THE MIDDEN

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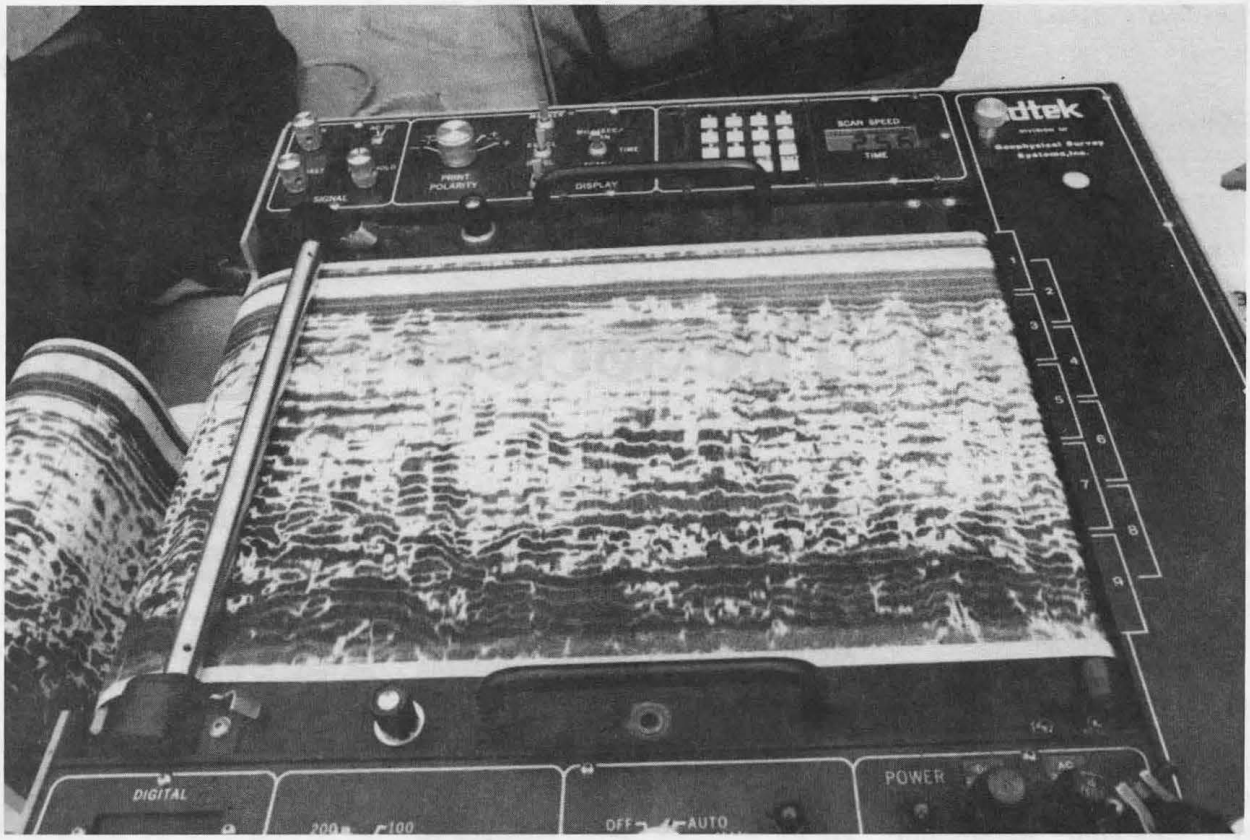

The Midden

Publication of the Archaeological Society of British Columbia

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Submissions and exchange publications should be directed to the Editor. Contributions on subjects germane to B.C. archaeology are welcomed: maximum length 1,500 words, no footnotes, and only a brief bibliography (if necessary at all). Guidelines available. Telephone inquiries: 873-5958.

The next issue of *The Midden* will appear mid-October 1990.

Contributors this issue: Kathryn Bernick, Erik de Bruijn, Lindsay Oliver, Kathi Sherwood.

THE COVER: *Subsurface radar signals on paper tape of graphic recorder, used to locate burials in historic cemetery.*

Subscription is by membership in the A.S.B.C. (see below), or non-member rates of $12.00 a year (5 issues). U.S.A. and overseas $14.00 a year. Check or postal money order in Canadian funds payable to the A.S.B.C. Address to: *Midden* Subcriptions, **P.O. Box 520, Station A, Vancouver, B.C. V6C 2N3.**

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The Society

The **Archaeological Society of British Columbia** is dedicated to the protection of archaeological resources and the spread of archaeological knowledge.

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

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Affiliated Chapters:

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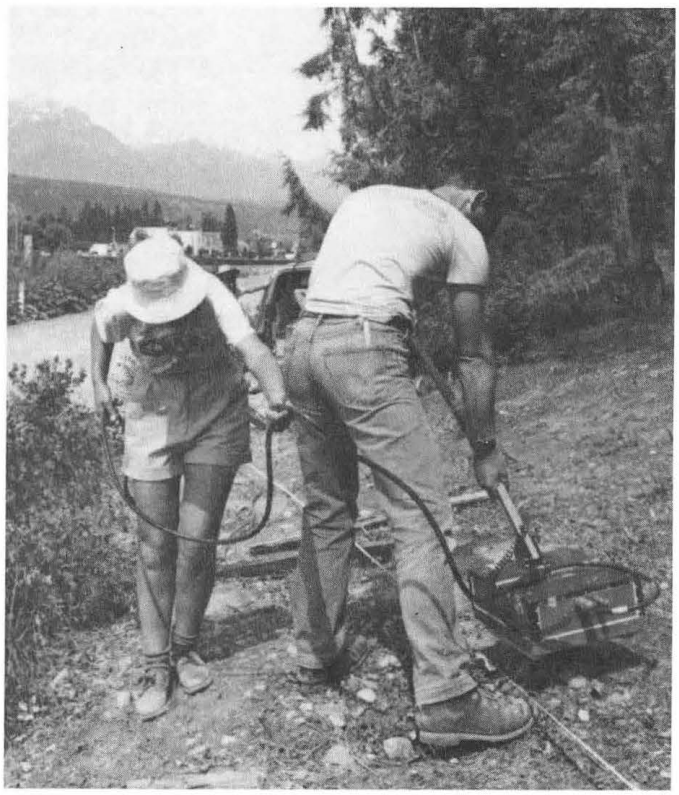
Victoria. President: Shirley Cuthbertson (c/o Royal B.C. Museum).

