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# MIDDEN

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## FIELD SCHOOL REPORTS:

CAPILANO, LANGARA AND NORTHWEST COMMUNITY COLLEGE

STEIN RIVER ROCK ART

MARPOLE AND MEDIA MANIPULATION

THE FUNCTION OF ULNAS

# THE MIDDEN

Volume 44, No. 3/4 2012

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## **THE MIDDEN Subscriptions**

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**Cover:** Bone ulna tools, details on page 23

## FORUM: ARCHAEOLOGY IN THE MEDIA

### “Cautionary Tale” and “Game Changer”—Media Response to Marpole Midden Decision

Rich Hutchings

We have expressed our determination to see the site preserved and we will continue that effort with all that it takes to succeed. [The Musqueam Village site] is one of the last and certainly the most significant Musqueam site[s] that connects to our past and to our identity: an identity that was almost destroyed by the Indian Act, residential schools, and other colonial indignities. It is surrounded by a sea of pavement and development that has obliterated almost all of the traces of our past life on our territory.

Chief Ernest Campbell and Musqueam Indian Band, 2012

The close of summer saw “resolution”<sup>1</sup> of the high-profile, year-long “Marpole Midden” imbroglio, a finale that did not go unnoticed by the media. Indeed, coverage by the *Vancouver Sun* provides us with a unique opportunity to explore up close the very heart of our contemporary heritage crisis. Here, I focus on two important elements: the first is media hegemony, where media is manipulated to reinforce dominant views, and the second is the ideology of economic “development,” where private property is paramount. These dimensions are important because they highlight the economic basis and seeming intractability of the crisis. In the end, and among many other things, Marpole became a case study in the production of public opinion.

As described in late September by *Vancouver Sun* reporter Christopher Reynolds, the province had decided to permanently halt development of a “hotly contested” property in Vancouver’s Marpole area—this after “months of negotiations between an urban aboriginal band and a developer failed to produce a compromise.” The title of Reynolds’ piece, “Ancient Musqueam burial ground in Marpole to remain free of development,” appears to reflect his effort to emphasize the positive feelings expressed by the “success[ful]” Musqueam Band while deemphasizing the “disappointed” development investors. As Musqueam spokeswoman and member Cecilia Point stated therein, “It’s a huge success [...] To

me this is precedent-setting in giving First Nations equal respect with non-natives.”

Reynolds summarized the government decision as follows: “The Ministry of Forests, Lands and Natural Resource Operations allowed a permit for alteration of the midden site to expire Sunday, saying the discovery of burial grounds on the property changed its heritage value and rendered large-scale construction inappropriate without Musqueam consent.” Reynolds also noted the “precedent setting” aspect of the decision, but in relation to the potential financial losses.

“The land is worth much less since the province revoked the site alteration permit—effectively rendering it untouchable,” [investor spokesman] Ransford said. Century Group had pre-sold more than 70 condo units and will now have to compensate buyers, he added. In total, Century Group—in a joint venture with LandPro, owned by the Hackett family who purchased the property more than 50 years ago—stand to lose millions of dollars, Ransford said.

The next day, Reynolds reformulated the Marpole story, and the title was changed to reflect what would become the central focus of the discussion—its “precedent setting” impact on developers. The new title was a combination of new and old: “Protection of Marpole Midden celebrated by Musqueam—‘Precedent-setting’

provincial decision to stop all work leaves developer looking for compensation.” Rather than focusing on Musqueam’s success, the narrative was seemingly being transformed into one about economics and private property:

“Century Group’s pretty disappointed the government made the decision they did, because in effect they’ve taken away all of the rights to do anything with the land. And they have done that without making any commitment to compensate,” said [...] Ransford on Sunday. “I think it’s a threat to private property in all British Columbia, quite frankly.”

The following week, two articles appeared in the *Vancouver Sun* to fan the flames. Musqueam “success” over an ancient burial site, it turned out, was to be short-lived; they (and other First Nation communities) were now to be seen as a visible threat.

On October 8, *Vancouver Sun* editorialist Craig McInnes had this to say about the situation:

It hasn’t been that long since finding an arrowhead in your backyard would have been pretty exciting. Now it’s just plain bad luck, especially if you uncover it while digging a foundation for a new garage or any significant redevelopment. An arrowhead or other pre-colonial artifact might be an indication that



your property has valuable archeological significance.

The value, however, isn't coming your way. What you will get, if you do the right thing and report the find, is additional costs. You may not even have to find anything to win the archeological sweepstakes. You might go for a building permit and discover that you are sitting on one of the 35,000 sites registered by the province as being potentially significant.

McInnes' main point is succinctly stated in his subtitle: "Private owners expected to pay for public heritage values—it may not be fair but it is provincial policy."

For McInnes, the Marpole case is one where "preserving our heritage"—a process that creates a public benefit—fails "by dumping the cost on individuals. Even if a homeowner, business owner or developer decides not to proceed with whatever work they had planned, the discovery can reduce the resale value of their property. [...] By stopping work, the province has effectively reduced the value of the land." In this sense, the Marpole story has become for him a "cautionary tale." Perhaps tellingly, McInnes does not call for government funding/assistance for such 'threatened' heritage sites; he only warns buyers to be careful with their property investments.

Two days later, on October 11, the *Vancouver Sun* published a guest editorial penned by Fraser Institute senior fellow Mike Milke, who also happens to have authored the book *Stealth Confiscation: How Governments Regulate, Freeze and Devalue Private Property—Without Compensation* (2012). In his provocatively titled *Sun* piece—"Open season on private property?"—Milke describes the Marpole decision as a "game changer."

But first, a bit of context to understand which "game" Milke thinks we are all playing. To begin with, he refers to "the discovery of *assumed* aboriginal bones" (emphasis added), a point that has, as far as I am aware, never been in contention. Moreover, Milke snidely observes,

It is understandable that some feel every bit of ground is sacred. But that over-romanticizes matters. This is not a recent graveyard with headstones identifying one's near relatives. Every human community in history is eventually built over

past inhabitants. Paris is built over crypts that contain six million skeletons. Most were reinterred from above-ground graveyards in the late 18th century for health reasons and to make way for a growing city.

The intact [Marpole] burial area is in a two-metre by two-metre wide plot that sinks just five-eighths of a metre. (Fragment remains were also found in a relatively small, already-disturbed area). That represents 0.113 per cent of the surface area. The city has refused to issue a building permit based on "the public interest"; similarly, the province denied the extension of its own earlier permits after the Musqueam protests.

Milke concludes that the Marpole remains should have been "removed respectfully and reburied as has already happened elsewhere in British Columbia; the protests should end; the development should proceed."

The most broad sweeping of Milke's contentions about Marpole, one which he opens his entire piece with, is his assertion that "[t]he federal and British Columbia governments have always claimed that native land claims would never affect private property, that First Nations governments would never have veto power over private land." His suggestion is clear: the Marpole decision mistakenly sets cultural heritage above private property rights, thus it impinges on the ability of the city, province and nation to "develop"—economically speaking, of course.

This chronological reading of the four *Vancouver Sun* articles suggests a concerted media effort to commodify Indigenous heritage and manipulate public perception. Increasingly, the Marpole story has pitted profit and private property rights against the value of cultural heritage and community history. In the end, a victory celebration for those who protected an ancient village and cemetery was reduced to nothing more than the relocation of a small assemblage of bones and archaeological "fragments." Ultimately, *Vancouver Sun* readers were led to believe that the Marpole decision heralded an "open season on private property," and that First Nations' history is to be feared.

For me, the Marpole situation illustrates the economic basis for our contem-

porary, global heritage crisis. It also highlights the role of the media when it comes to the construction of public opinion. Here, 'ideology' (ideas manipulated by power) and 'development' (notably economic development) coalesce into what should be the focal point of conversation—that is, *the Western ideology of growth, development and progress*.

I am left thinking, like Angèle Smith (2008:18; see also Mapes 2009), about the "clearance and removal" of people—physically and mentally—from their homes and lands to make way for "progress." As Smith asks,

If the meaning of landscapes in terms of a sense of place and identity is so great, then what must be the terrible impact on people who have had to leave, for whatever reason? Archaeologists can turn to the research conducted on placelessness, homelessness, and diaspora to better understand the personal and collective sense of grief, defeat, outrage, and resistance that often follows on clearing people from their landscape.

Asking that question and pursuing that research has led me to conclude, contrary to popular belief, that *manifest destiny* is alive and well in the 21<sup>st</sup> century. Indeed, I see manifest destiny as the highly volatile fuel that powers the great engine that is growth, development and progress. In the context of our modern-day consumer culture, manifest destiny refers to the "moral and economic rationale" that links human health and wellbeing to the commercial "exploitation and development" of heritage, both natural and cultural (Harper and Fletcher 2011:356). It turns out that in the "game" of manifest destiny, the rules clearly state that *heritage has no intrinsic value*, only "market" value. Sound familiar?

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#### Note

1. In hindsight, it remains unclear what exactly has been resolved. It may well turn out that this is more a case of "passing the buck" or "kicking the can" than meaningful change in policy.

References on pg.5



**CHRONOLOGY OF  
VANCOUVER SUN HEADLINES  
ABOUT MARPOLE**

**September 30:** "Ancient Musqueam burial ground in Marpole to remain free of development."

- Christopher Reynolds/*Vancouver Sun*, 2012

[<http://www.vancouversun.com/travel/Ancient+Musqueam+burial+ground+Marpole+remain+free+development/7318280/story.html>]

**October 01:** "Protection of Marpole Midden celebrated by Musqueam—'Precedent-setting' provincial decision to stop all work leaves developer looking for compensation."

- Christopher Reynolds/*Vancouver Sun*, 2012

[<http://www.vancouversun.com/technology/Protection+Marpole+Midden+celebrated+Musqueam/7323836/story.html>]

**October 08:** "McInnes: Halted Marpole condo development a cautionary tale—Private owners expected to pay for public heritage values, it may not be fair but it is provincial policy."

- Craig McInnes/*Vancouver Sun*, 2012

[<http://www.vancouversun.com/technology/McInnes+Halted+Marpole+condo+development+cautionary+tale/7360158/story.html>]

**October 11:** "Open season on private property?"

- Mark Milke/*Vancouver Sun*, 2012

[<http://www.vancouversun.com/technology/Open+season+private+property/7377718/story.html>]

## "Kennewick Man" Neither Native American nor Indigenous to Columbia River Valley, says Federal Archaeologist

**Rich Hutchings**

The names established an agenda under which the rest of the encounter would be played out. After discovering a patch of "unclaimed" land, the conqueror would wade ashore and plant his royal banner. He proclaimed that these newly discovered lands were now his patron's domain and laid claim to the new-found riches, the natural resources and the things living and inanimate—all of which was simply wilderness before being "discovered" and defined by Europeans. ... The power to name reflected an underlying power to control the land, its indigenous people and its history.

David Hurst Thomas, 2000:4

Fifteen years have passed since his resting place on the banks of the Columbia River was first disturbed, yet the 9500 year-old Ancient One ("Kennewick Man") remains politically as divisive a figure as ever. This is in large part because he still acts as a powerful energy source, continuously shedding light on the sprawling canyon that divides Western archaeology from the Indigenous people it studies and manages. This fall, the Ancient One's light once again shone fully and squarely on archaeology.

In early October, Smithsonian Institution scientist Doug Owsley presented his most recent discoveries to an audience of Columbia Valley tribal leaders. Owsley, a physical anthropologist with the National Museum of Natural History, led the nearly decade-long court battle to study the Ancient One's bones. That battle ended in 2004, when the 9th U.S. Circuit Court of Appeals ruled that the remains were not protected by the federal Native American Graves Protection and Repatriation Act (NAGPRA), this because the Ancient One was so old "that it was impossible to establish a link with modern-day Native Americans" (Mapes 2012). Owsley shared his findings at a private gathering hosted by Central Washington University.

According to *Seattle Times* reporter Lynda Mapes (2012), "Owsley spent most

of the day presenting his findings from the study of the skeleton." While Owsley had previously stated that the Ancient One is not of Native American descent, "he said here for the first time that he believed the man was not even from this area."

According to Owsley, "not only wasn't Kennewick Man Indian, he wasn't even from the Columbia Valley, which was inhabited by prehistoric Plateau tribes":

Isotopes in the bones told scientists Kennewick Man was a hunter of marine mammals, such as seals, Owsley said. "They are not what you would expect for someone from the Columbia Valley," he said. "You would have to eat salmon 24 hours a day and you would not reach these values. This is a man from the coast, not a man from here. I think he is a coastal man."

