Vol. VIII, No. 1
February 1976

Editor
N. Russell

THE MIDDEN

PUBLICATION OF THE
ARCHAEOLOGICAL SOCIETY OF BRITISH COLUMBIA

Produced by the Publications Committee five times a year.
Gladys Groves, Chairman,
504 - 2005 Pendrell Street,
Vancouver, B. C. V6G 1T8

Next issue: April 1976

C O N T E N T S

COULD CAVING POSE A THREAT?

Veteran cavers are said to have adopted the old term "speliologists" for beginning cavers, so perhaps it is the "speliologists" whom we have to worry about: novice cavers who have not developed any real respect for the craft, or any code of ethics.

What is there to worry about? There is an increasing body of evidence to show that the early peoples of British Columbia used caves or rock overhangs for shelters. But that body of information could well be damaged or totally obliterated by thoughtless modern cave explorers.

Vandalism in its overt form has of course long been a problem--from theft of grave goods in coastal burial caverns, to obscenities scrawled with that evil instrument the spray paint can.

But cavers--serious explorers of caves--would not do that. They are more interested in simply exploring ...in increasing droves. Currently, for instance, there is a night course in caving offered in Burnaby, which doubtless will culminate in group tours of suitable caves, with the entire class tramping through.

This is not to suggest that we have some priceless Lascaux-like paintings to protect. We have not, as yet. But the chances of preserving what paintings there are, and conducting what excavations that may be needed, will be seriously curtailed by a massive influx of enthusiasts (cavers, or even archaeologists!). Let us hope the appeal will be limited and there will be more serious "cavers" than "speliologists".

Northwest Coast Studies Conference

To be held at Simon Fraser University, May 12 - 16. Chairman: Dr. Mary Lee Stearns, Dept. of Sociology & Anthropology, Simon Fraser University, Burnaby 2, B. C. Phone: 291-3778. Advance registration ends March 1st. Future announcements will be sent to anyone who registers or who asks to be placed on the mailing list.

The conference will bring together scholars from all over North America who have specialized in ethnological, ethnohistorical, archaeological, linguistic and related studies of the Northwest Coast. The aims of this meeting are, first, to encourage communication between workers in different specialties and localities and, second, to regenerate broad interest in the Northwest Coast as a field of study.

.....

EXCAVATIONS AT THE McCALL SITE, OKANAGAN RIVER

By Stan Copp, Dept. of Archaeology,
Simon Fraser University

Introduction

The McCall site, a late-prehistoric north Okanagan open campsite, was excavated during the summer of 1975. The project was funded by the federal Opportunities for Youth program as well as by Simon Fraser University. A number of native Indian youths actively participated in the excavation as agreed upon by negotiations with the Inkameep Indian Band and as required under permit to the Archaeological Sites Advisory Board of B. C. As a result of this policy it was observed that the native youth's awareness of their past cultural heritage was considerably increased.

