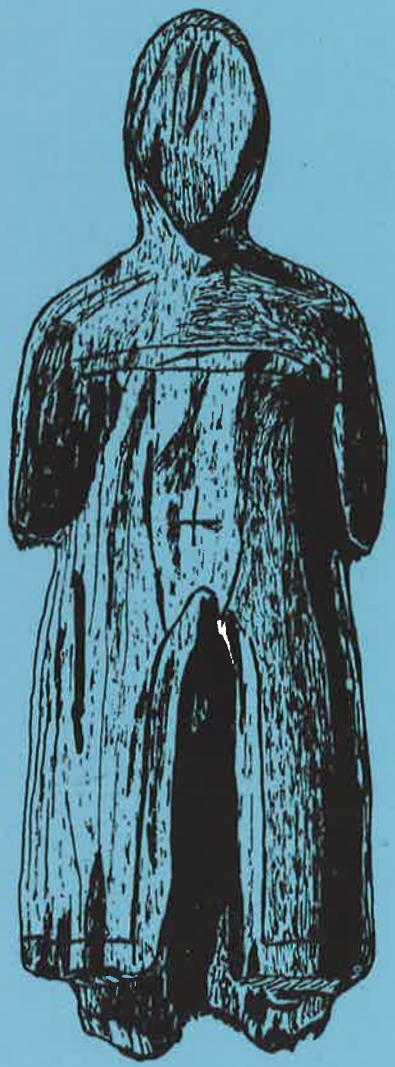
Jeff Hunston

ABSTRACTS/RESUMES

Association Canadienne d'Archéologie
Canadian Archaeological Association



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Abstracts appear in alphabetical order by author,
in the language in which the papers will be presented.

Les résumés sont classés par ordre alphébétique d'après
le nom de l'auteur, dans la langue utilisée pour la
présentation des communications correspondantes.

AJDACIC, Wanda, University of Toronto

A STUDY OF PIGMENTS ON PREHISTORIC POTSHERDS FROM THE SOUTH WEST REGION OF THE UNITED STATES (Session 1)

A review of the literature on pigments and glazes found on pottery in the American Southwest is followed by a discussion of the techniques that were used to identify the pigments and glazes on sample sherds from the collection of the Royal Ontario Museum. The results of the analyses are then summarized.

ALBRIGHT, Sylvia L., Simon Fraser University

BONES, STONES, AND SKIN: TAHLTAN HIDE PROCESSING (Session 6)

During recent ethnoarchaeological investigations in the Stikine River area of northern British Columbia, observations were made on the continued use of traditional methods and tools by Tahltan women in processing hides. Stone tools for softening hides are still manufactured by means of a bipolar technique. This paper outlines the process and describes the tools and facilities employed in this traditional activity.

ALEXANDER, Diane and Gaye Burton, Simon Fraser University

SITE ASSESSMENT IN THE BOREAL FOREST: A COMPARATIVE COST-EFFECTIVE ANALYSIS OF SUB-SURFACE SAMPLING TECHNIQUES (Session 6)

Sub-surface sampling techniques are the only means of determining the extent and nature of the buried cultural deposits commonly found in forested environments. This paper examines the advantages and disadvantages of using various techniques, such as micro-debitage analysis, in archaeological site assessment. A large multi-component site in the Peace River Valley of North-eastern British Columbia is used as a case study.

ALLEN, Pat, Historical Resources Administration, New Brunswick

"MEADOWOOD" IN NORTHEASTERN NEW BRUNSWICK (session 8)

In 1928 two burial loci were accidently uncovered from a hillside overlooking the Northwest Miramichi River, Sunny Corner, Northumberland County, New Brunswick. The graves appeared to have been cremations and were accompanied by ochre coated triangular cache blades, ground slate "plates", a copper awl and a projectile point. In 1937 William Wintemberg examined the collection and stated with a certainty that these Tozer site graves were not related to the "Red Paint" cemetaries which occurred so frequently in Maine and New Brunswick.

In 1975 salvage excavations were conducted on a large, agriculturally disturbed, habitation site which lay on a low

terrace approximately one km upriver from the Tozer burial site. From amongst the mixed lithic and ceramic assemblage of the Wilson site, fragments of nearly a dozen "Meadowood" points were recovered. A re- examination of the Tozer collection (portions of which had been housed in two separate provinces since 1937) and a preliminary study of surface and excavated collections from the Red Bank/Sunny Corner area of northeastern New Brunswick suggest a "Meadowood" related influence in our area sometime prior to 2600 B.P..

The base levels of the stratified Oxbow site, located on the Little Southwest Miramichi River about one km from the Wilson site, implies that decorated "Middle Woodland" ceramics were being manufactured at Oxbow prior to 2600 B.P. and that these ceramics were accompanied by stemmed point forms reminiscent of our Late Archaic/ Transitional Period types. The presence of a "Meadowood" influence when combined with the apparent absence of any "Vignette 1" pottery in the Maritimes poses a number of archaeological questions concerning the development of the ceramic industry in the Northeast, trade, population movements, etc.. An examination of "Meadowood" in New Brunswick's northeast can only shed light on these problems.

ARNOLD, Charles D., Prince of Wales Northern Heritage Center

THE LITHIC INDUSTRY OF WESTERN CANADIAN THULE (Session 10)

Chipped stone tools from Thule sites on Banks Island, N.W.T., are analyzed and interpreted within a functional framework. Comparison with other Thule assemblages as well as Paleoeskimo assemblages permit observations on the question of function vs style in the Lithic industry.

AUGER, Reginald, Memorial University

EARLY DORSET OCCUPATION AT FACTORY COVE (DlBk-3), WEST COAST OF NEWFOUNDLAND (Session 6)

This paper deals with the excavation of an early Dorset site undertaken by the author in summer 1981 on the west coast of Newfoundland. It aims to define the early Dorset phase as manifested in Newfoundland between 2800 and 2300 years ago. So far two c14 samples gave a determination of 2530 $\pm$ 280 B.P. and 2270 $\pm$ 100 B.P.. Some consideration is given to the "core area" concept and its relevance to Dorset occupation in the area.

BEAUDET, Pierre, Parks Canada, Quebec Region

AN ARCHAEOLOGIST'S VIEW OF CONSERVATION (Session 12)

Conservation, from the point of view of the archaeologist, is a loosely knit discipline offering a wide variety of different services, from the mending of a sherd to complex and sophisticated analysis. Utilization of these services can lead either to a far better understanding of the archaeological remains or to the most frustrating "bogging down" imaginable. It is the purpose of this paper to inquire into those reasons which either beckon archaeologists to avail themselves of these services or to shun them completely.

BRUMLEY, John, Ethos Consultants Ltd., Medicine Hat, Alberta

SOUTHRIDGE: AN OXBOW, PELICAN LAKE CAMPSITE IN MEDICINE HAT, ALBERTA (Session 7)

EaOq-17 or the Southridge site is a buried aboriginal campsite locality situated in the Southridge subdivision within the city of Medicine Hat. The site was located, recorded, and excavated at various intervals between November 1979 and October 1980.

Investigations conducted at the site indicate it served as an aboriginal campsite locality, utilized initially and primarily by people of the Oxbow phase, circa 4100- 4200 radiocarbon years B.P.. Typological evidence suggests subsequent light occupation by Pelican Lake, and either Avonlea or Old Woman's phase groups.

Description, analysis, and interpretation of cultural materials recovered from all areas of the site is discussed, giving a detailed picture of activities which took place. The Oxbow phase occupation at Southridge provides the best picture as yet available in Alberta for this cultural group.

BURTON, Gaye, Simon Fraser University

MICRODEBITAGE:FURTHER CONSIDERATIONS (Session 6)

The idea of considering the potential of the microscopic byproducts of lithic reduction was formally introduced by K.R. Fladmark at the 1980 Canadian Archaeological Association Conference.

It has been suggested that subsurface core samples tested for the presence and numbers of microdebitage could prove economically feasible in locating areas of aboriginal lithic concentration scatters. With this consideration in mind a microdebitage research project was included in the 1981 Peace River Archaeological Project, directed by Diana Alexander of Simon Fraser University, under contract to British Columbia Hydro and Power Authority. The results of the HbRf-62 analysis

discussing excavation versus subsurface core testing in terms of the overall relationship between lithic materials present, and man/hours for each method is the subject of a paper by Diana Alexander and Gaye Burton.

"Microdebitage: Further Considerations" is concerned with overall methodological problems, specifically related to the HbRf-62 analysis. The paper is also concerned with interpretive problems in the relationship between the numbers and presence of microdebitage and "macrodebitage". Finally, based on findings to date, the research directions which are indicated for microdebitage are discussed.

CARLSON, Catherine, University of Maine

A COMPARISON OF ARCHAEOLOGICAL FISHING STRATEGIES OF THE NORTHWEST COAST: IMPLICATIONS FOR EXPLANATIONS ON THE EVOLUTION OF RANKED SOCIETY, OR IS SALMON REALLY A RED HERRING (Session 7)

Post-contact ethnographic accounts of the Northwest Coast Indians often emphasize the abundance and utilization of salmon as a major resource by certain groups. Based on these accounts, numerous ecological models have been proposed by archaeologists to explain the evolution of ranked NWC society as directly linked to specialization on the salmon resource. Empirical archaeological faunal evidence from numerous shell midden sites located along the coast from the Olympic Peninsula in Washington, to Prince Rupert Harbour in British Columbia, argues against the salmon determinism models. Collaborative evidence on post-Pleistocene sea level changes, deep-sea cores, fluvial sedimentary histories, and salmon life cycle data is also considered in evaluating hypotheses on salmon productivity and aboriginal utilization throughout the Holocene.

CAVE, Jenny, University of Toronto

GROUND SLATE USE-WEAR STUDIES AND THEIR IMPLICATIONS FOR ARCTIC PREHISTORY (Session 1)

Slate ulus (semi-lunar knives) from an archaeological site in the Central Canadian Arctic were replicated to provide the control specimens for a study of the use-wear on slate ulus. The replicas were used to skin and butcher a large mammal (bear) which approximated the animals that were likely to have been used on site. Comparisons of edge damage after use on the replicas were made with the artifacts and conclusions were drawn as to the function of the artifacts. Results indicate the slate ulus from this site in the Central Canadian Arctic were primarily used for butchering although evidence also suggests that cutting, skinning and perhaps scraping activities may have been carried out with ulus.

CHAPDELAINE, Claude, Université de Montréal

LES PIPES PLATE-FORMES DE LA POINTE-DU-BUISSON (Session 11)

Les pipes plate-formes ont été retrouvées partout dans le Nord-Est américain. La position chronologique de ces artefacts demeure encore un problème important. La Pointe-du- Buisson a déjà livré plus de 12 fragments de ces pipes particulières. Comment expliquer alors cette abondance relative sur un seul site alors qu'on reconnaît une indigence de ces objets dans le Nord-Est?

CLARK,Donald, National Museum of Man

WHETHER, WHENCE, WHILST,WHITHER: REFLECTIONS ON THE ASTt OF GREAT BEAR LAKE, N.W.T. (Session 7)

Key data from 29 Arctic Small Tool Tradition sites containing 61 features or artifact clusters, here called loci, are as follows:
1) Tools: 0 to 6 (or 8?) per locus, average 3 (increase 25% to compensate for surface mode of collection?).
2) Sites: 1 to 7 loci form most sites, the four largest of which yielded 14 to 25 implements but due to incomplete natural exposure are estimated to contain 23 to 35 implements.
3) Fine or lustrous chert: characterizes ASTt but averages only 5 flakes per locus or 12% of total flakes in 18 relatively pure loci or sites.
4) Assuming that lustrous chert is not local and all other lithic material is local (known to be so in most cases) 88% of debitage is local but only 24% of all implements, or 16% of stylistically ASTt tools, are local. Imbalance in the debitage/tool ratio is further reason to believe that the fine chert is not local.

