

**Langara College  
Archaeology Field School  
2012**

**Summary Report of Teaching and Field Research;  
Stanley Park**



**Octopus Petroglyph**  
Brockton Point – North Beach

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## **Introduction**

Archaeology field schools have been offered at Langara College since the mid-1970s. Initially comprised of a single, six-credit university-transfer course (Anthropology 1221 and its antecedents) the field school has expanded to four courses and 15 credits when sufficient faculty and course sections are available during Summer terms.

The four courses are;

- Anthropology 1221 (6): Field Methods in Archaeology
- Anthropology 1222 (3): Laboratory Methods in Archaeology
- Anthropology 1223 (3): Geospatial Analyses (Mapping)
- Anthropology 1224 (3): Ethnoarchaeology

Most field schools offered since the mid-1990s have involved approximately one-half semester camping in the Similkameen or Pitt River valleys of British Columbia with the remainder of each semester consisting of on campus lectures and laboratory sessions. Other field schools have been commuter-oriented or a mixture of commuting and camping – especially in the case of Pitt River fieldwork.

Between 1988 and 1996 the field school operated as a multi-college program in association with Douglas, Capilano, Kwantlen and Malaspina Colleges and coordinated by Langara College. These field seasons focused on excavation of Fort Langley National Historic Park with goals of providing sub-surface indications of the locations of historic buildings and other features as well as proving the existence of pre-contact Aboriginal occupation and use of the area for over 9,000 years.

At all other times, the Langara archaeology field school has operated out of the college and focused on surveys and excavations of pre-contact and historical archaeological sites.

Students are taught basic and advanced survey, excavation, lab analysis and other skills during the field school sufficient to be hired by heritage consultants by the end of term.

### **The 2012 Archaeology Field School**

The 2012 field school was different and unique relative to past endeavours. It consisted of Anthropology 1221 (6) and Anthropology 1222 (3) courses only as there was a single instructor instead of two as required by the more comprehensive 15-credit semesters. 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 19<sup>th</sup> through 20<sup>th</sup> 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.

## **Stanley Park Field Reconnaissance**

Prior to the 2012 field school, foreshore surveys of park areas have been sporadic with researchers focusing upon land-based sites. Prior to having students conduct pedestrian field reconnaissance of park beaches, they were required to conduct an overview assessment using **GoogleEarth**<sup>®</sup> software in college computer labs. This resulted in the identification of linear stone alignments, canoe runs, stone cairns and potential eroded pre-contact middens, among other site types. Midden sites, indicated by deposits of white mollusc shells, show up quite well on satellite photographs. Several eroded midden deposits were noted from Coal Harbour around the peninsula and west to Lion's Gate Bridge.

Students were also required to consult Volumes 1 to 7 of the Major Matthews collection (online, Vancouver Museum and Archives website) for historical site information – including historical Aboriginal sites, as well as other occupiers and users of the park up to, and including, WWI and WWII gun emplacements and other sites.

Initially, students were to observe a petroglyph (rock carving) and several culturally modified trees (CMTs) that had been recorded by archaeological research in previous years. Upon learning that sections of the park had not been systematically examined, especially foreshore areas, they suggested that we continue non-invasive pedestrian examination of other park locales. Brockton Point was chosen for this due to ease of access, parking and the ability to be minimally intrusive to Summer visitors to beach areas.

Examination of two foreshore portions of Stanley Park (Ceperley Park and Brockton Point peninsula) revealed not only the existence of previously recorded archaeological sites, but the presence of unrecorded historical and pre-contact sites as well.

- **Ceperley Park Knoll**

Ceperley Park, also known as Second Beach, has been surveyed for heritage sites in the past except for the knoll on the southern end near the public washrooms and picnic grounds. Despite heavy rain in the morning, students conducted linear traverses on set compass bearings and were instructed to flag any cultural material or features of interest and record UTM coordinates using hand-held GPS units.

