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Association Canadian
Canadienne Archaeological
d'Archéologie Association



RESUMES

Saskatoon

ABSTRACTS

Saskatchewan

CANADIAN ARCHAEOLOGICAL ASSOCIATION
ASSOCIATION CANADIENNE D'ARCHEOLOGIE

THIRTEENTH ANNUAL MEETING/TREIZIÈME RÉUNION ANNUELLE

*The Holiday Inn
Saskatoon, Saskatchewan
April 24 to 27 avril
1980*

Program/
Programme:

Ian Dyck (chair)
David Meyer
Urve Linnamae
George Arthur

Local Arrangements/
Organization locale:

Urve Linnamae (chair)
Apala Society
David Meyer

Book Exhibits/
Expositions du livres:

Karen Elliott

Registration/
Inscriptions:

Saskatoon Archaeological
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ABSTRACTS OF PAPERS

Presented at the Thirteenth Annual Meeting

The Holiday Inn
Saskatoon, Saskatchewan
1980 .

Adams, Gary
Parks Canada Prairie Region

Motherwell Homestead: A Functional Application to
Pattern Recognition. (Session 14)

In 1978 distribution analysis was conducted on the artifacts from the Motherwell Homestead, a 20th century occupation. It was assumed that artifacts grouped into functional categories would demonstrate recognizable patterns. Two applications of the resultant patterns were employed to interpret site activity patterns. First, tracing the distribution of individual functional categories provided insight into activity areas. Second, comparing the frequency of various functional groups within a specific area provided a perspective of the overall usage of that area. Most of this interpretation could then be checked against historic records as a test of validity. This procedure provided insights into Stan South's method of pattern recognition and will be of interpretive value to the excavations.

Adams, Nick
Ontario Ministry of Culture and Recreation

The Whitefish Island Site, Sault Ste. Marie: An Important Middle
Woodland Fishing Village at the Hub of the Upper Great Lakes.
(Session 1)

The existence of a major fishery at the base of the St. Mary's rapids and the associated Ojibway village has long been known from documentary sources. In 1974, a major prehistoric site dating from the second or third century B.C. was discovered, confirming the suspicions of some researchers that present day Sault Ste. Marie was a focus of proto-Ojibway people. Excavations since that date have revealed evidence of intensive occupation from the early Middle Woodland period until the turn of the nineteenth century. The major area of Middle Woodland occupation is discussed in this paper with specific reference to the ceramics.

Alexander, Diana
Simon Fraser University

The Limitations of Traditional Surveying Techniques
in a Forested Environment. (Session 15)

Canadian archaeology has been dominated by the traditional approach to site survey. Although the intuitive concepts inherent in these surveys have often been gained from intimate familiarity with the primary data, this "gut-level" of analysis introduces the possibility that the resulting conclusions reflect preconceived personal biases. This comparison of a traditional survey with a probabilistic survey of the same area reveals that the results of a traditional survey cannot be legitimately used in an analysis of settlement patterns. Specifically, this study indicates that sites in the Peace River area are NOT associated with river confluences and secondary river drainages as was implied by the traditional survey data.

Anderson, Atholl
University of Otago, New Zealand

The Relevance of Iron Age Trade to Economic Change
in Northern Sweden. (Session 12)

This paper is concerned with explaining the decline of moose and beaver hunting economics in central Norrland during the Iron Age (about 400 B.C. to 1000 A.D.) and their replacement by Samic reindeer husbandry. Decimation of the beaver and other fauna, in response to developing markets in furs, is hypothesised as a major cause of change. The fur trade led to over-exploitation of resources vital to the survival of hunters and attracted farmers to the northern regions where their husbanding techniques were adopted by the Samer.

Arthur, George
University of Regina

Lithic Quarries in Southern Montana. (Session 10)

A variety of cherts and quartzites from several aboriginal quarries are displayed.

Auger, Réginald
Université du Québec

Application pratique et théorique de la technique de photographie verticale. (Session 7)

La communication portera sur l'utilisation en laboratoire des photographies verticales prises sur le terrain avec le bipied Whittlesey. Cette technique qui a facilité l'enregistrement des structures-témoins dorsétiennes sur le site à occupations multiples Diana 4. Réalisation des plans et délimitation des aires d'occupation. Formulation d'hypothèses concernant le répartition des pierres dans une aire stratigraphiée ou non stratigraphiée.

Baldwin, Stuart
University of Alberta

Artificial Cranial Deformation from Central Alberta.
(Session 10)

The purpose of this display is to alert archaeologists to the presence of a population practising cranial deformation, along the North Saskatchewan River in Alberta. Information regarding artificial deformation elsewhere in the prairie provinces is solicited.

Ball, B.F. and Bobrowsky, P.T.
Simon Fraser University

Application of Trend Surface Analysis to Archaeological Site Assessment: Advances in Merlin's Projections. (Session 3)

Using trench depositional data from the Beach Grove site (DgRs 1) trend surface analysis is used to map subsurface contours. Conventional strategies for defining archaeological site deposits have been shown to be problematical. Site testing techniques such as uncontrolled test pits and backhoe trenches are widely used by archaeologists to evaluate sites. However useful these techniques may seem, they are concomitantly destructive and unreliable for revealing the spatial extent of deposits. Subsurface analysis employed by geologists can be applied with equal success in archaeological contexts. Trend surface analysis provides a

potentially more reliable method of depositional evaluation. Results from analysis of the Beach Grove site provides a test case for this contention. Vertical and horizontal limits derived from transect trenching provide a data base for trend surface projections. The accuracy of such projections indicates that efficient employment of sediment core data may be used with less destructive consequences to assess subsurface site characteristics.

Banning, E.B. and Pavlish, L.A.
University of Toronto

The South Wadi Hasa Survey, Jordan. (Session 15)

During six weeks in 1979 an archaeological survey was conducted in an area of about 100 km² bordered by the Wadi Hasa on the north and including the wadis 'Afra and eth-Themed along with adjoining highlands. Artifactual materials sampled during the course of work ranged from Lower Palaeolithic to Ottoman times. The survey strategies applied to this mountainous, heavily dissected and arid region and their relative feasibilities will be discussed with reference to chronological, ecological and historical problems of interest to the archaeologist.