NEXT MEETING:

September 12: Topic to be announced.

Cpl. Bob Stair sweeps radar antenna across Golden Pioneer Cemetery (EhQf 3).



Subsurface Radar

in an Historic Cemetery Context

by L.J. Oliver

UNTIL RECENTLY, subsurface radar has been applied mainly to geological contexts. Archaeologically, the technique has been employed to locate features such as buried walls. In 1989, the Royal Canadian Mounted Police and the Golden Pioneer Cemetery Project collaborated in applying subsurface radar to locate pioneer graves no longer marked by any visible surface feature.

Golden Pioneer Cemetery, in Golden, British Columbia, was the community interment ground from 1882 to 1894, at which time, archival sources note, it was full and a new municipal cemetery was opened. The older cemetery was largely forgotten until 1986 when a pioneer grave was vandalized by a local person and the remains offered for sale. The vandalized unit—the only grave visible from off-site—was demarcated by a picket fence.

My identification of the remains aroused local interest and evacuation of the cemetery was proposed, to be followed by re-interment of the pioneer remains in the municipal cemetery once osteological analysis had been completed. A brief survey conducted in 1987 suggested that six to eight graves were present, though none was clearly marked.

The 1988 field season yielded a total of eight graves, seven of which were not visible prior to removal of overburden. No patterning of grave locations or marking features was noted when the burials were mapped, but since very little of the site had actually been excavated an additional field season was proposed—to complete recovery of the pioneer remains with the assistance of subsurface radar.

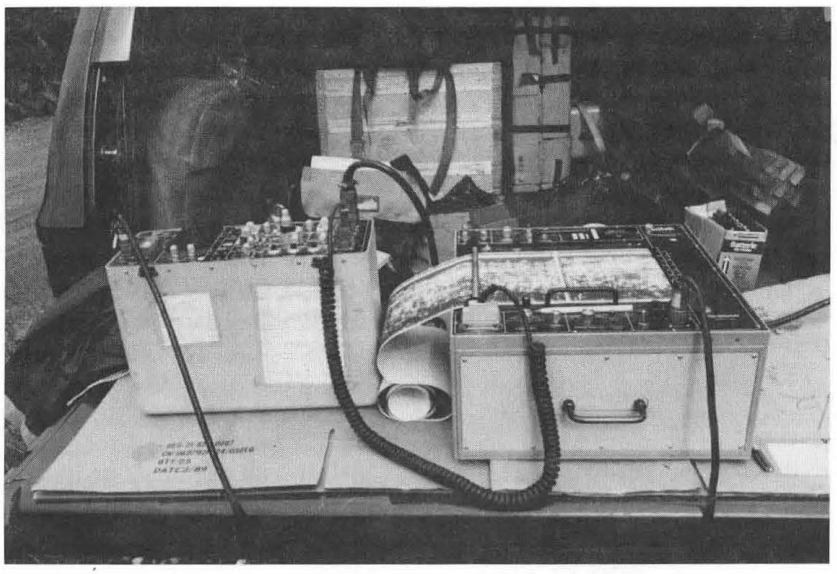
Subsurface radar, otherwise known as ground penetrating radar, employs a pulse of electromagnetic energy discharged from an antenna to a determined depth. A portion of the signal of pre-set duration and frequency is then reflected back to the surface, picked up by an antenna, and directed to a receiver station where it is processed. This includes an oscilloscope display and a paper-fed graphic recorder. The operator, Cpl. Bob Stair of "E" Division Identification Support Service, RCMP, volunteered his expertise in subsurface radar technology to assist in locating unmarked graves in the Golden Pioneer Cemetery. He controlled both the horizontal scale, that is, the

speed the antenna moved across the ground and the paper-feed rate of the graphic recorder, and the vertical scale, which in this case was depth.

The amount of reflected signal varies according to the electrical characteristics of the soil or object encountered. These characteristics depend on temperature, pressure, frequency, moisture content, and soil impurities.

The graphic display records strong signals as black, and weak signals as white; a grey range represents noise between the surface and interface reflections. In this case, ground interface changes were taken to signify grave pits. Certainly all graves encountered had quantities of rootlets penetrating vertically down to the coffin, thereby greatly increasing moisture content in these areas.

The *EhQf 3* site measures 16 m N-S and 24 m E-W. Site preparation consisted of removing vegetation; mapping and removing surface matter such as large rocks, scattered pickets, and metal cans; and exposing the survey pins delineating the 2x2 m units set up in 1988.



Subsurface radar signal processing station: oscilloscope (l), paper-fed graphic recorder (r).

The System 8 Geophysical Survey system was employed in this test, using a 500 MHz antenna. Subsurface scanning consisted of moving the 20-inch-wide antenna across the ground, east to west, following a grid laid out for the purpose. Six series of scans were conducted and the paper tapes were analyzed by Cpl. Stair at the end of each series. Based on the depths of graves encountered during the previous (1988) field season, a depth setting of six feet was used. The graphic display indicated several sharply delineated interface changes, which were assumed to represent grave cuts. The variations in depth and sharpness of these interface changes led Stair to designate them as either "most promising" or "less promising" of possible graves. There were two controls on the subsurface radar scans: first, the grave pits excavated during the 1988 season, the locations of which were not known to Stair; and second, a child's grave delineated by a ring of stones, which had been identified but not excavated during the previous season.