Pressed by Armand Minthorn of the Umatilla Board of Trustees, who asked Owsley directly, "Is Kennewick Man Native American?" Owsley said no. "There is not any clear genetic relationship to Native American peoples," Owsley said. "I do not look at him as Native American ... I can't see any kind of continuity. He is a representative of a very different people." His skull,

Owsley said, was most similar to an Asian Coastal people whose characteristics are shared with people, later, of Polynesian descent.

As reported the following month by *Crosscut.com* writer John Stang (2012), at least one Washington State archaeologist was taking aim at Owsley's methods. For University of Washington and Burke Museum archaeologist Peter Lape, the biggest question is "whether peer review, a time-honored scientific practice, is being ignored" by Owsley. Stang describes Lape as being "unhappy" with the situation.

[Lape] believes that many facets of Owsley's team's conclusions—such as the isotope results to speculate on Kennewick Man's diet and the potential elasticity of a human skull—stem from tricky aspects of forensic anthropology and he's bothered by the fact that no one outside of Owsley's team has had a chance to scrutinize the Smithsonian's data to see how the team reached its conclusions. "Any of this is open to discussion," he said. "Bones are not open books, especially not 9,000-year-old bones." ...

What bothers Lape...is the absence of peer-reviewed articles published prior to Owsley unveiling the bones' secrets. Standard procedure in the academic world is for scientists to submit articles to scholarly journals, have other experts review the articles prior to publication, and then have experts debate results after publication. While Owsley has consulted extensively with his group of experts, he has yet to publish a scholarly article on Kennewick Man. "He's never published any scientific results of his studies. There's no place for anyone to look at the actual data. ... You have to have a higher amount of scrutiny in the scientific process," Lape said.

"Discovered" in 1996, the Ancient One quickly became the focal point of an already overheated discourse (Ferguson 1996; Swidler 1997), particularly in the key areas of archaeologist-Native American relations, NAGPRA, and Native

Part of the dispute's background has been a practice of anthropologists digging up Indian remains and storing them in museums, often unstudied and violating Native American spiritual beliefs. The Smithsonian was a repository of unstudied Indian skeletons until Congress enacted NAGPRA in 1990 to begin repatriation of remains.

John Stang, 2012

American identity (Bruning 2006; Ray 2006; Thomas 2000; Watkins 2004).

Owsley's language—like others before him—is deeply troubling. For me, it recalls the politically motivated (colonialist and nationalist) rhetoric described by Don Fowler in his 1987 essay on the "uses of the past." Fowler, who shows how archaeology works in "service of the state," illustrates the "striking ways" in which "nation-states and their partisans have used archaeology, archaeological remains, and the past generally for purposes of national or chauvinistic ideology, or the legitimization of power, or all three."

Archaeologists might do well to pause and reconsider what the Ancient One stands for, what he represents. My point of departure for reflection is Fowler's (1987:241) conclusion that "interpretations, or uses, of the past are seldom value

neutral":

Nation states have long used and manipulated the past for their own needs and purposes. Since its inception as a field of study and later as a discipline, archaeology has been immersed in, and conditioned by, the economic, political, and governmental institutions of nation states. In various nation states at various times, some archaeologists have analyzed and interpreted the past to fit the ideological requirements of those states. That is one end of the spectrum. The other is the implicit and therefore unquestioned acceptance of ideological tenets and values from within the archaeologist's culture and how they influence the archaeologist's uses of the past.

Vivian Harrison, NAGPRA coordinator for the Yakama, said it was disturbing to look at the slides Owsley showed, with the bones presented on a platform to be scrutinized from every angle. "Really, to me, it's sad. This is a human being and his journey has been interrupted by leaving the ground." ... The day's presentation was "subtly traumatic," said Johnny Buck.

Lynda Mapes, 2012

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# Province Disappoints, First Nations Disengage: No Section 4 Agreement in Sight...

In 2011, *The Midden* (43.3) featured an article on the Joint Working Group on First Nations Heritage Conservation, comprised of members of the First Nations Leadership Council and the Province of British Columbia. Their mandate, described therein (Sayers et al. 2011:11), is

to explore options and provide recommendations for consideration by B.C. First Nations for improvements in policy and legislation that will adequately address First Nation interests with respect to the protection and conservation of our heritage sites, sacred sites and archaeological heritage objects.

A central issue for the Joint Working Group has been implementing section 4 of the *Heritage Conservation Act*, which provides the option for formal agreements between the provincial government and First Nations "with respect to the conservation and protection of heritage sites and heritage objects that represent the cultural heritage of the aboriginal people who are represented by that first nation" (*HCA* section 4[1]). A section 4 agreement would ensure more direct control by First Nations over the management of their heritage

sites.

Such agreements are in line with the *United Nations Declaration on the Rights of Indigenous Peoples*, which Canada finally ratified in November 2011. Article 11 of the Declaration specifically recognizes that

Indigenous peoples have the right to practise and revitalize their cultural traditions and customs. This includes the right to maintain, protect and develop the past, present and future manifestations of their cultures, such as archaeological and historical sites, artefacts, designs, ceremonies, technologies and visual and performing arts and literature.

On November 1, 2012, the Union of B.C. Indian Chiefs (UBCIC) announced that the First Nations Leadership Council and the First Nations representatives who are part of the Joint Working Group would be disengaging from the process of working with the provincial government towards a section 4 agreement (UBCIC 2012). They state that the Province "has been unwilling to place priority status on the advancement of the section 4 pilot project" and, despite recommendations

from various bodies involved, would not be proceeding with a section 4 agreement:

With this decision, the Province is now allowing for the continued desecration of First Nations heritage sites. The Province has been very clear that it has no plan or solutions to deal with issues arising out of the HCA or protecting First Nations sacred/cultural sites.

As Sayers et al. (2011:14) note, this project was "a significant test of the commitments made by the provincial government to recognize Aboriginal Title and Rights and honour both the *New Relationship* and the *United Nations Declaration on the Rights of Indigenous Peoples*. As is the case with many things time will tell..."

A short year and a half later, time has told: the province failed, and First Nations are once again on their own...

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cont'd. from pg.2

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## RESPONSE TO: COMMERCIAL ARCHAEOLOGY

*The last issue of The Midden featured an article about commercial archaeology in British Columbia. La Salle and Hutchings' (2012) piece provided data and analysis concerning the practice of archaeology in the province today and through time, and presented some challenging conclusions. A call for responses was put forth and, towards this, the following letter was received. It is hoped that this will prompt continued conversation on what may be some of the most crucial issues facing archaeologists in B.C. today.*

### Many Shades of Grey: Dispelling some Myths about the Nature and Status of CRM in British Columbia, A Response to La Salle & Hutchings

Natasha Lyons, Ian Cameron, Tanja Hoffmann and Debbie Miller

La Salle and Hutchings (2012) recently penned an exposé-style account of cultural resource management in British Columbia in the pages of *The Midden*. We agree with the authors that there is substantive room for improvement in the way CRM operates in B.C., and that there is a role for inside practitioners and outside observers in identifying concerns and raising them for debate. However, neither of these authors is a CRM practitioner in the province, and this disadvantage is apparent in their narrative, which contains a number of both factual and interpretive errors. We will address only a limited number of these in our reply, but we hope other archaeologists will respond to the article and address different aspects of La Salle and Hutchings' arguments. Our primary bone of contention relates to the tone of the piece, which is denigrating and dismissive (of both CRM practices and practitioners), unnecessarily divisive, and lacks solutions or alternatives. CRM, if nothing else, operates within a wide spectrum of grey, rather than the black and white caricature depicted by La Salle and Hutchings. Below, we touch briefly on a series of points related to money matters, motivations, the impact of First Nations on CRM policy in B.C., and the framing of this debate.

#### Money

Let's dispense with myths about money first. CRM practitioners are generally paid according to level of education and experience. At mid-career, we can make a solid, middle class salary (or wage, as the case may be), enough to buy a home, pay a mortgage, and raise a family. Hardly a one of us reaches an upper income bracket doing CRM; this is also true of many career academics in archaeology. Archaeological consultants are generally paid less than other field-based professionals in the sciences, due in part to the historical de-valuing of Aboriginal heritage in North America as well as the tendency of CRM firms to compete in underbidding wars.

#### Motivations

We also want to dispel the myth that CRM practitioners are a pack of money-grubbing, ethically-challenged, underachievers who couldn't land academic jobs. While we are overstating the case slightly here (in the interest of a bit of comic levity), we are completely serious when we state that CRM folks in British Columbia are generally ethically-grounded, professionally-

mindful individuals who are committed to the best interests of archaeological resources. La Salle and Hutchings accuse the entire CRM populace of willfully destroying archaeological landscapes for money. This is of course meant to be a provocative statement, but it is also a truly facile one. The politics of CRM in British Columbia are nothing if not dense and complex. To survive in the development environment, a CRM business owner must be adept at many levels of negotiation—with different types of clients, with other firms, with the B.C. Archaeology Branch, with different First Nations organizations and individuals and their respective interests, with the Environmental Assessment Office, and with a variety of special interest groups. And while there are any number of challenges and constraints to preserving archaeological resources within a CRM context, all of us have stuck our necks out with developers (who, incidentally, come in all stripes from the rare dastardly evil capitalist to those genuinely interested in archaeology) to prevent impacts to sites, and have also seen our colleagues do it on repeated occasions. There is no academic 'high ground' in these situations<sup>1</sup>—it is often a case of think-on-your-feet and in-the-moment. Informal conversations between the Branch and CRM archaeologists about the tactics of handling these different on-the-ground and usually front-line situations go on constantly. Permits themselves (of which there are a number of different types<sup>2</sup>) are also negotiated entities—how many shovel tests are appropriate, what kind of terrain is being surveyed, what level of monitoring, what types of sites are known and to what extent they may be impacted (or not). It is true that some kind of denominator must be found between the archaeologist, the proponent, the affected First Nations, and the Branch. But, despite the authors' accusations (and inaccurate portrayal of the "5 step" CRM process<sup>3</sup>), we are not collectively seeking the lowest common denominator. Rather, we are seeking a middle ground that we can all agree to within the regulatory constraints of the situation. This often means avoidance of sites, but it can also mean mitigation, excavation, and/or a variety of types of data recovery and analysis.

No one is saying this process is perfect: it is messy, contingent, pragmatic, and highly situational. And, as a collective, we are always interested to hear a success story and to hear suggestions for how to broker these decisions more effectively and in favour of the resource. To return to the accusation that the consulting community willfully sells resources for money, we suggest that

the authors put themselves in a consultant's shoes for 6 months in our province, and with best and highest intentions, get in the trenches and negotiate good deals in good conscience in order to see how the outcomes look and how they are arrived at. This is the experiential learning implied in both the theoretical and applied notions of 'practice'.

### First Nations & the Evolution of CRM Policy in B.C.

This brings us to perhaps the biggest myth of La Salle and Hutchings' article, and this relates to the role of First Nations in consulting archaeology in British Columbia. The authors leave a gaping silence about the status, role, and impact of First Nations on the profession. However, First Nations are perhaps *the most important prime mover* on the historical trajectory of CRM archaeology in B.C. Although First Nations' campaigns for the respectful treatment of their cultural heritage date back to colonial times, the consultative requirements stemming from major Aboriginal rights and title court decisions have meant that First Nations now have considerable influence over CRM practice. For most Nations, however, this level of influence is still insufficient. The court decisions meant that "industry and local government have...legally enforceable duties to consult with and accommodate First Nations wherever policy and operations decisions impact on lands subject to reasonable claims of Aboriginal rights and title" (Mason and Bain 2003:5). As a result of these requirements, in the late 1990s and 2000s, the number of permits issued rose dramatically and, subsequently, the application process was amended to provide First Nations with time to consider the implications of proposed developments on their cultural heritage. It is perhaps not surprising given the increasing avenues for direct First Nations involvement in cultural heritage management, that today many archaeologists work closely with, and in some cases, directly for First Nations in British Columbia. Many First Nations have implemented their own heritage policies and procedures that both formally and informally influence how archaeological sites are assessed and managed. It can be argued that the recent trend for First Nations to hire and establish internal CRM firms is one way to influence the trajectory of B.C. archaeology 'from the inside out'. As First Nations continue to lobby for increasing control over their cultural heritage, the outcomes of those efforts will undoubtedly, as they have in the past, change the course of consulting archaeology in B.C.