Bibeau, Pierre
Université du Québec

Analyse du site dorsetien JfE1-30 du Nord-Ouest de l'Ungava.
(Session 7)

Cette communication portera sur l'analyse préliminaire d'un site dorsetien fouillé au cours de l'été 1979. Ce site qui se trouve sur l'île du Diana, au Nord-Ouest de l'Ungava, comprend plusieurs structures d'habitation Paléo et Néo-esquimaudes. La fouille a révélé la présence d'une structure de creusement dorsetienne qui par sa forme oblongue rappelle les maisons-longues, avec par contre des dimensions plus réduites (3m x 6m). Des emplacements de tente étaient superposés à la structure de creusement. Une cache dorsetienne juxtaposée à cette même structure de creusement contenait les restes de diverses espèces de mammifères terrestres, marins, ainsi que d'oiseaux. La fouille de d'autres emplacements de tente, situés à proximité permet de compléter les analyses concernant la saisonnalité de l'occupation du site.

Bobrowsky, Peter T.
Simon Fraser University

Zooarchaeological Bandwagons: The Red River Cart Approach In
Canada. (Session 6)

Canadian archaeological literature from 1972 to the present dealing directly and indirectly with faunal remains is examined in the light of past and present European and American studies on the subject. Zooarchaeology proper as distinct from faunal analysis is shown to be a rare subject in Canadian studies. The state of zooarchaeology is examined at several levels of analysis from collection and identification to final synthesis. It is evident that advances in method and theory in zooarchaeology as performed by Canadian researchers requires stimulation and greater support by the publishing media if we as Canadians wish to dispose of the lag effect characterizing our endeavours.

Brizinski, Morris
McMaster University

Where Eagles Fly: An Archaeological Survey of Lake Nipissing.
(Session 1)

The aim of this paper is to (a) review the Nipissing cultural sequence of the Late Woodland period; (b) provide an interaction model in which to examine Nipissing culture history; and (c) discuss the effects of European contact upon Nipissing society.

Broderick, Michael
B.C. Provincial Government, Heritage Conservation Branch

The Identification of Blood, Resin, Starch and Fats from
Lithic Artifacts. (Session 16)

Chemical reagents and stains are used to identify organic residues from lithic artifacts. Inexpensive, non-destructive techniques are proposed which offer information pertaining to artifact use. Examples of the application of these techniques to a variety of lithic artifacts from the Pitt River Site, located in Port Coquitlam, British Columbia, are provided.

Buchner, A.P.
University of Winnipeg

Oxbow Distribution and the Anomalous Winter Hypothesis.
(Session 8)

The distribution of dated Oxbow components is considered relative to the ecological setting of each site. The observed pattern is explained in terms of on-going climatic changes which induced a shift in resource utilization and site distribution.

Burley, David V.
Parks Canada Prairie Region

Urban Archaeology: The Relationship of Theory to Data.
(Session 14)

Although the excavation of large scale urban sites is hardly new to archaeology, the inclusion of the North American city and town within that group is but a recent phenomenon. Moreover, this form of urban archaeology not only concentrates on the historic context but has also spilled over into the contemporary. The basic theoretical premise of the urban archaeologist is the treatment of the city as a single site composed of a multitude of inter-related components (individual complexes). Beyond this, there has been a growing tendency to build archaeologically relevant models from the vast body of urban sociological and anthropological theory. The present paper explores the relationship and applicability of this theory to urban archaeological data.

Burnip, Margaret and Adams, Gary
Parks Canada Prairie Region

A Study of Riverfront Activity Patterns at York Factory.
(Session 14)

Salvage excavation at York Factory has been concentrated along the river edge of the Hayes River. Sampling and excavation have intimated that selective activities were associated with this area. This paper proposes to examine features, structures and artifacts within a defined riverfront area to ascertain patterns of activity and construction associated with that area, in the context of an 1830 to 1957 fur trade depot.

Carmichael, Patrick H.
Trent University

"Smokey the Bear Syndrome vs. Positive Feedback
Between Fire Ecology and Human Populations" (Session 12)

In the past few decades abundant evidence has been produced to suggest that rejuvenation caused by periodic forest fires is usually beneficial to man. The distribution and abundance of food resources available to hunting and gathering groups are critical factors influencing the maximum population size an area can support, the size and distribution of local residential groups, and the frequency with which they must move. This paper examines the effects of fire on forest environments and the role of fire in an ecosystem. It concludes that forest fires usually benefit man and the ecosystem of which he is a part by "flushing" the forests and increasing certain species of plants and animals. This in turn has implications for reconstructions of prehistoric carrying capacities and their attendant social variables for hunting and gathering peoples. The opposing view, that forest fires are always ecological disasters, is seen as symptomatic of "Smokey the Bear Syndrome."

Chapdelaine, Claude et Clermont, Norman
Université de Montréal

Les Problèmes de Représentativité des Collections de
surface. (Session 15)

Résultats d'expériences sur un site où les restes artefactuels sont très abondants. Les collections de surface s'avèrent excellentes dans la détermination du contenu artefactuel mais elles livrent peu d'informations utiles sur l'organisation culturelle de l'espace.

Chisholm, Brian
Simon Fraser University

Carbon Isotope Fractionation: An Aid to Diet Reconstruction.
(Session 4)

Observed differences in stable carbon isotope ratios between terrestrial and marine plant types may be traced through food chains, appearing as ratio differences in the ultimate consumer(s). Carbon isotope ratio measurements on human archaeological bone should therefore permit distinction between marine and terrestrial sources for the diet of the individual(s) measured. If dietary intake is mixed some estimate of the degree of mixing might be possible. The analysis involves extraction of collagen from recovered bone samples and combustion of the collagen to obtain CO₂. The CO₂ is then analyzed with a mass spectrometer to determine the stable carbon isotope ratios. Similar ratios are determined for potential diet materials. Comparison of the two sets of results allows estimation of the diet source for the measured individual(s). This paper will outline the analytical technique and present some preliminary results.

Cinq-Mars, Jacques
National Museum of Man

Les abris (I & II) du Poisson-Bleu, Yukon septentrional.
Notes préliminaires et recherches en cours et futures.
(Session 12)

Les abris (ou grottes) du Poisson-Bleu sont situées le long du cours moyen de la rivière Bluefish, un tributaire de la rivière Porcupine, au Yukon septentrional. Grâce aux résultats des sondages qui y ont été effectués en 1978 et, surtout, en 1979, nous sommes en mesure de dire que ces gisements recèlent des des preuves tangibles d'une occupation humaine associée à une faune très riche datant de la fin du Pléistocène (autour de 13,000 B.P.). Une rare combinaison d'éléments culturels, fauniques et botaniques, se retrouvant en plus dans un contexte peu ou pas remanié, fait de ce site un lieu unique dans les annales d'un univers béringien en voie d'extinction.