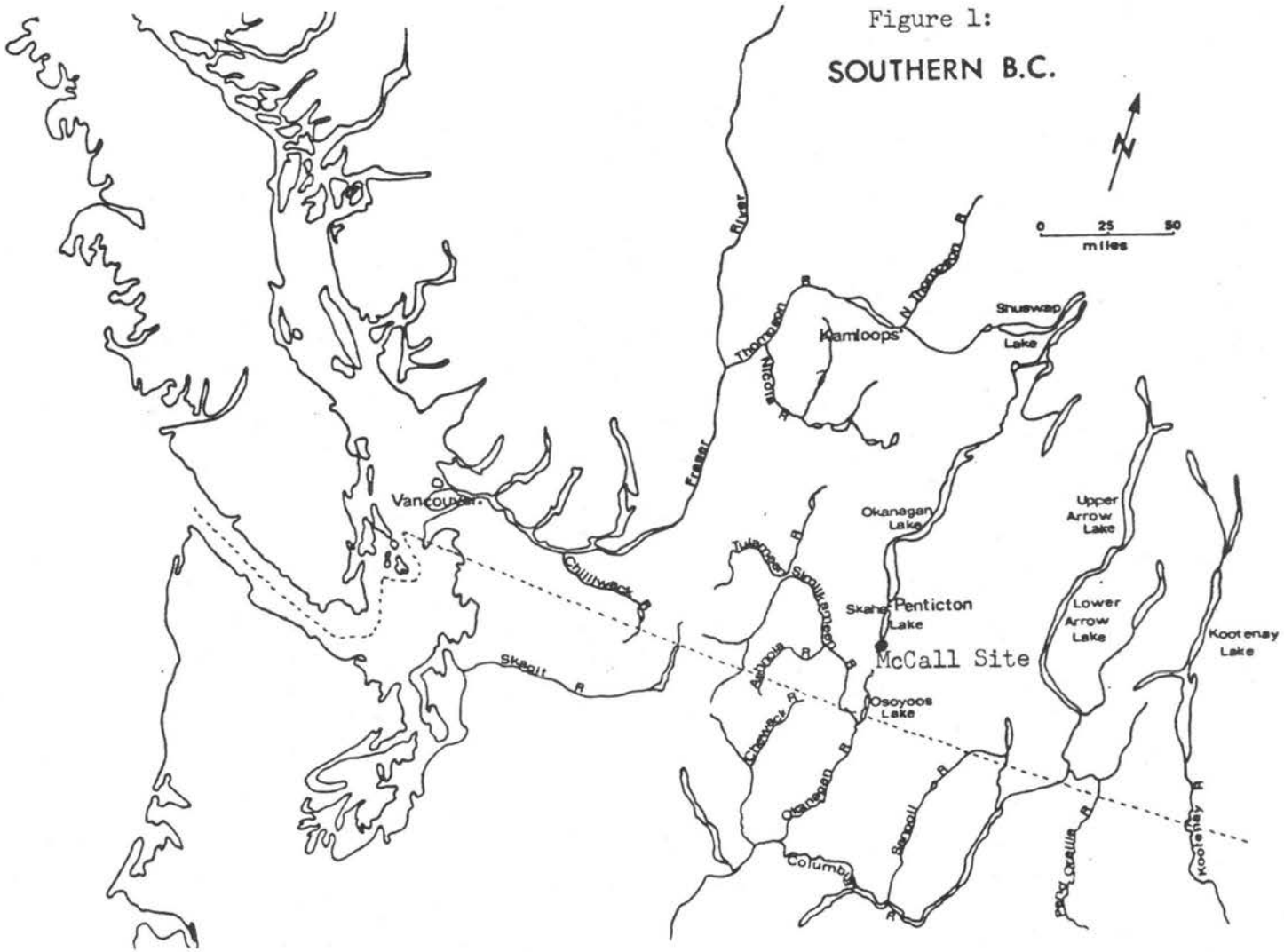
The Site

The McCall site (Borden designation DhQv 48) is located on a post-Pleistocene beach lag or channel bar deposit of the Okanagan River. (See Fig.1.) Historically, this portion of the Okanagan valley was the territory of the Inkameep Band, an Interior Salish-speaking people.

The site itself is quite large, extending some 180 metres by 40 metres (c. 7200 sq. metres) beside the present channel of the Okanagan River. Cultural material-bearing deposits extended nearly one metre below the surface of the site. While no stratigraphically defined living floor has yet been assigned to any particular depth in the site, the highest density of cultural materials was found at depths of c. 25 to 40 cm. below the surface. The similarity in type and distribution of this cultural material indicates a late-prehistoric time of occupation. This late time period for the cultures of the north and south Okanagan valley has been defined by Grabert (1974) as the Cassimer Bar phase (c. 1200 - 1811 A.D.). Similarly, this late-prehistoric period falls within that defined by Sanger (1970) and Stryd (1973) of c. 1500 years B.P. for the Fraser Plateau and Canyon areas. The late-prehistoric period of this area is referred to as the Kamloops phase.

Artifacts recovered from the excavation and characteristic of this late time period include various forms of chipped stone projectile points - usually small in size with well-formed stems, corner and side-notches - as well as woodworking tools (ground nephrite adzes and antler wedges). Late-prehistoric habitation structures consisted of either semi-subterranean pithouses or mat lodges.

Figure 1:


SOUTHERN B.C.
N
0 25 50
miles
Fraser River
Thompson R.
N. Thompson R.
Nicola R.
Kamloops
Shuswap Lake
Vancouver
Okanagan Lake
Upper Arrow Lake
Penticton
Lower Arrow Lake
McCall Site
Kootenay Lake
Osoyoos Lake
Columbia R.
Pend Oreille R.
Kootenay R.

During this same time an hypothesized increase in artwork had taken place. Evidence for this takes the form of an increased emphasis in the decoration of everyday utensils to the probable beginnings in the practice of painting pictographs on the various topographic natural features found throughout the valley.

The absence of structural habitation remains in the site indicates a seasonal period of occupation other than that of winter, with which both the late pithouse and mat lodge are associated. Large quantities of freshwater mussel shell (Margaritifera margaritifera) throughout the site, plus the large ungulate remains of white-tail deer (Odocoileus virginianus), mountain goat (Oreamnos americanus) and mountain sheep (Ovis canadensis) indicate a probable occupation in the spring or early summer. In addition, very few remains of fish were recovered. This may be a function of non-preservational factors in that salmonid or other fish remains need not have been butchered, and hence deposited, within the excavated boundaries of the site. The presence of one stone mortar reminiscent of the basket hopper-mortar found in the south Okanagan and Columbia plateau is indicative of a subsistence orientation based upon the gathering of vegetable foods as well as the hunting of larger game.

The single most intriguing artifact recovered was a tabular basalt cobble. This cobble has been altered along its edges by bifacial flaking and battering but one flat surface has had red pictographic symbols painted on it. The symbols are poorly preserved and are visible only as faint red, curvilinear lines and as two dots. Functionally this artifact resembles an ethnographic description of a club (Teit 1900). This interpretation need not be implied by the present time, however. This particular artifact may add to our knowledge of Indian pictography in that it was found in situ, in association with radiocarbon-datable materials. When such a date becomes available, and if the individual symbols can be isolated visually, then the symbols can be compared to those in local pictograph sites. This type of symbol analysis would then indicate a time range, at least, during which the symbols on the major, non-portable pictograph sites could have been painted. However, this type of analysis must await 1) radiocarbon dates from associated materials in the site, and 2) an infrared light analysis of the artifact. The infrared light hopefully will reveal the actual shape of the symbols as they were painted on the cobble.

Summary

The evidence recovered at the McCall site indicates a late-prehistoric occupation with an economic hunting/gathering subsistence base. An early spring to summer period of occupation has been suggested by comparisons of artifact, faunal and indirect floral remains. It is felt that the excavation of this one open campsite has added additional seasonal data with regard to the material culture and subsistence base of the late-prehistoric Okanagan Indians.

References Cited:

Grabert, G. F. 1974 — Okanagan Archaeology: 1966-67. Syesis, Vol. 7 Supplement 2. Queen's Printer (B.C.).

Sanger, D. 1970 — The Archaeology of the Lochnore-Nesikep Locality, British Columbia. Syesis, Vol. 3, Supplement 1. Queen's Printer (B.C.).

Stryd, A. 1973 — The Later Prehistory of the Lillooet Area, British Columbia. Unpublished PhD. thesis, University of Calgary, Calgary, Alberta.

Teit, J. 1900 — The Thompson Indians. American Museum of Natural History, Memoir 2(4); Publications of the Jesup North Pacific Expedition 1(4).

A.S.B.C. DIARY

Regular Meetings - held 8 p.m. at Centennial Museum Auditorium

Some changes in programme have been made since last announcement.