The correlation between targets indicated by the subsurface radar scans and known grave pits was very good. There was a drift between actual and indicated grave pit locations in the direction the scan was made, but the distance was not large enough to be significant.

Based on the subsurface radar tapes, two large, previously untested areas were selected for excavation in 1989. Test area 1 (6-8 m E, 2-8 m N) yielded four burials with coffins, three of these at a depth of only 1 m and contained in an area designated "most promising"; the fourth, in a "less promising" area, was considerably deeper. Test area 2 (18-22 m E, 8-12 m N) yielded two burials in an area designated "most promising"—time prevented the investigation of a possible third burial reported for this unit.

Subsurface radar scans produced excellent results in this trial, with all previously excavated graves being detected. Six burials were recovered from grave pit areas indicated by the technique and two additional burials were recovered outside the scanned area. The total number of burials from the Golden Pioneer Cemetery is now 15, with approximately 20% of the site excavated. At least five other small areas designated as "less promising" from subsurface radar tapes remain untested. The failure of the subsurface radar to detect a known child burial, probably relates to the depth of the pit, approximately 8' to the outer coffin base and therefore beyond the anticipated depth set for radar penetration.

In 1982 and 1983, attempts to locate graves at a 16th century Basque whaling station in Red Bay, Labrador were unsuccessful since there was not sufficient contrast between the grave and beach materials to appear as a distinct anomaly on the paper tapes. On the other hand, the results of the collaboration between the RCMP and the Golden Pioneer Cemetery Project were extremely encouraging, with a good correlation between located targets and actual graves. Both time and labour were saved during the 1989 field season through the application of subsurface radar, and a better understanding of the nature of the site was gained. □

* * *

The Golden Pioneer Cemetery Project was funded by the B.C. Heritage Trust. Dr. Mark Skinner of Simon Fraser University directed the project with Lindsay Oliver as Principal Investigator.

L.J. Oliver, an MA candidate in the Archaeology Dept., Simon Fraser University, has worked with both modern and prehistoric skeletal material. She holds a permit from the Archaeology Branch to investigate "found human remains" and is on contract with the B.C. Coroner's office.

Ottawa announces forthcoming legislation

FEDERAL LEGISLATION to protect archaeological resources is currently being drafted and, according to information released last month by the minister responsible, the Hon. Marcel Masse, it will be a vast improvement over the current state of affairs.

Highlights will include:

- non-retroactive government ownership of archaeological objects found on federal lands, except reserves;
- a resource management capability that would issue permits and certify professional fieldwork and collections management, set standards for impact assessment, conduct emergency rescue, and select repositories and criteria for mandatory reporting of finds;
- special provisions regarding burial sites;
- amendments to the *Cultural Property Export and Import Act* giving the review board the power to deny a permit for permanent export of archaeological objects, without compensation;
- amendments to the *Canada Shipping Act* to deal with archaeological wreck;
- restricted information on site location when necessary to protect the resources;
- public involvement and official recognition for reporting archaeological discoveries;
- enforcement powers and penalties for offenses.

A newly created Office for Archaeological Resource Management will oversee the process of enacting the legislation, expected late this year, and subsequently will set up the new programs and policies. □

Debitage

Arnoud Stryd lost his partner earlier this year when **Stephen Lawhead** quit archaeology and Arcas for other things. The company has closed its Kamloops office and now operates entirely from its base in Coquitlam . . . Members of the Canadian Archaeological Association recently elected UBC professor **David Pokotylo** as their vice president, thereby supporting his stated commitment to promoting public archaeology. Let's hope they fare better than the **Heritage Canada Foundation,** which just folded its magazine *Canadian Heritage* . . . The theme of the **Chacmool Conference** to be held in Calgary, Nov. 8-11, 1990, is *Ancient Images, Ancient Thought: The Archaeology of Idealogy.*

* * *

ASBC member **Anne Underhill,** who is just finishing her Ph.D. at UBC specializing in the archaeology of China, departs shortly for the east—she'll be teaching next year at Franklin and Marshall College in Lancaster, Penna . . . New positions teaching archaeology at B.C. colleges drew numerous applications this spring. **Cathy Carlson,** who's been away doing graduate work in Maine, captured the Cariboo College (Kamloops) job . . . SFU's **David Burley** has worked in nearly every region of Canada—he now opts for the exotic, with a SSHRC grant to do research in Tonga. Other SFU professors are taking off in the opposite direction—**Knut Fladmark** and **Jon Driver,** also with SSHRC funding, head this summer to Charlie Lake Cave near Fort St. John.

This spring's crop of M.A. graduates includes one from UBC's Dept. of Anthropology and Sociology—**Margaret Holm** with a thesis entitled *Prehistoric Northwest Coast Art: A Stylistic Analysis,* and three from SFU's Dept. of Anthropology: **Elisabet Bedard**—*The Historic and Ethnographic Background at Fort d'Epinette (HaRc 27), Considerations for the Archaeological Determination of Ethnicity;* **Luisa Beram**—*Capital Regional District Parks: A Case Study in Archaeological Resource Management;* and **William Quackenbush**—*Taste of Canadians and Dogs: The History and Archaeology McLeod's Lake Post, British Columbia, GfRs 2.*

* * *

Archaeological conservation rates low priority

A RECENT EVALUATION of B.C. museum conservation needs recommends establishment of a government-funded network of regional labs overseen by a broad-based advisory body.

Museum consultant Dr. Sonja Tanner-Kaplash spoke in April to a meeting of the informally organized Pacific Conservators Group about the study she was conducting for the Ministry of Municipal Affairs, Recreation and Culture. She related that British Columbia has not received its fair share of conservation assistance from the federal government and that the lack of facilities and jobs for conservators in B.C. has exacerbated a bad situation. For example, conservation training programs in eastern Canada (there are none locally) do not accept B.C. applicants because they have no job prospects as professional conservators in this province.