The results of the initial pedestrian survey in the park resulted in the location and recording of several CMTs (including two springboard stumps from the mid-19<sup>th</sup> Century), a small patch of pre-contact midden and a possible crime scene. This consisted of discarded items located at the base of a large cedar tree; including clothing, a DVD drive, car parts and other items.

**Figure 1: Springboard stump, 19<sup>th</sup> Century logging practice**



**Figure 2: Probable crime scene or dump (?)**



- **DhRs-811 Foreshore Reconnaissance**

A review of the British Columbia government archaeological site database (RAAD) indicated the relatively recent discovery of a petroglyph (carved figure in stone) near Ceperley Park. The site, a sandstone boulder discovered during reconstruction of the park seawall, is located in the inter-tidal zone in proximity to an unrecorded canoe run as well as lithic (stone tool) site.

Three additional boulders appear to exhibit engravings (linear incisions or cup-marks) were also located within 100 meters of DhRs-811. Students photographed and sketched all sites and features, as well as recorded locations with GPS hand-units and compass and hip chain maps.

DhRs-811 was poorly recorded. The original site form was lacking specific data and good photographs and maps. Student data is being used to update the site form (for inclusion in the government database) as well as additional site forms are being prepared for the other, previously unrecorded, sites in proximity.

All petroglyphs, or potential petroglyphs, are in the process of being re-imaged using two software programs - **ImageJ**® and **Dstretch**® (see Figure 7). These two programs alter the hue and chroma of the visible spectra, making visible aspects of the images that are otherwise difficult to see under normal light and photographic recording.

**Figure 3: DhRs-811**



**Figure 4: DhRs-811, detail**



**Figure 5: Petroglyph boulder I**



**Figure 6: Petroglyph Boulder II**



**Figure 7: Image before and after ImageJ<sup>®</sup> and Dstretch<sup>®</sup> software computations**



Although faint, there appear to be several images on the surface of this outcrop. Further research is required. Some students have expressed interest in continuing research of this type on a volunteer basis.

**Figure 8: Canoe run**



Canoe runs are sections of beach cleared of large boulders to facilitate landing of wooden watercraft without damage. They resemble ‘lanes’ of relatively clear space between boulder fields (as above). Subsequent human and natural activities result in smaller boulder and stone infill.

- **Lost Lagoon, North**

In order to provide students with practice recording CMTs and an actual midden site, most of one morning was spent surveying a small point on the north side of Lost Lagoon and re-recording a pre-contact through historic period midden (site DhRs-05). Students used compass and pace, compass and hip chain, and GPS coordinates to produce sketch and site maps of the area as well as to locate the site on **Vanmap**<sup>®</sup> and **GoogleEarth**<sup>®</sup> images.

Several CMTs (DhRs-361 and 681) located north of DhRs-05 were also recorded using government Level I & II data record forms. Each CMT was recorded according to government standards, as well as photographed and located with mapping methods similar to those applied to DhRs-05.

All CMTs recorded were Western Red Cedar, but included tapered bark stripping, rectangular bark stripping and a single rectangular test hole (done to determine how sound the interior of the tree is).

In addition, one bark stripped tree showed evidence of additional use by the presence of kindling removal scars as well as an in-grown piece of wooden fencing. This latter feature most likely dates to the historical use of the DhRs-05 area by First Nations or an early manifestation of a park trail system. If the former case, then this supports historical



documentation indicating Aboriginal peoples in the area established gardens and/or livestock pens in the area.