### Changing the Frame of this Debate

As alluded to throughout this reply, cultural resource management in British Columbia operates in a multi-faceted, multi-layered, and multi-interest environment. It operates as many shades of grey (with apologies to E.L. James) rather than in blacks and whites. La Salle and Hutchings appear to be standing on a pedestal and critiquing from above rather than entering the fray. We think this is an unproductive tactic, and counter: if we were to all lay down our trowels tomorrow, what would the alternatives be? We challenge these authors as much as other practitioners to help generate solutions.

For better and for worse, archaeology is part of a much larger dynamic of industry and development in the province of British Columbia. We work within this environment—not above or outside of it—making our *practice* of critical import. And while we are not able to change the broader workings of this macroenvironment,

we *are* able to examine the structure(s) of our working milieux and relationships in order to generate observations, critique, discussion, and debate. Rather than asking who is making the money, we suggest setting our sights higher, and asking how we, as a collective, could work better together in order to manage the archaeological resources that are still extant in B.C. This question implies others, such as:

How should we work with the many communities and stakeholders with interests in heritage resources? How can we encourage multiple publics to be more aware of sites and heritage and their destruction?

How can we put an end to underbidding that lowers the quality of work?

How can we find venues to better share and disseminate our reports and results<sup>4</sup>? How do we equip archaeologists and other interested parties with tools needed to negotiate non-disclosure agreements that balance the need for public dissemination of archaeological findings with those of the client?

How can we improve communications between archaeologists practicing in different sectors of the discipline in B.C. (and beyond)?

If you have ideas about setting the terms of this debate, please add your voice. La Salle and Hutchings have encouraged B.C. archaeologists to respond to their salvo. We add our voices to this, and ask how we should proceed in sparking and then holding and sustaining an informed, engaged, respectful, and above all else, constructive discussion on these issues. We ask readers what format such debate should take—a session at the CAAs or the B.C. Archaeology Forum, or an event hosted by one of the universities? A round table between the BCAPA, the Archaeology Branch, and other discussants at one of these venues? A special issue of *The Midden*? Some form of online discussion, and/or otherwise? Please send your comments and suggestions to *The Midden*: [asbc.midden@gmail.com](mailto:asbc.midden@gmail.com).

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Natasha Lyons and Ian Cameron own and operate Ursus Heritage Consulting Ltd.; Tanja Hoffmann owns and operates Circa Heritage Consulting; Debbie Miller is Acting Director of Katzie Development Corporation.

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### Acknowledgments

We thank a number of friends and colleagues for offering their thoughts on these issues and for reviewing earlier drafts of this paper.

### Notes

1. We have no interest in dismissing the importance and merits of academic scholarship, and we acknowledge the work and advocacy of academic archaeologists in B.C. What we are highlighting are some of the working differences between academic and consulting practices. To wit, the requirement of CRM practitioners to engage in a constant stream of negotiations about their permits and how their work will be done that is not a necessity of academic permit-holding (see note 2). We also note that the gulf between academic and CRM archaeology has in many ways narrowed over time. Many former consultants become academics; many academics do consulting on the side. Becoming a professor is not

the apogee of the archaeological food chain; amongst us authors, we hold various professional and academic credentials—including several advanced graduate degrees—and each of us still consciously chose consulting over other forms of archaeological employment.

2. Permits are issued by the B.C. Archaeology Branch for a number of different reasons. Types of permits include Heritage Investigation Permits (often issued to academics), Site Alteration Permits (issued for sites that will be impacted), and Heritage Inspection Permits. The predominant type of permit is the Heritage Inspection Permit, which includes single proponent/single development permits, and two types of blanket permits, single proponent/multiple development permits and multiple proponent/multiple development permits. It is problematic to compare these permits as apples to apples (as La Salle and Hutchings have) because their scope, complexity, and most particularly, their potential impact to the archaeological record, differ significantly. The increasing volume of permits is directly related to an increase in regulation of development, and cannot be taken as a direct measure of an increase in the number of impacts to archaeological sites, which might be better measured by the number of site alteration permits issued.

3. La Salle and Hutchings present an erroneous summary of the CRM process. A more accurate depiction follows: 1) conduct background research (including in many cases field reconnaissance) to determine the potential for an archaeological site to be both present and preserved on a subject property; 2) conduct field survey to determine the extent, nature, and significance of archaeological deposits on the subject property; 3) assess the potential impacts the proposed development may have on the archaeological deposits and provide management recommendations that range from site avoidance (usually the archaeologist's first option) to data recovery, to no further work; 4) submit a report to the Archaeology Branch that contains management recommendations; 5) conduct further work depending upon the Branch's decisions (it is the Branch

that makes the decisions about how a site is managed, not the individual CRM archaeologist), and; 6) submit a final report that adheres to the Branch's reporting standards. In summary, archaeologists do not take out permits to impact sites, they take out permits to *manage impacts to sites*.

4. La Salle and Hutchings rightly suggest that more should be published about the 'business' of archaeology. In our experience, non-disclosure agreements do not represent as serious an impediment as they are made out to be by these authors. The real culprits are both time and the orientation of CRM work. Cultural resource management practitioners are paid to assess projects, apply for permits, carry out fieldwork, write technical reports, and in effect 'manage' resources, rather than publish their observations about the meta-level of the business they engage in (which, when written, is really compelling stuff!). Nevertheless, it is a tricky business to write about our dealings with various 'stakeholders' and to simultaneously avoid 'biting the hand that feeds' (for further discussion, see Lyons forthcoming).

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This Fall, *The Tyee* featured a collection of articles as part of its "BC's Enduring Central Coast" series, the goal of which was to investigate "a land and culture that has thrived for thousands of years." Archaeology featured prominently in these articles, reporting on a summer of site visits and storytelling by practitioners in the field.

While archaeology is one contributor to history in these stories, oral traditions, museum repatriations, contemporary fishing and resource planning for the future are all interwoven. The resulting colourful fabric offers a holistic picture of Central Coast Indigenous peoples—past, present and future.

### B.C.'s Central Coast Heritage Featured in *The Tyee*

Titles of articles and videos include:

- *Bringing the Ancestors Home (video)*
- *Sifting Evidence with BC's Ancient Civilization Sleuths*
- *Ghost Towns and Living Defenders: A Coastal Timeline*
- *Coastal People's Past Powers Their Political Future*
- *Stone Fish Traps Explained (video)*
- *Bella Bella's Revitalized Fish Plant*
- *Hakai Beach Institute: A Science Hub for BC's Central Coast*
- *On BC's Central Coast, the Way Forward*

Check out the features and videos here:

<http://thetyee.ca/Series/2012/10/29/BCs-Enduring-Central-Coast/>



# Reconstructing an Early 20<sup>th</sup> Century Japanese Camp in the Seymour Valley: The 2012 Capilano University Archaeology Field School

Bob Muckle



The 2012 Capilano University archaeology field school focussed on excavations at the McKenzie Creek site in the Seymour River Valley, near Vancouver. The site contains considerable evidence that its peak use was around 1920 when it served as a logging camp for Japanese workers. It may have continued to be secretly occupied until 1942.

## Background

The site was first identified as a potential Japanese logging camp during survey in 2003 and Capilano University field schools have subsequently spent at least

a week at the site in each of 2004, 2005, 2006, 2007, 2008, and 2010. The camp is unusual insofar as it exhibits elements of a Japanese-style camp not routinely seen in North America, including a bathhouse, considerable evidence of women, and several small residential cabins rather than a typical bunkhouse and mess hall set-up.

## Objectives

There were three primary research objectives of the 2012 field season. One was to test the hypothesis that Japanese continued to live at the site until the internment of Japanese in camps away from the coast

in 1942. This hypothesis was developed based on a memoir providing second-hand information that a small group of Japanese lived in secret at an abandoned logging camp in the Seymour Valley until 1942; what appears to be a deliberate attempt to hide a relatively expensive cooking stove (presumably so it wouldn't be looted when

Figure 1. Besides excavation, 2012 field school students visited sites in the Seymour Valley documented by previous field schools, including this early 20th century logging camp. Photo by Mark Galvani.



Figure 2. Numerous industrial artifacts were excavated at the site in 2012, including this sawblade. Photo by author.

they were away); a relatively large number of work boots and personal artifacts that could be explained by the limitations on the amount of things Japanese could take to internment camps; and an observation of differential preservation of cans within the site. A second objective was to determine the function of two features at the site – a relatively flat area with a visible component of fragmented shell and a rock feature. A third objective was to get a better sense of the camp layout. Another, although not primary, objective was to monitor sites previously recorded in the study area (i.e., the Lower Seymour Conservation Reserve).

## Results

Five areas of the site were excavated: a cabin area, a small midden, a workshop area, the flat area with shell, and the rock feature. Not unexpectedly, the cabin area revealed artifacts associated with residential living, including parts of a stove, buttons, and medicine bottles. The midden area included a variety of items related to food and drink, such as fragments of cans, bottles, and dishes. The workshop area revealed industrial artifacts, including a saw blade.

The flat area with shell had been subjected to test excavations in previous seasons, but the results were inconclusive. It is hypothesized that the area, measuring about 4m x 4m was a garden, with the shell being added to raise the pH. One 2 x 2 m excavation unit was excavated and sediment analysis undertaken. Results show the pH to be higher than the control samples taken elsewhere in and near the site. Dozens of nails were found during excavations of the feature but no other artifacts. Seeds were recovered, but they are yet to be identified. The tentative interpretation is that the feature is a garden. The nails may have been some kind of structure within the garden or perhaps added to the soil to alter the mineral content.

The rock feature was excavated in its entirety. The feature consisted of four rock walls approximately 60 cm high and making a square a little bit less than 2 m on each side. The area within the walls was filled with sediment. The feature is on the periphery of the site, alongside what was likely the main wooden road running through the site, and also alongside a creek. Excavations revealed that near the top of the feature, beneath the littermat, there were once wooden planks laid

horizontally, presumably forming a floor. Some nails were found including one visible in a disintegrating plank. Below that were layers of fine sediments and gravel. Besides nails, the only artifacts recovered from the rock feature were two pieces of twisted and interlocking wire and four small pieces of green glass. The tentative interpretation of this feature is that it was a small gazebo-like structure, perhaps a shrine. The green glass may have been part of a lantern held by the twisted wire.

## Discussion

One hundred and fifteen artifacts were catalogued from the McKenzie Creek site in 2012, bringing the total for the site to 793 (only artifacts with diagnostic information are catalogued; excluding hundreds or more nails, fragments of glass and ceramics, and unidentified metal). Analysis of the artifacts, including dating, is in its very preliminary stages, so it is not yet clear whether the artifact collection supports the hypothesis that the site continued to be occupied up until 1942. The hypothesis that the relatively flat area is a garden is tentatively supported (awaiting identification of seeds). Excavations did enhance the understanding of camp





Figure 3. Excavation of this rock feature suggests it may have been a gazebo-like structure, perhaps a shrine. Photo by author.

layout, identifying for example the length of a cabin wall (about 10 feet) and adding to the number of structures at the site (at least a dozen).

#### Public Education

As usual, an important component of the field school included public education. Visitors to the site were an almost daily occurrence, and included professional archaeologists, anthropologists, other academics interested in B.C. history, and members of the public. The instructor and field school students introduced several hundred members of the public to the project by participating in public events in Lynn Headwaters Regional Park and the Lower Seymour Conservation Reserve. One student blogged the project, which

can be found at <http://archaeologyfield-school2012.blogspot.ca/>. Over the seven weeks of the project, the blog had more than 3,000 hits from 20 countries, including Argentina, Australia, Canada, France, Germany, Ireland, Italy, Japan, Korea, Lithuania, New Zealand, Norway, Philippines, Russia, Slovakia, Switzerland, Turkey, the United Kingdom, and Zimbabwe. The project director posted a contribution about the project to the 'Day of Archaeology 2012' web site (<http://www.dayofarchaeology.com/archaeology-of-a-japanese-camp-in-western-canada/>), joining several hundred other archaeologists around the world blogging their activities on June 29, 2012.

#### The Crew

The project was directed by Bob Muckle. Physical geographer Cheryl Schreder oversaw the work on soils analysis in the field and the lab. Student archaeologists included Jasmin Sykes, Sarah McKenny, Alexis Forsyth, Ryan Pugh, Rebecca McKenzie, Willow Hunt-Scott, Andrew McManus, Mark Galvani, Evan Guiton, Lindsay Flynn, Spencer Mulder, Meghan Walley, Dini Stamatopulos, Kitty Mork, and Nathan Laronde.