Clermont, Norman et Julien, Michèle
Université de Montréal

La Distribution Spatiale des Débris Alimentaires et sa
Signification Culturelle. (Session 15)

L'analyse des ossements naturels et de leur position permet à l'archéologue l'accès à de nombreux comportements de l'homme préhistorique. Etude particulière de la distribution de plus de 50,000 os sur la station No. 4 de la Pointe-du-Buisson.

Conway, Thor
Ontario Ministry of Culture and Recreation

A Pictograph Is More Than a Painting (Session 5)

The study of prehistoric Ojibwa Rock Art is progressing beyond a descriptive stage into synthetic and interpretative levels. Recently discovered pictograph sites in northern Ontario are discussed with reference to Ojibwa cosmology and folklore. Various thematically linked groups of paintings are shown to represent Algonkian divisions of nature and celestial phenomena.

Cook, John P.

Obsidian Trade in Alaska: A Progress Report. (Session 2)

In the last 10 - 15 years, instrumental neutron activation analysis has led to increasingly accurate characterization of a number of materials. The present project deals with identifying different groups of obsidian in Alaska, and mapping their distribution. Nine different source groups have been identified so far (three more in Canada). The distribution clearly delineates several long lines of communication - over 800 km - and clusters or nodes deriving from several sources. Archaeological sites between Fairbanks and the Canadian border contain obsidian from as many as six different obsidian sources.

Cormie, Allison B.
Simon Fraser University

Tephrochronology: X-Ray Fluorescence as a Rapid Instrumental Technique for Fingerprinting Volcanic Ashes. (Session 12)

The potential of tephrochronology as an aid to strata interpretation has been recognized by archaeologists and geologists and efforts have been made to fingerprint volcanic ashes discovered in the field. At Simon Fraser University we have used energy dispersive X-ray fluorescence analysis of trace elements in glass shards at a rapid technique for identifying tephtras in B.C. Additional fingerprinting methods which have been examined in this study include alpha counting and neutron activation analysis. The results and problems of sample preparation will be discussed in this presentation.

Crockford-Dawson, Susan
British Columbia Provincial Museum

The Distinctiveness of Some Obscure Skeletal Elements Encountered in Faunal Analysis. (Session 6)

Anatomy books often neglect to illustrate certain bones that turn up during the preparation of animals for comparative skeletal collections. Of several worth mentioning, the emphasis in this paper is on the hyoid apparatus and the tracheal bulla of birds, which appear to be distinctive enough to warrant close examination by faunal analysis. Archaeologists building up comparative skeletal collections should be aware of the existence and usefulness of these highly identifiable elements, as they are often lost or broken during the preparation process.

Daechsel, Hugh
McMaster University

The Identification of a Middle Woodland Occupation in the Ottawa Valley. (Session 1)

A brief description and interpretation is provided for the material recovered from Sawdust Bay, a small Middle Woodland site located on the Ottawa River. The identification of the Sawdust Bay material is presented in light of the current framework provided by archaeologists for the Middle Woodland in southern Ontario. The clustering of certain ceramic attributes such as the high frequency of pseudo-scallop shell decoration and interior brushing indicate that this material, while reflecting general similarities with both the Laurel and Point Peninsula, may be more appropriately placed within the Ottawa Middle Woodland.

Daly, Michael J.
Ontario Ministry of Culture and Recreation

Protection of the Tie Creek Boulder Site. (Session 5)

Tie Creek is an archaeo-astronomically significant petroform site in southeastern Manitoba. Responding to the danger of potential damage by winter recreational vehicles, the Manitoba government has provided funds for the erection of a 3/4 mile-long chain link fence to enclose the eight known features. Planning for a possible educational parkland is currently underway. Protection for future archaeological studies, however, must be the paramount concern.

Davis, Leslie B.
Montana State University

Oxbow Manifestations in Montana and North Dakota. (Session 8)

Occurrences of Oxbow Complex manifestations in Montana and North Dakota, with primary emphasis on comparative morphological, spatial, and historical relationships with other Early Middle Period complexes, will be documented and discussed. Rocky Mountains-foothills-high plains-tall grass prairie natural settings will thus be inspected for the presence of Oxbow as a distinctive "Archaic" type adaptation responsive to widely varying resource potentials.

Denton, David
McGill University

A Preliminary Culture-Historical Framework for the Central Interior of the Quebec-Labrador Peninsula. (Session 4)

On the basis of a new series of C-14 dates, typological data, and evidence of changing patterns of raw material usage resulting from recent archaeological investigations in the Caniapiscau area, a preliminary culture-historical framework is presented for the central-interior of the Quebec-Labrador peninsula. An attempt will be made to relate the Caniapiscau chronology to developments in other portions of the peninsula such as the coast of Labrador, the James Bay area and the north shore of the St. Lawrence. The problems inherent in the data, which makes such an initial formulation difficult, will be discussed.

Dodd, Christine
Simon Fraser University

The Longhouse: An Ethnohistoric Perspective. (Session 13)

This paper synthesizes the ethnohistoric documents as they pertain to the longhouse of the Iroquoian speakers of the Northeast. The longhouse is discussed in terms of form (eg., shape, size, method of construction) and function (eg., residential, ceremonial). This ethnohistorically derived model is then compared to the relevant archaeological data. Discrepancies between the two may be, in part, the result of regional environmental variations, ethnic differences...either not perceived or not deemed worth noting by the seventeenth century observer.

Dods, R. Robin
University of Toronto

Lithic Raw Materials and Regional Utility. (Session 11)

A major review of Ontario prehistory conducted under the auspices of Parks Canada, Ontario Region, afforded the systematic examination of a vast number of archaeological sites. Collections were viewed, literature reviewed, and many sites were visited. During the study it became evident that lithic raw materials may be characterized by their local and regional utility. Some of the regional lithic resources have wide distribution and may become markers in the development of network analysis in Ontario. This paper deals with the practicalities of quick visual identification of some of the lithic materials in regional use and the location of their source. The objective of this paper is to allow the non-lithic expert quick identification of perhaps exotic elements in his site assemblage. Only when we have built a data base of distribution can we move to the network level.

Dyck, I. G.
Saskatchewan Museum of Natural History

Initial Work at the Sjevold Site, Saskatchewan. (Session 10)

The Sjovold Site is a small twenty component camp or activity area in the South Saskatchewan River Valley near Outlook. This display shows the major results of 1979 excavations including the stratigraphy of a deep profile, some of the late side notch and Avonlea artifacts, and photographs of hearth and rock features.