Tanner-Kaplash stressed that the efficiency of available conservators must be stretched. She suggested establishment of a community college museum technician program that emphasized conservation and that guaranteed places for Natives working in band museums and cultural centers. She also advised conservators to work toward recognition of a junior position within their profession.

The proposed regional labs would be phased in following detailed assessment of existing facilities. They would be generalist treatment centers catering to common needs. Eventually, two or three would develop specialities in the conservation of totem poles, wet site and marine material, and large industrial and agricultural machinery, which are unique B.C. needs with little or no services available at present.

Tanner-Kaplash believes that the federal government will come through with funding—if it is matched by the province. She also believes that Victoria will support a conservation program. Conservators in the audience were considerably less optimistic.

The report was to be submitted in mid-May with no indication of when Victoria might respond to it. As far as archaeology goes, even the best scenario would not fill the most pressing needs—wet site and marine material—in the foreseeable future. □

News Bits

ASBC joins international

The Archaeological Society of British Columbia has become an official affiliate of the Society for American Archaeology. The newly created organizational affiliate status is designed to promote interaction between professional and avocational archaeologists.

Date meets expectations

While monitoring construction at the north end of the Crescent Beach site *(DgRr 1)* earlier this year, Arcas Ltd. archaeologists identified a series of circular hearth-like features on an ancient beach margin. A relatively recent radiocarbon date of 960±70 BP confirms previous reconstructions of the occupation area shifting northward with the advancing shoreline.

Housing Project goes ahead

Dr. Gary Coupland (Univ. of Toronto) will spend three months this summer with a crew of eight excavating a prehistoric village *(GcTo 6)* in Prince Rupert Harbour. He plans to dig some of the 15 house depressions at the site, as well as surrounding midden areas, for information on household organization and subsistence.

Victoria protects wreck

British Columbia has a new designated heritage site, the 25 m sternwheeler *City of Ainsworth* at the bottom of Kootenay Lake. The vessel, which sank in a storm in 1898, was spotted this spring in 365 feet of water by divers from the Underwater Archaeological Society of British Columbia.

The case of the Large Bone

THE MYSTERIOUS sea mammal bone from the *DkSf 4* Comox Harbour site (see the April 1990 *Midden,* Vol.22:2:9), turns out not to be walrus after all.

Bjorn Simonsen told *The Midden* that faunal experts at the Smithsonian Institution in Washington D.C. have now identified it as the vertebra of a large male Steller's sea lion.

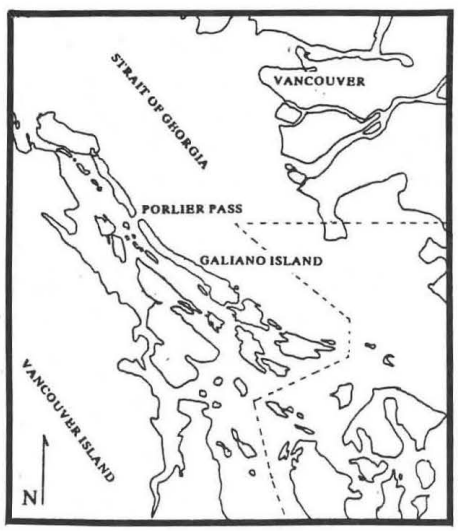
The specimen aroused interest when it was identified as walrus by the Zooarchaeological Identification Centre in Ottawa since no walrus remains had ever been found so far south. Walrus specialists in Alaska examined the bone and said, however, that it looks more like bison than walrus.

The Smithsonian experts told Simonsen that it's the largest Steller's sea lion vertebra they'd ever seen. Recorded adult male Steller's (or northern) sea lions average about 3 m long and weigh as much as one ton. They are present along the B.C. coast, including the Comox area.

The mystery question this month is, How does a bison resemble a walrus/sea lion? Perhaps the next set of experts will find another, large answer. □