Mar. 10 - Father Michael Sheehan, Cecil and Ida Green Visiting Professor at U.B.C., speaking on "Excavations at the Monastery of Alahan" in the Taurus Mts., Turkey.

Apr. 14 - Alan McMillan, Douglas College, "Nootka Archaeology - Barkley Sound to Alberni.

May 12 - Please note change of time and place for this meeting only:

8:30 p.m., Simon Fraser University - special programme in conjunction with Northwest Coast Studies Conference. Speaker: Dr. Richard Daugherty of Washington State U. on "The Archaeology of Ozette" - illustrated.

June 2 - Please note change of date - 1st Wednesday of month. (This is at the request of the Museum to accommodate Habitat.) Dr. Jack Nance, Simon Fraser U., "Fossil Man in Africa".

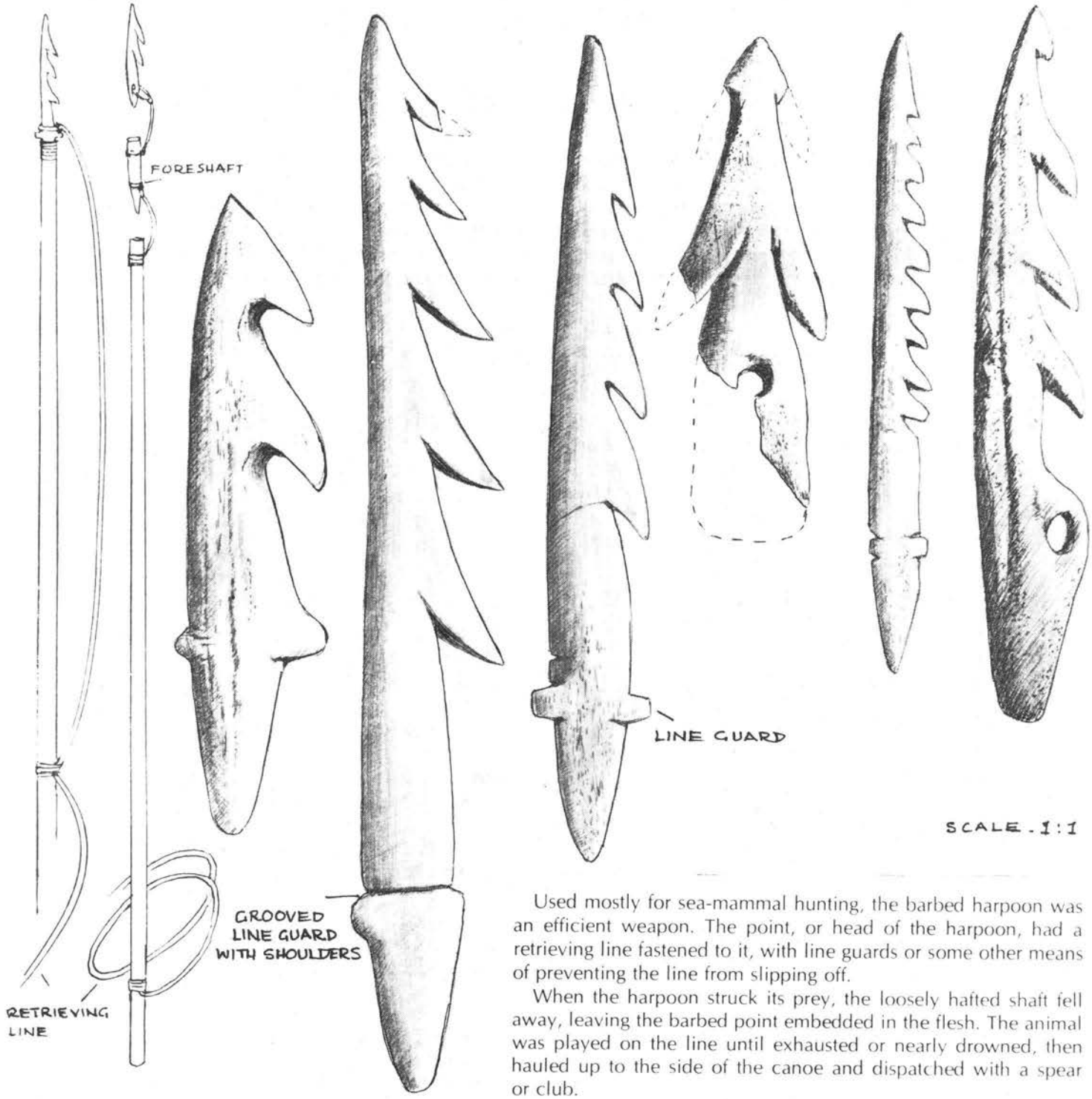
Archaeological Institute of America Meetings - 8:30 p.m., Lasserre Bldg., U.B.C.

Mar. 12 - "New Excavations at Marathon" by Colin Edmonson, U. of Wash.

Mar. 26 - "The Minoan Palace of Kato Zakro Reassessed" given by Leon Pomerance, New York, Vice-President of A.I.A.

****

BARBED HARPOON POINTS



Used mostly for sea-mammal hunting, the barbed harpoon was an efficient weapon. The point, or head of the harpoon, had a retrieving line fastened to it, with line guards or some other means of preventing the line from slipping off.

When the harpoon struck its prey, the loosely hafted shaft fell away, leaving the barbed point embedded in the flesh. The animal was played on the line until exhausted or nearly drowned, then hauled up to the side of the canoe and dispatched with a spear or club.

ARCHAEOLOGIST NAMES B. C.'S FIRST WARDENS

The Provincial Archaeologist, Bjorn Simonsen, has announced the names of the province's first 32 archaeological wardens.

The individuals were selected following a recent training and briefing session in Victoria. They represent a good spread across the province, with some density where the most sites occur. Of special interest among the appointees, perhaps, is the number of native Indians and the number of provincial government conservation officers included.

The role of the wardens will include keeping a protective eye on known archaeological sites, and helping spot and report new sites.