**Figure 9: CMT, Lost Lagoon area**



**Table 1: CMT Level I and II data standards**

The following data fields are to be recorded on Level I CMT Recording Forms (the CMT Feature Recording Form should also be used with the Level I CMT Recording Form, where possible):

- (1) temporary site number;**
- (2) map sheet number (NTS or TRIM);**
- (3) location (mapped on 1:50,000 NTS and ca. 1:5,000 forest cover maps;**
- (4) UTM coordinates, specifying NAD 27 or 83;**
- (5) tenure or legal description (e.g., cruise plot number, cut block, TFL, District Lot);**
- (6) site dimensions;**
- (7) number of CMTs;**
- (8) CMT species present;**
- (9) CMT class types present;**
- (10) recorder;**
- (11) date; and**
- (12) comments.**

The following minimum data fields, in addition to Level I fields, are to be recorded on Level II forms, which are to be used in conjunction with the CMT Feature Recording Form:

- (1) location (i.e., access, transect number, mapped transect locations);**
- (2) tree species for individual CMTs; and**
- (3) classes and types of CMTs:**

- a) bark-stripped trees typed as tapered, large rectangular, girdled or other stripped trees;
- b) aboriginally-logged trees typed as tested, undercut, felled, sectioned, notched, planked, or canoe trees; and
- (c) other modified trees typed as pitch collection, kindling collection, delimited, message, arborglyph, arborgraph, blazed, sap collection, or other types of trees.

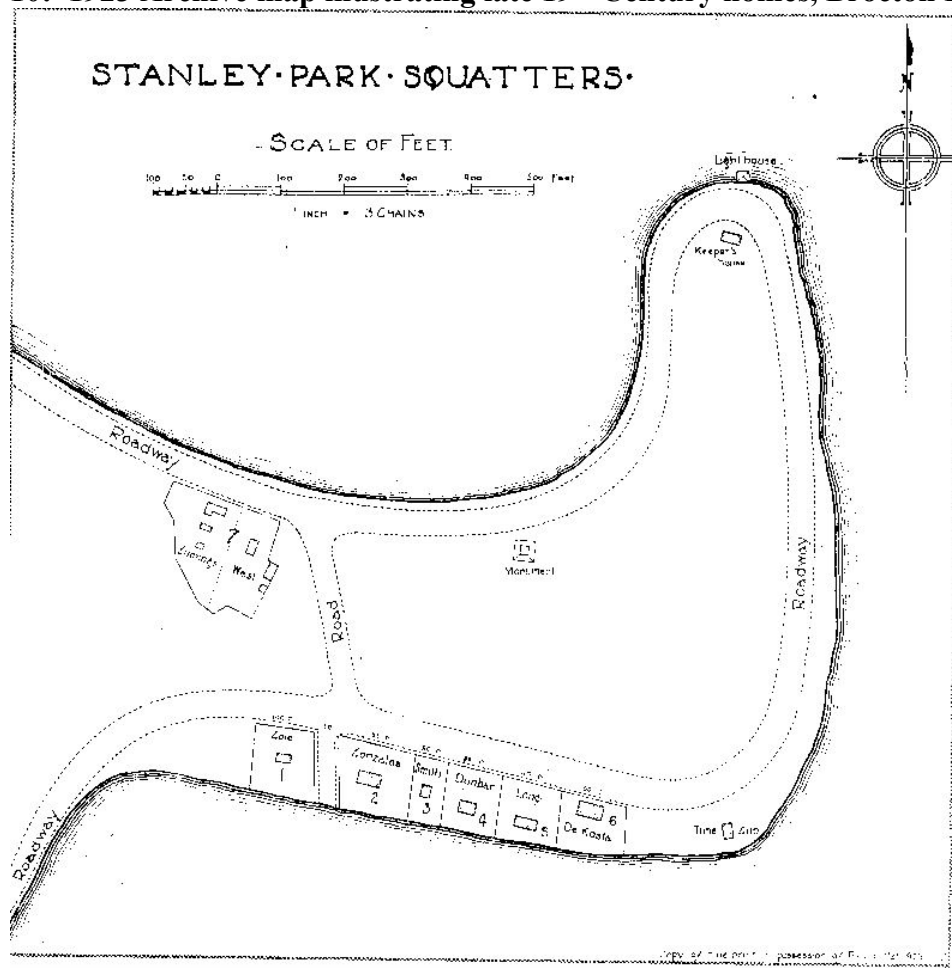
([http://www.for.gov.bc.ca/archaeology/policies/recording\\_culturally\\_modified\\_trees.htm](http://www.for.gov.bc.ca/archaeology/policies/recording_culturally_modified_trees.htm))

• **Brockton Point Peninsula**

Brockton Point peninsula exhibits pre-contact as well as historical archaeological sites. A 1923 sketch map (Figure 10) shows the distribution of late 19<sup>th</sup> Century homes and gardens situated on top of pre-contact Aboriginal midden occupation sites.