Evidence for Aboriginal Fish in Porlier Pass

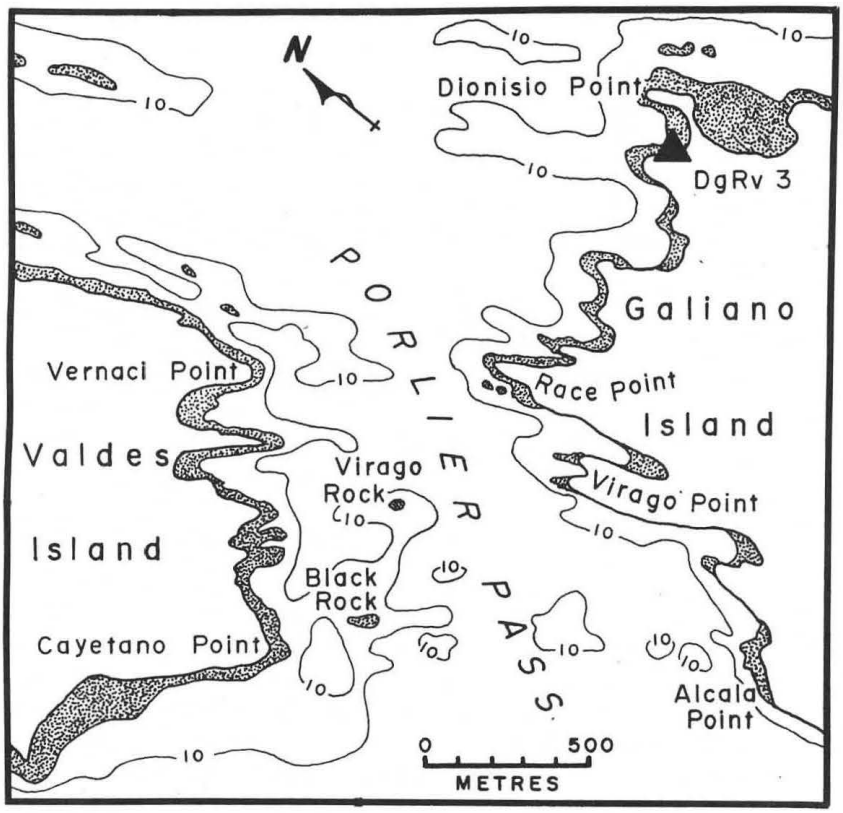
by Erik de Bruijn



THE HISTORIC AND ARCHAEOLOGICAL record demonstrates the importance of fishing among the subsistence activities of aboriginal peoples on the Northwest Coast. Ethnographic accounts of the 18th and 19th centuries together with information obtained through archaeological excavations provide us with knowledge about probable fishing locations, methods, and technology. Methods included the use of weirs and traps, trolling, jigging, trawling, spearing, dip netting, reef netting, and gill netting. In her books *Artifacts of the Northwest Coast Indians* and *Indian Fishing: Early Methods on the Northwest Coast,* Hilary Stewart describes and illustrates much of what we know about the different fishing techniques and equipment.

A great deal still remains to be discovered, however, especially about the exact locations of fishing sites. Early accounts are often not specific enough to enable us to place mentioned sites. The archaeological record may not be complete, or may be inconclusive. With the exception of stone weights and anchors, much of the equipment used in fishing was made of organic materials such as bone, wood, shell and plant fiber, which only survive under favorable conditions, and may not be found. Moreover, some of the tools and equipment that may have been used in fishing or fish processing were also used for other subsistence activities. Thus, it has not always been possible to conclusively determine that fishing activities took place at a certain location.

Although underwater investigation can provide assistance in identifying fishing sites, especially those sites at which methods making use of weights and anchors were employed, archaeologists studying aboriginal sites have not, for the most part, proceeded deeper than the intertidal zone. The main focus of underwater archaeology in British Columbia has been on historic shipwrecks. With the exception of preliminary exploration of a reef netting site at Point Roberts (Rozen 1981), the only



Porlier Pass with intertidal zone (stippled) and 10 m depth contour.

substantial use of underwater investigation has been as part of a comprehensive study of Straits Salish reef netting (Easton 1985a, 1985b, 1986). Working from very general ethnographic descriptions, divers found the exact spots where the nets had been set by locating the stones that had been used to anchor the corners of the nets.

Underwater investigation can materially assist in recovering information about fishing sites in the course of a planned archaeological study. In addition, chance finds by divers can provide new evidence for fishing activities and, thus, be a stimulus for further archaeological research. Two such finds from Porlier Pass are described in this article and are compared to similar artifacts found in the course of controlled excavations on land.

Porlier Pass

Porlier Pass separates Valdes and Galiano islands, two of the Gulf Islands lying east of Vancouver Island, in the Strait of Georgia. The pass contains a number of shallow reefs and drying rocks, the most hazardous of which are now marked by navigational aids. Like the other inter-island passes of the Gulf Islands, Porlier Pass is a high-current area, with tidal streams reaching speeds of 9 knots on the flood and 8 knots on the ebb. These currents deliver a steady supply of nutrients that directly or indirectly support a great abundance of marine life, today attracting the recreational diver as well as the sport and commercial fisherman. Fish species include salmon, lingcod, various kinds of rockfish, flatfish, and herring. At certain times of the year, marine mammals, including seals, sea lions, and even killer whales, frequent the waters of the pass.

A number of deeply indented coves and bays on the north end of Galiano Island and the south end of Valdes Island provide shelter from prevailing winds and from the currents, and permit easy access for canoes to the waters of the pass. Archaeological sites have been identified at many of these coves and bays on both sides of the pass. An Indian reserve is situated along the northwest shore of Galiano Island, extending from Alcala Point to east of Race Point, and native people continue to utilize the marine resources available in Porlier Pass.

Excavations have been carried out at Dionisio Point *(DgRv 3)* where Mitchell found cultural remains attributable to three components: Dionisio Point I, related to the Lithic culture type, which he considers as lasting from about 7000 BC to 5500 or 5000 BC; Dionisio Point IIa, related to the Marpole culture type, which he dates from about 500 or 400 BC to around AD 500 or 600; and Dionisio Point IIb, assigned to the Gulf of Georgia culture type, which he sees in existence by about AD 1000, and possibly as much as 500 years earlier. This indicates considerable antiquity for human occupation at the north end of Galiano Island.

Alcala Point Resort is the centre for diving activities in Porlier Pass.

It is located at Alcala Point immediately south of the reserve. The foreshore is generally a low cliff or steep sandstone slope, but a small, sandy cove provides easy access to the water. A substantially disturbed midden runs across the property parallel to the shore. Surface examination shows some shell, occasional salmon vertebrae, and fire-cracked rock in a matrix of black soil.

Perforated Stone Anchor

At Alcala Point, an anchor stone was found lying underwater at a depth of 11 m, on a sloping shelf of broken, tumbled rock beside a vertical sandstone cliff extending to the surface. No other stones appeared to be culturally modified. The upper surface was encrusted with marine growth that almost obscured the perforation. It measures 36.2x27.5x8.8 cm and weighs 10.8 kg. The stone is a roughly triangular flat sandstone cobble of varying thickness with a pecked biconical perforation 11.5 cm from the apex. The perforation cones are oval, 8.3x7.8 cm on one surface, 8.7x8.0 cm on the other. Each perforation cone is 3.5 cm deep, and the diameter of the actual perforation is 2.5 cm. If the apex is held towards one's body, each cone slopes towards the lower right corner, indicating that the maker completed one cone, then turned the slab about its long axis to start the cone on the opposing surface. The lateral edges and apex of one surface may have been pecked as well, but this shaping could be natural.