These data suggest short term occupation of loci and sites and that most implements were brought in from elsewhere. This may indicate that ASTt occupation was in the form of seasonal incursions or was so brief that replacement of the original immigrants' tool kits with items of local material had not become a major characteristic.

Comparisons with the Colville-Horton Lake hinterland, the upper Thelon River barren grounds region, the coast of Hudson's Bay, and the High Arctic show that a paucity of occupation remains, and hence presumed brief occupation of each structure, characterizes the majority of northern sites. However, in each of these areas, Colville Lake excepted, there are also features or sites manifesting more intensive occupation represented by 20 to 30 or even 40 tools for selected clusters or features and site inventories of 100 to 300 lithic implements (exclusive of microblades and burin spalls). It is proposed therefore that Great Bear Lake variously lacked the maximal level of community aggregation, the durance of seasonal occupation, and the long term persistence of occupation expressed by the peak

intensities and dated span of occupation found elsewhere.

CLARK, Donald ~~and Richard Morlan~~, National Museum of Man

~~THE WESTERN SUBARCTIC: THE PAST TEN YEARS~~ MOUNTAINS, FORESTS, AND BARRENS NORTH OF SIXTY. (Session 4)

Tremendously accelerated archaeological work in the 1970's in Yukon Territory and the District of Mackenzie has resulted in the recording of more than three times the number of sites known only ten years ago. Major changes in the impetus for this work include increased requirements for rescue archaeology in reservoirs and along both road and pipeline alignments accompanied by inventories motivated by native land claims. Individual research projects have continued along with several large scale multidisciplinary programmes. An important trend has been the integration of archaeological work with research in geology and paleoecology especially in Pleistocene studies.

This flurry of activity has resulted in the amassment of a large body of rather uneven data much of which has not been published and little of which has been synthesized. In general, prehistory has been viewed locally or regionally with little effort to achieve a pan-Subarctic synthesis. Exceptions include Workman's revision of southwest Yukon prehistory, Gordon's reviews of Barrenground prehistory, several early man summaries, and articles that have just appeared in the Handbook of North American Indians seven years after they were submitted for publication.

At present, broader synthetic constructs are of uncertain validity or else appear valid because their definitions are so generalized. During the coming decade we should try to come to grips with our disparate data base and attempt to reorganize data collection in terms of problem orientation as well as rescue oriented field work.

CLERMONT, Norman and Charles Martijn , Université de Montréal et Ministere des Affaires Culturelles, Québec

D'ARCHEOLOGIE PREHISTORIQUE QUEBECOISE DEPUIS 1970 (Session 3)

Présentation des principaux dévelopements qui ont marqué l'essor de l'archéologie préhistorique québécoise depuis 1970.

COLE-WILL,Rebecca, University of Alberta

COPPER INUIT ANTLER TECHNOLOGY, BANKS ISLAND, N.W.T.: AN EXPERIMENTAL APPROACH (Session 2)

Preliminary analysis of 19th century Copper Inuit technology is presented. Antler artifacts have been collected from sites on Banks Island which postdate the introduction of large

quantities of iron and smelted copper. Analysis includes description of technological processes and tool types employed to work antler. Replicative experiments have been designed as a means of inference concerning technological processes. Antler sections were worked by several processes, including grooving and splitting, cutting, chopping, scraping, and drilling, to test hypotheses about methods of antler modification. In addition, iron, copper and stone tools were employed to observe the morphological features produced by each.

COTE, Marc, Université de Montréal

ETUDES COMPARATIVES DES TRACES D'UTILISATION SUR DEUX ENSEMBLES DE GRATTOIRS "MEADOWOOD" PROVENANT DE LA POINTE-DU-BUISSON (Session 11)

L'étude des traces d'utilisation devient de plus en plus nécessaire si l'on veut pleinement saisir tous les aspects "fonctionnels" des outils de la culture des populations préhistoriques. Nous examinerons la variabilité des traces d'utilisations observées sur deux collections de grattoirs triangulaires "Meadowood" du site de la Pointe-du-Buisson. L'intérêt de ce travail réside principalement dans le fait que l'un des deux assemblages provient d'un site funéraire (station 5) tandis que l'autre fut essentiellement recueilli sur un site séculier (station 4).

CUMBAA, Steve, National Museum of Natural Sciences

WISHBONES: A BIRD'S-EYE VIEW OF SOME CARDINAL ISSUES IN ZOOARCHAEOLOGY (Session 14)

With few notable exceptions, avian remains have received relatively scant attention in the archaeological literature, in spite of the fact that they have great interpretive potential. Even when properly identified bones and feathers are discussed, too often common sense has been laid aside in the search for a handle on seasonal use of sites, and the resulting conclusions are often hard to swallow. While there is not much to crow about, there are signs that better identification of excavated material, use of documentary sources and increased knowledge of our feathered tribes are leading to more sophisticated analyses.

DALY, Michael, University of Winnipeg

SEDIMENTS FROM FLOODED AND NON-FLOODED ARCHAEOLOGICAL SITES ALONG THE WINNIPEG RIVER (Session 7)

Using a combination of particle size distribution and soli-fluction tests of soil samples from flooded and non-flooded archaeological sites, a model may be predicted for the rates

of erosion due to raised hydro reservoir levels along the Winnipeg River. In combination with other archaeological considerations of site significance this information could provide a useful site excavation priority scale.

DAMKJAR, Eric, Simon Fraser University

SERIATION OF IROQUOIAN VILLAGE EXPANSIONS (Session 9)

Iroquoian villages have recently been excavated which appear to have undergone a complex series of expansions. In an attempt to determine the proper sequence of these expansions, some archaeologists have made use of ceramic seriation.

This paper utilizes both real and simulated data to examine some of the implications of applying the principle of seriation to such situations where the total time-span being dealt with is on the order of a few decades and where the units being seriated are not temporally sequential but, instead, overlap and are partially contemporaneous.

DELLER, Brian and Chris Ellis, Mt. Bridges, Ontario and Simon Fraser University

THE CROWFIELD-WILLAEYS SITE: A PALEO-INDIAN SITE NEAR LONDON, ONTARIO (Session 16)

Salvage excavations at the Crowfield -Willaeys (AfHj-31) site in 1981 resulted in the recovery of a large number of heat fractured Paleo-Indian tools including fluted points, preforms, large alternately beveled bifaces, tool blanks, side scrapers, gravers, etc. All of this material apparently originated in one plow truncated feature. A preliminary analysis of the material strongly suggests that the site represents a cremation, and as such, is the earliest known in the New World. The unique circumstances of the site's formation provide important insights into the organization of Paleo-Indian lithic technology in the lower Great Lakes area, insights not usually obtainable from the analysis of living sites.

DONAHUE, Paul and Brian Spurling, Archaeological Survey of Alberta and Archaeological Resource Management, Government of Saskatchewan

THE STATE OF ARCHAEOLOGICAL RESOURCE MANAGEMENT IN CANADA (Session 15)

A critical review of archaeological resource management in Canada is presented by comparing the ideal model to the national reality. Data gathered from resource management agencies across Canada is used to ascertain priorities, estimate the

annual loss of sites and associated data, assess the quality of collection management, and to review programme objectives vis-avis the actual results in order to develop an overall perspective of archaeological resource management in Canada. Recommendations are put forward for correcting perceived weaknesses.

DREWITT, Bruce, University of Toronto

THE ROLE OF ONTARIO HERITAGE FOUNDATION FUNDING IN PREHISTORIC RESEARCH (Session 15)

This paper reviews the funding of archaeological research in Ontario by the Ontario Heritage Foundation. It then compares different models concerning the role of various Ontario research institutions in future research in Ontario prehistory and indicates alternative patterns of possible support by the Foundation. Finally, the question is raised as to how great a steering effect Foundation support will or should have on prehistoric research policies in the province into the Twenty-first Century.

DRIVER, Jonathan, Simon Fraser University

DERIVING CULTURAL INFORMATION FROM ENVIRONMENTAL DATA: A USE OF LARGE MAMMAL BONES (Session 14)

The use of terms such as "ecofact" or " environmental remains" to describe preserved animal remains on archaeological sites tends to obscure the fact that such remains are the product of culture. The nature and patterning of such finds from archaeological sites can contribute to our understanding of human behavior beyond the level of subsistence reconstruction.

Large mammal bones are common finds on Canadian sites, and their presence on such sites can rarely be attributed to any other process than deliberate introduction by humans. Consequently, assemblages of large mammal bones are particularly amenable to analysis designed to extract information about past human behavior.

Although much work has been undertaken in this field on agricultural societies (particularly in the Old World), there is considerable potential in Canada for the study of various types of human behavior, such as the identification of activity areas, analysis of meat distribution, or the analysis of social structure at various levels of integration. Such studies are ultimately concerned with the effect of culture on the distribution and preservation of animal bones. Because distribution and preservation will affect subsistence reconstruction, the importance of such studies is considerable.

DUMONT, Jean, Université de Montréal

LES ECLATS RETOUCHES-UTILISES: UN POTENTIAL D'ETUDE A DEVELOPPER (Session 11)

Présentation des résultats d'une étude portant sur un échantillon d'éclats retouchés-utilisés provenant de la station 4 de la Pointe-du-Buisson. Une première étape visait à cerner les attributs particuliers de cette catégorie d'objets. L'examen de leur répartition à l'intérieur d'aires d'activités constituait la seconde étape de l'étude.

Les résultats obtenus nous indiquent que l'on devrait accorder plus d'attention à cette classe d'artefacts souvent mise de côté au profit des outils façonnés.

ENGELBRECHT, W., State University College of New York at Buffalo

TRACING EARLY NEW YORK IROQUOIS POLITICAL DEVELOPMENT (Session 9)

No abstract received.

FARQUHAR, R., J. Holliday, C. Breede, and L. Lecelle, University of Toronto, University of Toronto, Bruce County Museum, Government of British Columbia

APPLICATIONS OF ELECTROMAGNETIC SURVEY METHODS TO THE SEARCH FOR ANCIENT CANALS IN THE WADI TUMILAT, EGYPT (Session 1)

Resistivity surveying in archaeology is normally conducted using probes to introduce electral current into the ground and to determine potential differences. Equivalent measurements can also be made using electromagnetic devices. We report the results of some large-scale surveying using such a device over an area in which a canal once existed adjacent to an archaeological site in Egypt (Tell-el Maskhuta). 1100 conductivity measurements at surveyed station locations were made in a period of 7 days. Wide variations in electrical properties were observed ranging from high conductivities (400 m mhos per m) over areas of saline soil to low conductivities (10 m mhos per m) over pure sand. The results are in accord with direct soil profile observations made with a corer. These results provide a rapid method of interpolating between core locations as well as permitting one to distinguish between areas underlain by sand and those underlain by Nile sediments.

FERGUSON, Robert, Parks Canada, Halifax

TECHNIQUES OF PHOTO MAPPING AT AN HISTORIC SITE IN CANSO, NOVA SCOTIA (Session 8)

During the 1981 field season at Grassy Island in Canso, N.S.,

for Parks Canada, photographic methods were used to record all plans and profiles in the excavation of an 18th-century merchant's residence. This increased the accuracy and speed of recording and resulted in a better visual representation. Field and lab equipment and techniques used will be discussed.