In addition, the forested area between the Nine O'clock Gun and the lighthouse served as the pre-1888 pioneer cemetery for the local population of the City of Vancouver.

**Figure 10: 1923 Archive map illustrating late 19<sup>th</sup> Century homes, Brocton Point**



- **The Early Vancouver Cemetery (ca 1858-1887)**

Prior to the establishment of Mountain View Cemetery in 1886, citizens of Vancouver buried their dead in Stanley Park, particularly on the forested area at the extreme eastern end of what was then known as “Coal Peninsula” or “Brew’s Point”, now known as Brockton Point after one of the residents who were eventually removed after 1888 when the area became part of Stanley Park.

**Figure 11: Vanmap ([www.vanmap.com](http://www.vanmap.com)) contour map of Brockton Point. Pre-1888 cemetery on forested height of land**



Students were tasked with researching all seven Matthews’ archival volumes to locate information about Stanley Park and, in particular, the original pre-1888 cemetery. This was done in preparation for proposed pedestrian reconnaissance of the cemetery area as no maps or sketches of it exist. Nor is there a record of burials.

Students determined that the population of pre-1888 Vancouver was multi-ethnic and multi-cultural, and peoples of all ‘races’ were buried at Brockton Point. This included

Whites (Euro-Canadians), Aboriginal or First Nations, Chinese, Kanakas (Hawaiians) and others.

It was also determined that a Chinese-operated piggery existed at the present location of the Royal Vancouver Yacht club where burials or cremations took place on a piece of land near the current parking lot, Aboriginal and non-Aboriginal burials of historic and pre-contact ages were located on Deadman's Island (including pre-contact box tree burials and possibly interments under stone cairns), as well as Aboriginal burials to the East and West of Lumberman's Arch, as well as at least one mortuary house burial at *Chay-toos*, an Aboriginal rancho on the terrace east of Prospect Point.

Although historic graves at Brockton Point were marked with fence and wooden markers, none have survived. However, vases and other receptacles to hold flowers, rocks and other small features or artifacts may lie in the undergrowth to mark interment areas.

Unfortunately, heavy rains stimulated a luxuriant under story or gallery growth throughout the cemetery area – and prevented pedestrian reconnaissance. Several attempts were made to access the area, but all were defeated by the height and density of plant growth. As such, the reconnaissance of this area was abandoned.

- **Brockton Point, South**

Figure 10 (above) indicated ca 1923 recollections of late 19<sup>th</sup> through early 20<sup>th</sup> Century houses and gardens on the terrace between the current location of the Nine O'clock Gun and the HMCS Discovery (Deadman's Island) areas. Archaeological surveys conducted in the 1990s confirmed earlier occupations by pre-contact Aboriginal groups by the presence of intact and disturbed midden and eroded cultural materials on the beach.

Student archival research confirmed both pre-contact and historical occupations by locating references in the extant Major Matthews records as well as by conducting pedestrian ground reconnaissance of the foreshore area. This resulted in the location of numerous pre-contact lithic artifacts (both formed and unformed tools and flakes) as well as mid-to-late 19<sup>th</sup> and early 20<sup>th</sup> Century artifacts of glass, ceramic and metal.

Recorded previously as site DhRs-302, the geographic point location of artifacts and potential stone features will be added to the provincial government archaeological site database.