I observed a similar underwater specimen at the south end of Denman Island at a depth of approximately 10 m, and Easton (1985a:80) reports seeing a pear-shaped stone approximately 0.90x0.45 m with a possible pecked perforation at the narrow end, at a reef netting site off North Pender Island in Bedwell Harbour. Other end-perforated stones of varying sizes and compositions have been recovered from sites throughout the Georgia Strait area. Some examples are illustrated by Stewart (1977:31, 1981:79).

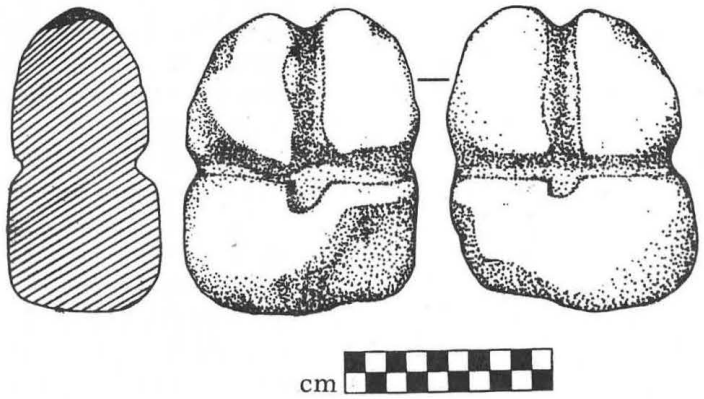
A comparable sandstone specimen (Mitchell 1971: Figs. 84 and 85a) weighing 7.42 kg was found at Montague Harbour, *(DfRu 13)*, at the southern end of Galiano Island. It came from the Montague Harbour II component, which Mitchell attributes to the Marpole culture type. A smaller granitic example (Burley 1981:Fig. 32a) weighing 472.3 g comes from the False Narrows I component at Senewelets, *(DgRw 4)*, the False Narrows midden on Gabriola Island. Burley places this component in a mid-Marpole time range, between approximately 100 BC and AD 100. Mitchell considers perforated stones, both large and small, as a distinctive archaeological feature of the Marpole culture type, but Burley notes that they can occur in more recent contexts. Such occurrence could reflect re-use of earlier specimens rather than manufacture in later periods. A more common practice in the historic Coast Salish period seems to be the use of unmodified stones as anchors or weights. Such stones are often not recognized as artifacts, unless, as at the Little Qualicum River site *(DiSc 1)*, they are found with their associated cordage still preserved.

It is obvious that perforated anchor stones were meant to be retrieved and re-used, for considerable time would have been invested in their manufacture. Underwater finds, thus, represent accidental losses in the course of use, rather than abandonment or

Perforated anchor stone found near Alcala Point, Porlier Pass. Photo by Erik de Bruijn.

discard. These stones probably served a number of functions. They could be used to anchor the ends of a net, to prevent a fishtrap from moving, to hold down a line of halibut hooks, or to anchor a canoe. An ethnographically described use was as a sea anchor or drag when sturgeon fishing to prevent the fish from towing the canoe too far, but the waters of Porlier Pass are not a likely habitat for sturgeon. Another possible use is as a weight for a line set with baited throat gorges to catch bottom fish. It would seem to be unnecessary to use such a heavy stone for this purpose.

It is unlikely that the Alcala Point specimen was being used as a canoe anchor. It was found so close to the shore that either current or wind would have quickly swung a canoe against the rocks. Moreover, a sheltered cove is close at hand to land or launch canoes. A more probable use was as a net anchor for a net set perpendicular to the shore to intercept fish moving with the current across the inshore part of the series of reefs that extends from Alcala Point to Cayetano Point on Valdes Island.



T-Grooved stone weight found near Black Rock, Porlier Pass. Drawing by Kathi Sherwood.

T-Grooved Stone Weight

My second underwater find is a roughly rectangular sandstone cobble from a depth of 15 m on a level sand and shell bottom about 7 m southwest of Black Rock reef, which lies about 200 m southeast of Cayetano Point. The upper surface was covered with marine growth; the bottom surface shows signs of natural deterioration. No other stones were in the immediate vicinity. The stone measures 14.5x11.5x7.5 cm and weighs 1.75 kg. A pecked groove encircles the middle. A second pecked groove encircles one of the ends and is perpendicular to and intersects the groove around the middle. Groove width varies from 1.4 cm to 2.0 cm, and groove depth varies from 0.4 cm to 1.0 cm.

Grooved, T-grooved, and notched stones are reported from components at a number of sites in the Georgia Strait area. Stewart (1977:31, 1981:79) illustrates several specimens. A fragmentary one with a single groove is reported from the Dionisio Point IIb component (Gulf of Georgia culture type), though Mitchell notes that it may not belong to this component as it was found considerably deeper and in a different soil layer than other artifacts. Three T-grooved sandstone cobbles, one weighing 1.24 kg, another 0.866 kg, were found at Senewelets *(DgRw 4)*. They are associated with the False Narrows II component, which Burley identifies as transitional late Marpole with an associated radiocarbon date of AD 240 ± 90.

One fragmentary T-grooved stone made of weathered sandstone was found along with other notched and grooved stones at Montague Harbour *(DfRu 13)* in the Montague Harbour I component (Mitchell 1971:Fig. 51c) which is identified with the Locarno Beach culture type and has two associated radiocarbon dates, 940 ± 140 BC, and 1210 ± 130 BC. This stone had a complete encircling groove and appeared to have broken at a second, parallel, encircling groove 4.0 cm from the first groove. A third groove, perpendicular to and intersecting with the first groove, encircled one end. Additional sandstone weights came from the Montague Harbour II component, however, only one example had a continuous groove encircling the middle and none was T-grooved.