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**Bob Muckle has been practicing, teaching, and writing about archaeology since the Palaeocene. His day job is teaching archaeology at Capilano University in North Vancouver and directing the field school.**

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# Highlights of the 2012 Langara College Archaeology Field School

Stanley A. Copp



Figure 1. Students surveying the intertidal zone at Stanley Park, Vancouver. All photos by author.

The 2012 Langara College Archaeology field school was a departure from those offered in the past. It consisted of two anthropology courses (9 credits total), was entirely local and did not involve camping.

An on-campus archaeological site was constructed in a sunken courtyard facility located between the Gymnasium and Administration buildings. Two 12-foot square by two-foot deep wooden containment units were constructed within this area.

Box A was filled with alternating strata of pre-contact artifacts and features superimposed by additional strata containing late 19th through 20th Century historical artifacts and features. Box B held four to five traumatized replica human skeletons, buried in shallow graves replicating a potential crime scene. Students alternated excavations between the two boxes over the semester.

An additional site consisting of three recent culturally modified trees (CMTs), in this case three rectangular bark-strip



Figure 2. Replica Yuan Bao (Sycee).



Figure 3. Dr. Rudy Reimer (SFU) recording post-holes in sandstone shelf, Brockton Point, North Beach, Vancouver. Dr. Reimer kindly assisted students on one of our field trips to Stanley Park both in survey techniques and an 'open air' talk about Indigenous archaeology.

scars on Western Red Cedars, provided on campus practice recording this type of site.

The on-campus 'sites' complemented off-campus reconnaissance that allowed students to complete the requirements of the British Columbia government Resource Information Standards Committee (RISC) Archaeology certificate program.

Off-campus field reconnaissance methods were a major component of the field school. These ranged from pedestrian examination of pre-contact as well as mid-19th to late-20th Century North Arm Fraser River sites to give students a taste of fieldwork.

More intensive field reconnaissance was conducted along specific foreshore portions of Stanley Park. Previously recorded culturally modified trees were examined and re-recorded using standard Level I and II protocols, as were sites ranging from isolated artifacts and lithic scatters to middens.

Students re-located DhRs-811, a recently recorded petroglyph, plus a

number of additional rock art boulders in two locations - Ceperley Park (Second Beach) and Brockton Point areas. A probable petroglyph resembling an octopus, although heavily encrusted with barnacles and mussels, was located near Brockton Point.

Historical documents point to a nearby semi-submerged boulder that was known for always being a place where octopi could be procured. We are still trying to determine a non-invasive method for determining if this image is based on an underlying glyph without disturbing the marine life.

Pre-contact and historic occupations of the Brockton Point area were a primary focus of the field school as this area contains evidence from the pre-contact through historical occupations of early Vancouver. The historic period provided a number of intriguing inter-tidal zone finds including 19th and 20th Century bottle glass, bottles, ceramics, internal battery carbon posts, and a profusion of spark plugs.

Of interest, four post-holes excavated into the sandstone shelf on the north-facing beach at Brockton Point match late 19th and very early 20th Century practices of setting fixed mooring stations or the construction of a building over the water in this location. Photographs from the time indicate both types of features were present on this peninsula.

Although the pre-1888 cemetery for the earlier Vancouver historical populations is known to be located between the Nine O'Clock Gun and the Brockton Lighthouse, vegetation growth was too dense to conduct ground truthing.

Most pre-1888 graves would have been marked by wooden fences, long since rotted away, it was hypothesized that some burials may still exhibit vases, bottles or other receptacles that once held offerings to the deceased. Students quickly deduced that a cemetery reconnaissance would likely be more productive during winter months when the ground surface is actually visible.

An important part of the 2012 field



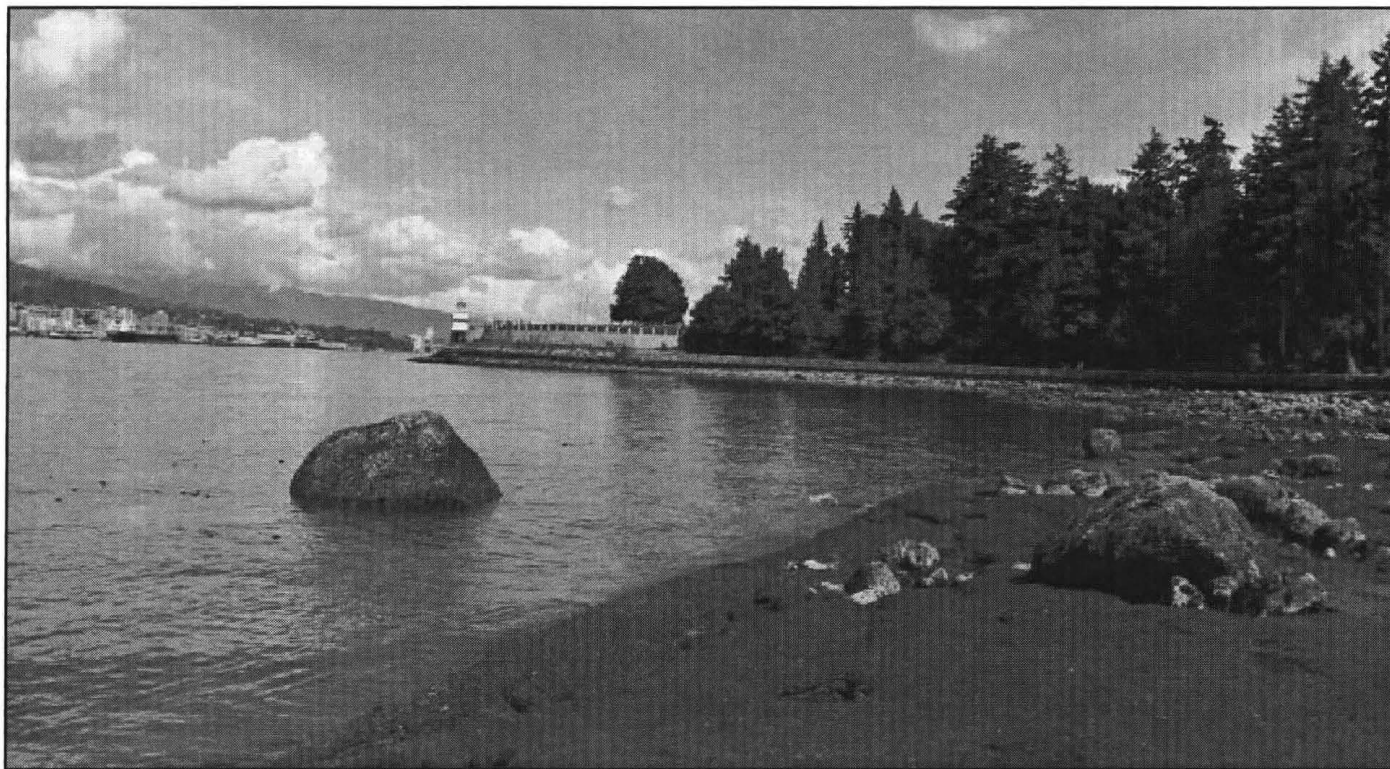


Figure 4. The Octopus Rock fishing station at Brockton Point mentioned in Major Matthews' archival records as always being a place where one could find octopi to fish.

school was the use of a computer lab for research assignments. These were heavily oriented towards historical document location and analysis (e.g., all seven volumes of Major Matthew's Early Vancouver manuscripts are online from the Vancouver Museum and Archives); locating online sources for artifact identification (e.g., "Gollywog" ceramics of the early 20th Century as well as artifacts observed in the field); using the VanMap utility (City of Vancouver) to produce contour maps of the Brockton Point peninsula, Mountain View Cemetery and other locales; researching the historic land-use of Brown's Landing in New Westminster; using GoogleEarth to conduct preliminary overviews of potential foreshore sites around Point Grey and Stanley Park, and other practical assignments.

Regular lab work consisted of standard archaeological analyses of pre-contact and historical artifacts, as well as many additional 'hands-on' practical assignments required of academic and consulting projects. Although hand-held GPS units were used extensively, students also had to master old-fashioned compass and pace as well as compass and hip chain

or tape survey methods. They also learned that festooning parts of Stanley Park with hip chain thread is not an acceptable practice – you retrieve this stuff!

Two types of artifacts stand out in my mind. Both were found to engage the students and encourage the development of research skills. The first was a photograph of a watch. The back plate exhibited information that allowed students to locate information about the watch (in less than 15 minutes online), but it was the context that was important. The context was that the watch in question likely belonged to a USAF aviator whose plane was shot down in 1968 over enemy territory.

Eight seasons of excavation by JPAC (Joint Prisoners of War, Missing in Action Accounting Command) on the crash site produced features and artifacts that strongly suggested the aviator had not survived the crash. A grieving father had to turn to archaeology to determine if his son is still an MiA (Missing in Action) or a KiA (Killed in Action) 'statistic'.

The watch is exactly the make and model favoured by USAF aviators flying missions over VietNam in 1968. This single 'assignment' made archaeology

not only personal, but provided a sense of its potential importance for the living as opposed to an exercise concerning the distant past.

Second, students located three curious metal ingots in the tidal wash zone below the Brockton Point lighthouse. Online research coupled with field trips to Chinatown and the New Westminster Museum provided some clues for identification. These metallic ingots are replica Yuan Bao or Sycee ingots. These were legal tender until 1911 in China and were usually made of silver or gold in multiples of ca 0.85 grams (one tael). What were these doing in the tidal zone, below the lighthouse (in company with wave worn coins) and so close to the pre-1888 cemetery? We are still working on this...

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**Stan Copp teaches Anthropology, Archaeology and Forensic Anthropology at Langara College, provides Heritage consulting services, and is an Executive Board and Team leader for MIA Charities, Inc., a non-profit organization based in Scottsdale, Arizona.**

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# Crossroads CRM Provides Applied Experience for NWCC Field School Students

Rick Budhwa and Jocelyn Franks

In the summer of 2012 students from Northwest Community College (NWCC), in partnership with Crossroads Cultural Resource Management, participated in a cultural resource management (CRM) field school that focused on the management of both tangible and intangible resources within North Central B.C.. Several local cultural and archaeological sites were visited over the course of this three-week field school. Most importantly, students gained invaluable experience from several high profile past and current Crossroads CRM projects.

In Hagwilget Canyon, located near Hazelton, B.C., community members gave a tour of the old village site. There are two designated archaeological sites in Hagwilget Canyon and dozens more in the area. In 2011 a high profile archaeological excavation took place in a burial ground (which had been disturbed by industrial development in 2006). Students from that year's field school had the opportunity to participate in the excavation and gain valuable work experience, working alongside professional archaeologists and community members. During the 2012 summer season, the CRM field school returned to the site of the excavation and students were given exposure to that project, with the assistance of some of the community workers who had been involved in the excavation process.

The field school also visited K'san, which is an interpretive Gitksan museum in Hazelton, B.C. Moving from longhouse to longhouse on a tour of the past through the present resonated with many of the students. They were able gain an understanding of lives both pre- and post-contact as well as experience some of the strong traditions that continue to live on in First Nations cultures today.

This field school also included Moricetown Canyon. Here, students were welcomed onto the territory by traditional drumming and singing, which included an exposure into the vibrant traditional lifeways of the Wet'suwet'en. Moricetown Canyon introduced students to traditional



Figure 1. Rick Budhwa in primary excavation trench. Hagwilget Village burial ground excavation. Photo by Jocelyn Franks

smoke houses and fishing methods. Moricetown Canyon was another site of an archaeological excavation by Crossroads CRM. Students were given an overview of the specifics of the project (another disturbance on a burial ground) as well as an understanding of the archaeological processes that are utilized in these cases. A few of the students expressed interest

in volunteer opportunities and were able to spend some of their time after the field school volunteering on the excavation in Moricetown Canyon.