FINSTEN, Laura, R. Blanton, S. Kowalewski, G. Feinman, and L. Nicholas, Purdue University, Purdue University, University of Georgia, Arizona State University, Arizona State University

THE EMERGENCE OF A REGIONAL DIVISION OF LABOUR IN THE PREHISPANIC VALLEY OF OAXACA, MEXICO (Session 6)

The prehispanic state in the Valley of Oaxaca, Mexico, was never uniformly developed or integrated. As the centralised polity of the Classic Period collapsed, an agriculturally marginal portion of the Valley (Tlacolula) began to flourish, and maintained a position of pre-eminence in the Valley of Oaxaca regional system until the Spanish Conquest. Commercially-oriented craft production played an important role in this area's relatively late emergence as the Valley 'core'. The energetics of irrigated and rainfall maize cultivation through time are compared to test the hypothesis that Tlacolula's development conincided with the evolution of maize strains that were substantially more productive under conditions of intensive cultivation. It is argued that Tlacolula developed commercially on the periphery of the Classic state in part because of its limited capacity for irrigated maize agriculture and consequently low marginal utility of agricultural labour. It survived the collapse of the state because it was peripheral and poorly integrated into the centralised Valley polity. Tlacolula's emergence as the core of the Postclassic Period regional system was facilitated by its already well-developed marketing institutions, unlike areas that had been heavily dependent on state-regulated mechanisms of production and exchange.

FITZGERALD, William, McGill University

A REFINEMENT OF HISTORIC NEUTRAL CHRONOLOGIES: EVIDENCE FROM SHAVER HILL AND DWYER (Session 16)

The associated villages of the Shaver Hill and Dwyer burial complexes, Christianson and Robertson respectively, represent an archaeologically documented continuous Neutral Iroquoian occupation along the upper Spencer Creek between ca. A.D.1615 and 1651. Historical events, particularly the interruption in the flow of European trade items from New France between 1628 and 1632 appears to be responsible for the notable distinction between certain varieties of the European assemblage included within the burials. Fortuitously, the Christianson villagers appear to have relocated at the Robertson site sometime during the disruption in the St.

Lawrence supply route. This conclusion is based not only on the quite different glass bead assemblages and the lack of continuity evident in the nature of both European and foreign aboriginal burial inclusions at Shaver Hill and Dwyer, but perhaps more significantly, corroborative substantiation from a Jesuit rosary medallion recovered from Shaver Hill which dates to the period 1627-1632.

Consequently, Shaver Hill has been dated, also implementing the assemblage from its associated village, at ca. 1615-1632, with Robertson/Dwyer from ca.1632-1651. The significance of their temporal placement in light of archaeological and historical evidence is that two such distinctive temporal assemblages can be used as markers for other Iroquoian assemblages and should lead to the development of a more refined chronology in the region.

FLADMARK, Knut, Simon Fraser University

A SUMMARY OF THE PREHISTORY OF BRITISH COLUMBIA (Session 3)

There have been many changes in the archaeology of British Columbia over the last 10-15 years. Greatly increasing numbers of active researchers and available resources have encouraged expansion of field investigations into remote coastal and interior settings archaeologically unknown prior to about 1970. Other positive developments include the application of a wide range of new field and analytical methods, including markedly increased concern with paleoecological data. However, despite these advances, there are still a great many very substantial areal and/or temporal gaps or uncertainties in such fundamental archaeological knowledge as regional culture histories and artifact/trait distributions. More complex questions such as the nature of prehistoric subsistence and settlement patterns; paleodemography; prehistoric social and belief systems; the degree and direction of inter and extra-regional trade and contact, and many others, are still largely unanswered for any part of the province. Nevertheless, far more data are available now than ever before, and it is becoming increasingly feasible and appropriate to attempt provisional cultural historical syntheses.

This paper will propose a summary and partial synthesis of the culture history of British Columbia in terms of coastal and interior sub-regions. Because there are really no published precedents for such a resume of B.C. prehistory, this first approximation must introduce and/or redefine some cultural-analytical units applicable at the large scale regional level. Coastal sequences will be described in terms of two major cultural stages (Lithic and Developmental), divided into two and three substages respectively. Interior sequences, which are generally much more poorly known than those of the coast, will be treated in terms of a traditional tri-fold division into Early, Middle and Late Periods. Time will not permit detailed discussion of individual sites or

sequences, and emphasis will be placed on two primary questions: 1) The Nature of the initial cultural occupations of the province, and; 2) Evidence pertaining to the origins and evolution of cultural complexity in coastal and interior contexts.

FORBIS, Richard, University of Calgary

PLAINS PREHISTORY IN THE LAST TEN YEARS:A SUMMARY (tentative title) (Session 3)

No abstract received.

FOSTER, Gary, Trent University

THE WOLFE CREEK SITE: A PREHISTORIC NEUTRAL FRONTIER COMMUNITY (Session 16)

The Wolfe Creek site (AcHm-3) is a one hectare prehistoric Neutral village, circa A.D. 1500-1550, located in Kent County near Chatham. During the 1980 field season, 15% of the site was excavated. At that time evidence of seven longhouses was revealed.

Its location on the western frontier of prehistoric Neutralia appears to be responsible for the introduction of Sandusky Tradition ceramics onto the site. Since the direct influence of the Sandusky Tradition appears to be confined to the ceramics and there are a proportionately large number of projectile points, it is proposed that the presence of Sandusky material is a by-product of warfare.

FOULKES, Ellen, Archaeological Survey of Canada

PREHISTORY OF THE KOUCHIBOUGUAC NATIONAL PARK REGION OF NEW BRUNSWICK (Session 8)

Recent fieldwork in northeastern coastal New Brunswick, though productive, has had its disappointments. Destruction of archaeological sites in the Maritime Provinces by severe erosion has limited research in many cases to surface collections.

In an attempt to reconstruct the prehistory of Kouchibouguac National Park and surrounding areas, excavated material from the 1981 testing has been studied in conjunction with survey collections from previous years.

Thelagoon-estuary environment which characterizes the Park has parallels along large sections of coastline in the Gulf of St. Lawrence "southern basin". Late prehistoric adaptation to the resources of rivers and protected coastal waters is reflected in artifact similarities from sites in Prince

Edward Island, Nova Scotia, and northeastern New Brunswick.

FOX, William, Archaeology and Heritage Planning Branch, Ontario Ministry of Citizenship and Culture

THE CALVERT VILLAGE: GLEN MEYER COMMUNITY PATTERNS (Session 9)

A six week rescue excavation project in Dorchester, Ontario during the spring of 1981 exposed a little over one half of a 0.2 hectare ($\frac{1}{2}$ acre) Glen Meyer village, dating to ca. 1100 A.D.. The complexity of its construction history was both staggering and typical of the period. A total of 242 features and approximately 3000 postholes were mapped, while 154 features were excavated and sectioned. Study of house wall line and feature superimposition, as well as inter-feature artifact mends argue for at least 3 construction phases. Activity areas have been defined on the basis of pit feature distributions and their contents. The Calvert village community pattern is then compared with other Glen Meyer data and later Ontario Iroquoian patterns.

GIBSON, Terrance, University of Alberta

ALTERNATIVE APPROACHES IN COLLECTING AND MANIPULATING ARCHAEOLOGICAL DATA FROM ARCTIC SURFACE SITES (Session 2)

Archaeological remains on Banks Island Copper Inuit sites were comprehensively mapped and photographed in situ during the 1980 and 1981 field seasons. These records required the formulation of special data manipulation techniques to take full advantage of their potential to provide information. Methods centred about the use of an artifact description and mapping system designed for use with a micro-computer, providing a field as well as laboratory capability. Selected methods of computer-assisted analysis of Banks Island data are presented, which employs a mainframe-linked micro-computer system. The paper concludes by assessing the practicality of micro-computers as archaeological tools of data analysis, both as adjuncts to larger computers and as stand-alone systems.

GOTTHARDT,Ruth, University of Toronto

ARCHAEOLOGY IN THE NORTHERN CORDILLERA-PRELIMINARY RESULTS OF A RECONNAISSANCE IN THE HEADWATERS OF THE ROCK RIVER, NORTHERN YUKON TERRITORY (Session 7)

Preliminary results of an investigation of 23 prehistoric sites along the Dempster Highway, in the middle Rock River headwaters, are reported. Site distribution and density suggest a prehistoric subsistence based on the seasonal exploitation of caribou moving through the western Richardson Mountain foothills in spring and fall. Collections from the Rock River sites are characterized by the production

of bifaces and large flakes, and the almost exclusive use of a local black silicious argillite in the production of tools. Separation and placement of the technologies represented in the Rock River sites in the known culture-historic sequence of the Northwest is hampered by a paucity of diagnostic tool types and by the surficial context of the sites. Two isolated buried deposits have yielded respectively material with Northern Archaic affinities (dated to 7500 B.P.) and evidence of a microblade technology (as yet undated). A methodology is suggested for the recognition and separation of elements belonging to different technologies in surface deposits by comparison with the materials in buried context.

GRATTAN, D. , Canadian Conservation Institute

WATERLOGGED WOOD CONSERVATION: THE CURRENT SITUATION (Session 12)

From discussions with several archaeologists it seems that many of them are under the impression that the conservation of waterlogged wood and other organic material is too expensive and difficult to be worth bothering with, and as a consequence are not excavating potentially important wet or frozen sites, or if they do, are undertaking little or inappropriate conservation measures. Furthermore, many who understand the problems and are convinced of the need for conservation find difficulty in getting information and support.

These problems surfaced at a recent conference on the conservation of waterlogged wood, at which several archaeologists were present. These feelings of archaeologists are understandable since in Canada, a country with (almost certainly) a rich heritage in wet and frozen sites, they receive no training in conservation. We were told at that conference that graduates from Canadian Schools don't know where to go for assistance, what organizations can help or even where to find literature on the subject. If this is a true description of the Canadian situation, clearly something must be done to remedy it.

There are several organizations which have conservation laboratories and well-trained staff. For example, the Canadian Conservation Institute (CCI) can give assistance to the archaeologist in a variety of ways and at no cost.

Direct conservation aid, with a conservator on- site can be given for sites of particular importance. CCI also gives practical and scientific advice, and in addition to carrying out wood conservation , conducts scientific research into treatments. Lectures and literature on the subject can also be provided. Similarly, Parks Canada has a network of conservation laboratories across Canada, where advice can also be sought. Several of the provincial museums (such as the British Columbia Provincial Museum) also have qualified staff and there

are also specialist departments in universities such as the Art Conservation Training Programme at Queen's University, in Kingston, Ontario. All of the institutions can and will help.

The ICOM WWWG is one vehicle that brings together those working in this area from many countries, since many of the problems are common. This group can help by putting you in contact with other workers, by supplying you with a free newsletter and by the conferences that are and will be organized on a regular basis. It will keep you abreast of the state of the art.

Thus there is a network of information and assistance that the wet/frozen site archaeologist should be associated with.

As for the treatment of waterlogged wood, although there isn't and never will be a cookbook of conservation treatments, there are many simple processes which can be carried out by an archaeologist with little or no conservation training, providing he or she receives some advice or assistance from the conservation specialist.

Nevertheless, the 'Conservation Profession' would like to see conservators brought in at the early stage of the planning of wet/frozen site excavations, and would prefer that a conservator should be on-site during excavation. This highly desirable state of affairs is not yet possible since there are not enough archaeological conservators in the world, enough funds to pay for it nor are sufficient Excavation Directors convinced of the need. But this a goal to be aimed at.

In conclusion, the problem of waterlogged wood treatment are not completely understood by any means, but much <u>is</u> known and many methods <u>are</u> available, and considerable advances continue to be made. Our biggest challenge at present is to persuade the archaeologist to learn some conservation and to make sure he or she is in contact with those who can help most.

GORDON, Diana, McMaster University

NORTH CARIBOU LAKE ARCHAEOLOGY-NORTHWESTERN ONTARIO (Session 16)

A comprehensive examination of the settlement pattern of North Caribou Lake revealed Laurel, Blackduck, and Selkirk occupations in locations favoured during historic as well as recent times. Though essentially descriptive in nature, this paper will illuminate aspects of site selection in this formerly unknown and isolated region. With the assistance of native crew members, the project effectively integrated ethnographic, ethnohistoric and archaeological data for a more complete understanding of the cultural history of the lake.