Epp, H. T.
Saskatchewan Environment

Coping With Changing Values In Archaeology. (Session 3)

Recent trends in archaeology, particularly its involvement in the environmental impact assessment process, have brought the discipline into the world of the business contract. This has resulted in a lessening of peer control over the quality of work, and a number of archaeologists recently have expressed fears that this situation may erode the discipline. Some quality control of contract work is possible because contractors who produce poor quality work will not long remain in business. Further control is possibly by archaeologists entering the planning and decision making arenas of public life, which will ensure that their interests will be met during the assessment and evaluation processes. This means participation by archaeologists in non-research activities, but, in government and business. This is essential for their survival.

Eyman, C. and Vickers, Rod
University of Calgary

Ethno-archaeology in the Highlands of Viti Levu. (Session 10)

This is a preliminary report using oral traditions to locate and test known sites within the territory held by one chief.

Finnigan, James T.
University of Saskatchewan

Interpreting Tipi Ring Structure: Facts or Fancies.
(Session 15)

This paper presents the results of the author's investigation of the tipi rings at the British Block Cairn site in Alberta. Fifty-one tipi rings were mapped in an attempt to derive information on the way tipi rings were structured. Additional information on the weights of the rocks used, and on their depths below surface, was obtained for 24 of the tipi rings. The analysis of this data will be discussed in terms of its potential for unraveling cultural patterns, and chronology, at tipi ring sites.

Fitzgerald, Bill
McMaster University

Foreign Manifestations in Early 17th Century Neutralia. (Session 1)

Archaeologically identifiable manifestations and intensity of ethnohistorically recorded contacts the Ontario Iroquois Neutral had with adjacent aboriginal groups and Europeans during the A.D. 1615-1651 pre-dispersal period are becoming more readily evident. Hostilities between the Neutral and the Asistaguerouon were reported as early as A.D. 1615 by Champlain, and also by the Jesuits in the 1640's, when they noted that numerous prisoners, mostly females, were taken by the Neutral. The high percentage of shell tempered pottery and attributes such as notched appliqué strips on ceramics from sites of the northern tier likely represent such Michigan intrusions. The quantity and variety of European items in Neutral artifact inventories does not follow a regular and steadily increasing pattern, and the "Brûlé effect" hypothesis will be forwarded to explain the sudden explosion of European goods in Neutralia.

Fladmark, K.R.
Simon Fraser University

Microdebitage Analysis: Initial Considerations. (Session 2)

Microdebitage is defined as by-products of lithic manufacturing, ranging in size between 1.00 and 0.0063 mm in maximum dimension. Great quantities of microdebitage are produced in all flaking activities and can be microscopically identified and quantified. The usefulness of this procedure is discussed in terms of: (1) site identification during survey; (2) site verification after intensive macroscopic surface collecting; (3) intra-site analysis of activity density; (4) identification of aeolian or fluvial re-deposition, and (5) the identification of task-specific areas within sites.

Forsman, Michael
Archaeological Survey of Alberta

Searching for Material Culture Differences in Recent Settlements. (Session 14)

In the last few years, quantities of archaeological data have been recovered from late nineteenth and early twentieth century sites in northwestern North America. A preliminary analysis of selected artifact groups from these sites has now been completed. Differences and similarities in the artifact assemblages are being attributed to underlying cultural forces, economic bases and political influences.

Foulkes, Ellen V.
Trent University

The Fulton Island Site: A Key to New Brunswick Prehistory.
(Session 4)

Systematic archaeological research has only recently begun in the Maritime Provinces, but much has been learned through the efforts of Sanger, Davis, Turnbull and others. However, there are still large gaps in our knowledge of Maritime prehistory. Fulton Island, a stratified camping site in the Saint John River Valley, presents data crucial to the reconstruction of culture history in the area. The ceramics in particular are important. Large collections of the past lie in the Saint John Museum, but without provenience they are of little value. Fragments representing more than 25 vessels from 60 centimeters of strata at Fulton Island, complemented by five radiocarbon dates (with more forthcoming) now provide a framework for a regional ceramic sequence. The Fulton Island site, characterized by a multitude of hearths scattered through up to two meters of alluvial deposits,

lies in an area of natural abundance. The waterways, lakes and marshlands nearby offer migrating and breeding waterfowl, spawning runs of gaspereau, salmon, eels and many other species of fish, plus a variety of large and small mammals. The site presents further evidence for aboriginal inland exploitation during the summer, in contrast to the early Contact pattern of coastal habitation through the warm months.

Gibson, T.
University of Alberta

Remnant Oxbow on the Northern Plains: The Evidence and its Implications to Regional Prehistory. (Session 8)

Sites displaying Oxbow and related complex materials in anomalously late contexts are reviewed. An attempt is made to reconcile the evidence with existing models of Northern Plains prehistory and to suggest alternative interpretations.

Gordon, Bryan C.
National Museum of Man

Archaeological Site Seasonality using Dental Annuli of Migratory Fauna - Caribou/Reindeer. (Session 16)

Using teeth taken from a control sample of caribou recently killed throughout the Kaminuriak range of Manitoba and the Northwest Territories, the effects of seasonally predictable annual herd movements are seen in monthly changes in the cementum annuli. Known location, sex and age compare favourably in the number of annuli, presence of rut lines in males and predictable location of migratory animals based on time of year. With this control sample as a base, teeth were mounted, photographed and analyzed from archaeological sites in the adjacent Beverly range and from 54 Magdalenian sites in France. Our goal is to establish human site seasonality and the possibility of establishing ancient herd movements. Technical problems of tooth analysis, sampling problems and archaeological controls will be discussed.

Gordon, Diana
Quebec, P.Q.

Reflections on Refuse: A Contemporary Example from James Bay.
(Session 6)

A modern Cree winter campsite in James Bay, Quebec provides an interesting example of faunal bone treatment and distribution. In the field identifications and observations are compared with ethnographic data to determine in what ways the faunal remains reflect the activities of the occupants. Some implications for prehistoric boreal forest sites are explored.

Grainger, Dana-Mae
Parks Canada

Faunal Assemblage from Late Woodland Component of Wanipigow Site (Manitoba). (Session 6)

A description of the faunal material associated with the Woodland component of a multi-component site near Bissett, Manitoba is presented in this paper. Its implications in terms of resource utilization for the Woodland period as well as the later Fur Trade period are discussed.