Other sites that provided hands-on experience for students included Gitanyow (where some of the most impressive totem poles in B.C. reside), Battle Hill (a national historic site), the newly constructed

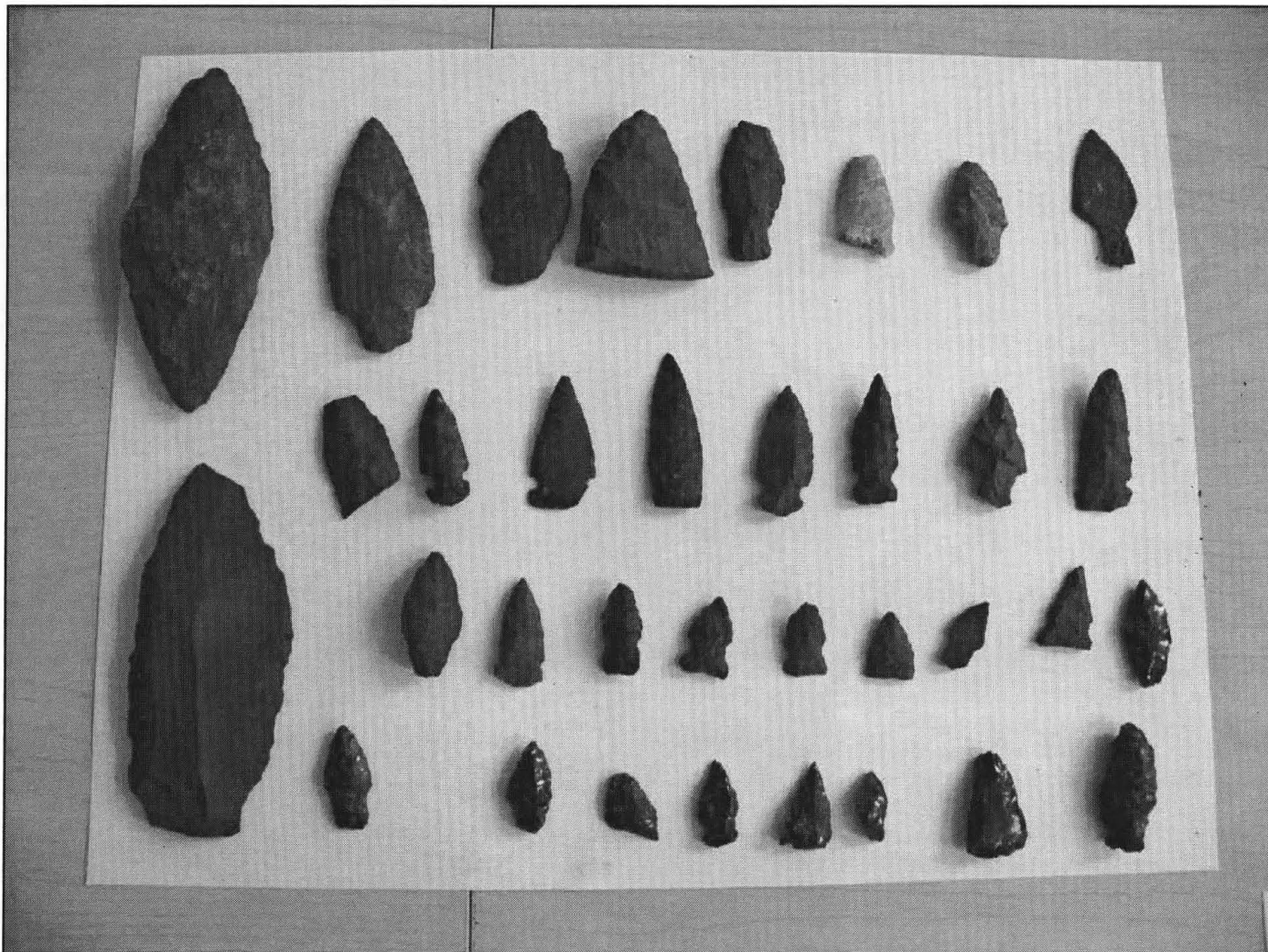


Figure 2. Various projectile points from Moricetown Canyon. Photo by Jocelyn Franks

Nisga'a museum, and Kitselas Canyon (where students learned the importance of cultural tourism).

In order to provide students with a comprehensive perspective of CRM, a historical visit to the old town site of Aldermere was included in this field school. Aldermere, once a bustling stop on the telegraph line, is located just outside of Telkwa, B.C. The historical perspective allowed students to see that CRM is a holistic discipline that encompasses more than just archaeological work.

Most importantly, this field school has illustrated to students a greater under-

standing of true cultural resource management, beyond just archaeology. Students left this field school with an understanding of the challenges First Nations face balancing traditional and contemporary land use practices. This is the ninth year that Crossroads CRM has collaborated with NWCC to provide students with a unique experience in the field of CRM. Each year our collective experience has contributed to better practices within cultural resource management. Our sincere gratitude to all of the First Nations who have guided us on this journey. For more information please visit: [CrossroadsCRM.com](http://CrossroadsCRM.com).

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**Rick is the principal of Crossroads Cultural Resource Management and teaches anthropology, archaeology, history and First Nations studies at Northwest Community College.**

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**Jocelyn is a cultural resource specialist for Crossroads CRM and is also a CRM instructor for the School of Exploration and Mining at NWCC.**

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# ARCHAEOLOGICAL INVESTIGATIONS AT *TSeTSeQU* (EbRk-2), AN NLAKA'PAMUX ROCK PAINTING SITE ON THE STEIN RIVER, BRITISH COLUMBIA

Chris Arnett



Figure 1. Collapsed rock shelter at the base of granite cliff, EbRk-2. 2009 excavations were at entrance of shelter beneath painted overhang, right centre of photo. Photo by Chris Arnett.

While much work has been focused on the material record and subject matter of Salishan rock painting (Teit 1896:1900;1906; n.d.; Malouf and White 1953; Corner 1968; Lundy 1976; Bell 1979; York et al. 1993) until recently very little attention has been paid to archaeological investigations of Salishan rock painting sites. As a result, detailed records of site formation processes (natural and cultural histories) of these landscapes are limited. Fortunately, the archaeology of British Columbia rock art sites has increased dramatically in the past few years

adding significantly to the comparative data archive regarding these places of important Indigenous social activity.

In southern British Columbia a number of landscape painting sites—including DhRa-2 (Copp 2006), EdRi-2, EdRi-10 (Rousseau 1991), EbPw-1 (Mohs 1981) EbRk-2 (Arnett 2012) and EaRj-81 (Sanders et al. 2013) on the Canadian Plateau as well as coastal sites DhRl-2 (Ritchie and Springer 2011) on the Harrison River and Ashlu River (Rudy Reimer p.c.)—have revealed valuable data on behavioral patterns at these sites. Bryan Gordon's

experimental work in the Nicola and Similkameen Valleys in 2008 and the Birkenhead River used subsurface deposits to gather information pertaining to the age of specific paintings by focusing on the recovery of paint or pigment and samples beneath painted panels for C-14 dating (Gordon 2010). This was the initial research goal of the 2009 work in the Stein River Valley considered below. However, archaeological investigation of rock art sites requires a more inclusive study of subsurface deposits using traditional excavation techniques to recover as much



data as possible if we are to understand behavior at a specific site, including the research goal of investigating the relationship between subsurface deposits and extant panels of paintings.

The largest rock painting site in Nlaka'pamux territory (EbRk-2) is located within the boundaries of the 107,191 hectare Stein Valley Nlaka'pamux Heritage Park on the Aboriginal trail, which passes directly in front of the cliff site in full view of the paintings (Figure 1). It is the only rock art site in the Stein River Valley with a recorded Nlaka'pamux name, *TSeTSeQU* meaning "markings/writings", to describe the large number of individual red ochre paintings (*TSeQU*) found here. The approximately 30m high, 120m long granite cliff is separated from the river by a 45m stretch of boulder-strewn alluvial terrace covered with small diameter fir, cedar trees (some culturally modified), vine maple, cottonwood, and cascara trees. The north-facing cliff dominates the south side of the river which begins a rapid canyon descent to the Fraser River at this point. Mechanical erosion has created a small rock shelter at the base of the cliff flanked on either side by sheer rock walls and ledges where red ochre paintings occur up to a height of five metres. As many as 98 distinct painting episodes appear along the base of the cliff from ground level to five metres above the ground.

The fact that EbRk-2 is marked by numerous paintings (*TSeTSeQU*) indicates that the site is a landform of some significance to Nlaka'pamux people. The striking anthropomorphic geology of the cliff, calling to mind "standing collasi" suggest that the landform is a *sxwAym*, or powerful being(s) transformed to rock during the *sptaquh*, or legendary times (Teit 1898;1900; n.d.). Part of the rock shelter has collapsed and the eroded rounded face of the fallen overhang block may have suggested "a body part" feature of a *sxwAym*. In any event the geology indicates that the place is "pre-given," not a *tabula rasa*, and an important agent in the production of later, historically contingent activities. On the cliff face, older granite blocks are suspended in more recent mica-speckled quartzite veins and are particularly pronounced above the rock shelter at the base of the cliff at the spatial centre of the site. Groundwater deposited iron oxide is also present on the cliff and because of its

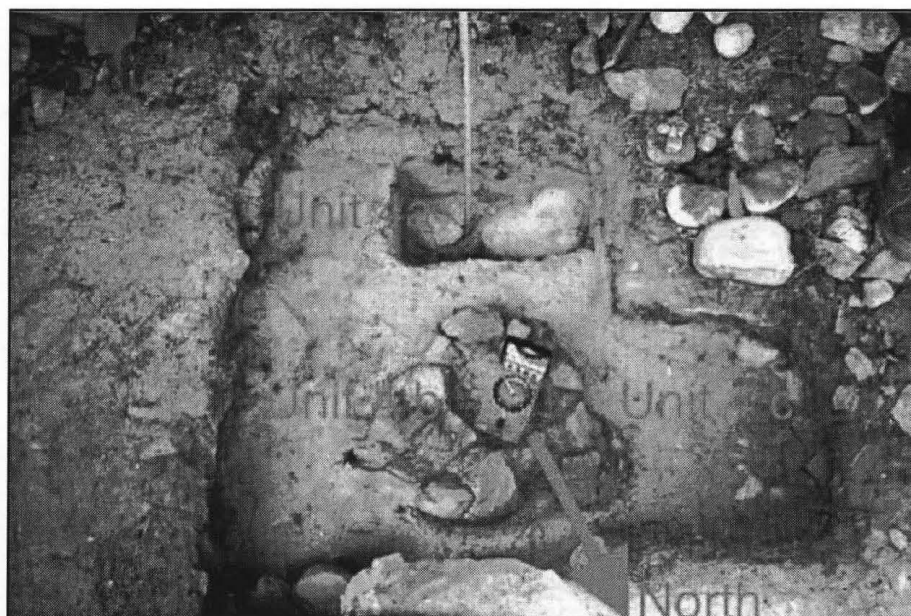


Figure 2. Unit 4 excavated to sterile alluvial sediment (Stratum IV) showing stratigraphy with compact dark anthropogenic layer (Strata III and IV) between sandy eolian (Stratum I) and sandy illuvial (Stratum IV). Note exploratory shovel test in sterile alluvial deposits in Unit 4a (43 cm DBS). Stone hearth is situated at 8 cm DBS at beginning of Stratum III deposits. Photo by Chris Arnett/Adrian Sanders.

known cultural properties can be assumed to be part of the site's significance. As well, the site has an acoustic dimension caused by the refraction of sound from the nearby river distinguishing the place from other locations. The cultural importance of the site embodied in the physical appearance and acoustics of EbRk-2 may be assumed to predate the paintings found there.

Earlier European visitors to the Stein, including the archaeologist Harlan Smith, were not shown this site, the largest in the valley, which suggests that local people deliberately restricted access to the location (Arnett 2012).

In July 2009 Adrian Sanders and I conducted an archaeological excavation to understand the site formation processes and to recover pigment and other cultural material beneath a painted slab overhang located at the entrance of the collapsed shelter at the base of the cliff where the largest amount of paintings are concentrated. A 50 x 50 cm excavation (Unit 4a) was chosen directly beneath the painted ceiling of the overhang (Figure 2). A datum was established at the base of an angled rock beneath the overhang with a 50-cm horizontal quadrant using 2-cm vertical levels to record any in situ artifacts.

All sediment was screened through a 1.5 mm mesh strainer to locate pigment and other cultural, faunal and floral material, which included red and yellow ochre, lithic debitage and shatter, shell artifacts, glass shatter, seeds, fish and mammal bone.

A bulk sample of 624.07 g was taken from the 4 to 6 cm DBS level of Unit 4a and another 1,180.49 g from the hearth features.

The initial excavation (Unit 4a) was extended by an additional 40 x 50 cm unit (Unit 4b) parallel and northeast of Unit 4a with another excavation, 35 x 40 cm (Unit 4c) made adjacent and west of Unit 4b. This fully exposed a small 27-cm diameter hearth of fire-altered rock placed directly in front of the entrance to the now-collapsed shelter. Cultural deposits, pigment, artifacts, flora and faunal material were located to a depth of 13 cm in all sub-units.