GREAVES, Sheila, University of British Columbia

ETHNICITY AND PROJECTILE POINTS (Session 6)

This papers presents the results of research conducted to test the hypothesis that ethnic affiliation is a source of metric variability in Late Plains Side Notched projectile points. Twenty-four discrete variables were recorded on 348 projectile points from 12 sites, previously identified as Blackfoot, Crow, Shoshoni, or Kutenai. Multivariate statictical techniques were applied to the data in order to discover whether quantifiable variability existed both between groups and between sites. Factor analysis demonstrated that the number of variables contributing the major portion of variance is significantly fewer than the number recorded. Results from the discriminant function analysis support the hypothesis tested. It is possible to discriminate between groups with all sources of recorded variance controlled for with the exception of ethnicity. Cluster analysis confirms the author's belief that the construction of a typology is not necessarily the most productive method for examining variability in lithic tools. It is concluded that ethnic affiliation produced quantifiable variability which can be utilized, within certain spatial and chronological limits, to discriminate between assemblages from sites of either known or unknown ethnic affiliation.

* GREER, Sheila,University of Toronto

THE 1981 MACMILLAN PASS AND NORTH CANOL ROAD (YUKON) SURVEYS (Session 7)

Two survey projects, one a regional inventory, or overview, of archaeological resources, the other a road corridor impact assessment, were conducted in the Selwyn Mountains/upper Pelly basin area, on the Yukon side of the continental divide. Forty-six prehistoric sites were recorded in the roughly 12,000 square kilometre study area. The site list included isolated artefact finds, small sites which consist of only a few square metres of buried deposits, and sites which may represent family hunting and fishing 'base' camps. Site size and distribution patterns here can be tied in with that of the game and fish resources of the area. The area has a unique historic period as well, e.g. the massacre of the original Upper Pelly Indians supposedly occurred here, and the area was extensively used by the Mountain Indians in the 20th century, and perhaps earlier. The study area also faced boom and bust conditions with the construction of the Canol Road and pipeline through it in the 1940's.

HAGGARTY, James, R. Inglis, and R. Hebda, Archaeology Division, British Columbia Provincial Museum

THE BROOKS PENINSULA REFUGIUM PROJECT (Session 7)

The Brooks Peninsula on the west coast of Vancouver Island was

the location of an interdisciplinary research project during late July and August, 1981. Comprised of 18 researchers, representing 8 disciplines, this research team's primary objective was to determine whether the Brooks Peninsula was an unglaciated refugium during the last major ice advance (Vashon). Three secondary objectives of the project were: a) to collect geological and palaeoecological data that record the history of the peninsula; b) to collect botanical and zoological specimens to determine if the Brooks Peninsula populations are different from those of the surrounding area an thus likely to have survived in a refugium; and c) to document past utilization of this landscape by human populations. Preliminary results of the project are presented.

HALEY, Shawn, Simon Fraser University

OLD AND NEW RESEARCH IN THE FRASER CANYON, B.C.: THE SOUTH YALE AND UNION BAR SITES (Session 7)

Two aspects of archaeological research in the Fraser Canyon are discussed:1) a re-analysis of the material from S. Yale -a controversial 'early man' site near the southern end of the Canyon and 2) a test excavation and analysis of a stratified mulit-component site in the same general area. Preliminary findings are introduced. These will focus on the re-evaluation of the Pasika Complex from S. Yale as a specialized unifacial cobble chopper manufacturing technique contemporaneous with other (e.g. bifacial) techniques. This combined with data from the Union Bar site will be used to suggest a revision of the Fraser Valley chronology deleting the Pasika Complex and assigning Milliken as the earliest known human presence in that area.

HAMALAINEN, Peter, Toronto, Ontario

THE EFFECT OF THE FUR TRADE ON BEAVER RESOURCES IN THE PETUN AREA AS INDICATED BY THE FAUNAL SAMPLES (Session 16)

Traditionally the effect of the fur trade has been seen as resulting in the rapid depletion of the beaver resources in a given region. However, this does not appear to have happened in the Petun area. The frequency of beaver remains in the faunal samples,which date from c. 1585 to 1650, remains constantly high, suggesting that the beaver resources in the Petun area were not being depleted. This paper will look at the evidence, both archaeological and environmental, and will speculate as to why the above appears to have happened.

HANCOCK, R., University of Toronto

ON THE INTERPRETATION OF POTTERY ANALYSIS (NAA) DATA (Session 1)

There is a tendency for analysts starting with potsherds to

convert them into analytical numbers, with little or no direct physical meaning.

The numbers then become the artifact, instead of representing the artifact. They are then massaged and manipulated until they lead the analyst to a 'functional' conclusion which may or may not bear any relationship to the original wares.

Pottery consists of mixtures of clay minerals with varying amounts of tempering materials such as silica, calcium carbonate, grog (water and carbon), and local mineral particles or pebbles, etc. The potter then had the choice of using lightly tempered clay (for fine wares) or more coarsely tempered clays (for common wares). So, depending on the nature of the tempering material and the elements chosen for analysis, different 'real' numerical groupings may be obtained from the use of differing quantities of temper and clay.

From the analyses of all the major constituents, one may perform mass balances to'chemically' reconstruct the sherd by summing the element oxide concentrations for the major constituent elements Na, Mg, Al, Fe, Si, Ca, Ti, etc. Modern XRF laboratories have the facility to perform the required analyses very precisely but most NAA laboratories do not. This gives XRF a major advantage in the area of establishing the effects of temper on a particular set of sherds. However, to date, NAA still retains a significant advantage for the determination of trace elements in pottery.

These and related problems are discussed and examples presented.

HANKS, Christopher, University of British Columbia

THE FOXIE OTTER SITE (CdHk-3): A MULTICOMPONENT OCCUPATION NORTH OF LAKE HURON (Session 5)

Excavation on CdHk-3 during 1980 and 1981 has revealed a cultural sequence which includes the post contact, Woodland, and Early Archaic periods. A separation of the components, horizontally, has allowed a relatively precise definition of each of the occupations. The Foxie Otter site is of regional significance as it fills a gap in the archaeological record concerning the relationship between interior lakes (i.e. Fox Lake) and adjacent river systems (i.e. Spanish River). Further, the Archaic component at CdHk-3 and surface finds at the nearby Devils Elbow (CdHk-1) on the Spanish River offer a preliminary insight into the human occupation of the region north of Lake Huron at the time of the white pine maximum.

HANNA, Margaret, University of Calgary

BEYOND TYPOLOGY: THERE'S MORE TO A POTSHERD THAN MEETS THE EYE (Session 6)

Ceramics have traditionally been subjected to typological analysis as archaeologists attempt to answer questions about chronology, population movement, technology, cultural change, and interaction. Although typology can answer some of these questions, archaeologists have not been making full use of the information potentially available. Chemical and mineralogical analyses of ceramics can provide a useful and detailed set of information to answer these same questions. This paper presents questions and implications, derived from a chemical/mineralogical analysis of ceramics from Manitoba, about our present knowledge of prehistoric ceramic technology and even our definition of the term 'ware'.

HARDIE, Karie, Archaeological Survey of Alberta

ARCHAEOLOGISTS VS. GEOLOGISTS: HAVE WE "PAST" THEM? (Session 14)

Archaeologists have always been concerned with locating, as well as interpreting archaeological sites. Unfortunately, when the research is completed, many of the final reports contain no more than a basic description of the artifacts recovered. Similar results, with respect to the lack of interpretation occurs when archaeologists try to fulfill the role of geologists, while conducting their research. This paper demonstrates, with the use of examples from Alberta, how a proper interpretation of the regional geology can directly contribute to the understanding of culture history. Since geology has exerted a control on prehistoric groups, as in the form a continual active environment, geology must rank significantly in the research designs being formulated by archaeologists.

✶ HARINGTON, C.R., National Museum of Natural Sciences

QUATERNARY MARINE AND LAND MAMMALS AND THEIR PALEOENVIRONMENTAL IMPLICATIONS- SOME EXAMPLES FROM NORTHERN NORTH AMERICA (Session 14)

A skeleton of a ringed seal (Phoca hispida) from near Hull, Québec first showed that an arctic marine environment was characteristic of the early Champlain Sea (an inland sea that covered the St. Lawrence Lowlands from about 12,000 to 10,000 years ago). Later corroboration for this arctic phase came from studies of marine ostracods. Thus, fossils of mammalian species with particular adaptations and habitat needs often provide clues to the nature of past environments in an area - the basic assumption being that species represented by fossils had ecological requirements similar to those of the same or closely allied living species.

Sometimes other fossils, such as mollusc shells or plants, directly associated with remains of ancient skeletons offer clues to habitats of extinct mammals. For example, a study of fossil pollen and plant macrofossils from a pond deposit enclosing a skeleton of a Columbian mammoth (Mammuthus cf.

columbi) at Babine Lake, British Columbia indicated that the animal had occupied a dwarf birch shrub tundra environment.

Rarely soft parts, stomach contents, or droppings of ice age mammals are preserved, providing direct evidence of their environmental adaptations and eating habits. The famous Berezovka mammoth from Siberia is an example. A case of a 12,000 year-old arctic ground squirrel (Spermophilus parryi) skeleton found in a nest (with nesting grasses, seed cache and droppings) from the Dawson area, Yukon Territory exemplifies the potential of this type of evidence.

HELMER, James, Arctic Institute of North America

LATE PALEOESKIMO SUBSISTENCE STRATEGIES IN THE CROZIER STRAIT REGION, HIGH ARCTIC CANADA (Session 10)

Excavation of several early Dorset (ca.2350 B.P.) and late Dorset (ca.1245 B.P.) sites on Karluk Island and Markham Point, Bathurst Island in the Crozier Strait region of the Canadian High Arctic during the 1977 through 1979 field seasons, yielded a combined total of 18,242 bird and animal bones and bone fragments. This paper provides a summary of the detailed analysis of these faunal data and offers a preliminary reconstrcution of the seasonal subsistence patterns for both of these stages of the late Paleoeskimo tradition. Several broad implications arising from this analysis which are of potential significance to the processual study of Arctic prehistory are also discussed briefly.

HETT, Charles, Canadian Conservation Institute

THE PRESERVATION OF ARCHAEOLOGICAL SITE FEATURES (Session 12)

This paper will present some different methods of preserving features of archaeological sites, many of which may be destroyed in the course of excavation. The application of two methods in particular will be considered- 1. Soil section transfers; 2. Molding and reproduction. Reference will be made to some other methods of "in situ" preservation.

HICKEY, Clifford, University of Alberta

THE COPPER INUIT: RELEVANT THEORETICAL ISSUES IN ANTHROPOLOGY AND OTHER DISCIPLINES (Session 2)

Examination of prehistoric, historic, and ethnographic records indicates that the second half of the 19th and early 20th centuries was a dynamic period for the Copper Inuit. Theoretical issues in archaeology, anthropology, history and wildlife biology are examined to assess their significance in

this case and more generally.

HICKEY, Clifford, R. Will, T. Gibson, M. Wayman, R. Cole-Will and J. Savelle, University of Alberta

THE COPPER INUIT RESEARCH PROJECT: INTRODUCTION AND OVERVIEW (Session 2)

Beginning in 1977, research has focused on the western Canadian Arctic in order to determine the effects on Copper Inuit society of pre-Ethnographic Present introductions of European goods. As originally conceived, the project began with a limited series of theoretical concerns, focussed primarily on subsistence relationships. As the data base expanded, it indicated that the late nineteenth century was a period of significant cultural change and that the events and processes hypothesized to have occurred then could have parallels beyond that time and area. In pursuit of the overall project goals to document these alterations in Copper Inuit society, members and associates of the project have now amassed much new data and have developed or modified a number of methods for collecting, analyzing and assessing such information.