The Archaeological Society of British Columbia is happy to greet the new appointees, and to offer to them any help possible. ASBC members living near any of the wardens may wish to make contact with them.

The wardens are as follows:

Robert Bonneau
Box 246
Penticton, B. C.
493-0048

Katherine Capes
R. R. No. 3
Courtenay, B. C.

John Cass
455 Sunderland Ave.
Nanaimo, B. C.

Brian Clapp
Conservation Officer
Fish & Wildlife Branch
1600 - 3rd Avenue
Prince George, B. C.

Mr. J. Dryburgh
MacMillan Bloedel Ltd.
Port McNeill Division
Box 5000
Port McNeill, B. C.
956-4411 (work)
956-3516 (home)

Mr. G. Ferguson
General Delivery
Hope, B. C.
869-9868

Mrs. Swede Gano
Anahim Lake, B. C.
Radio Phone 8L71 via Williams Lake Chilanko Channel

Mr. W. W. Gilgan
Planning Director
Regional Dist. of Bulkley-Nechako
Box 820
Burns Lake, B. C.
692-3195

Mr. W. H. Goodson
938 Handsworth Road
North Vancouver, B. C.
987-0872 (home)

Robert Hall
Box 880
Bella Bella, B. C.
957-2435

Mr. E. Hendricks
Box 1743
Merritt, B. C.
378-2814

Mrs. Beth Hill
General Delivery
Ganges
Saltspring Island, B. C.

Sylvester Jack
Box 32
Atlin, B. C.
Atlin 941 (through Whitehorse)

George Kirszenstein
210 - 10525 - 150th St.
Surrey, B. C.

Bill Leishman
2321 South Island Highway
Campbell River, B. C.
923-6067

Ken Luggi
Stellaquo Band
P. O. Box 427
Fraser Lake, B. C.
699-6359

Mrs. Kay McKenzie
Box 728
Invermere, B. C.

(Assistant to above)
G. H. Borch
David Thompson Secondary School
P. O. Box 429
Invermere, B. C.
342-6113 (home)

George Mutter
135 - 3rd Street
Duncan, B. C.
748-1053

Mr. W. Prosser
North Peace Historical Society
Box 485
Fort St. John, B. C.
785-5390

Mr. R. A. Reinke
Conservation Officer
Fish & Wildlife Branch
Court House
Prince Rupert, B. C.
624-2121, local 230
624-9086

Elinor Rhynas
Marine Station
Bamfield, B. C.
728-3215

Mr. S. G. Riley
3381 Hernando Avenue
Powell River, B. C.
485-5669

Mr. A. Rissling
Conservation Officer
Fish & Wildlife Branch
13B Mill Street
Chilliwack, B. C.
792-7274

Gerry Roberts
Box 42
Osoyoos, B. C.
495-6188

Mr. A. I. Ross
R.R. No. 1, Site No. 52
Creston, B. C.
428-2057

Ron Sampson
Halalt Band Admin. Office
R. R. No. 1
Chemainus, B. C.
246-9256

Ursula Surtees
Okanagan Museum & Archives
470 Queensway
Kelowna, B. C.
763-2451 (office)
764-4816 (home)

Mr. G. Trotilsch
Conservation Officer
Fish & Wildlife Branch
540 Borland Street
Williams Lake, B. C.
392-6261

Cliff Weeks
Hazelton, B. C.
842-5985

Dave Walker
Box 234
Terrace, B. C.
635-6511, local 54
535-6404 (home)

Richard Wilson
Skidegate Band
Skidegate, B. C.
559-4233

* * * * *

U.B.C. Centre for Continuing Education courses of interest to members - for further information call 228-2121.

Northwest Coast Indian Use of Natural Materials, SC 1422 - Hilary Stewart - 4 Thurs. Apr. 8-29, 8 p.m. Conference Room, C. for C.E., Sat. May 1, 10 a.m. Centennial Museum, $20. Graphic explanations, demonstrations of how Indians used plants, shells, bones, etc. Participants may try these skills themselves.

As a follow-up to the above, field trip and workshop will be held at Strathcona Park Lodge, Vancouver Island with Hilary Stewart and Joy Inglis as resource people - West Coast Native Lifestyles, July 18-26 and Aug. 22-30, $200. Examining fishing methods, building techniques, ethnobotany, artifacts, art and culture; visiting petroglyph site on Quadra Island, old village site at Cape Mudge and Friendly Cove. Also: West Coast Experience, July 20-29, $165. Exploring, hiking, studying survival techniques, etc. For further information write: Strathcona Park Lodge, Outdoor Education Centre, P.O. Box 2160, Campbell River, B.C.

Queen Charlotte Islands, WE 3544, Aug. 28-Sept. 6. A field study cruise with Anthropologist Dr. Wilson Duff, Botanist Dr. Roy L. Taylor, and Marine Biologist Dr. William Austin. Pre-departure orientation meetings. $850 includes tuition, food, accommodation and transportation.

Sicily and Southern Italy, ET 3026, tour directed by Dr. J.A.S. Evans, Dept. of Classics. Approx dates June 6-28. To visit major ancient sites in less well known parts of Italy. In conjunction with Travellers' Introduction to Ancient Sicily and Southern Italy, PA 1520 4 Thurs. Apr. 1-22, 8 p.m., Rm. 232 Buchanan Bldg.

The World of Islam: Ottoman Turkey, ET 3033, May 31-June 22, tour director Dr. Anthony Welch, Dept. of Art History,U.Vic. Combining visit to World of Islam Festival in London with 16-day tour of the major Ottoman centres in Turkey. Travellers' Introduction to the World of Islam, PA 1524, Niki Gamm, Coordinator, 5 Tues. Mar. 23-Apr. 20, 8 p.m. Rm. 232, Buchanan Bldg. $15. History, culture, art and architecture.