Greer, Sheila C.
University of Toronto

Aspects of the Later Holocene Prehistory in the Old Crow Area, northern Yukon Territory. (Session 12)

Field investigations in the Old Crow area by J. Cinq-Mars and myself as part of the Northern Yukon Research Programme have produced late Holocene site components which predate and differ significantly from the Late Prehistoric (Athapaskan) occupations as identified by R. Morlan at the nearby Klo-Kut site and R. LeBlanc at the Rat Indian Creek site. Excavations and testings at the multi-component Old Chief and Lazarus sites will be discussed and data on stratigraphy and three semi-subterranean housepit features presented. Site location and available subsistence data as derived from faunal remains will be summarized for these two sites. The need for detailed technological and typological analysis of the lithic remains will be stressed, a method currently in progress by the author.

Haley, Shawn D.
University of Toronto

The Archaeological Site and Its Place in a Synthesis of
Ontario Prehistory. (Session 11)

Synthetic approaches to prehistory in Ontario and elsewhere have been based on many different aspects of archaeological data. This paper will deal with one method for grouping data which allows for a somewhat more widely applicable synthesis. It will be suggested that whatever data set is chosen as a basis for the synthesis, the most important element in the comparative aspect of the synthesis is the site as a whole. Of particular importance will be the unique/typical dichotomy in terms of fitting sites into appropriate time periods or cultural units. The definition of a "site" will also be discussed.

Heitzmann, Roderick J.
Historical Resources Consultant, Edmonton, Alberta

Systematic Data Recovery and Archaeological Interpretation Based
on Linear Highway Survey in Alberta. (Session 3)

The problem for most cultural resources impact studies is that the archaeologist does not make the decision of where to look. The choice of areas to be examined is often determined by where impact will occur. This is the situation for most highway surveys as well as other linear surveys such as pipelines. Beyond identifying and assessing archaeological and historical sites, is there further data that can be obtained in such studies? For the last two years, 390 km of roadway have been examined and data on the topography, surficial geology, and vegetation has been recorded. The results are new information on site preference and site density in various areas of Alberta.

Hood, Bryan,
Trent University

Nuka susutok-5: A Maritime Archaic Habitation Site in the Nain
Region, Labrador. (Session 4)

Nukasusutok-5 is a large Maritime Archaic habitation site suspected to date ca. 4,500-5,000 B.P. Excavations in 1979 produced a tent ring structure with associated midden deposits as well as a possible cemetery. These features and the associated tool assemblage are described and evaluated with regard to their implications for the Maritime Archaic sequence in northern Labrador.

Howes, Donald
Washington State University

A Predictive Model for Foothills Site Location. (Session 15)

The Beddington Creek survey yielded a total of 75 sites, consisting of habitation sites, kill sites and cairns and rock alignments. The variables of site type, site area, physiographic category and distance to water are analyzed by X^2 and ANOVA techniques to determine correlations between site and physiographic variables. These correlations are then used to develop some predictive statements concerning the location of archaeological sites within the foothills region.

Huggins, Rob and Weymouth, John
University of Nebraska

A Progress Report on Archaeological Prospection. (Session 16)

Various types of archaeological prospection techniques have been used in past years to aid in locating the physical remains of cultures. Traditionally, these techniques have proved most useful in detecting the remains of larger scale architectural features, such as those found in an Old World setting. The Nebraska Center for Archaeophysical Research (Department of Physics, University of Nebraska) under the direction of Dr. John Weymouth has been extensively involved in magnetic surveying and has utilized the method in a variety of prehistoric and historic settings in the United States. Recent improvements in instrumentation, including $\frac{1}{2}$ y sensitive magnetometers, micro processor controlled data collection systems and the use of trend analysis, filtering and model studies to interpret the data have increased the resolution of the method for locating cultural features. Experiments with resistivity surveying also yield promise for detection of archaeological remains in Plains regions. In general, even when used in prehistoric areas which have less concrete physical remains, these two forms of

archaeological prospection can provide a valuable contribution towards cultural assessment and the establishment of a stratified sampling strategy in preparation for excavation.

Jamieson, Susan M.
Washington State University

Economics and Ontario Iroquoian Social Organization. (Session 1)

The economic behaviour of the historic Huron and Neutral Iroquois is examined and fitted against a generalized model of exchange. It is concluded on the basis of interplay between material flow and social organization structures that the Neutral were a chiefdom, the Huron only slightly less complex developmentally. Implications for archaeological research are discussed.

Tim Jones
Canadian Rock Art Research Associates

Fish Guts and Rock Painting: Ethnography Informing Archaeology.

Ethnographic information derived from Indian folk tales and cultural practices can inform archaeological research in two ways: (1) by suggesting prehistoric religious or cultural significance attached to given sites and artifacts, and (2) by providing data related to the more usual empirical concerns of archaeologists. Both aspects will be discussed but an example of number 2 will be reviewed in detail: the use of isinglass as a likely binder for paint formulations used in the creation of Canadian shield rock paintings is indicated by studying ethnographic observations of northern Cree, certain folk tales, and linguistics.

Keenlyside, David L.
National Museum of Man.

Late Prehistory and Coastal Attrition in Northern Nova Scotia.
(Session 4)

Archaeological investigation of shell midden sites in north-coastal Nova Scotia emphasize a Late Prehistoric maritime adaptation characterized by a distinctive tool assemblage. Comparisons between site surveys in this region over the past sixty-five years suggest a rapidly increasing rate of coastal site attrition.

Kennedy, Clyde C.
The Ottawa Valley Historical Society

An "Adena" Burial In The Upper Ottawa Valley. (Session 1)

A red hematite sprinkled burial, dated to A.D. 35⁺ 100, found near Pembroke, Ontario, in the Upper Ottawa Valley, was accompanied by four chert blades ranging in length from about four to nine inches; 212 rolled, native copper beads; two small, remnant pieces of fabric preserved by contact with copper; and a deposit of "limonite", possible altered pyrite, bearing an imprint of birch bark. Two of the blades conform to Don W. Dragoo's "Robbins" blade classification in the late Adena burial ceremonial of the Ohio Valley. Another blade, ovate, is similar to one found in an "Adena" burial at Sillery, Quebec, and the fourth blade is lozenge-shaped. The chert appears to be from outside Ontario and Quebec, possibly from Ohio or Illinois. The burial date and dates of 85 B.C., 80 B.C., A.D. 90, A.D. 95 and A.D. 200 for the Ottawa Middle Woodland components at five sites in the Upper Ottawa Valley all fall within the ca. 500 B.C. to A.D. 200 period Dragoo proposes (1976) for the "middle and late phases" of Adena and some trade or gift system apparently extended into this region.

