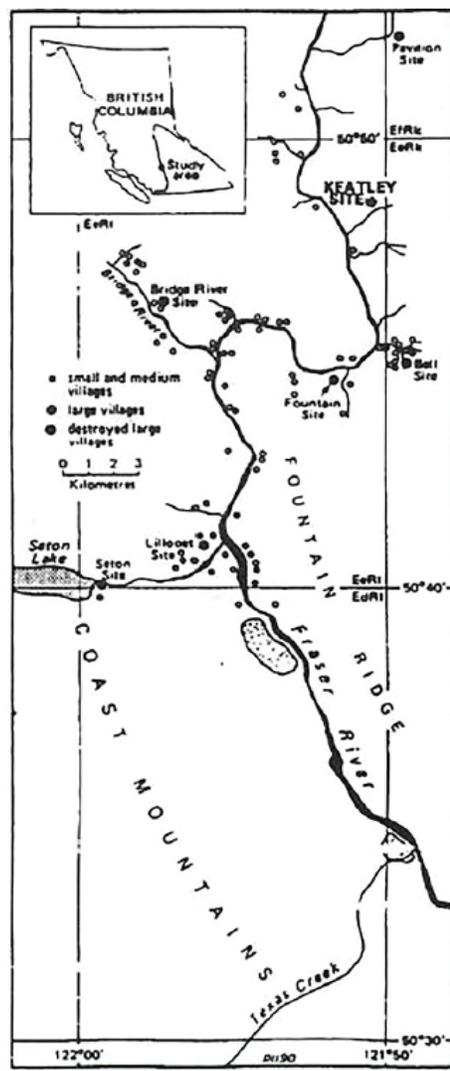


Figure 1 . Location of Keatley Creek Site.

ethnobotanical information) are circled in the figure.

There is clearly a non-random distribution of plant remains across the housepit floors. A common pattern displayed in all three structures is the relative absence of archaeobotanical remains in the centre of the floors. This pattern, however, is less marked in the small housepit than in the medium and large housepits. The centres of the floors may have been a communal use area for inhabitants of each structure.

Several charcoal concentrations are located across the floors of the three housepits. There is only a loose association between charcoal concentrations and hearths on the floors, suggesting that some hearths were not used frequently enough to have accumulated or retained large amounts of associated charcoal debris. In terms of the average amount of charcoal recovered per litre flotation sample, the large structure has significantly more charcoal on the floor than the medium structure, but not more than the small structure. In terms of wood species, the most common taxa are found in the same proportions in the large and medium structures (no charcoal identifications were conducted from the small structure).

From the foregoing we can conclude that the same kinds of fuel wood were generally burned in the large and medium structures, but that more fires were burned on average in the largest structure than in the medium-sized structure. It cannot be determined whether the burning of more fires has more to do with differential access to fuel, the intensity which the large house pit as a whole was used, or perhaps the length of time of the use of the floor.

The three housepits do not differ significantly from one another in average conifer needle abundance per litre flotation samples. However, nearly contiguous concentrations of needles around the peripheries of the large and medium structures, but not the small housepit, indicate that the needles may have been used differently in the latter structure. The peripheral concentrations of conifer needles in the larger two