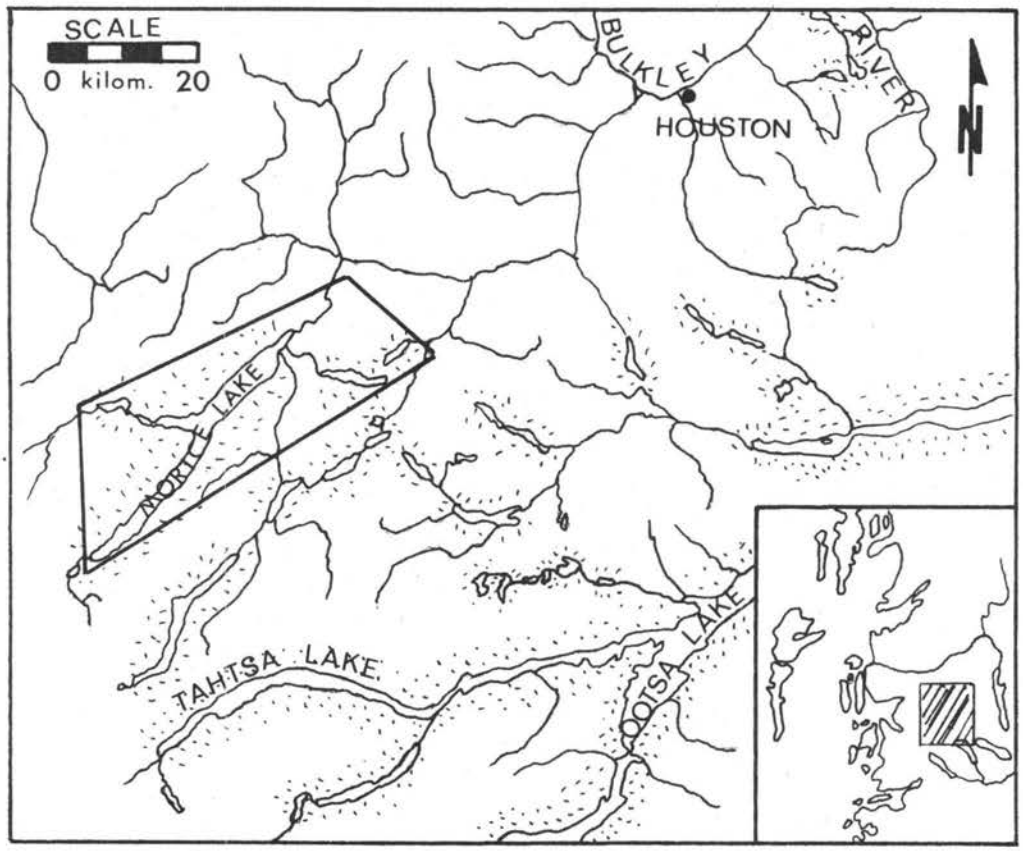
Cont'd on page 13...

DAM SITE ON MORICE LAKE SURVEYED

by David V. Burley,
Simon Fraser University

Between June 1 and August 15, 1975, a systematic archaeological site survey was conducted on and near Morice Lake, in the central interior of British Columbia. This project, necessitated by the impending threat of Kemano II, a proposed hydro-electric development, was sponsored by the Archaeological Sites Advisory Board in conjunction with their resource inventory program.

Morice Lake, bordering on and intruding into the Tahtsa Range of the coast mountains, is 32 miles long, one to 1.5 miles wide and up to 1,000 feet in depth. While the Morice



River constitutes the lake's sole outlet, the majority of its inflowing streams are directly derived from glacial meltwaters. The former tributary flows 44 miles to the northeast joining the Bulkley River near the present community of Houston.

On the fringe of the coast mountains, the area is intermediate between a coastal maritime climate and the continental climate of the interior plateau. Lower elevations along the lake's northern periphery are characterized by typical Caribou parkland with stands of well separated lodgepole pine (Pinus contorta latifolia) while a contrasting mix of Alpine fir (Abies lasiocaroa) and Englemann spruce (Pices glausa ssp. englemannii) is found along the steep mountain slopes of the southern shoreline. Wildlife resources are particularly numerous. In fact, almost all of the larger mammals recorded for northern B. C. are present (c.f. Morely & Whately 1974 for a discussion of Morice Lake fauna), plus large populations of various fresh-water fish. However, it is the anadromous runs on the Morice River which must be considered as the single most important drawing factor for a prehistoric people. Annually represented are steelhead trout (Salmo gairdneri), pink salmon (Oncorhynchus gorbuscha), coho (O. kisutch), chinook (O. tshawytscha), chum (O. keta) and sockeye (O. nerka).

Ethnographically, Morice Lake falls within the traditional homeland of the Babine Carrier, an Athabaskan hunting and gathering adapted group. Presently, the closest occupied aboriginal community belongs to the Chesslatta band on Francois Lake, an overland distance in excess of 45 miles.

First purpose of the survey was to examine those areas subject to inundation should the proposed hydro-electric project be approved. Therefore, a total shoreline investigation became necessary. As well, on the lower elevations of Morice Lake's northeastern perimeter a transect sampling scheme using 100 by 500 meter transects (the standardizing boundary being the waterline) was employed to insure that sites further inland were not being overlooked.

SHORELINE IS PRIME TARGET

A total of 26 previously undesignated sites was recorded during the summer. These included historic, prehistoric habitation and prehistoric cache components.

Historic habitation on Morice Lake, as indicated by local informants, was extremely sparse. A few scattered plywood cabins post-dating 1940, a decaying log structure near the outflow of the Morice River from the lake, and what appears to be the remains of a homesteading attempt on one of the smaller nearby lakes constitute the total range of late components. Furthermore, only the latter two were considered significant for site designation.

As in the historic era, permanent occupation through the prehistoric period (at least that which was detectable through surface features) seems to have been minimal. One site has definitely been assigned to the category of pit house while at

two others house pit features are tentatively identified. With the latter, final functional statements are deferred until testing can be carried out. The recognized habitation component is situated on the Morice River's northwestern bank near the confluence with Morice Lake. Three aligned circular housepits had been excavated into an elevated gravel bench. No further features were encountered.