Knight, Dean
Wilfred Laurier University

Settlement Patterns at the Ball Site: A Study in Huron Town Planning. (Session 13)

Five years of excavation at the Ball Site has revealed some interesting settlement pattern data previously unknown in Huronia. The houses have a definite and specific orientation on the site which suggests forethought and planning in the village construction. As well there appear to be groups of houses which are more closely related to each other than to the other houses on the site. Such house associations would suggest some type of social unit larger than the nuclear family.

Kritsch-Armstrong, Ingrid D.
McMaster University

Lake Abitibi Revisited (Session 11)

The excavation this past summer of the Jessup Site (DdGw-2) on the south shore of Lake Abitibi, revealed both Early Laurel and Archaic occupations. The technology, subsistence and settlement pattern of these two occupations will be examined on the basis of the lithic, faunal, ceramic and environmental evidence.

Latta, Martha A.
University of Toronto

Environmental Parameters to Ontario Prehistory: the Hills
Environmental Summary and Its Significance for Archaeology.
(Session 11)

Work over the past three decades by Professor G. Angus Hills, Faculty of Forestry and Landscape Architecture, University of Toronto, has produced a classification of biological productivity based on thermal, moisture, soil and vegetation characteristics for the province of Ontario as a whole. Use of this classification for a synthesis of prehistoric occupations is discussed, together with its implications for future research in the province.

Laver, Marilyn E.
Canadian Conservation Institute

Studies on Arctic Metal Fragments. (Session 16)

The methods used in the examination of some recently excavated metal artifacts from the Arctic are described. These include radiography, x-ray fluorescence, x-ray diffraction, atomic absorption spectrophotometry, and metallography. Emphasis is placed on the fact that a great deal of information can be obtained non-destructively or with the aid of an extremely small sample. This is illustrated using artifacts of bronze, brass, smelted and native copper, and meteoritic iron.

Le Blanc, Raymond
University of Toronto

The Late Prehistoric Period in the Northern Yukon
Territory: The View from Rat Indian Creek (Session 12)

The Rat Indian Creek site (MjVg-1) is situated on the right bank of the Porcupine River, near the village of Old Crow in northern Yukon Territory. Excavations over the course of three field seasons at this late prehistoric site have disclosed the presence of seven cultural horizons which span the period from approximately 2000 years ago to the recent ethnographic past. A rich and varied assemblage was retrieved from this site. In addition to several classes of lithic materials, excellent preservation factors allowed the recovery of a substantial number of antler, bone and bark artifacts as well as 50,000 plus faunal specimens. This paper will briefly review some of the results of the study of these data and outline the evidence for marked technological change during the early part of the second millenium A.D.

Lebrèche, Yves
Université du Québec

DIA4-F, une structure de creusement dorsétienne du nord-ouest
de l'Ungava. (Session 7)

Cette habitation présente un intérêt particulier pour la compréhension des modes d'installation des Paléo-esquimaux sur l'île du Diana; en effet, elle se trouve en retrait des autres structures de creusement dorsétiennes qui sont plutôt groupées sur les plages plus basses; du plus, nos observations ont permis de constater des différences notables quant à l'intensité ou la durée des occupations successives de cette aire.

Lee, H. W. and Beukens, R.P.
University of Toronto

Preparation of Milligram Samples for Radiocarbon Dating with
Electrostatic Accelerators. (Session 4)

An apparatus has been constructed for producing acetylene (C_2H_2) from milligram samples of archaeological origin, groundwater carbonate, charcoal and dissolved carbon. The acetylene gas is subsequently cracked into a 1 mm diameter dimple on the flat face of an aluminium sample holder by a radiofrequency glow discharge with a measured efficiency of greater than 82%. These graphite-like carbon samples are ideal for use in the negative ion sputter source commonly employed in accelerator dating. High quality C^- beams of up to 4.4×10^{13} C^- ions per second have been produced for as small as 150 gram of (cracked) carbon. If this sample was contemporary this beam would contain $53^{14}C^-$ ions per second. Results from the latest radiocarbon runs will be presented.

Long, Robert J. and Dyck, Ian G.
Saskatchewan Museum of Natural History

The Past in Place (film) (Session 3)

This 18 minute film shows the variety of archaeological remains present in Saskatchewan and discusses factors which lead to site destruction. The benefits of scientific studies are illustrated in various situations as are the disbenefits of indiscriminate collecting. Subjects include salvage of a site being destroyed by wind erosion, preliminary investigations at a vandalized fur trade post, a practice dig by an archaeological society, the work of a museum survey team, and, finally, a major dig at Fort Carlton.

Loy, Thomas H.
British Columbia Provincial Museum

Microscopic Identification of Surface Residue on Lithic Tools:
A Preliminary Report. (Session 2)

The identification of surface residues on lithic tools has been studied in an effort to identify the material contacted by the tool; this information is important to both functional and use wear studies. Liquid chromatography has been successfully used to identify amino acids present on the surface of lithic specimens. In this study, high power light and electron microscopy have been used to identify a wide range of material which is found to adhere to the surface of stone tools. The materials identified have survived as much as 2000 years of burial, excavation, washing and storage. Adherent material includes protein and starch

granules, calcium oxalate crystals, bird feathers, diatoms, plant fibres, fat and oils and insoluble protein films. Continuing research will concentrate upon the establishment of inferential procedures to more unequivocally identify the actual source of surface adherents.

Ludowicz, Deanna G.
University of British Columbia

An Intersite Analysis of Technological Variation in Lithic Debris.
(Session 2)

This analysis of stone tool manufacturing by-products identifies reduction activities considered to be part of the overall settlement and subsistence strategy of the Medicine Creek region of the Upper Hat Creek Valley, B.C. Quantitative analysis is used to construct 67 platform-remnant bearing flake types, the distribution of which is examined across 20 sites. This procedure enables the recognition of three camp types representing distinct activities. Interpretation is supported independently by environmental variables, other lithic material and site area data.

Magne, Martin P.R.
University of British Columbia

Sequential Patterning in Lithic Debitage: Some Experiments and Multivariate Analyses. (Session 2)

This paper presents the procedures and results of a set of experiments in stone tool manufacture that focus on the analytic potential of lithic debitage. Multivariate statistical techniques are employed to reduce the number of relevant variables, and to show that reduction stages of basalt bifaces can be predicted from debitage. Problems and potential applications of the research findings are discussed.