Granite rock shelters such as EbRk-2 can present particular problems to archaeological excavation. European archaeologists have used the term *eboulis*, French for rubble, to describe rock shelter and cave deposits marked by the disintegration of rock due to mechanical weathering, particularly freezing and thawing cycles that cause "a relatively steady rain of rock



Figure 3. Southwest corner of Unit 1c, EbRk-2. Culture bearing strata I, II, and III (to 13 cm DBS) on top of alluvial deposits. Note upper dense eboulis stratum. Visible tape is 23 cm. Photo by Adrian Sanders.

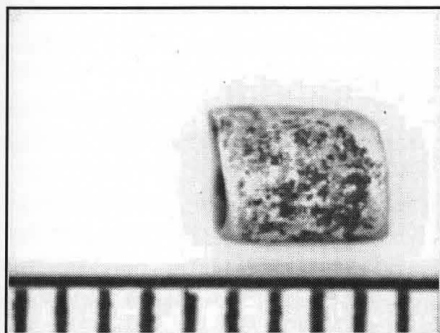


Figure 4. Dentalium bead, Unit 4b, 9.5 cm DBS. Photo by Chris Arnett.



Figure 5. Pecten shell fragment, Unit 4c, 6 cm DBS. Photo by Chris Arnett.

fall" from large blocks marking significant roof collapse to individual grains (Goldberg and McPhail 2006:175). Eolian sand altered cultural deposits over time creating a complicated undulating and overlapping microstratigraphy. Interestingly, EbRk-2 cultural strata was distinguishable mainly by the presence or absence of eboulis (none found below 8 cm DBS) and sediment composition.

Despite the shallowness of deposits four strata could be distinguished (Figure 2): Stratum I was a disturbed surface layer up to 2 cm deep consisting of eolian sand mixed with rootlets, forest debris and small rocks.

Stratum II is a compact 6-cm thick cultural stratum of dark brown ashy sediment mixed with variable sizes of eboulis and bioturbated with rootlets (Figure 6). At 8 cm DBS this stratum graded into Stratum III composed of sandy ashy sediment with no eboulis.

The presence of a lower stratum (IV) composed solely of alluvial deposits of sand and waterworn cobbles and boulders at 13 cm DBS suggests that the Stein River once flowed close by this portion of the cliff prior to the deposition of the present cultural layers (Figure 6). Earlier cultural deposits, if they existed, would have been washed away, as would be any eboulis leaving only alluvial deposits. Climate change may be part of the observed difference in the natural site formation process

at EbRk-2 with warmer temperatures associated with the initial occupation of the site followed by a colder period with freeze and thaw cycles increasing mechanical erosion, production of eboulis, and use of the site.

Below the upper 13 cm of cultural deposits were sterile deposits of coarse river sand and boulders to 43 cm depth below surface (Figure 6). These deposits represent a period when the river apparently flowed directly below the cliff. It is possible that earlier cultural deposits may have been washed away or covered by this alluvial deposit.

Two features were identified during excavation of Unit 4 including a hearth in the east wall of Unit 4c and a single rock hearth feature measuring 27 cm in diameter in the centre of the unit. The stone hearth was constructed at the beginning of Stratum III deposits (8 cm DBS) when the river level dropped allowing occupation of the site. The small rock hearth was composed of small, fire-altered rock ( $n=20$ ) arranged in a rough circle in front of the entrance to the shelter. The edge of another small simple hearth was located in Unit 4c at 4 to 6 cm DBS (See Arnett 2012 Figure 3).

Basalt and quartzite debitage was recovered in all sub-units but predominant ( $n=32$ ) in Unit 4a and 4b, those closest to the entrance of the rock shelter (See Arnett 2012, Figures 16, 17 and 22, Appendix A, Table 1). 97.5 % of the lithic debitage was found in the pre-glass (European) levels above 4 cm DBS. This amount is similar to the percentages at the Oregon Jack Creek EdRi-1 rock art shelter where vitreous and fine grained basalt made up 98.1% of the debitage (Rousseau 1991).

Four types of glass shatter ( $n=12$ ) were recovered from the upper 4 cm of each sub-unit of Unit 4. Glass made up 51% of the "artifacts" from this layer suggesting recent deposition over the last century or more. Amounts were concentrated in the sub-units closest to the perimeter of the overhang. Although glass, as a source material, is clearly of European-American origin its presence at EbRk-2 does not necessarily indicate that the material was not used by indigenous people (Martindale and Jurakic 2006; Ritchie and Springer 2011).

A small piece (7 x 5.2mm) of calcined pecten (scallop) shell was recovered



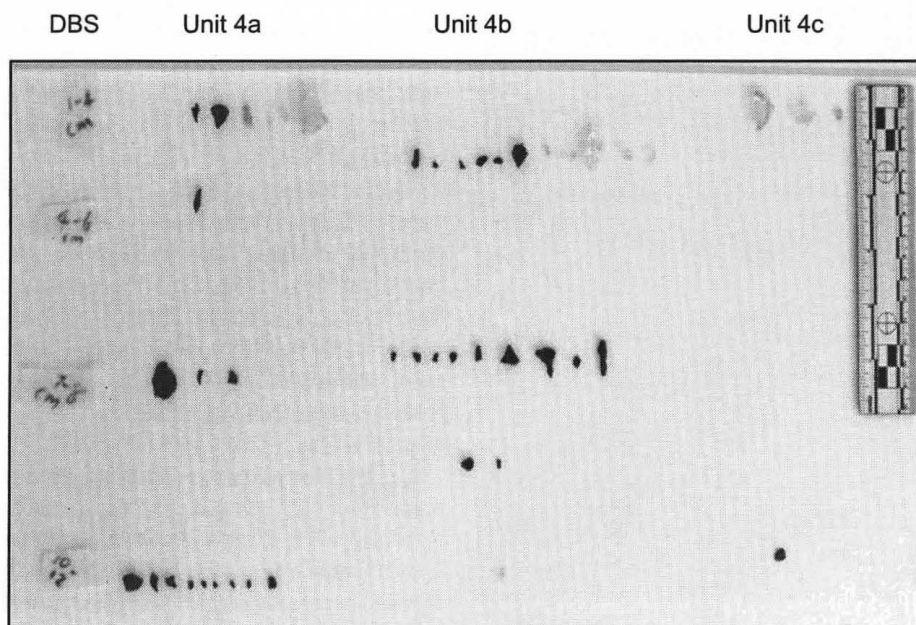


Figure 6. Lithic debitage and glass shatter according to 2 cm levels and sub-Unit. Photo by Chris Arnett.

from Unit 4c at 4 to 6 cm DBS (Figure 5). This is probably a piece from an intentionally (?) burned piece of a *Pecten caurinus* rattle or pendant. Rattles and pendants are known archaeologically from the Middle Fraser and Kamloops areas (Smith 1899:152; 1900:428; 1913: Plate XIII f; Sanger 1968:123; 1970:101) associated with burial places (as prestige/ritual items) and rock painting shelters (e.g., [Sanders et al. 2012] EaRj 81 at Kwoiek Creek). To date, pecten shell is found only in Plateau (2400-1200 BP) and Kamloops (1200-200 BP) Horizons context (Richards and Rousseau 1987:Table 10).

A single dentalium bead was recovered in Unit 4b at 9.5 cm DBS (Figure 4). The bead was cut from a shell of *Dentalia pretiosum* probably from the west coast of Vancouver Island. The 5 x 3.6-mm bead was probably part of a larger string of similar beads comparable to archaeological examples from Cache Creek (Richards and Rousseau 1989:Fig 23j), Lytton (Smith 1899), Nicola Lake (Smith 1900:425), Kamloops (Sanger 1968:123), Lillooet (Stryd 1973:425-427) and Scowlitz, where 7,000 cut dentalium beads formed a necklace for the occupant of Mound 1 (Blake 2004:108-109). While unmodified dentalium has a respectable antiquity in Pacific Northwest archaeological sites (Andrews 1989), cut dentalium beads are limited to Plateau (2400-1200 BP) and

Kamloops (1200 BP to 200 BP) contexts (Richards and Rousseau 1987:91).

As expected, small pieces (<5mm) of red (Fe<sub>2</sub>O<sub>3</sub>) and yellow ochre (FeO(OH) nH<sub>2</sub>O) were encountered occasionally throughout Unit 4 and in the deepest levels of Unit 3 (Table 1). Smaller particles were also collected from fine-sorting the bulk samples up to 500 UM from Unit 4. This material is curated at the Laboratory of Archaeology at UBC and will be the subject of further trace analysis using SEM/EDS and other methods.

A limited variety of fauna, including fish and mammal taxa, was recovered from all sub-unit levels in Unit 4 a and in Unit 3 and analysed by Rebecca Wigen of Pacific ID (Arnett 2012; Table 1). 92 bone elements were evenly divided between fish (47 elements) and mammal (45 elements). Fish elements consisted mainly of salmon vertebrae and ribs. The presence of a single postcleithrum, a bone associated with the pectoral fin behind the gills, suggests that it may be from a processed fillet rather than a whole fish. Identifiable species included mountain whitefish. The presence of a single metacarpal proxima of hoary marmot with no other remains may indicate that it was brought to the site, possibly as part of a cultural artifact or practice.

A variety of flora were recovered from Units 4a and 4b including seeds identified by Natasha Lyons as *Prunus* spp.

(n=24), *Rubus* spp. (n= 8.5), *Sambucea* cf. *cerulea* (n=2) *Shepherdia canadensis* (n=1) and a definitely historic cf. *Prunus armeniaca* (n=1) (Table 2). *Rubus leucodermis* grows on the slopes above, is a favorite food and was sometimes used in the production of red dye or paint (Tepper 1994:73).

The earliest archaeological evidence of the site follows stabilization of the river bank, which allowed occupation on alluvial sediments and use of the shelter and the construction of a small stone hearth at its entrance. Results indicate intermittent site-specific activity involving painting, lithic manufacture, mammal, fish and berry consumption and burning at EbRk-2 by small groups of people over time with increasing intensity towards later use. Differential deposition of eboulis (fallen rock fragments) in cultural levels may be a signature of climate change specifically the onset of the little Ice Age and subsequent colder temperatures resulting in increased cryoclastic weathering between 1550 and 1800 AD (Lamb 1972:107).

Stone tool artifact production is reductive and the absence of large debitage and cores at EbRk-2 (X=7.6, SD 3.75) is indicative of later stages in lithic tool manufacture. (Andreisky 2005:98). The small flakes revealed no dorsal cortex surface, generally indicative of early stage reduction in more sedentary residential or food processing locations, with the possible exception of three small basalt flakes with possible cortex indicating raw material and potential core reduction at the site. Eliminating outlier basalt pieces allows the remaining basalt debitage at EbRk-2 to cluster at less than 8mm length, 6mm width and 1.5mm in thickness indicating later stages of reduction by soft hammer techniques or pressure flaking. This reflects a pattern of very short-term limited maintenance or production of basalt, chert and quartzite lithic tools at EbRk-2 over time from the beginning of site formation, with the cortex bearing outliers possibly indicating the manufacture of expedient tools from small portable cores.

Glass made up a significant 57% of the slim Strata 1 cultural material. The relatively small amount (n=12) from at least four different sources suggests that it may not have originated in accidental or deliberate breaking of a glass container which would presumably leave significant



| DBS      | Unit 4a | Unit 4b | Unit 4c | Unit 3  |
|----------|---------|---------|---------|---------|
| 0-2 cm   | present |         |         |         |
| 2-4 cm   | present | present |         | present |
| 6-8 cm   | present | present | present |         |
| 8-13 cm  | present |         |         |         |
| 13-16 cm |         |         |         | present |

Table 1. Presence of red and yellow ochre pieces by level and Unit 4 sub-units EbRk-2.

shatter.

Modified glass flakes at DhR1-2, a pictograph decorated rock shelter on the Harrison River (Ritchie and Springer 2011:13, Table 1) and glass arrowheads in the Lytton/Lillooet area (Peter Merchant, p.c.) suggest that post-contact incorporation of glass as a raw material into indigenous cultural activity in painted rock shelters is a possibility.

Although glass is recognized as a raw material by indigenous people at other rock painting sites, the presence of glass shatter in the same contexts as lithic debitage at EbRk-2 does not prove that glass was used as a resource material by indigenous people for a specific purpose at this site. The Stein River and its archaeological sites have been known for well over a century by outsiders and hundreds, perhaps thousands, of people have visited EbRk-2 particularly in the last few decades. Thus glass may have originated as the result of other activities. Nevertheless, the incorporation of this material into indigenous cultural activity is a distinct possibility and could demonstrate new raw material acquisition and continuity of practice into the beginning of the 20th century at EbRk-2.