OTHER SITES ARE CACHES

The remaining 21 sites have been classified as prehistoric cache components. All are identified by the presence of circular artificial depressions having diameters too small for possible habitation. For the Morice Lake sample, the diameter range was .75 to 2.50 meters with actual pits numbering between one and 16. Such cache "cellars" in the ethnohistoric record are associated with the storage and putrefaction of salmon (cf. Morice 1893: 196-197). With many situated away from this resource, additional uses may be inferred.

At present, it is virtually impossible to provide anything but the most minimal of interpretations for the data collected this summer. As with much of the central and northern interior of B. C., the region has not as yet been ascribed a culture history nor have there been serious attempts to define prehistoric settlement patterns. Indeed, it has only been within the past few years that interest of any sort has been generated in the Athabaskan sectors of the Skeena drainage.

The fact that so few sites were located in an area seemingly abundant in subsistence resources must be explained. Of course, it is always possible that such negative evidence is the product of the investigators and not of aboriginal populations. On the other hand, if sites are viewed in terms of the ethnographic settlement pattern recorded for the northern Carrier, their thin distribution is justified. The seasonal round of the northern Carrier is reported to have been dominated by the salmon with large numbers of people spending May through September in the best fishing areas. Wood supplies and the advantages of hunting in segregated areas led to a winter separation into smaller bands although each is known to have remained reasonably close to the "cached salmon stock" should the immediate subsistence base fail (Steward 1955: 174, Morice 1893: 184). In accordance, Morice Lake would be expected to show only peripheral secondary activity sites and such is the case. However, the Morice River, in lieu of this model, can be predicted to have major habitation components most probably adjacent to advantageous fishing locales. Verification of this supposition awaits the 1976 field season.

Acknowledgements: I wish to thank the Archaeological Sites Advisory Board for both the finances and support granted during the summer months. Victor Neumann of North Vancouver served as an able field assistant.

Bibliography

Morice, Father A. G. 1893 — Notes Archaeological, Industrial and Sociological on the Western Denes, Transactions of the Canadian Institute, Session 1892-1893.

Morely, R. L. and M. R. Whately 1974 — The Effects of Implementation of the Kemano II Project on Sport Fisheries, Wildlife and Recreation, Preliminary Report to the Habitat Protection Section, Fish and Wildlife Branch, Victoria

Steward, Julian H. 1955 — The Theory of Culture Change, University of Illinois Press, Urbana.

* * * * *

UBC - Centre for Continuing Education Courses - cont'd

Mystery of the Maya Tour, ET 3031, Aug. 6-29. Travelling instructor: Frances Robinson. Exploring achievements of Maya civilization, concluding with a stay at Cozumel. Contact: H.M. Rosenthal, 228-2181.

The Grandeurs of Buddha - mid-Dec. to mid-Jan. '77. A tour of some of the great sites of Buddhist religious inspiration in Bangkok, the Katmandu Valley, Nepal, India, Sri Lanka, Indonesia and Japan. Cost about $2500.

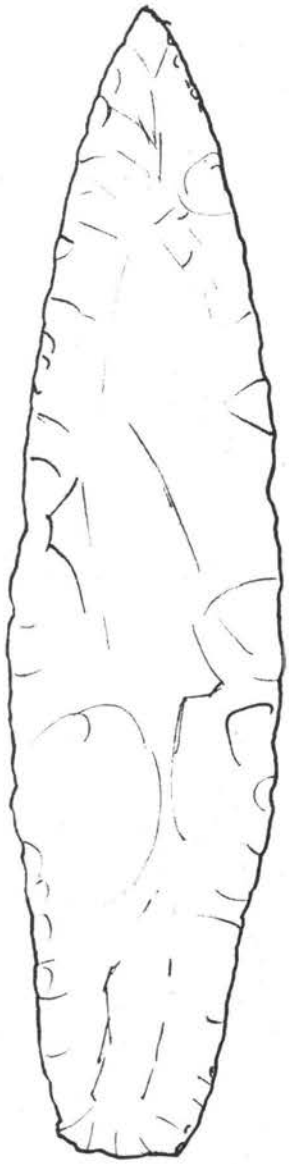
UBC Archaeology Series, Dr. Richard Matson, Dept. of Anthropology & Sociology, coordinator, and guest lecturers. 8 Tues. Feb. 3-Mar. 30, 8 p.m., Rm. 234 Buchanan Bldg. $26. Part I - Studies in Archaeological Methodology SC 1429, Part II - Adaptations to Coastal Resources in B.C. & Japan SC 1430.

* * * * *

Free Admission to Centennial Museum and Maritime Museum

New members of the Society may not know that they are affiliate members of the Centennial Museum and have free access to the museums at any time. Special programmes are featured on Thursday evenings with films being shown Friday and Saturday evenings and Sunday afternoons. There is a fee for the films and some of the special programmes. Take along your membership card.

* * * * *



PROJECT ON ARTIFACT DESCRIPTION LAUNCHED

Are these terms all thoroughly familiar to you?

Biface	Chipped or Flaked	Excurvate
Bilaterally	Denticulate	Discontinuous Retouch
Bevelled or Facetted		Basal Notched

If they are...then skip the rest of this.

If not, the Midden hopes to help, with the very considerable help of professional archaeologists.