McGhee, Robert
National Museum of Man

Radiocarbon Dating Arctic Materials: An Update. (Session 4)

In 1973, James Tuck and myself presented arguments, suggesting that the radiocarbon dating of materials from the marine environment associated with Arctic archaeological sites produced dates which were not compatible with dates on terrestrial materials. Since then, people have continued to obtain dates on marine material, and have adjusted these dates in various ways in order to compare them with dates on terrestrial material. These techniques of adjustment are discussed, new dates and recent evidence on the marine reservoir effect are presented, and it is pointed out that we cannot control for temporal fluctuations in marine C¹⁴ concentration. Stylistic dating, as an alternative to radiocarbon dating, is evaluated relative to Arctic archaeological material.

McLeod, D., Sawyer, D., Keenlyside, David and Judy
National Museum of Man/National Film Board of Canada Co-Production

River Through Time. (Session 16)

A two-year archaeological dig along the shores of the Tracadie River in New Brunswick unearths artifacts that support an old man's memories of the days when Indians would camp every summer by the river and weave baskets. On a second site archaeologists explain the nature and function of ceramic pieces and stone implements used by the Indians. This film jolts its audience into the realization that history is all around us, and not something that only exists in distant lands.

McLeod, Mike
Lakehead University

The Archaeology of Dog Lake, Thunder Bay:
9000 Years of Prehistory (Session 11)

In the summer of 1977, a low water salvage project was carried out on Dog Lake, Thunder Bay, Ontario. Some 60 sites have been recorded on the lake. Most are multi-component, with some ranging from Palaeo-Indian to the Historic Period. At the 1978 C.A.A. conference, I proposed that this unique record is due to a rock out-cropping at the outflow area of the lake which has prevented down cutting of the area, and that if the record is lacking at other lakes it was due to geological alterations of their areas. Sites were assigned a tentative seasonal occupation depending on their location or exposure. In 1979, the lake was visited again and private collections from the area were recorded. In an effort to

Obtain some stratigraphic control emphasis was shifted to small adjoining lakes where high water erosion had not destroyed the sites. On one such site, DeJi-9, a surface collection by the owner was recorded and a small salvage excavation was undertaken. One 2m square yielded promising results, namely the remains of what may have been a sweat lodge, an Agate Basin-like point, a trihedral adze, adze flakes and a hearth area from which a charcoal sample was taken. The proposals set out in 1978 regarding site seasonality and a prolonged record for the interior of the Thunder Bay region tended to be confirmed.

Meyer, David
Saskatchewan Research Council

The Laurel Culture in Northern Saskatchewan. (Session 10)

During the 1960s and 1970s Laurel ceramics were recovered from a number of sites in Northern Saskatchewan. Since detailed descriptions of this material have not yet been published this presentation will provide useful information concerning the most north-westerly of Laurel assemblages.

Millar, J.F.V.
University of Saskatchewan

Mortuary Practices of the Oxbow Complex. (Session 8)

From the data recovered from the Gray Site and several other sites, a view of the mortuary systems operative in the Oxbow Culture are developed.

Millar, J.F.V.
University of Saskatchewan

The Morris Church Site, EdMj-2. (Session 10)

Found about 3 miles southeast of Chamberlain, Saskatchewan, at least two prehistoric bison drives took place around 400 to 650 years ago. The site was subsequently found by a farmer, John Reynoldson, and tested by students from the University of Saskatchewan under the direction of Dr. J.F.V. Millar. The site consists of a bison drive lane, kill site, and a camp area.

Morlan, Richard
National Museum of Man

Evidence for Stone Artifacts in the Early Wisconsin of Northern
Yukon Territory. Contribution No. 57 of the Yukon Refugium Project.
(Session 10)

The emerging evidence for early human occupation in the Old Crow region should not be misrepresented as a new exercise in osteo-donto-keraticism. A number of bones and antlers including three examples from early Wisconsin deposits exhibit cuts which reflect the use of stone tools for butchering animals, shaping artifacts, and perhaps even artistic expression. In addition, two lithic specimens - an obsidian bifacial knife and a chert flake - have been recovered along with abundant Pleistocene fossils from final Wisconsin deposits more than 10,000 years old.

Nadon, Pierre
Parcs Canada Quebec Region

An Ecological Approach to Understanding the
St. Maurice Ironworks. (Session 14)

Presentation of an ecological approach for understanding the St. Maurice Ironworks (1729 - 1883). The environment, the mode of production and the population are represented as boundaries, described within segments of a chronological continuum. A model is introduced to tie together the various components interpreting them as a single interacting whole.

Nicholson, B.A.
Simon Fraser University

The Potential of Freshwater Mussels as Seasonal Indicators in
Archaeological Sites. (Session 6)

One of the goals of almost every archaeological field project is the determination of the season of the year when a given assemblage of cultural material was deposited. Most attempts to determine the season of site occupation have centered upon the degree of maturation observable in the remains of juvenile birds and mammals recovered from the archaeological excavations. Implicit in these methods is the idea that hatching and birth are restricted to short, well defined, predictable seasons of the year. However, second hatches and late births are commonplace

events in nature. More recently, seasonality studies have shifted to the structure of the carbonate shells of bivalves. These poikilotherms respond in a much more immediate manner to environmental changes, especially temperature change, than do homiotherms. These responses are reflected in the patterned deposition of shell increments. The growth rings observed on the surface of bivalve shells have, for a long time, been considered to represent annuli. Most seasonality studies have been based on this assumption. Recent work suggests this view to be simplistic. An evaluation of growth rings and incremental structures of freshwater mussels, based on microscopic examination of stained thin-sections, will be presented.

Noble, Wm. C.
McMaster University

The Protohistoric Revisited (Session 11)

This paper examines the current status of the protohistoric period in southern Ontario and adjacent Quebec. Advances have been made since Noble (1968) first introduced the concept to the Northeast, including refinements in dating, determining the archaeological nature of the period, and elucidating the trade/exchange networks among native populations as a result of European contacts in the upper St. Lawrence during the 16th century. Various hypotheses emerge.

Patenaude, Valerie
B.C. Provincial Government, Heritage Conservation Branch

The Pitt Site: A Multi-Purpose, Multi-Seasonal Site in the Western Fraser Valley, British Columbia. (Session 16)

Salvage excavations carried out at the Pitt River Site (DhRq-21), located in Port Coquitlam, B.C., reveal two distinct site areas. The plant processing area contains large hearths in which carbonized seeds of Maianthemum dilatatum are found. Radiocarbon dates from these hearths suggest a late occupation (760 AD to 1650 AD). The general activity area consists of stratified midden deposits suggestive of a wider variety of subsistence and settlement related activities, and which yield dates in the 3000 BC to 1000 BC time period. The theoretical background and field and lab methodologies are discussed. Artifact classes recovered from the site suggest that local culture history is not as well understood as previously outlined.