HILL, C. Gordon, Ministry of Citizenship and Culture, Thunder Bay

SURVEY OF INTERIOR LAKES EAST OF NIPIGON (Session 5)

Initial investigations have taken place on thriteen lakes in the North Central Region of Ontario in the past two years These shoreline intensive surveys have resulted in the documentation of some 77 sites with Paleo-Indian, Archaic, Laurel, Blackduck, fur-trade Historic, recent Historic and modern affiliations. Fieldwork included the excavation of a small site and the recording of one pictograph site.

JAMIESON, Bruce, McGill University

THE STEWARD SITE: CERAMIC SERIATION AND ARCHAEOLOGICAL STRATIGRAPHY (Session 16)

The Steward site is a prehistoric St. Lawrence Iroquoian fishing station located not far from the St. Lawrence River near the town of Morrisburg, Ontario. In 1978 a stratified midden deposit was discovered there and excavated by the Ontario Ministry of Culture and Recreation. The subsequent analysis of the stratigraphy and a comparison of the change in individual attributes of ceramic vessel shapes and motifs have allowed the author to isolate those single attributes that show chronological significance. A comparison of the findings from the Steward site with those of other scholars whose research has concerned itself with the occupation

sequence of the St. Lawrence Valley suggests that alternative site orderings are possible. The author will examine and discuss the implications of this new data and how it may alter our ideas concerning the late prehistory of the St. Lawrence Iroquoian group.

JENSSEN, Victoria, Parks Canada, Ottawa

CONSERVATION FACILITIES FOR TREATING ORGANIC ARCHAEOLOGICAL ARTIFACTS (Session 12)

Archaeologists and museum professionals are aware that wet organic finds pose special treatment requirements. These invoke images of expensive "super labs" with large staff. This talk intends to familiarize one with both large laboratory facilities and smaller set-ups which can stabilize organic artifacts. Strategies for long-distance consultation are also discussed.

JONES, Gwyn, University College, Cardiff, Wales

HISTORICAL EVIDENCE FOR VIKING VOYAGES TO THE NEW WORLD (Session 13)

The Norse Viking voyages of exploration and settlement westward across the Atlantic Ocean took place during the so-called Viking Age, c. 760-1085 A.D., a period which saw far-reaching changes in the Viking kingdoms at home, and witnessed their powerful impact on the world beyond their borders. A complex of pressures, economic, dynastic, climatic, and technological (particularly in respect of sea-power), provided reason, means and opportunity for plunder and conquest in Western Europe and the British Isles, trade and lodgment in Russia and the adjoining Arab and Byzantine regions, settlement and for the most part peaceful exploitation of the Atlantic island-countries out west. The Norsemen were in Scottish waters and N.E. England by 789-93, in the Faroes by c. 820, Iceland c. 860-70; they reached the south-west of Greenland in the 980s, and Vinland (=North America=Canada) c.1000.

Evidence for a permanent Norse presence in Iceland and a long-lasting one in Greenland is amply provided by literary documents and archaeology. The evidence for a presence in North America was for long predominantly literary, and to that extent theoretical and in need of archaeological backing. The area of investigation is considerable, northern Newfoundland in particular, Labrador, and thereafter the prolonged coastlines of Arctic Canada.

The literary (i.e. documentary) evidence for Vinland extends from Adam of Bremen's Gesta Hammaburgensis, c. 1075, by way of Ari Thorgilsson's Islendingabok, c. 1125, the so-called

Geographical Treatise in Arnamagnaean MS 194 (date arguable but early), the Icelandic Annals (entires for 1121, 1347, and,more debatably, 1630) to the two Icelandic sagas Graenlendinga Saga and Eiriks Saga Rauda, which are late and often not to be relied on.

With all its imperfections the documentary evidence has proved a valuable, indeed indispensible, directive to our present state of knowledge. But future progress must depend on the findings of Archaeology and its ancillary sciences.

JULIEN, Michèle, Université de Montréal

LA REPRESENTATION DIFFERENTIELLE DES MAMMIFERES: LA STATION 4 DE LA POINT-DU-BUISSON (Session 11)

Cette communication soulève l'importance d'employer une méthode de quantification des espèces qui soit appropriée à la nature de l'échantillon analysé et présente l'exemple des résultats obtenus par l'application de différentes méthodes de quantification à l'analyse des vestiges mammaliens de la station 4.

JULIG, Patrick, York University

AN ARCHAEOLOGICAL SURVEY OF THE LOWER ALBANY RIVER (Session 5)

The Lower Albany River lies within the Hudson Bay Lowlands, a region generally regarded as being very sparsely populated in Precontact times. Twenty prehistoric and several fur trade Historic sites were located during a two part survey in 1981. Initial testing indicated most sites to be aceramic, including several of probable Archaic affiliation in the vicinity of the relict Tyrrell beach. An Initial Woodland component was evident on several sites near the Forks of the Albany. Site locations on high terraces did infer seasonality, indicating that Precontact bands may have wintered along select drainages in the lowlands.

KEENLEYSIDE, D.L., National Museum of Man

NEW EVIDENCE FOR PALAEO-INDIAN OCCUPATION OF PRINCE EDWARD ISLAND (Session 8)

To date, only a single archaeological specimen attributable to Palaeo-Indian occupation has been reported for Prince Edward Island. Recent archaeological surveys of the north-eastern part of the province and documentation of private collections from the Island have produced at least eleven additional specimens which likely relate to this early time period. Proposed is a generalized point form characterizing a late Palaeo-Indian or perhaps transitional Palaeo/Archaic maritime population in the southern Gulf of St. Lawrence.

Palaeoecological reconstructions of the southern Gulf based on existing sea-level change and palynological data portray a dramatically different setting for these early people compared to present day.

KENYON, Dienje, University of Toronto

THULE TOY ARTIFACTS: AN ANALYSIS (Session 10)

The importance and function of toys in the development of children has been explored in recent studies in other disciplines. Analysis of the same in prehistoric cultures has, however, been limited. Concentrating upon the neo-eskimo Thule culture, with specific reference to the Nelson River #1 site (OhRh-1) on south-eastern Banks Island, N.W.T., those artifacts usually identified as "toys" have been examined. Using ethnographic references to historic Eskimo children's play and their play things, and an analysis of functional wear on artifacts, conclusions concerning the validity of identification of certain artifacts as toys is discussed, a system of identification to distinguish adult and toy implements having been developed. Evidence which may suggest religious or ceremonial use is implied by some aspects of the analysis. Importance to further culture studies of the Thule is indicated.

KERKHOVEN, Marijke, University of Alberta

TEXTILES AND CORDAGE OF BRITISH ARCTIC EXPEDITIONS (Session 2)

During the summer of 1980 a small number of textile remains were found on Banks Island and brought back to the University of Alberta for further study. The pieces most likely came from H.M.S. Investigator or its cache at Mercy Bay. Identification of the pieces was conducted: 1) by examination and analysis of the weave and yarn structure, and fiber content; 2) by scanning primary sources on the voyage of the Investigator and other records concerning contemporary British expeditions to the Arctic, with respect to textiles. Two pieces were identified, as to the type of cloth and fiber content. A number of questions remain for the three other kinds of textiles. The paper will also touch on difficulties and methods for working with archaeological textiles in general.

KOWAL, WALTER, University of Alberta

TRACE ELEMENTS AND MUSKOXEN (Session 2)

Compositional analysis using a variety of trace element analytical techniques is applied to problems specific to Arctic multi-component surface sites. Muskoxen bones and teeth collected at site PjRa-18 on Banks Island, N.W.T. are the

focus of the experiments. Results of these studies are compared with data generated by standard faunal analytical techniques and conclusions are presented as to the utility of these highly technical experiments to archaeological interpretation.

KOWAL, Walter, University of Alberta

ATOMIC EMISSION SPECTROSCOPY AND ARCHAEOLOGICAL BONE (Session 14)

Various trace element analysis techniques are examined for their efficacy and utility in analyzing archaeological bone material. Less well known techniques are introduced and are compared to more commonly used techniques such as neutron activation and X-ray fluorescence. The results of this study indicate that some new techniques have greater applicability to a wider range of archaeological problems. A control sample of archaeological bone from the High Arctic is used as a case study.

LATTA, M.A., University of Toronto

"LANDLORD FILL THE FLOWING BOWL...":19th CENTURY LIFE AT THE BROWN TAVERN SITE, BhFw-3 (Session 16)

No abstract received.

LUDOWICZ, Deanna, University of British Columbia

REGIONAL VARIABILITY IN MICROBLADE TECHNOLOGY: A CASE STUDY FROM THE FRASER PLATEAU, B.C. (Session 7)

This paper examines variability of lithic assemblages from eight sites on the B.C. Southern Interior Plateau. Common to each of these sites is the presence of a prepared-core technology utilized for the manufacture of microblades. Variation of microcores and microblades is compared to the distribution of variation of other lithic tools. The analyses yield information regarding the organization and range of activities in which microblade technology participated.

LYONS, Diane, University of Calgary

STYLISTIC VARIABILITY IN DORSET ART: A STUDY TOWARDS THE UNDERSTANDING OF REGIONALISM IN DORSET CULTURE (Session 10)

Stylistic variability of Dorset art style has not been examined at a regional level. Five collections of art from widely separated geographic regions are examined. The results test an hypothesis which proposes the existence of regional styles, the development of which are correlated to current theories concerning the origin and expansion of Dorset culture.

MACDONALD, GEORGE, National Museum of Man

WET SITE ARCHAEOLOGY (no title received) (Session 12)

No abstract received.

AN OVERVIEW OF CANADIAN PREHISTORY FOR THE LAST DECADE (tentative title) (Session 4)

No abstract received.

MAROIS, Roger, Commission archéologique du Canada

LA POTERIE DU LAC ABITIBI (QUEBEC) (Session 11)

La poterie du lac Abitibi recueillie principalement dans deux gisements représentant vraisemblablement une longue occupation, manifeste des similarités avec la poterie blackduckienne de l'ouest et iroquoienne du sud. Par l'étude comparative des caractères décoratifs blackduckiens et iroquoiens, on s'efforce de déterminer 1: si cette poterie du lac Abitibi a été fabriquée sur place ou a été importée; 2: quels sont les caractères qui sont susceptibles d'avoir une valeur chronologique; 3: et qeulles sont les difficultés à surmonter pour effectuer une étude comparative de la poterie.

McCULLOUGH,K., University of Toronto

FESTIVAL STRUCTURES OF THF RUIN ISLAND PHASE (Session 10)

No abstract received.

McGHEE, Robert, National Museum of Man

THE LAST TEN YEARS OF ARCTIC PREHISTORY (Session 4)

The past decade has seen a great increase in the amount of archaeological research done in Arctic Canada, and in published results of this work. Although the general study of culture history has remained an important part of research, many studies have focussed on more limited aspects of site and artifact analysis. Important questions which have been addressed include revisions to the previously accepted radiocarbon dating scheme; the nature of environmental change and its influence on culture change; the development of regional cultural variants and the related question of diffusion and population movements between core and marginal areas; the nature of contacts between Dorset and

Thule populations; culture change in the late prehistoric period, and the related archaeology of early European exploration. The questioning of several previously accepted generalizations regarding the nature of prehistoric occupation of the region has led to a more particularistic view of Arctic prehistory.

NORSEMAN AND NATIVES IN NORTHEASTERN CANADA (Session 13)

The sparse historical records of meetings between the Norse and the native inhabitants of North America have been recently supplemented by a small amount of archaeological evidence. The Norse probably came into contact with three distinct groups of natives:Algonkian speaking Indians in southern Labrador and Newfoundland; Dorset Paleoeskimos in northern Labrador; and ancestral Inuit in Greenland and perhaps in Arctic Canada. The encounters with Indians occurred during the eleventh century Vinland voyages, were probably brief and violent, and no archaeological records of such encounters have yet been found. Meetings with Dorset Palaeoeskimos in northern Labrador may have occurred occasionally between the eleventh and fourteenth centuries, and at least two archaeological finds can probably be traced to such meetings. The contacts between the Norse and Inuit were more frequent, occurred over a period of several centuries, and resulted in the scatter of Norse objects which have recently been recovered from Inuit archaeological sites in Greenland and Arctic Canada. It is tempting to speculate that the relationship between these two groups may have included trading, and that such activities may have encouraged at least sporadic Norse penetration of the eastern Arctic islands.