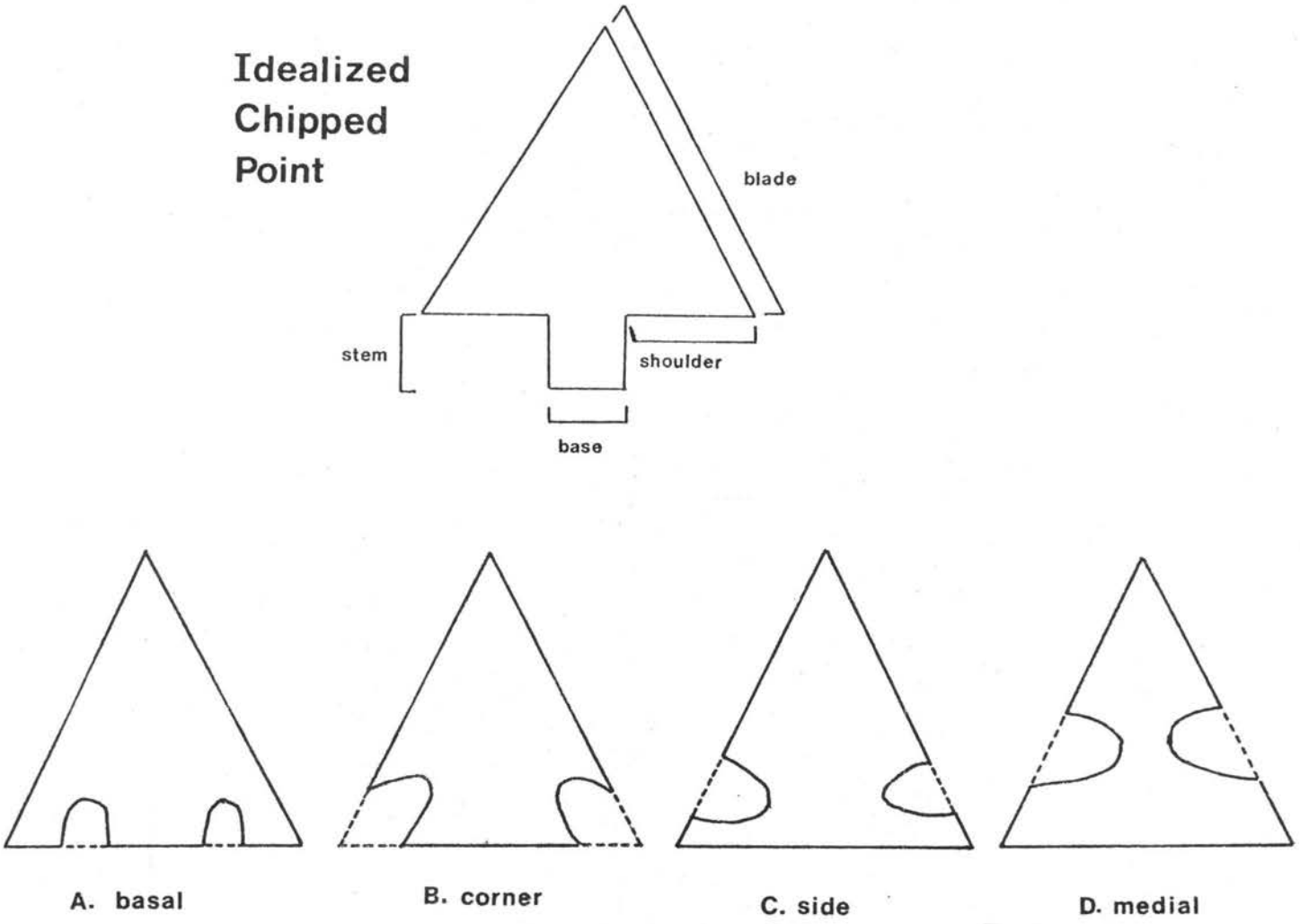
The project is to define archaeological terminology as encountered in British Columbia, so that A.S.B.C. members are better able to understand reports, and better able to describe artifacts.

The concept is courtesy of Tom Loy, of the B.C. Provincial Museum, Archaeology Division. He has authorized the Midden to borrow wholesale from the massive "Dictionary of Terms" and "Users' Guide" which he and his colleagues have prepared for staff working on the National Inventory Project.

"The major emphasis has been to arrive at a discreet, mutually exclusive terminology for cataloguing artifacts from British Columbia," note the editors in their preface. And that, we trust, is information which could be useful to Midden readers.

The Midden will, therefore, publish from time to time excerpts both from the Dictionary and the Users' Guide, with kind permission of Mr. Loy. One follows.

Editor



Notching

Notching -- determined by an indentation depth exceeding the original area (as suggested by the remaining outline) of the artifact. If a circle is drawn from the arc at the head of the notch, the majority of its depth will be enclosed within the reconstructed form of the artifact (if the majority is not so enclosed, it is called "Indentation" rather than notching).

A. basal notch: the entire notch is included within the reconstructed base.

B. corner notch: the notch includes parts of both the reconstructed base and the blade.

C. side notch: the entire notch is included along the blade of the artifact, and the centre of the notch to the base is less than one-third of the total length of the artifact.

D. medial notch: the entire notch is along the blade, and from the centre of the notch to the base is greater than one-third of the length of the entire artifact.

A FAUNAL ANALYST IN THE NORTHERN YUKON

by: Dr. Howard Savage
Faunal Osteology Lab.
University of Toronto

(Reprinted, with permission, from the October 1975 ARCH NOTES, Newsletter of The Ontario Archaeological Society)

Faunal bones from archaeological sites scattered across Canada's 3,700 miles from east to west are notorious for the diversity of mammalian, avian and fish species in the site middens. A faunal analyst, well acquainted with life forms in Ontario, will truly be at sea when confronted with findings from coastal sites, until he or she has examined in detail skeletons of species native to coastal areas. There is no better way to gain familiarity with the bones of a species than to prepare a skeleton of that species for use in a faunal identification lab.

Of equal importance in understanding the significance of the presence or absence of a faunal species in an archaeological site, is knowing the nature of the surroundings of the site. Marshland, upland and mountain terrain are the choices of various species in which to live. The presence of grazing herds of bison or horses bespeaks grassy plains or sparse forest, while a multiple of muskrat and beaver bones in a site infers nearby marshland or muskeg country. Until the faunal analyst has visited the site and seen its environment, his or her appreciation of the species identified in the site will be as limited as his knowledge of the site surroundings.