Four T-grooved sandstone weights are reported from the Georgeson Bay I component at the Georgeson Bay site, *(DfRu 24)* on Active Pass at the south end of Galiano Island, although only two are illustrated (Haggarty and Sendey 1976:Fig. 15). This component is dated between 1100 BC and 820 BC, and is associated with the Locarno Beach culture type. Mitchell lists grooved or notched sinkers as a distinctive archaeological feature of this culture type.

The Porlier Pass specimen fits comfortably within the range of dimensions that Haggarty and Sendey give for the four T-grooved stones from Georgeson Bay: length 13.9-17.8 cm, width 10.0-13.6 cm, thickness 7.10-10.6 cm, weight

1.724-2.309 kg. In weight and general shape it most closely resembles the specimen, which, like the fragmentary one from the Montague Harbour I component, has two parallel grooves encircling the middle.

This type of weight was also meant to be retrieved and re-used. Again, a considerable amount of labor would have been involved in its manufacture, and it can be assumed that underwater finds are the result of accidental loss in the course of use. Post-contact parallels suggest a number of possible uses. The most obvious, as a weight tied by cedar cord or cherry bark lashings to the bottom edge of a fish net suspended from wooden floats. Courtland Smith gives a weight of 3 pounds (1.36 kg) for sinkers on seine nets 100 ft (30.5 m) long and 12 ft (3.66 m) deep used on the Columbia River by the post-contact Wishram.

Haggarty and Sendey, noting that seal netting is ethnographically attested and that seals frequent the reef in front of the *DfRu 24* site, suggest that the large number of grooved and notched weights recovered from the Georgeson Bay I component may have been used to anchor seal nets near the reef. This raises the possibility that the Porlier Pass specimen may be associated with similar activity at Black Rock reef. Mitchell does report a few fragments of sea mammal bone, which he thinks are probably seal, from the Dionisio Point IIa component, but provides no information about faunal remains from the much earlier Dionisio Point I component.

Another use for a T-grooved weight is as a sinker for a halibut line suspended from a float. The stone was tied some distance below the steam-bent wooden hooks and helped to keep the hooks off the bottom. However, no faunal evidence is available to corroborate halibut fishing in Porlier Pass, nor is any available from the other excavated sites on Galiano Island (Georgeson Bay and Montague Harbour).

The most likely use of the Porlier Pass T-grooved stone was as a bottom weight for a net set along or on the reef at Black Rock. Loss while fishing on the ebb could account for its location on the sand southwest of the reef face.

Conclusions

These two artifacts suggest that peoples of both the Locarno Beach and Marpole culture types fished the waters of Porlier Pass, and that this exploitation may have begun as early as 3,000 years ago. Their locations underwater clearly identify them as artifacts associated with the utilization of marine resources. Further exploration of the reefs lying within the 10 m contour line, especially those located close to recorded sites on shore, may yield further information about aboriginal fishing activities in this area. □

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Stewart, Hilary. 1977. *Indian Fishing: Early Methods on the Northwest Coast.* Douglas & McIntyre, Vancouver.

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ASBC member Erik de Bruijn is Assistant University Librarian at the University of British Columbia, a scuba diver, and an avocational archaeologist. He has worked at excavations in British Columbia, Greece, Israel, and Jordan, and is pursuing studies towards a degree in classical archaeology as time permits.

New Publications

The Question of Asiatic Objects on the North Pacific Coast of America: Historic or Prehistoric? by Grant Keddie. 1990. Royal B.C. Museum, Victoria. Contributions to Human History No.3. 26 pp., ills., bibl. $5.00

A scholarly discussion of the evidence of Chinese coins for contact between the peoples of Asia and North America.

Federal Archeology: The Current Program compiled by Bennie C. Keel, Francis P. McManamon, and George S. Smith. 1989. Annual Report to Congress on the Federal Archeology Program FY 1985 and FY 1986. U.S. Dept. of the Interior, National Park Service. 56 pp. plus 155 p. app. $US 10.00 from Supt. of Documents, Government Printing Office, Wash., D.C. 20402-9325.

Management report of archaeological inventory, law enforcement, and public education programs conducted by and for the U.S. federal government—types of activities, costs, agencies involved, etc. Numerous tables.

Little Bit Know Something: Stories in a Language of Anthropology by Robin Ridington. 1990. Douglas & McIntyre, Vancouver. 281 pp., bibl., index. $16.95 (paper).

A collection of 15 previously published articles about the Beaver (Dene) Indians of northeastern British Columbia.

CJA features B.C.

THE RECENTLY published issue of the **Canadian Journal of Archaeology** (Vol. 13, 1989) contains a number of articles on B.C. topics: *The Pink Mountain Site (HhRr 1): An Early Prehistoric Campsite in Northeastern B.C.* by Ian R. Wilson (pp.51-67); *Subsistence Resource Variability and Culture Change During the Middle-Late Prehistoric Cultural Transition on the Canadian Plateau* by Ian Kuijt (pp.97-118); *Archaeological and Ethnographic Correlates of Seasonality: Problems and Solutions on the Northwest Coast* by Pamela J. Ford (pp.133-150); *Lachane Basketry and Cordage: A Technical, Functional and Comparative Study* by Dale R. Croes (pp. 165-205); and *Visual Punning and the Whale's Tail: AMS Dating of a Marpole-Age Art Object* by Alan D. McMillan and D.E. Nelson (pp.212-218). □

Writing Awards

1989 WINNERS of the Canadian Archaeological Association's public writing competition include two entries in the same issue of the same magazine. Rhoda Metcalfe picked up the award for the best magazine article about Canadian archaeology with her piece *Unearthing a Legacy* in the November/December (1989) issue of **Up Here**, pp.36-39. The award for the best article by a professional archaeologist went to Jean-Luc Pilon for *The Riddle of Thunder River,* also in the November/December (1989) issue of **Up Here**, pp.40-42.