Magne's study on variations of lithic debitage in the Southern Interior identified 11 types, all of which were focused on food production. The one closest to the EbRk-2 assemblage is characterized by small assemblages, ("short term lithic scatters with fire-cracked rock") "with restricted ranges of debitage reduction stages" which he sees as "related to large mammal procurement and processing" (Magne 1985:248-249). Limited fauna and flora remains at EbRk-2 suggests that lithic scatter types, particularly those associated with rock paintings, also include sites of potential ritual activity not associated directly with food production.

The sparse faunal and flora remains

at EbRk-2, complete lack of manufactured tools or cores, and the socio-cultural context of a rock art landscape suggest that lithic technology at EbRk-2 was a limited and infrequent activity involving later stages of lithic reduction for maintenance or expedient tool manufacture not necessarily associated with the processing of game. This raises the question of what might those activities have been?

Ethnographic accounts from the late 19th century Plateau area describe cultural practices involving the use of unspecified basalt lithics in ritual bloodletting including one account where a novice during spiritual training "cut the points of his eight fingers with a sharp arrowstone, after which he sweat bathed. ... the cutting of finger tips was supposed to let out all bad blood" (Teit 1909:590; see also Teit, 1906:238-239, 267; Keyser and Taylor 2006). Piercings of nasal septum and ears also occurred during puberty training and required sharp instruments (Teit 1900:321). In Mesoamerica where the practice of ritual bloodletting still occurs, bloodletting practitioners use tiny sharp instruments invariably made of glass (Deal and Hayden 1987). There is also a connection in Plateau practice between the use of red ochre and cuts on the skin. Teit wrote that red ochre or charcoal "were sometimes rubbed into cuts made at puberty. These formed no designs" (Teit 1930:418).

Bloodletting was an integral part of Canadian Plateau spiritual training of warriors (Teit 1906:238) and hunters. The

late Charlie Mack, a noted Lil'wat elder, described the practice of a renowned mountain goat hunter (Bouchard and Kennedy 2010:114):

This man was trained. He could almost fly because he had lanced himself. The trained men removed as much of their blood as they could to make themselves light. One day the hunter grew tired going up the mountain. He thought that it might be because he hadn't lanced his tongue. He pulled out his tongue and lanced it. There was some blood still in it. When he had done this he was once again light and filled with energy.

The lithic assemblage at EbRk-2 represents the latter stages in the maintenance or creation of tools for intermittent activities under a painted overhang in a landscape with rock art. EbRk-2 is well-known to the local Nlaka'pamux people as having an association with *shxwoonAm* (shamans) who are said to be the painters. It seems likely that the limited lithic oriented activity at EbRk-2 may be associated with the restrictive activity of *shxwoonAm* and may be the result of tool-related activities other than those associated with hunting.

Lithic scatters associated with ritual activities are, however, not unrelated to food acquisition. In the Canadian Plateau culturally prescribed ritual activity is related in a very direct way to natural food resources and is integrated with technology as an adaptive mechanism essential to the reproduction of life and social structure. Successful hunting of mountain goat, bighorn sheep and deer in the Stein River Valley, according to 19th and 20th century Nlaka'pamux epistemology, was dependent on the acquisition of spiritual powers in the course of a rigorous training program. During this training one might acquire a powerful spirit helper who appeared in a dream and bestowed valuable songs and symbols to the recipient.

| DBS    | Unit 4a | Unit 4b | Unit 4c |
|--------|---------|---------|---------|
| 2-4 cm | present | present |         |
| 4-6 cm | present | present |         |
| 6-9 cm | present | present |         |

Table 2. Presence of flora (seeds) by arbitrary level and Unit 4, EbRk-2.

Of course, whether or not these lithic activities either archaeological or ethnographic have any association with the rock paintings on the cliff faces is unclear at this point of analysis. The proximity of the archaeological pattern to the paintings, and the direct association of red ochre paint with the lithic assemblage, suggests a connection between these lithic assemblages and the practice or presence of the rock art either by the painters or later visitors to the site.

Although the 2009 archaeological investigations at EbRk-2 are inconclusive regarding absolute dating (samples may still be submitted for radiocarbon dating) the nature of the subsurface cultural material through time suggests a close relationship between a specialized lithic activity, the production of paint using red and yellow ochre (and possibly bitter cherries and black caps), limited food production and the burning of bone, ochre and scallop shell at the entrance to a rock shelter at a dominant geological landform, or *sxwayAm* ("transformed mythological being") located on a travel corridor between Lytton area and points elsewhere through the Cascade mountains. Initial use coincided with changes in the river flow that permitted construction of a stone hearth on sterile sandy alluvial surface beneath an overhang at the entrance of the rock shelter. Later cultural deposits show increasing cycloclastic rock fall suggesting that the activity at the site intensified during a period of climate change probably the Little Ice Age that occurred between 1550 and 1800 AD.

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**Chris Arnett is a PhD candidate in the Department of Anthropology at the University of British Columbia. His dissertation is a spatial temporal analysis of Salishan rock painting.**

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# ULNA BONE TOOLS: IDENTIFYING THEIR FUNCTION

Grant Keddie



Ulna tools have several main uses that are often not recognized in the archaeological literature. Based on my own experimental uses and an examination of the ethnographic literature, we can describe at least four different common uses of ulna tools.

Ulna bones, which are the lower limb bones in animals, have a naturally shaped end that functions as a handle with little or no modification needed, and the pointed end is easy to shape into a functioning tool. The working ends of these tools need to be different to fit the intended function. Non-ulna bones with similar ends may, of course, have similar functions.

One type of ulna tool has a point that is sharp, more rounded, longer tapering and thinner. This tool is what is defined in Western tradition as an awl or pricker used to poke small holes in things. Coiled baskets from the Interior of the province require the poking of holes, but this does not apply to most woven material on the coast. This tool would mostly be used for piercing holes in the preparation and making of fur and leather clothing (see the three ulnas on the left of Figure 1).

In contrast to the sharp awl is a fibre pressing tool that is not required for poking holes (see four ulnas on right side of Figure 1). It is similar, but has a thicker, duller working end that would have

been used for two primary purposes. The first is to manipulate plant fibres used in making baskets and mats. It can push fibres into place without damaging them—as would more likely happen with a sharp point. The second is tying animal sinew, gut and rawhide, such as in the delicate art of tying on spear points. When a short point is pushed under a rawhide cord on its flatter side and then twisted sideways onto its thinner side, a space is opened to allow another cord to be pulled under it where it is held in place (Figure 2). In these tools, the thinning edge near the tip is often ground to create a flatter and therefore a less sharp point. The duller points generally have less of a taper at their thicker tips (Figure 3).

A third type of ulna tool has a thin flat end for splitting cedar bark into different layers, as well as for splitting roots (Figure 4). I am calling these bark splitting tools (not to be confused with the much larger bark stripping tools for leveraging bark off of trees).

Figure 1 (above). Three ulna awls on the left and four fibre pressing tools on the right. All photos by author.



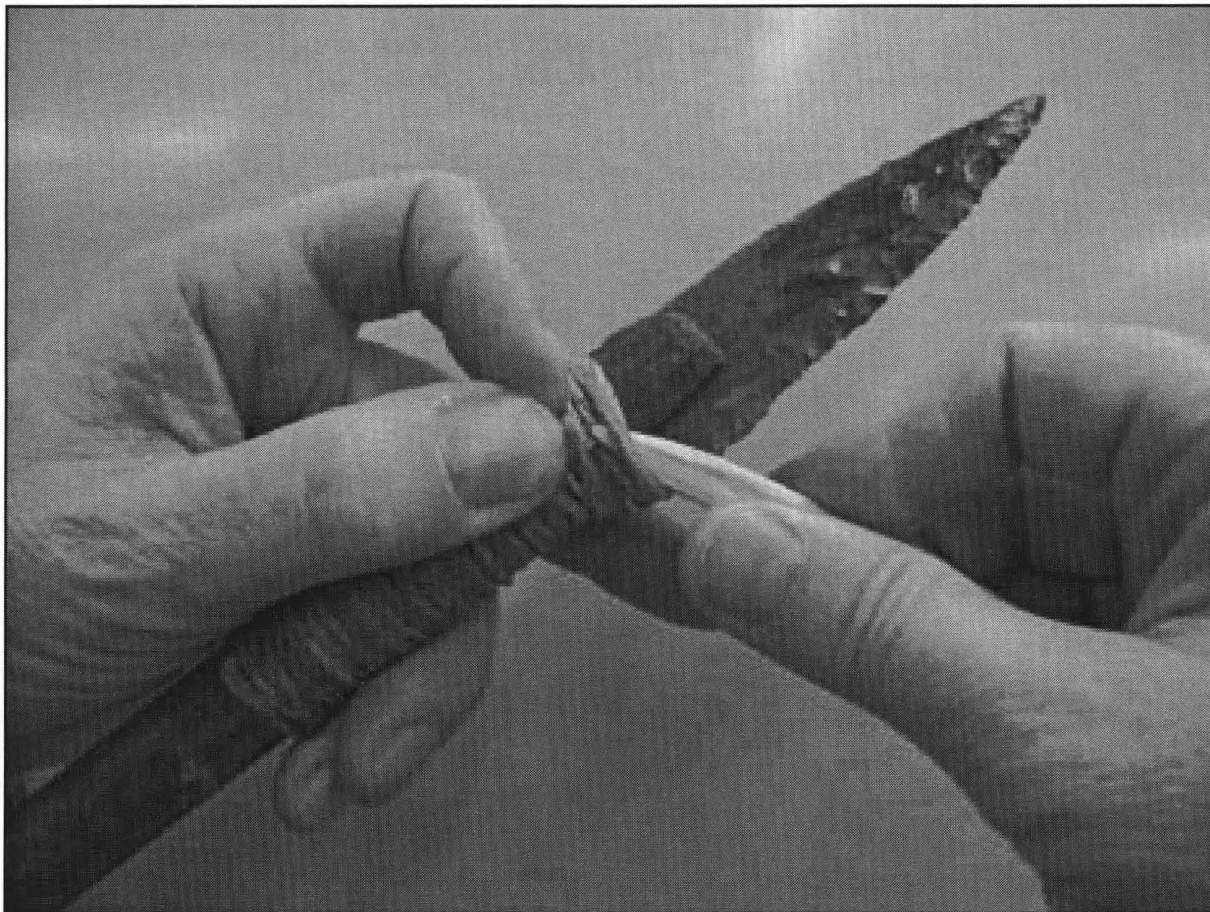


Figure 2. Bone tool with short point for tying rawhide to secure spear point.

A fourth type of ulna tool is a knife for cutting or splitting small fish such as herring. In some cases it also served as a gutting tool. It generally has a short point that is flat-to-rounded near its tip. The lower edge is often sharpened. Its design allows it to cut into fish and survive the strong lateral pressure that is involved in the cutting and gutting process. Sharp, long, tapering, pointed bones cannot take much lateral pressure without breaking.

#### **The Ethnographic Record on Ulna tools**

What is the evidence from the written ethnographies and the ethnographic collection to support these uses? Ethnographic collections sometimes have tools whose use was observed by the collector, or provided by First Nation consultants, or both. However, there are also examples of ulna tools collected by ethnologists, that were both in recent use and found in archaeological sites, that exhibit recorded functions that were only a guess on the part of the cataloger. In the Ethnology collection of the RBCM there are only three ulna tools that have been assigned a functional use by an ethnologist.

#### **The Ethnographic Artifacts**

Artifact #9992 is a 170mm long deer ulna tool collected by Charles Newcombe in 1912 (Figure 5). In his Manuscript (Mss1077, Vol. 58, Folder 23) Newcombe refers to this as an "Awl or pricker of bone," and gives the local name of "Kwetani." The original catalogue says: "Nootka 1912," and "awl-bone mat

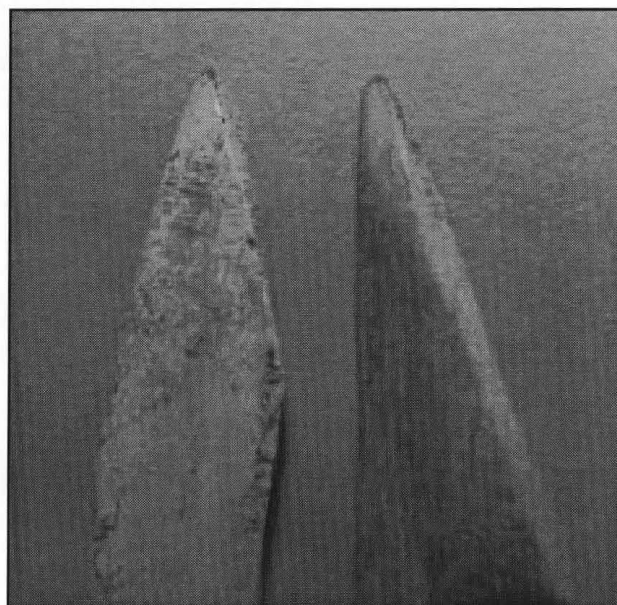


Figure 3. Examples of ground edges on fibre pressing ulna tools.