Nowhere is the necessity for knowledge of skeletal elements and of site environment more evident than in the Old Crow area of the northern Yukon. The Old Crow River has its headwaters in the Davidson Mountains of eastern Alaska, and then meanders south-eastward endlessly through a vast assemblage of lakes, muskeg and tundra over some 5,000 square miles known as the Old Crow Flats. At the southern edge of the flats, the Old Crow joins the Porcupine River, which in turn adds itself to the lordly Yukon River in its thousand mile journey westward through Alaska to the Bering Sea.

The Northern Yukon Research Programme, under the direction of Dr. Wm. Irving of the University of Toronto, and with financial support from The Canada Council, the University of Toronto and Canadian Arctic Gas Limited, had its first field season in the Old Crow Basin from June to August this year. As a member of this project, it was my privilege to see at first hand much of this countryside, the fossil bones <u>in situ</u>, and many of the valley's present day faunal species.

A number of seemingly fortuitous circumstances are believed to have made the gravel bars and the banks of the lower Old Crow River a veritable treasurehouse of fossilized faunal bone. These fossils are capable of shedding much light on earlier life forms, including man himself, in the Old Crow Valley. The rate of flow of the river, including its floods after spring break-up, is deemed great enough to permit fossil bone in the river bed and banks to be picked up in the currents and subsequently deposited downstream, but not to produce gross damage or destruction of the bone.

An absence of glacier formation in the Old Crow Basin (Hughes, 1970) during the Wisconsin glaciation from circa 70,000 or 10,000 years ago, permitted the survival of cold-adapted life forms on the flats at least during the latter part of this period. Preservation of their skeletal elements by being permanently frozen and/or by fossilization, made possible their recovery and recognition in recent decades.

Two other major events in the Old Crow Valley have been the lakes which filled this basin, one before or during the early part of the Wisconsin glaciation, and a later lake somewhere a little prior to 18,000 years and until 12,000 years ago (Irving, pers. comm.). Sediments, mainly from the river which was present between the lake phases, make up the cliff banks of the present day river where its bed has been deeply eroded, the fossils lie exposed or are superficially covered, and are available for recovery.

The mammal species of these fossil bones are strange to the faunal analyst of Eastern Canada archaeological sites. Faunal findings from the gravel bar at Old Crow Site 14 N have come from the extinct Giant Pike, Giant Beaver, Scimitar Cat, American Mastodon, Woolly Mammoth, Western Camel and Large-horned Bison (Irving and Harington, 1973). Many of these species were also represented down-river at Site 11 A in fossils excavated by Irving in 1970 and examined by Holland and Johnson (1974). One or both of these sites also contained representatives of other species, still resident in this area or elsewhere in North America or Asia, i.e. the horse, moose, caribou, wapiti, saiga antelope, muskox, dhole, arctic fox, bear, wolverine, lion-like cat, hare, beaver, muskrat and singing vole. A period of study and comparison of reference skeletons of many of these species is necessary to become familiar with their skeletal characters.

Of great interest are the evidences of early North American man in the Old Crow Valley, contemporaneous with the extinct mammals. Of note are numerous examples of extremity bones of mammoths, horses and bison showing large flakes split off, spiral fractures characteristic of controlled breakage of bone from recently killed animals, and a recurring pattern of fractures through heel bones in order to avoid butchering through the incredibly tough heel tendons. Mental reference was frequently made to the flesher made from a caribou leg bone, found in 1966 by Harington and Lord, and itself radiocarbon-dated at approximately 27,000 B.P. (Irving, 1971). In August 1975, a fossilized caribou antler portion,

bevelled at one end and tapered at the other, was recovered from a fossil-bearing stratum of the Old Crow River by Dr. Francesco Fidele, of the University of Turin, as a member of the crew of the Northern Yukon Research Programme.

The faunal analyst from eastern and central Canada is accustomed to receiving the material for examination neatly catalogued according to one metre squares and ten centimetre levels; the accompanying plan of the site is similarly neatly gridded. Great contrast is provided in the Old Crow River material where exact location data is invalidated by the strong probability that finds have been brought downriver an uncertain number of miles during an uncertain time period. The dating provided by radio carbon assay is more invaluable than ever, in the absence of a firm association with archaeological strata and their contents.

In brief, the wealth of faunal material from the gravel bars and the banks of the Old Crow River remains today a tantalizing puzzle. Once identifications have been made, to as small taxa as is possible with confidence, and inference re the nature of the countryside made, there still remains uncertainty concerning its antiquity, when not established by radiocarbon assay. Hopefully, in the coming field seasons of the Northern Yukon Research Programme, some answer to this problem will be forthcoming.

Literature Cited

Holland, E.A. and R. Johnson, 1974. A Report on the Faunal Analysis of Locality 11A, Old Crow River, Yukon Territory. Unpubl. ms., Faunal Osteology Lab., Dept. of Anthropology, University of Toronto.

Hughes, O.L., 1972. Surficial Geology of Northern Yukon Territory and Northwestern District of Mackenzie, Northwest Territories. Geol. Sur. Canada, Paper 69 - 36. 11 p. and map.

Irving, W.N., 1971. Recent Early Man Research in the North. Arctic Anthropology, Vol. 8 (2): 68 - 83.

Irving, W.N. and C.R. Harington, 1973. Upper Pleistocene Radiocarbon-dated Artefacts from the Northern Yukon. Science, Vol. 179, No. 4071: 335 - 340.

* * * * *

ANNOUNCEMENT: *Dr. William Finlayson will give a public lecture on Monday, March 8, 1976 at 8:00 p.m., Rm. 3154 AQ (S.F.U.). Title: Salvaging Canada's Prehistory: An Example from Ontario.*

This lecture is sponsored by the National Museum of Man and is hosted by the Department of Archaeology, Simon Fraser University.