The newspaper journalism award was split between two entries: Mark Bourrie's *Archaeologists Losing Battle with Site Looters,* which appeared in the **Toronto Star** July 2, 1989; and a co-authored piece by Robin Karpan and Arlene Karpan—*Wanuskewin: Revealing What Prairie Life Was Like 6,000 Years Ago,* in the **Western Producer Supplement**, September 21, 1989, pp.8-9. □

Soggy archaeology anyone?

If you know of a wet site in the Lower Mainland that might not be recorded, Kitty Bernick would like to hear about it—she's collecting all available information on water-logged sites and perishable artifacts in the greater Vancouver - Fraser Valley area. Phone her at 873-5958. Address: c/o Laboratory of Archaeology, Dept. of Anthropology and Sociology, UBC, Vancouver V6T 2B2.

Permits

Permits issued by the B.C. Archaeology Branch April through May 1990:

1990-30 John Dewhirst: inventory, residential subdivision at Gainsburg Road, Deep Bay (NW of Bowser).

1990-31 Arnoud Stryd: monitoring and emergency impact management, residential construction, Crescent Beach *(DgRr 1)*.

1990-32 Arnoud Stryd: inventory of traditional Squamish territory.

1990-33 Richard Brolly: impact assessment, subdivision at Fintry, Okanagan Lake.

1990-34 Richard Brolly: impact assessment, subdivision at Westbank.

1990-35 Richard Brolly: impact assessment, subdivision at Caesar's Landing, Okanagan Lake.

1990-36 John Dewhirst: inventory, Duncan property, Denman Island *(DjSe 2)*.

1990-37 Bjorn Simonsen: inventory, proposed Graig Bay Estates development near Parksville.

1990-38 Arnoud Stryd: impact assessment, subdivision on Bowen Island.

1990-39 Bjorn Simonsen: inventory, Finneron property, Comox *(DkSf 4)*.

1990-40 Ian Wilson: inventory, sections of PNG pipeline west of Telkwa.

1990-41 Ian Wilson: inventory, Public Works Canada's small boat harbour facility locations at Shingle and Alliford bays, Moresby Island.

1990-42 Ian Wilson: monitoring and emergency impact management of backhoe trenching at historic R.B. McLean Lumber Co.

1990-43 Ian Wilson: impact assessment, Norcen's proposed gravel pit between Sikanni Chief and Buckinghorse rivers.

1990-44 Richard Brolly: impact assessment, Bedwell Harbour Hotel proposed expansion near *DeRt 4,* South Pender Island.

1990-45 Gordon Mohs: field reconnaissance, Fraser Valley.

1990-46 Jean Bussey: inventory, Soo River electrical generating facility and transmission line, Whistler area.

1990-47 Ian Wilson: impact assessment, Departure Bay, Nanaimo.

1990-48 Wayne Choquette: inventory, mouth of Janes Creek, Windermere Lake, Kootenay District.

1990-49 Wayne Choquette: impact assessment, subdivision on west side of Columbia Lake, Kootenay District.

1990-50 Jon Driver: excavations at Charlie Lake Cave, *HbRf 39.*

1990-51 Wayne Choquette: impact assessment, proposed improvements at Kalamalka West and Bear Creek provincial parks.

1990-52 Arnoud Stryd: monitoring and emergency impact management, Crescent Beach *(DgRr 1)*.

1990-53 Ian Wilson: impact assessment, McMahon cogeneration facility, Taylor.

1990-54 Richard Brolly: impact assessment, subdivision near Lillooet.

PERMITS • PERMITS • PERMITS • PERMITS • PERMITS • PERMITS

This Summer

Visit a Dig...

- **Galiano Island.** Norm Easton (Yukon College) and volunteers from the ASBC and the UASBC are investigating the Montague Harbour site *(DfRu 13)* to see whether the midden deposits extend under the intertidal zone out into the water. Underwater and on-land excavation, June 1-24, 1990, in Montague Harbour park on Galiano Island. Visitors welcome 7 days a week. For details of ASBC tour on Saturday, June 16, please phone Guy Mageau at 980-2012.

- **Fort Langley.** Excavations by Lower Mainland college fieldschool (Capilano, Douglas, Fraser Valley, Langara) in Fort Langley National Historic Park, in conjunction with the Canadian Parks Service. Visitors to the park (there is an admission charge!) are welcome to watch the students dig—they'll be at it most weekdays, May 7 to June 28, 1990. Special ASBC tour on Saturday, June 16—meet near the entrance about 9:30 am. If you need a ride or want more information, phone Guy Mageau at 980-2012.

- **Bella Coola.** Phil Hobler and the SFU fieldschool together with the local band are excavating for a third and final season at Snxlhh (near the new village site) and at Stewie (in the upper valley, in Tweedsmuir Park). June 1 - August 3, 1990. Visitors welcome—ask for directions at the Bella Coola Cultural Centre.

- **Crescent Beach.** R.G. Matson returns to South Delta for a second season of research at *DgRr 1.* His crew will be working July 3 - August 31, 1990, alongside UBC's fieldschool, taught this year by Richard Pearson. Visitors are welcome on weekday afternoons. The site is in Crescent Beach on Bayview St., just before the railway tracks.

See a Show...

- ***BLOOD FROM STONE: Making and Using Stone Tools in Prehistoric British Columbia*** — a UBC Museum of Anthropology travelling exhibit. Showing at the

  Fraser - Fort George Regional Museum: June 4 - July 27, 1990.

  Vernon Museum: September 3 through October 15, 1990.

- ***PETROGLYPHS & PICTOGRAPHS*** — a Royal B.C. Museum travelling exhibit coming to

  Penticton Museum: May 11 through July 2, 1990.

  Fraser - Fort George Regional Museum: September 28 to November 12, 1990.

The Midden
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