McGOVERN, T.H., City University of New York

THE EXTINCTION OF NORSE GREENLAND (Session 13)

For nearly five hundred years (AD 985-ca. 1500), the small Scandinavian colony of West Greenland represented the westernmost extension of medieval Europe. Founded by Erik the Red at the end of the Viking-age expansion of Norse settlements across the North Atlantic, this colony successfully adapted to Greenland's arctic climate and changed its old-world subsistence economy to meet the challenges and exploit new resources of the new land. By the early 13th century, the colony had a bishop, cathedral, monastery, nunnery, and some of the most impressive churches of the Scandinavian world. However, during the 14th and 15th centuries migrating Thule Eskimos, cooling climate, and changing orientation of European markets presented challenges to the Norse Greenlandic economy that their society seemed unable to meet. The

colony gradually collapsed and became completely extinct. A speculative reconstruction (based on recent archaeological research) of the last days of one Norse farm is presented.

McLEOD, Mike, Thunder Bay, Ontario

THE ARCHAEOLOGY OF THE LITTLE JACKFISH RIVER, THUNDER BAY (Session 5)

The Little Jackfish River was surveyed in the summer of 1981 as part of an environmental assessment for Ontario Hydro. The river system was considered as a minor or backwater canoe route from the Albany River to Lake Nipigon. The survey recorded thirty-one sites ranging from Palaeo-Indian to Historic. Although all small in size and low in cultural yield, the sites provided valuable insights into the archaeology of northwestern Ontario.

MELBYE,F. Jerome, University of Toronto

ADVANCES IN THE CONTRIBUTION OF PHYSICAL ANTHROPOLOGY TO ARCHAEOLOGY IN CANADA:THE PAST DECADE (Session 4)

Human skeletal biology is inextricably bound to archaeology. No matter how specialized a skeletal biologist may be and no matter whether he/she has ever been in the field, ultimately, the data are bound to the archaeological context. We have enjoyed a fruitful relationship. That relationship has a rich history in Canada extending over 100 years. Recently, we have been forced to review the moral implications of this research. The controversy is by no means over, but the dust has settled.

During this period of reflection osteologists have stayed out of the field and archaeologists have tried desperately to avoid digging human remains. This is a generalization, and there are many exceptions. At any rate, the focus in recent years has been on laboratory techniques and analysis. Skeletal biologists have been quietly developing new methods and new techniques. A brief progress report will be presented and a new florescence is predicted in the analysis of human skeletons.

MITCHELL, Barry, Deep River, Ontario

A REVIEW OF SELECTED ARTIFACTS FROM THE MIDDLE OTTAWA RIVER VALLEY, ONTARIO (Session 5)

Archaeological explorations in the central section of the Ottawa River valley have not been extensive.

A suggested cultural sequence for the middle Ottawa Valley

relies on limited material culture samples from a few sites and upon inferences about relationships with adjacent areas for which the material culture is known in part.

This paper provides some information about certain artifacts recovered from the middle Ottawa River valley. Described are items which have not been reported or which, to date, are locally rare or which show efflorescence or individualism. The paper is not an analytical document.

MORGAN, Anne and Alan Morgan, University of Waterloo

FOSSIL INSECTS AND THE RECONSTRUCTION OF ARCHAEOLOGICAL ENVIRONMENTS (Session 14)

The use of fossil insects, particularly beetles, in the reconstruction of paleoenvironments began with material encountered in organic deposits of Pleistocene age. Archaeological sites may also yield, or be associated with, sequences which contain abundant insect remains. These are relatively easy to extract, and, when compared with extant faunal assemblages, can provide an abundance of information about the paleoenvironment of the site. The data derived from the insect remains can be divided into two categories. The first is a "natural" or background component to the site. Insects in this category lived in natural habitats geographically close to the site, and show an assemblage which is little influenced by man. Such faunal groups might typically be correlated on a radiometric or stratigraphic basis with occupation sites or horizons used by Paleolithic hunters or Paleo-Indians. The second category includes insect assemblages which have been modified as a result of interference by man. Included in this group might be faunas associated with cultivated plants, or with the accumulation of produce in granaries or storage pits. Forest clearance patterns, the domestication of animals and the presence of refuse pits might well be reflected by changing faunas. Finally, transportation routes, or indications of long-distance trade may be suggested by peculiar introductions of insects which have distributions far removed from the site under investigation. Such studies are even more meaningful when carried out in conjunction with investigations on other biological groups such as seeds and pollen, or various invertebrates such as molluscs, ostracodes and cladocerans.

MORRISON, David, National Museum of Man

THULE SUBSISTENCE PATTERNS IN CORONATION GULF (Session 10)

Thule culture subsistence patterns are examined in the light of faunal and artifactual material from the Clachan site, on the western coast of Coronation Gulf, Arctic

Canada. The site's inhabitants relied almost exclusively on ringed seal for at least their winter subsistence, as did the historic inhabitants of the area. Yet exploitation patterns appear to have been altogether different.

MOSS, William, Parcs Canada, Québec

FROM CANNONS TO KODAKS: THE EVOLUTION OF THE FORTIFICATIONS IN THE SECTOR OF THE DUFFERIN TERRACE, QUEBEC (Session 16)

Archaeological research undertaken in conjunction with the systematic restoration of the Dufferin Terrace has provided important insights into military, recreational and domestic uses of a portion of the Upper Town of Québec City. Results of a portion of the 1981 excavations have identified elements of three systems of defence beginning in the late seventeenth century and ending with the construction of the Terrace in 1880. Two successive constructions of the Terrace were documented, and the presence of a restaurant in the early twentieth century was investigated. The common consideration of civil engineering techniques was noted in the presence of drainage systems in all but one of the groups of elements described.

MUCKLE, Robert, Simon Fraser University

THE INTERPRETATION OF SHELL MIDDEN STRUCTURE: AN EXPERIMENTAL APPROACH (Session 6)

The formation and preservation of a shell midden is a complex interaction of cultural and natural processes. Various species of mollusks native to the Northwest Coast have been subjected to a series of experiments aimed at learning more about shell midden formation. The implications of the results of these experiments are presented.

NICHOLAS, George Peter, University of Maine

A REEVALUATION OF EARLY POSTGLACIAL LOW RESOURCE/LOW POPULATION MODELS IN THE NORTHEAST: NEW DATA AND ALTERNATIVE MODELS (Session 8)

A review of the current archaeological and paleoenvironmental data representing the late Pleistocene-early Holocene period in New England and adjacent Canadian Provinces indicated that previous low population/low resource potential/marginal environment models for the Paleo-Indian and Early Archaic occupation can no longer be supported. Five major factors either negate or do not support these models or support alternative models: 1. a recent recognition of a substantial sampling bias against early sites; 2. absence of a regional, closed boreal forest-type pollen assemblage and misconceptions concerning its carrying capacity when present;

3. increased evidence for an extremely broad subsistence base not restricted to large mammals;4. no empirical evidence for correlations between climatic anomalies and cultural discontinuities; and 5. increased evidence of an extensive and continuous occupation of the northeast based on dated and undated early assemblages between 11,000 and 6000 B.P.. One alternative model, based on a higher potential and more stable resource base and on in situ development, focuses on the suite of transgressive landscapes and environments associated with a proglacial lake basin/early riverine system.

NOBLE,William, McMaster University

POTSHERDS, POTLIDS, AND POLITICS: AN OVERVIEW OF ONTARIO ARCHAEOLOGY DURING THE 1970'S (Session 3)

Momentous changes and significant new advances have occurred in Ontario archaeology during the 1970's. This paper endeavours to synthesize the new advancements in our understanding of Ontario prehistory and history, as well as to survey some of the major trends that have shaped Ontario archaeology during this unquieting decade.

HISTORIC NEUTRAL SETTLEMENT PATTERNS (Session 9)

The settlement patterns for the Neutral Iroquois of the Hamilton-Niagara region of southwestern Ontario are providing the most up-to-date information and detailed models currently available for an historic Northeastern Iroquois group. In this paper, thirteen years of settlement research are evaluated and examined according to five ascending levels of enquiry that span low-level definition of features to the higher and most difficult task of reconstructing the physical features of the historic Neutral chiefdom.

PASTORI, R., Memorial University

THE DISTRIBUTION OF ABORIGINAL SITES ON THE ISLAND OF NEWFOUNDLAND (Session 8)

This paper will examine the geographic distribution of aboriginal habitation, burial, and quarry sites on the island of Newfoundland. All of the sites examined are assigned to three aboriginal occupations: the Maritime Archaic, the Paleo-Eskimo, and the rather loosely-defined, poorly understood, "Recent Indian". (For the purpose of this discussion, this last term will be used to designate those Indian cultures postdating the Maritime Archaic occupation.)

An attempt will be made to determine if there is a correlation between archaeological culture and type of local environment

favoured for the three categories of sites listed above. It is expected that this will result in the generation of a number of hypotheses about aboriginal Newfoundland economy and technology which can be tested against future archaeological data. By plotting the distribution of these sites in time as well as in space, it is hoped that more light will be shed on the culture history of Newfoundland. Such a distribution, for example, may suggest something about the interaction between Dorset Eskimo and Recent Indians. In addition, it is hoped that this exercise will provide more information about the manner in which the island's populations were organized. For example, the data may suggest that island social groups were organized in bands corresponding to major bays or other geographic divisions. In conclusion, an effort will be made to predict those areas where a high density of sites should be found. This ought to be useful for both academic researchers and those government agencies entrusted with the preservation of the island's past.

PAVLISH, L., University of Toronto

ARCHAEOMETRY IN THE REPUBLIC OF BELAU, WESTERN CAROLINE ISLANDS, MICRONESIA (Session 1)

A magnetometer survey in the environs of the large megalithic structure known as Bairulchou located on the north end of Babeldoab Island in the Belauan Archipelago (formerly Palau), Western Caroline Islands, Micronesia provided evidence that the large stones used in construction were quarried a few hundred yeards away rather than being brought in by rafts along the coast as has been popularly believed. This view is substantiated by comparison of elemental constituents in the Bairulchou stones and the local buried outcrop. Aspects of the structure's alignment suggest an age for construction. The functional arrangement of the stone 'monument' is discussed.

PEARCE, Robert, Museum of Indian Archaeology

PREHISTORIC NEUTRAL CABIN SITES (Session 9)

During the summer and fall of 1981, the Museum of Indian Archaeology (London) conducted salvage excavations at three small late prehistoric sites, located in a cluster less than 2 km east of the five acre Lawson prehistoric Neutral village. Each of the three small sites covered less than one-half acre and consisted of a single longhouse with associated exterior house refuse deposits.

The three sites, Windermere (AgHh-9), Ronto (AgHh-10) and Smallman (AgHh-14) are interpreted as special purpose hamlets, where men, women and children grew crops, gathered wild plant foods, processed meat and fish and made chert and bone artifacts. It is proposed that these sites represent both agri-

cultural hamlets and food-processing centres serving the main Neutral village in the area, Lawson.

Data from the three hamlets and Lawson are used to formulate a model for prehistoric Neutral settlement and subsistence and to offer a unique glimpse of prehistoric Neutral daily life.

PENDERGAST, James, Merrickville, Ontario

THE SIGNIFICANCE OF A HURON ARCHAEOLOGICAL PRESENCE IN JEFFERSON COUNTY, NEW YORK (Session 16)

No abstract received.