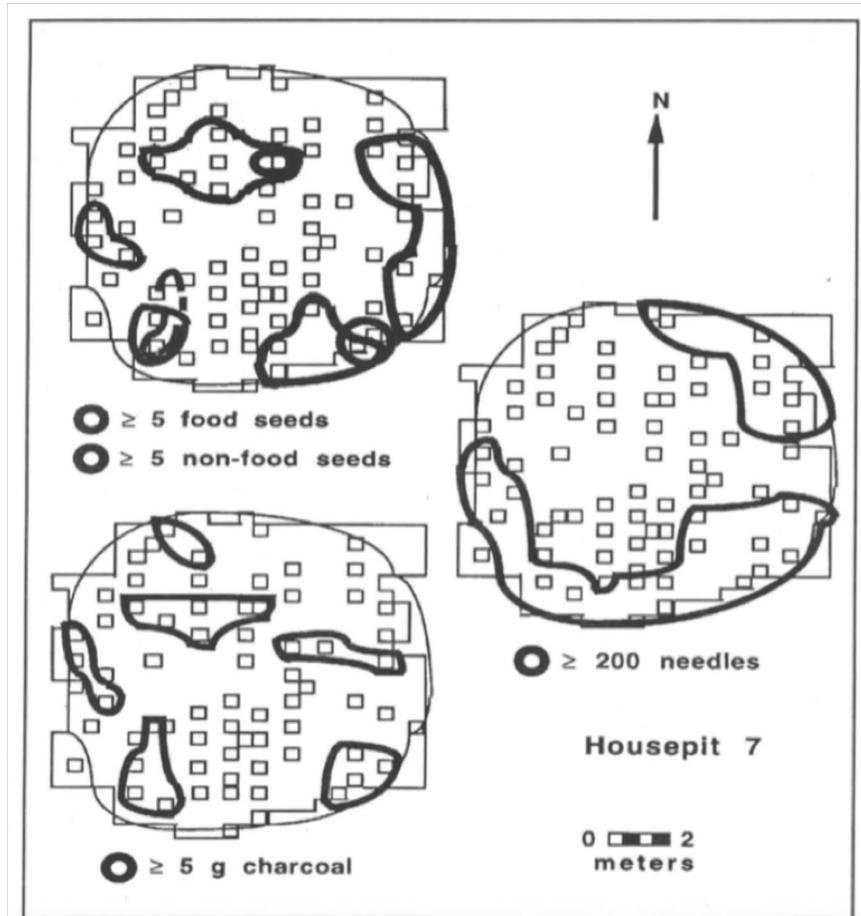


Figure 2 . Floor of the large housepit showing designated 50 x 50 cm sampling subsquares, and concentrations of floral remains.

structures may indicate the deliberate covering of the floor with boughs for bedding or floor covering, as was documented in ethnographic times.

Food seeds in the large and medium housepits cluster in discrete areas associated with hearths, and likely represent plant food processing areas. Seed densities are strikingly low in all areas across the floor of the small housepit, and no area appears to have a greater or lesser concentration than another. Statistically, the large housepit has significantly more seeds per litre flotation sample than the small structure, and contains far more seed plant taxa than either the medium or small structures. Finally, the large housepit accumulated new taxa at a significantly higher rate than the medium and small structures relative to the addition of new seed specimens.

Taken together, the three housepits are quite distinct in terms of their paleoethnobotanical records, and suggest very different pictures of prehistoric plant use. In the large and medium structures, the floor peripher-

ies used for sleeping and activities involving sitting, presumably by all members of the pithouse. Plant processing and plant consumption in these structures was conducted in discrete areas—presumably either conducted communally by group members, and/or all pithouse inhabitants had access to the processed plant products. The lack of plant remains in the floor centres also argues for communal activities within the structures. By contrast, only a limited amount and kind of plant processing was conducted in the small structure, and we can only hypothesize that such activities were conducted communally.

Thus, based on the paleoethnobotanical analysis, the three structures reflect distinct socioeconomic patterns. The results indicate that the large housepit, followed by the medium housepit, may have been used more intensively and involved far more diverse

activities that the small structure. Whether these differences can ultimately be related to status differences, to a larger work force having access to a more diverse resource base, or to differences in the length of time of use of the floor cannot be definitively answered with the present study.

It is important to remember that the three housepits analyzed represent less than 3% of the village of Keatley Creek. A much larger sample size including more housepits of all sizes is needed before we can draw more definitive conclusions about the prehistoric socioeconomy at Keatley Creek. This study, however, clearly demonstrates the potential of paleoethnobotanical analyses in studies of prehistoric social and economic organization.

Mystery Artifact

DkSf-2:62

Chelsea Gogal



Artifact DkSf-2:62 (bone tool) resembles a projectile point, but has a squared dull edge and a distinctive notched base (Photo 4). This artifact, found by Baseline Archaeological Services in Courtenay could not be conclusively identified, however other archaeologists familiar with the culture area consider that it may be a skeuomorph or a knitting/weaving lucet-like tool (Al Mackie, Eric Forgeng and Quentin Mackie, personal communication, September 23, 2012).

Please send thoughts and comments to asbc.midden@gmail.com

CONFERENCES AND EVENTS

Canadian Archaeological Association: 49th Annual Meeting

May 4 - 7, 2016

Whitehorse, Yukon

<http://canadianarchaeology.com/caa/annual-meeting>

The Archaeology Channel: Conference on Cultural Heritage Media

May 11 - 15 2016

Eugene, Oregon, USA

<http://archaeologychannel.org/events-guide/tac-conference-on-cultural-heritage-media-2016>

American Rock Art Research Association: Annual Conference

May 27 - 30, 2016

Las Cruces, New Mexico

<https://www.archaeological.org/events/21389>

The 4th International Landscape Archaeology Conference

August 23 - 25, 2016

Uppsala, Sweden

http://www.arkeologi.uu.se/LAC_2016+/

2016 World Archaeology Conference

Aug 28 - Sept 2, 2016

Kyoto, Japan

<http://worldarch.org/>

Western Bioarchaeology Group: Annual Meeting "Communities"

Oct 7 - 8, 2016

Sonoma State University, Rohnert Park, California

<https://sites.google.com/site/westernbioarchaeologygroup/home>

Joint Annual Meeting of the Archaeological Institute of America (AIA) and the Society for Classical Studies (SCS)

January 5-8, 2017

Toronto, Ontario

<https://www.archaeological.org/meeting/about>

Society for American Archaeology: 82nd Annual Meeting

March 29 - April 2, 2017

Vancouver, British Columbia

<http://saa.org/AbouttheSociety/AnnualMeeting/tabid/138/Default.aspx>

To include your event or conference here, please contact the editor at asbc.midden@gmail.com.

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