**Figure 12: General foreshore area, South Brockton Point**



**View: east towards Nine O'clock Gun**

**Figure 13: Dacite core, inter-tidal zone, south beach Brockton Point**



**Figure 14: Mid to Late 20<sup>th</sup> Century Hudson's Bay Company liquor bottle**



The Hudson's Bay Company (HBCo) began bottling various liquors in bottles embossed with the company logo as early as the 1930s. By the mid-1980s, the HBCo had divested itself of this part of the company, thus providing an early to late 20<sup>th</sup> Century date for this artifact as a minimum estimate (1930s). Artifacts such as this may have been curated (kept out of the archaeological record for an unknown time), so deposition may post-date the 1980s although this is not considered likely given its discard location and association with other glass alcohol beverage containers observed in foreshore deposits nearby.

- **Brockton Point, East**

Students continued a pedestrian foreshore survey from the Nine O'clock Gun north to the Brockton Point lighthouse. There was a continuation of pre-contact and historical cultural materials along the entire beach – which is not a recorded site.

Besides tool stone flakes and cores, three larger boulders of good quality dacite (a form of volcanic basalt) were located near the low tide mark. One boulder forms part of a stone circle feature, the others are isolated finds. A very large boulder estimated to weigh at least a tonne was observed just west of the lighthouse, possibly in a secondary location as it is surrounded by other large boulders that were likely displaced during construction of the lighthouse and seawall.

None of the boulders, flakes or smaller cores was likely to be of local material. Dr. Rudy Reimer/Yumks (SFU) hypothesizes that these finds originated near Squamish as similar materials located on the foreshore of the northern beach at Brockton Point have been traced to this area through analysis using a portable X-ray fluorescence unit (Reimer 2012: pers. comm.).

Besides recording the eastern beach as an archaeological site for the provincial and Aboriginal governments, I hope to return to this locale with Dr. Reimer to assist in taking pXRF readings of these boulders.

**Figure 15: Boulder circle and dacite core, east beach Brockton Point**



**Figure 16: Dacite boulder, east beach Brockton Point**



It must be noted that the foreshore areas between the Nine O'clock Gun and Brockton Lighthouse may have, or continue to have, subsurface human skeletal materials from the pre-1888 cemetery located on the slope from the seawall west across Park Drive and into the forest. Future research (field school 2013) hopes to address this issue, but will require an investigation permit from the provincial government as well as permission of the Parks Board and City of Vancouver.

- **Brockton Point, North**

The foreshore and terrace associated with the northern foreshore of Brockton Point is a recorded pre-contact and historical archaeological site - DhRs-301 (see Figure 10, re: 1923 sketch map).

Pedestrian reconnaissance of the rocky eastern end of the beach provided evidence of primarily late 19<sup>th</sup> through 20<sup>th</sup> Century historical refuse (glass, ceramics, metal and a surprising number of spark plugs) between boulders on mostly sandstone beach.

As reconnaissance proceeded west, pebble and sand beach deposits revealed pre-contact lithic (tool stone) artifacts between the seawall and inter-tidal sandstone shelving as well



as a large granite boulder with a modern petroglyph (initials within a valentine-heart shape).

Further west along the sandstone shelf a potential petroglyph was located on a boulder near the low tide mark. Almost entirely outlined by barnacle and small blue mussel growth, this feature requires additional research to confirm if the boulder substrate has been modified.

Some 100 meters north of this feature is a large inter-tidal boulder referred to as Octopus Rock in several volumes of the Major Matthews' online archival manuscripts. One of the assignments students were required to conduct was to compare several historical late 19<sup>th</sup> through early 20<sup>th</sup> Century photographs of this boulder as well as others showing the beach in order to determine the nature of the foreshore and archaeological site that existed in the embankment. Visual archaeology, as it is sometimes referred to, makes use of historical photographs to reconstruct earlier landscapes, land use, and social norms.

**Figure 17: Octopus petroglyph and rock, North beach, Brockton Point**



Note: Octopus rock in upper right, in water

**Figure 18: Early photograph ~AD 1900, Brockton Beach North**



(after Vancouver Public Library Timms Accession #7271)

The pre-contact lithics consisted of Squamish origins (Reimer 2012: pers. comm.) from at least two sources based on an extremely small sample of three artifacts selected from the beach, as well as cryptocrystalline silicates (cherts) of unknown derivation.