PETERS, Gordon, Superior National Forest Service, Duluth

AN ARCHAEOLOGICAL OVERVIEW OF THE SUPERIOR NATIONAL FOREST (Session 5)

During the last four years, approximately 12,000 acres of the Superior National Forest have been surveyed for the presence of prehistoric and historic sites. This has resulted in the identification and field verification of over 300 sites. While most of these sites require further study in order to ascertain site function and affiliation, some generalizations about the cultural history of the Superior National Forest area can be made from the existing data.

PILON, Jean-Luc,University of Toronto

ARCHAEOLOGY OF THE FORT SEVERN AREA, NORTHWESTERN ONTARIO (Session 5)

Based on data collected during the summer of 1981, it appears that prehistoric and historic settlement patterns were greatly influenced by the ease of access to a diversity of microenvironments. In particular, sites are more abundant and exhibit greater resource diversity (mammals, fish, waterfowl) at the foot of the Rapides du Calcaire where oxbow lakes are present. This is in contrast to sites further down along the river where access to small lakes and streams is severely restricted by the muskeg. These sites contained virtually only caribou remains. In general, the faunal remains from all sites suggest summer and fall occupations although historic winter occupation is attested to at one site.

Although the artefact yields from the prehistoric sites were quite modest, the material culture of the prehistoric inhabitants seems to have lacked a ceramic industry. The exact extent and importance of this negative attribute needs further study.

RAJNOVICH, Grace, Ministry of Citizenship and Culture, Kenora, Ontario

SELKIRK CULTURE ON LAKE OF THE WOODS: THE SPRUCE POINT SITE, DjKq-1 (Session 5)

The Spruce Point site on Lake of the Woods provides the first settlement pattern data of the prehistoric Selkirk period in northwestern Ontario. It contains evidence of at least two oval lodges with interior hearths and pits. The ceramics are related to the southern Selkirk types of Manitoba and are associated with minor inclusions of Blackduck and Sandy Lake.

REID, Peter, University of Windsor

THE EARLY LATE WOODLAND IN SOUTHWESTERNMOST ONTARIO (Session 16)

Some twenty sites in Essex Co have been identified for the early Late Woodland Point Pelee Focus (AD 600-1100), of which eight have been investigated in some detail. Although some of the pottery may suggest links with the Ontario Iroquois Tradition, the available evidence indicates that the people of the Point Pelee Focus were seasonally nomadic hunters and gatherers. The subsistence and settlement practices of these people are discussed, with specific focus on the Cherry Lane and Robson Road sites in Leamington, investigated by the author over the past two years.

RUSSELL, Graham, Illinois State Museum

THE ROLE OF SMALL MAMMALS IN ARCHAEOLOGICAL STUDIES (Session 14)

Small mammal remains from archaeological sites can be used in many ways to enhance interpretations of archaeological data but the most frequent application is in paleoenvironmental reconstructions. Studies of distribution adjustments of species, analysis of community structure, and quantification of clinal variation have all been used effectively in modeling and detecting environmental change. New approaches in paleoecological studies; specifically, an individualistic model of organismic response to environmental change rather than a community unit association approach; have produced greater insight into the nature of environmental change.

Biostratigraphic studies based upon evolutionary development of small mammal species may assist in establishing a chronologic framework for archeological sites when other dating techniques are not available or their accuracy is in question. These studies have direct application to the study of early man sites in the New World. However, biostratigraphic studies are not restricted to Pleistocene

faunas but may be used for Holocene and Historical sites as well.

Subsistence studies generally focus on remains of large to medium sized mammals(bison, deer, rabbits, squirrels, etc.). However archeological and ethnographic evidence have demonstrated that small mammals (gophers, cotton rats, woodrats, etc.) also formed a significant portion of the subsistence base for certain cultural groups. Future studies in subsistence must evaluate the contribution of small mammals to the economic resource base. The segregation of natural vectors for small mammal bone accumulations from those related to human behavior (i.e. the cultural filter) is of particular importance. Therefore, the taphonomy of small mammal remains in archaeological sites must also be pursued in future studies.

SAVELLE, James and R. Will, University of Alberta

DENTAL ANNULI ANALYSIS AS AN AID IN THE DETERMINATION OF COPPER INUIT SUBSISTENCE STRATEGIES (Session 2)

Analysis of dental annuli to determine age and season at death of muskoxen from 19th century Copper Inuit sites on Banks Island is discussed. The results serve to corroborate exploitation patterns of muskoxen as indicated by other lines of evidence. In addition, several methods of dental annuli analysis and their suitability are compared.

SCHNURRENBERGER, Douglas, University of Alberta

MODERN ANALOGUES FOR CLASTIC SEDIMENTATION IN LIMESTONE CAVES (Session 14)

Geoarchaeology can be broadly defined as the application of geological/geomorphological techniques, principles and models to archaeological problems. This application can range from the level of the artifact, site, or regional problem. With the developments in this subfield over the last ten years, geoarchaeology has been elevated from the status of a technical sidelight accompanying archaeological reports to a dynamic role in the formulation and testing of archaeological problems.

Cave sedimentology in Europe has played a prominent role in posing and helping to answer archaeological problems of chronology and adaptation since the earlier parts of this century. Cave sediments have been shown to be amenable to climatic interpretation. Regional Quaternary climatic-chronological frameworks, derived from a series of deeply-stratified caves and rockshelters, have enabled the regional correlation of Paleolithic archaeological cultures beyond the limits of radiometric dating techniques. European cave

sedimentological techniques have rarely been employed in the investigation of caves and rockshelters in North America.

Despite several decades of research leading to an elaborate array of sophisticated analytical methods, the underlying interpretive framework involved in deriving climatic information from cave sediments has yet to be assessed adequately. Significant experimental research has contributed to a limited understanding of some of the variables involved in the dissagregation of limestones. However, there exist few studies of the processes of sedimentation in modern caves and shelters.

Recently, alternative methodologies have been suggested for the climatic interpretation of cave sediments. This approach involves relating the composition and structure of internal cave sediments to changes in the external geomorphic environment. In parts of North America where climatic change has been less severe than in the Pleistocene of western Europe, this recent approach has proved invaluable in addressing the role of small but culturally significant climatic changes.

On the assumption that modern processes in analogous environments may hold the key to understanding conditions of the past, several authors have advocated the investigation of on-going sedimentation in caves and shelters, in either high latitude or high altitude situations. Potentially, such studies can provide information on rates and mechanisms of sedimentation that could be judiciously applied to the analysis of more ancient deposits. Toward this end, a long term research program has been initiated in the Pryor Mountains of southern Montana where limestone caves and rockshelters are distributed across a variety of climatically distinct environmental zones.

A surface sampling program designed to investigate the variables, processes, and rates of deposition at modern cave and rockshelter sites will be implemented with the objective of developing a firm empirical background for the interpretation of ancient deposits. Surface sediment samples will be collected from various portions of caves and shelters situated in a variety of microclimates. Variables of interest include temperature, presumably controlled in part by altitude and solar orientation; humidity; and intrinsic variables having to do with the form of the shelter and the parent material in which it formed. For these purposes, an altitudinal transect will be designed, running from the desert edge to high altitude sectors of East Pryor Mountain and Big Pryor Mountain.

Ideally, from four to five sampling localities will be chosen at different elevations. Within each locality, at least three sampling stations consisting of caves and shelters will be selected. The selection of particular sampling stations will be based upon solar orientation, position with the valley,

parent rock characteristics, and the size of the shelter.

Current research has focused on the detailed examination of Holocene through Pleistocene sedimentary fills in excavated caves. The tight chronological control and additional proxy climatic data (i.e. microfaunal data) afforded in these situations will be used to evaluate alternative methods of cave sedimentological analysis.

In the future it is hoped to expand this project in terms of a latitudinal transect along the eastern flanks of the Rocky Mountains. This research should prove valuable in the interpretation of important excavated caves and shelters in the Canadian arctic and subarctic.

This research project involves personnel from the University of Alberta, the University of Maine at Orono and the Illinois State Museum.

SCHWARCZ, H.P., McMaster University

ABSOLUTE AGE DETERMINATIONS ON SOME PALEOLITHIC SITES OF WESTERN EUROPE (Session 1)

New Th-230/U-234 dates have been obtained for travertines deposited at prehistoric archaeological sites in France, Germany, Hungary, and Britain. Ages can be obtained for deposits ranging in age from 10 to 350 ky (ky= 1000 years B.P.). Mousterian, middle paleolithic industries have been found at Abri Vaufrey in the Dordogne Valley of France, and Ehringsdorf, East Germany. Abri Vaufrey gives dates ranging from 209 ky at its base to 74 ky for the end of the Mousterian sequence. At Ehringsdorf, the Brandschichte, which contain a Mousterian industry and an early Neanderthal skull fragment, yield a date of 210 ky. These dates are much older than has previously been assigned to Mousterian industries in Europe, and suggests the need of some revision of the time scale. The site of Vértesszőllős in Hungary, at which a low-grade Neanderthal was found associated with a pebble tool industry also gives an age of about 210 ky for travertines enclosing the artifact/hominid assemblage. In north Wales, an Acheulian site at Pontnewydd Cave has been dated in the range from 200 to pre-99 ky. Thus, we are finding evidence that supposedly chronologically discrete industries may have been broadly coeval.

SCHWEGER, Barbara, University of Alberta

FOOTWEAR OF BRITISH ARCTIC EXPEDITIONS (Session 2)

Suitable protective clothing is a necessity for survival

under environmental conditions of the Canadian Arctic. A method was devised to document and compare the material, cut, and style of footwear used by 19th century explorers, scientists, whalers, and missionaries. Data derived from written sources, visual communications and footwear artifacts were coded systematically, allowing computerized cross-tabulation analysis of footwear design with temporal-geographical context, specific climatic detail, and personal characteristics of the wearer and the expedition party. Comparison of the footgear design, procurement, and usage by the men on British Arctic expeditions with that of other non-natives in the north facilitates understanding of Admiralty policy and expediting practices, changing technologies, and trading practices between natives and explorers.

SEGAL, Martha, Canadian Conservation Institute

ARCHAEOLOGICAL TEXTILES (Session 12)

The form in which archaeological textiles are found often makes objects very difficult to identify, let alone analyse in terms of materials, weave type, count and techniques of manufacture. Textiles recovered from archaeological sites are often too physically weak to support their own weight or resist any type of manipulation. Because of this very great fragility of archaeological textiles these materials can often not be closely examined by an archaeologist before conservation treatments have taken place. The conservator for his part can often not make well informed decisions on the final configuration and support of fragile textiles without information from the archaeologist or textile curator. For the reasons outlined above it can be seen that in the area of archaeological textiles a close collaboration must exist between archaeologists and conservators for the best and most appropriate results to arise from the work of both.

SHEPPARD, P. and L. Pavlish, University of Toronto

THE USE OF THERMOLUMINESCENCE (TL) IN AN INVESTIGATION OF HEAT TREATMENT IN THE EPIPALAEOLITHIC OF NORTH AFRICA (Session 1)

This paper reports the results of a study which investigates the possibility that the introduction of a new bladelet production technique into the Capsian industry (Algeria and Tunesia) circa. 8,000 B.P. was accompanied by the use of thermal treatment of lithic materials. Tixier (1976) has postulated that this technique was,

in fact, the use of pressure removal of bladelets and that it might have also involved the use of heat treatment. To investigate this problem TL determinations on over 100 samples taken from Capsian bladelets found in assemblages dating both before and after 8,000 B.P. were carried out. The methods used and the results obtained are discussed.

SMITH, Sheryl, Parks Canada, Cornwall

RECENT ROCK ART RESEARCH IN PUKASKWA NATIONAL PARK (Session 5)

Cobble beach features ("Pukaskwa pits") were intensively investigated fro cultural resource management purposes at two sites along the Lake Superior shoreline of Pukaskwa National Park in 1981. This paper describes the various techniques used to build up a meticulous record of the features so that disturbance caused by increased visitation can be monitored and alleviated. Parks Canada's programme of recording, monitoring and evaluating cobble beach feature sites in Pukaskwa National Park is briefly described.

SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL Repre-resentative, Ottawa

THE ROLE OF THE SSHRC IN CANADIAN ARCHAEOLOGY (tentative title) (Session 15)

No abstract available.

STEWART, Frances, Fredericton, New Brunswick

SEASONAL MOVEMENTS OF INDIANS IN ACADIA AS EVIDENCED BY FAUNAL REMAINS AND HISTORICAL DOCUMENTS (Session 8)

Subsistence activities of the Indians of the Maritime provinces and New England states have been divided into two seasons: an inland hunting one and a coastal fishing season. The relative importance of these two activities has been considered by anthropologists (Hoffman 1955 and Nash 1978) but more importantly, evidence for the specific seasons in which these activities were carried out is contra-dictory. According to Bourgue(1973), early historical sources indicate that after 1550 A.D. the Indians exploited the coastal resources in the warm weather and inland ones in the winter. Archaeological evidence from sites in Maine dating from A.D. 200 to A.D. 1150 revealed the opposite; that is, a late winter-early spring occupation of coastal sites.

Faunal analysis of sites in New Brunswick, particularly Minister's Island and the Carson Site from Passamaquoddy Bay, and in Nova Scotia, particularly the Delorey Island Site from Antigonish County, have shown that the archaeological evidence is varied. Secondly, conflicting statements about subsistence occur in the historical documents. These two sources of information are considered and it is concluded that the assumed dichotomy may be an oversimplification of the Indians' subsistence patterns.

STROMBERG, Richard, University of Toronto

A FRAMEWORK FOR STUDYING THULE SEALING (Session 10)

The recent debate on whether the Thule hunted whales was instructive but ignored the fact that during the 8-10 months of winter, whaling would have been impossible. Faunal remains indicate that seals provided the "daily bread", and suggest that the interaction of environment, technology, and society in sealing activities must be examined. This paper presents a framework for such a study.

TAYLOR, W.E., National Museum of Man

THE ROLE OF THE NATIONAL MUSEUM OF MAN IN CANADIAN ARCHAEOLOGY (Session 15)

This presentation is a commentary on the recent history of research and publication in the National Museum .

THOMSON, J. Callum, Memorial University

SHULDHAM 9:A POSSIBLE DORSET/THULE CONTACT SITE IN NORTHERN LABRADOR (Session 10)

Erotic artwork is among the lines of evidence offered as proof of contact between Dorset and Thule Eskimos at this site in Saglek Bay. More mundane, but safer, indications include radiocarbon dates, other soapstone carvings, and house styles.

TUCK, James, Memorial University

PREHISTORIC ARCHAEOLOGY IN ATLANTIC CANADA SINCE THE LAST TIME WE DID THIS (Session 3)

The outline of Atlantic Provinces prehistory presented at this meeting in 1975 can now be seen as a very simplistic one. New information regarding early Indian populations,

their Archaic descendants or successors, and a wealth of data on more recent Indian peoples has expanded and modified this earlier outline considerably. No less affected by recent researches has been our understanding of Palaeo-Eskimo occupations of the northern portions of the Atlantic Provinces. These new data can be used to construct a much more comprehensive, but probably still far from adequate, picture of the prehistory of Atlantic Canada.

TURNBULL, Christopher, Historical Resources Administration, New Brunswick

MORE ADENA SITES IN THE MARITIMES (Session 8)

No abstract received.

VANCE, Robert, Archaeological Survey of Alberta

NEW POLLEN EVIDENCE OF FOREST DEVELOPMENT IN CENTRAL ALBERTA: IMPLICATIONS FOR ARCHAEOLOGISTS (Session 14)

Three sedimentary cores from lakes in central Alberta are analyzed for their pollen content. These data reveal a 5,000 year record of vegetative development in the northwestern extreme of the Aspen Parkland. A reconstruction of late-Hypsithermal environmental conditions is presented and the time current vegetative conditions were established is delimited. These results are considered in the light of archaeological investigations in central Alberta illustrating the value of regional pollen studies in archaeological research.

WALLACE, Birgitta, Parks Canada, Halifax

THE VIKING SITE AT L'ANSE AUX MEADOWS AND AN EVALUATION OF OTHER SELECTED VIKING FINDS (no title received)(Session 13)

No abstract received.

WARRICK, Gary, Simon Fraser University

THE LONG AND THE SHORT OF LATE ONTARIO IROQUOIAN HOUSE SIZE (Session 9)

Temporal trends and variation in Iroquoian house size are examined. Ontario Iroquoian house size increased prior to 1400 A.D. but declined sharply after this date. Several

explanations for this decrease have been offered including increased village exogamy, alteration in village defence strategy, socio-economic change and demographic fluctuation. These hypotheses are evaluated in terms of archaeological, historical, ethnographic, and cross-cultural data. It is proposed that the effects of European trade and contact accelerated indigenous changes in Iroquoian society leading to the disintegration of the longhouse.

WAYMAN, Michael, University of Alberta

COPPER INUIT COPPER TECHNOLOGY (Session 2)

Exposure of the Copper Inuit to outside influences during the 19th century is believed to have caused marked changes in their use of copper. Their original technology, based on the working of native copper, was affected both by the influx of smelted copper and by the increasing availability of tools suitable for metal working.Recent analysis of copper artifacts has pointed out the difficulties in understanding these changes. Modern analytical techniques, including electron microscopy, X-ray fluorescence, neutron activation analysis and X-radiography have been employed in an attempt to trace the development of the technology.

WIDMAR, Francis and M. Thompson, University of Toronto

ARCHAEOMETRY AT THE AKHENATEN TEMPLE PROJECT (Session 1)

Excavations at the Akhenaten Temple site, Karnak, Egypt have revealed unusual diagonal orange-red strata which may potentially provide valuable information regarding the activity at the archaeological site. The archaeologist's question was whether these strata were natural formations or the decomposed remains of a destroyed fired brick wall. If it was fired, was it the result of an intentional firing in a kiln, or the result of a local destructive firing of sun dried bricks? An integrated analytical approach involving geomagnetic analyses, archaeometric dating, and chemical analyses by mossbauer spectroscopy and several types of X-ray spectroscopic techniques (XES,XRF, and XRD) has shown that these red strata are decomposed fired brick from the Akhenaten time period.

WIGHT, Judith, Canadian Conservation Institute

THE CONSERVATION OF ARCHAEOLOGICAL IRON: THE STATE OF THE ART (Session 12)

Archaeological iron represents a major conservation problem due to : 1.the variety and reactivity of its corrosion products; 2. the inherently unstable nature of the metal; and 3. the large quantity of iron recovered from some historic sites.

This paper will outline the approaches that can be taken to stabilize archaeological iron, emphasizing the parameters affecting the choice of a particular conservation procedure. The problems of handling a large collection of unstable artifacts will also be discussed.

WILL, Richard, University of Alberta

MUSKOX EXPLOITATION: HUNTER AND GATHERER SUBSISTENCE MODELS RE-EXAMINED (Session 2)

Over 30,000 refuse bones from two 19th century Banks Island Copper Inuit archaeological sites have been identified and computer data banked. The majority of the faunal remains belong to muskox (Ovibos moschatus). Bone frequency tabulations, as well as computer generated distribution maps document considerable variation in animal butchering and processing patterns at each site. These data are used in developing a framework for modelling 19th century hunter-gatherer subsistence ecology on Banks Island. Similarities and differences between this subsistence model and others presented in the literature are discussed.

WILLIAMS, Jean, University of Alberta

HOLY VIRGINIANUS! A CASE FOR THE CEREMONIAL TREATMENT OF DEER REMAINS AMONG THE ONTARIO IROQUOIS (Session 6)

Numerous perforated White-tail deer humerii were discovered among the faunal remains from the Uren Site (AfHd3), a Terminal Woodland Iroquois village in southwestern Ontario. Closer inspection of these bones, found mainly in two caches, revealed that modification was extremely uniform and thus presented a classic and ubiquitous problem in archaeology-to explain the unknown. Of the several possibilities considered, the explanation for these modifications seems to lie in the classic and ubiquitous archaeological answer,namely, ceremonialism.

WILLIAMSON, Ron, McGill University

EARLY IROQUOIAN SETTLEMENT SUBSISTENCE PATTERNS AND THE SHIFT TO "FORMAL" VILLAGE LIFE (Session 9)

The spheres of behavior or cultural subsystems most frequently examined by archaeologists are those of subsistence and settlement. Integral to the analysis of these and other complex components of a cultural system operating within an ecosystem, is a thorough regional and microenvironmental reconstruction that stressed the dynamic nature of a natural environment (i.e. vegetative successional sequences and

animal population dynamics). However, before attempting to understand the complexities of resource exploitation or a settlement- subsistence system, certain general concepts concerning the relationship between the economy and the rest of the socio-cultural system must be outlined. For the Glen Meyer, this task is best accomplished through an examination of the shift from hunting and gathering to agricultural reliance. An important advantage to that shift, and perhaps causal in nature, was a gradual removal of the need to disperse during the winter season, accomplished by providing enough food to store for use throughout the winter. This was a period of social, political, and economic transition likely characterized by regionally differing commitments to corn and"village life", by the procurement of important, traditionally exploited resources, and by slowly developing changes in the role of women in society. "Formal village life", rather loosely defined in the past, may best be reserved for when this transitional pattern eventually transformed into the historic Iroquoian mode of settlement-subsistence observed by the Jesuits.

WRIGHT, M., Simon Fraser University

INTRA-LONGHOUSE ANALYSIS (Session 9)

No abstract received.

YORGA, Brian, Ottawa, Ontario

ETHICS IN NORTHERN ARCHAEOLOGY (Session 15)

Archaeology in Northern Canada has undergone rapid and unprecedented change in the past dozen years. Most notable has been the rapid development of an applied, or rescue and resource survey branch (with the concomitant addition of substantial private sector funding)as distinct from the more traditional pure or 'research' branch. The increasing importance of the private sector as a funding source has tended to aggravate and intensify a major ethical problem. Increasingly, archaeologists are defining their responsibilities in terms of production of results that generate the continued approval of funding bodies. A greater measure of professional autonomy from private funding agencies is required.

North American archaeology, although concerned with the prehistory of aboriginal cultures, has been reluctant to respond to the needs of, and has been incapable of identifying with modern native groups. It is suggested that we have had no choice. Archaeologists, as practioners of an empiricist (or scientific) world view,project and reinforce assumptions concerning the evolutionary nature of cultural phenomena. These assumptions in turn tend to:

a) denigrate the values and achievements of northern native peoples, and b) award archaeologists the right to disturb and study the cultural resources of northern groups. It is necessary to define for ourselves the limits of the scientific method,and to look beyond.

ZACHARIAS,Sandra and U. Franklin, University of Toronto

INVESTIGATIONS OF ANCIENT COPPER SLAGS FROM NEAR ASPROYIA, SOUTHWEST CYPRUS (Session 1)

Ancient copper slags collected during a site survey in the southwest Troödos mountains were analysed physically and chemically by microscopic and X-Ray methods. Results show that these slags are very similar in composition to other analysed copper slags from Cyprus dated to the Iron Age. They are products of smelting copper sulphide ores on an industrial scale using a carefully controlled reproducible technique- probably matte smelting.

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1 TO CHUCK ARNOLD

JANES LETTER TO BURNE SEEKING C.A.A. SUPPORT FOR POSITIONS.

1983 CAA - HALIFAX

1984 " - VICTORIA.

NOV. 82 - PLAINS CONFERENCE IN CONJUNCTION WITH CALGARY CONF.

FRANCIS FOX - MINISTER OF STATE - RE - CUTBACKS IN MERCURY SERIES