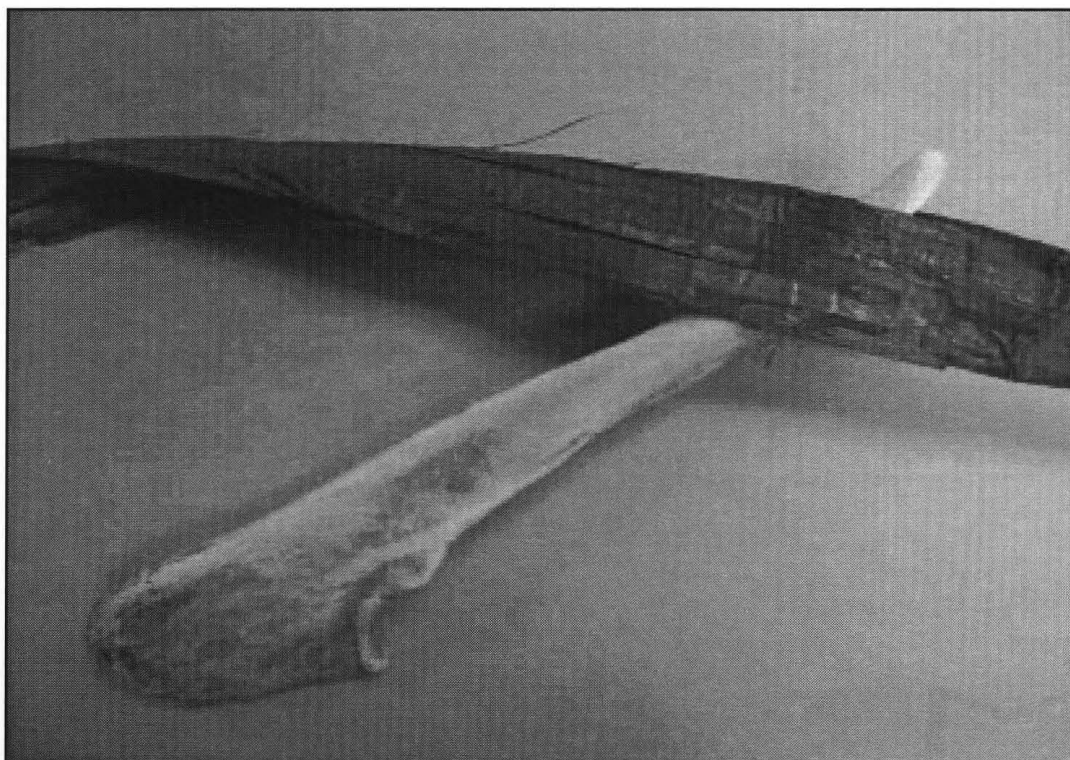


Figure 4. Flat tipped ulna tool being used to split cedar bark.



Figure 5. Ulna cedar splitting tool. RBCM EC9992.



Figure 6. Tip of tool RBCM EC9992.

maker's." Although this was an ethnographic artifact, it was catalogued into the archaeology collection in 1974, with the Borden number DjSp-Y (the "Y" indicates the artifact is from the general area around Nootka Sound).

The tool shows evidence of distinct steel file marks. The distal end is intentionally flattened and partially rounded by filing the thinner outer edges (Figure 6). In making mats, one does not poke holes, but a tool is used to push the cross fibres into place to tighten up the weave. Although it is said that it is a mat makers' tool, it does not specify the nature of its use. I would suggest that this tool was used to split the finer sections of cedar that are used in making the fibre the right size for making mats. I call this a cedar bark splitting tool.

Artifact #14230 (Figure 7) is a 139mm long ulna tool that has the handle end wrapped in a small piece of thin European manufactured cloth which is smeared in dried fish slime and scales. The collection was purchased by ethnologist Peter McNair in 1973, from the A. E. Caldwell, along with a collection of other ethnographic material, mostly from the central west coast of Vancouver Island.

The artifact was most likely collected by Caldwell when he lived in Ahousat from 1934-39, or in Alberni from 1944-1960—although he did live briefly in Kitamaat from July 1939 to March 1940. A DNA analysis of the scales may help pin-point the source of the fish.

The tool gently tapers to a flat but rounded-off distal tip (Figure 8). The bottom of the distal end has been beveled to a thin cutting edge. The upper distal end is more rounded-off. A small 6mm notch area centred 11mm from the distal end appears to have been intentionally made—possibly for better gutting ac-





Figure 7. Fish Splitting tool. RBCM EC14230.



Figure 9. Fibre pressing ulna tool. RBCM EC1251.

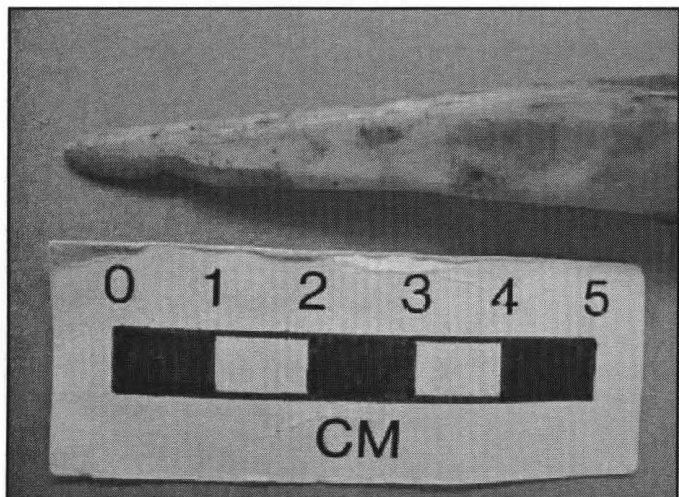


Figure 8. Tip of Fish Splitting Tool.

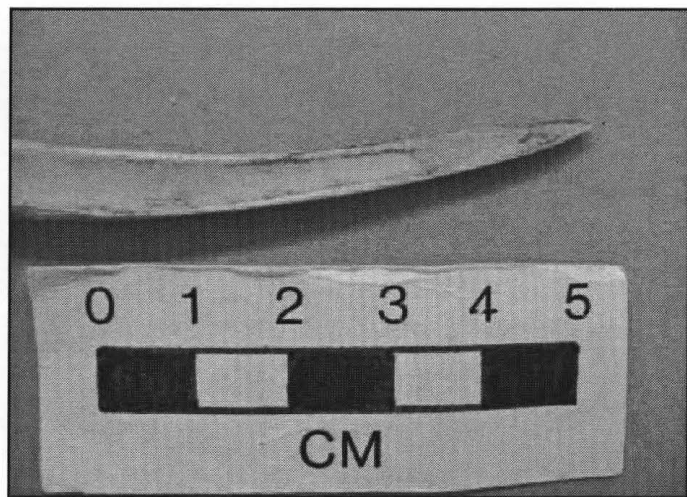


Figure 10. Tip of RBCM EC1251.

tion? Similar notching can be found on archaeological specimens from the West Coast of Vancouver Island. I would call this a fish splitting ulna tool.

Artifact # 1251 (Figure 9 & 10) has contradictory information. The original catalogues indicate it is a "Kwakiutl Herring Knife" purchased at Nawahitti, by Charles Newcombe in 1900, and identified as the ulna of a Mountain goat.

Charles Newcombe's notes, however, refer to this number as "mat maker's knife," "collected 1899." It was acquired by the RBCM, Dec 14, 1900. The 170mm long artifact is a mountain goat ulna. Since mountain goats have not been on Vancouver Island for thousands of years, the owner must have brought it over or removed it from a carcass brought to the Island. The long, but not sharp point of the artifact would suggest that the latter stated use is the correct one and the tool was used for manipulating fibres in the making of mats. I would call this a fibre pressing ulna tool.

### Ethnographic references

#### *Cedar Bark Splitting Ulna Tool*

Boas (1921:117) observed that, when processing cedar for making mats, a person uses the "cedar bark splitting-bone (the ulna of the foreleg of the deer), and grinds it well, so that it has a sharp point and also so that it is thin" and for "making narrow strips

of bark" and for "stripping spruce roots."

Boas later notes (1921:124) that the bark-splitting ulna has "a flat end for it is sharpened on a sandstone." A woman takes a folded bundle of stripped bark and splits it further. She then removes the second middle layer with the bone splitter. The outer layer was used for matting and coarse clover baskets and protecting new canoes. The middle layer was used for "ordinary mats and ordinary baskets," and halibut fishing lines and anchor-lines for the halibut-fisher. The inner layer was for twilled mats, spoon baskets and the double twilled baskets used by "the daughter of the chiefs of the tribes" to keep their combs. Drucker (1951:95) observed that a deer ulna, or seal rib, usually served to start the splits in preparing the inner bark layers.

#### *Fibre Pressing Ulna Tool*

An artifact similar to #9992 from the Puget Sound area is shown in a drawing in Ruby and Brown (1976:26) wrapped with cloth around its mid-section and extending toward the handle end. Eells (1985:169) describes this knife under Basket Working: "The only tools which I have seen in use are the knives for preparing the material, awls for sewing the water-tight baskets, and a bone implement for pressing the woven parts very firmly and closely together. [...] It is not thick, and the edges dull. A cloth was wound around the handle to prevent it hurting the hand." Eells describes the latter as 153mm long, 38mm at the handle, and tapering to a





Figure 11. Elk Ulna Tools. Left ulna DcRt-15:35; Right ulna DcRt-75:61; Left ulna DcRv-1:2193.

width of 6mm at the tip.

#### *Fish Slitting Ulna Tool*

Koppert's (1930:23 & 29) Opitsit and Clayoquot consultants, whose memory would go back to the 1860s, noted that the ulna was used as a table knife as well as for cutting herring. The tool called "ha woi chek" was from the "foreleg of deer" suggesting an ulna (which only occurs in the foreleg) rather than a metapodial bone (which occurs in both front and back legs). His consultants also mentioned a Sea Otter cloak making awl ("Sot'h ta") used to make holes for lacing. These are described as 102mm long with a 3mm wide "sharp point," which had a loop of gut string through the end. The type of bone used in this awl cannot be determined.

Drucker (1951:91) observed that the women, of the northern and central Nuu-chan-nulth, used an "awl-like bone blade" for slitting herring in preparation for drying. They had a "prized variety of this knife" made of "a deer ulna ground to a long slim point." It is interesting to note that this tool was used primarily for splitting the fish and not necessarily gutting it. Drucker (1951:65) observed that the larger herring were slit from head to tail with the bone tool, but not gutted. He explains that "apparently they do not feed as the time comes for spawning, and like smelt and similar fish have very little viscera then."

#### *Other Ulnas—Other Uses*

Most ulna tools are made from deer ulnas, but elk ulnas are also used—in some cases to produce chisel-like tools (Figure 11).

Carnivore ulnas are much rarer, but include raccoon, dog, and at least one case of a lynx ulna from the mainland imported to Vancouver Island (Figure 12).

#### **Summary**

Ethnographic artifacts with older archaeological equivalents are often not common in museum collections. Where they do occur, it is important to take a critical look at the records to be sure that a more accurate comparison can be made with archaeological equivalents. Archaeologists often refer to ulna tools, with a variety of point shapes, as awls—implying a known function. It would be helpful to attempt to improve our classification system by being more specific about ulna tools where it seems warranted. I would propose that the ulna tools with steeper tapering and intentionally dulled points be referred to as fibre pressing ulna tools and the ones with flattened and thinned points be called bark splitting ulna tools. Fish gutting ulnas should be longer tapering but thicker with only the lower edge sharpened. These may be harder to separate out from the ulna bark splitters, but regional distinctions, such as those with notches near the end, may arise with more detailed descriptions.

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Figure 12. Carnivore ulna tools. Lynx, DcRv-1:974 (L. 97mm); Raccoon, DgRs-1:4528; Dog, DgRv-3:13.

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