The pebble-sand beach changed to a sandy beach between Octopus Rock and the Statue of a Girl in a Wetsuit located in the inter-tidal zone north of the Empress of Japan steamship figurehead monument. Fewer artifacts were observed in the sandy beach matrix, but historical artifacts including spark plugs and the carbon rods from dry cell “D”-sized and larger were observed on the sandstone shelf portions of the beach.

In addition to the Octopus petroglyph, four ca 25-30 cm diameter circular post-holes were observed in the sandstone shelf to the southeast. Late 19<sup>th</sup> Century photographs suggest these four post-holes (12 feet apart from each other) represent the base of a structure built on stilts over the inter-tidal zone or mooring poles for boats.

**Figure 19: Brockton Point ca AD 1900**



Brockton Point Beach – North ca AD 1900. Note posts in foreshore.  
Vancouver Public Library Timms Accession #5452

**Figure 20: Post-holes in sandstone shelf, Brockton Point, North Beach**



Brockton Point Beach – North (July 2012)  
Note Post-holes – posts from ca AD 1900 (?)

**Figure 21: South Brockton Point, boat house on stilts**



(after Vancouver Museum and Archives Photo # CVA 371-2196)

Beach sediments returned to cobble and boulder matrices closer to the wet-suited girl statue, with 19<sup>th</sup> to 20<sup>th</sup> Century artifacts continuing to be observed.

The Brockton Point peninsula and its foreshore sediments represents an ideal location for future field schools as it exhibits intact and eroded pre-contact, 19<sup>th</sup> Century through contemporary archaeological sites, features and artifacts.

Locating these materials was of particular interest to one student as she has *Skwxwú7mesh* (Squamish) First Nation ancestors who lived at Brockton Point and at other locations within Stanley Park (see DeKosta residence, probably originally built by Baker, listed in Figure 10 previously).

## Some Recommendations for Future Research

Future research contemplated for Langara archaeology field schools involves the systematic recording of size, shape, weight and orientation of historic period artifacts along the north beach sandstone shelf in order to determine principles of inter-tidal hydraulic movements of eroded artifacts in foreshore provenience. It was interesting that no pre-contact artifacts were observed on the exposed sandstone shelf at Brockton Point north beach, whereas the majority of exposed historic artifacts were in this zone.

Due to time constraints the area west of the statue to Lumberman's Arch and on to the Lion's Gate bridge were not surveyed. However, the terrace area from the Empress of Japan figurehead to Lumberman's Arch is a recorded archaeological site (midden, house remains and burials) so artifacts are expected to be eventually located on the foreshore.

Future field schools could involve foreshore survey from the Empress of Japan figurehead area west past Lumberman's Arch (DhRs-02), to the historical and pre-contact site of *Chay-Toos* (DhRs-79), around Prospect point and south to Third and Second (Ceperley Park) beaches in order to provide additional site and feature data for the provincial, municipal and Aboriginal governments.

All foreshore surveys would include examination of sandstone boulders and shelves for additional evidence of unrecorded petroglyphs as well as linear stone features (canoe runs) and cairns, and eroded midden material, among other probable features.

Future surveys should be conducted under the auspices of the City of Vancouver, Parks Board and First Nations within whose territory these areas are located. Discussions with these groups will be initiated in late Fall or early Spring 2012/2013.

At a minimum, it would be beneficial to acquire the use of a ground penetrating radar (GPR) device to measure and record geophysical anomalies on the landform between the north and south beaches at Brockton Point. This would serve as baseline data for potential future excavations.

Similarly, a GPR survey of the forested landform between the Brockton Point lighthouse and the Nine O'clock Gun would be advantageous as a first step towards relocating the pre-1888 graves in the area.

## Reference Cited

Reimer, R. (*Yumks*)

2012 Personal communication. Departments of Archaeology and Indigenous Studies, Simon Fraser University, Burnaby.