Pelshea, Victor
Ontario Ministry of Culture and Recreation

Deer Lake Rock Art and Prehistory in Northwestern Ontario.
(Session 5)

This paper will discuss some aspects pertaining to the location and the distribution of rock painting sites in the boreal forest in Northwestern Ontario. The Deer Lake pictographs will be used as an areal settlement study model.

Pinard, Claude
Université du Québec

Présence du pré-dorsétien à l'île du Diana. (Session 7)

Lors de la fouille de l'été 1979 sur l'île du Diana au Nord-Ouest de la Baie d'Ungava, un site pré-dorsétien fut trouvé. La présence de ce site pouvait allonger l'occupation paléo-eskimaude dans la région Nord-Ouest de la Baie d'Ungava d'environ 1 500 ans. La forme et la disposition de certaines structures du site DIA.3 sont comparables à celles de sites pré-dorsétien du Labrador.

Plumet, Patrick and Badgley, Ian
Université du Québec

Implications méthodologiques des fouilles de Tuvaaluk sur l'étude des établissements dorsetiens. (Session 7)

Les fouilles de Tuvaaluk ont été orientées vers l'étude de l'espace domestique et social dorsetien dans l'espoir d'en obtenir des données paléothnographiques. Le site principal, choisi au départ, semblait correspondre à des habitats divers avec maisons semi-souterraines dont trois étaient partiellement achevées. L'extension horizontale de la fouille dans l'espace interstructural, l'enregistrement des structures-témoins par photographie verticale, l'analyse de la stratigraphie naturelle ont révélé une occupation intensive de l'espace fouillé très différente des prévisions. Elle correspond à une série de réaménagements fortement imbriqués les uns dans les autres, à différentes saisons et différentes époques de la période dorsetienne. Ainsi, la fouille systématique et intensive d'un site apparaissant relativement simple au départ révèle des facies variés et complexes que des sondages et des fouilles restreintes aux structures visibles et au dépotoir supposé n'auraient pas décelé. Les interprétations et les hypothèses en résultant sont donc fort différentes, en particulier en ce qui concernent l'utilisation de l'espace, la saisonnalité, la démographie et l'implantation régionale.

Pohorecky, Zenon
University of Saskatchewan

Faces Carved On Boulders In Southern Saskatchewan. (Session 5)

At least five boulders with the likeness of a human face incised on one surface were found by various people during the first three decades of this century in the rolling grasslands of southern Saskatchewan. Each carved boulder weighed several hundred pounds, indicating that all were carved near where they were found, usually on a hill overlooking a river. Yet each has since been moved. One near Weyburn bears a clear affinity with a face carved at St. Victor and a possible relationship to another face painted on granite over 400 miles north of St. Victor, along the Churchill River near Leaf Rapids in northern Manitoba. Several have a weeping eye motif which has been associated with the Death Cult that began in the American Southeast shortly after Desoto in 1541. The paraphernalia show Mexican influence. Such cult items as carved shell gorgets, stone palettes, ceremonial batons and perhaps mounds have also been found in Saskatchewan. All five boulders here were near the five known mounds in the province, if indeed these are mounds. There is some semiconjectural information which may tie in the weeping eye motif with a mask-headress of the Hopewell cult, which would be about 2,000 years old.

Pokotylo, David L.
University of British Columbia

Lithic Technology in Regional Perspective: Implications of Locational Patterning in Lithic Debitage. (Session 2)

Archaeological survey data are employed in a study of lithic technological variability and environmental patterning exhibited by limited activity and occupation sites in Upper Hat Creek Valley, interior British Columbia. Settlement categories are established on the basis of quantitative variation in lithic debitage assemblages. Statistical analyses of the distribution of the debitage-defined site types among environmental data classes provides tests of hypotheses concerning the function of the site types in the regional settlement pattern. The potential applicability of lithic debitage as a useful indicator of subsistence-settlement strategies is also discussed.

Pollock, John
University of Alberta

Plains Archaic Complexes in the Alberta Parkland and Boreal Forests. (Session 8)

In this paper, Plains Archaic (Oxbow) complexes relating to central and northern Alberta are examined in detail. Drawing on two years of excavation at FjPi-29, an Oxbow Site near Edmonton, plus several years of survey and excavation in Northern Alberta, an attempt is made to delineate the expression of the Oxbow complex in the region.

Prager, Gabriella
Simon Fraser University

Heat Treatment of Soapstone. (Session 2)

Laboratory experiments concerning heat treatment of soapstone have demonstrated that at a critical temperature, soapstone will harden. Some field experiments have shown that the critical temperature can be reached in an open campfire. These experiments will be described and their relevance to the study of past technologies will be discussed.

Pyszczyk, Heinz
Simon Fraser University

Frontiers and Settlements in Western Canada. (Session 14)

The aim of this paper is to briefly examine settlement patterns of fur trade posts in Western Canada, with particular reference to factors involved in locational selections and the impact of these selections on subsequent settlement. Previously proposed regional frontier settlement models deal primarily with the impact of colonization on aboriginal peoples, or those colonial situations dealing with the advent of agriculture. Little consideration was given to the common primary frontier situation of single purpose economic exploitation. More explicit formulation of the above factors will aid historical archaeologists to develop comprehensive research designs and a more thorough synthesis of frontier settlement.

Road, Kathie and Wilson, Michael
University of Calgary

Butchering Patterns at a Nineteenth-Century Muskox Kill Site,
Bank Island, N.W.T. (Session 6)

Butchered muskox bones from the Head Hill Site, Bank Island, are described. Material comes from surface collection of a butchering area at the site; material from related house sites has not yet been studied. Limb bones predominate in the sample; and all are broken. Humeri are almost all distal portions, and proximal ends may have been removed attached to scapulae. All were smashed at midshaft. Radii tended to be smashed above midshaft, but all showed a tendency to longitudinal fractures, which is thought to have been intentional. Metacarpals were struck on anterior and/or posterior faces at midshaft. Femora were highly fragmentary, showing extreme reduction, perhaps for marrow. Proximal ends were absent, as were pelves. Tibiae were smashed below midshaft, but like radii showed a strong tendency to longitudinal fractures. Metatarsals were struck as for metacarpals, but showed a stronger tendency to longitudinal fractures. Tarsals and carpals were intact. Skinning marks (small groups of light transverse cut marks) were rare, and on metapodials. Impact points on long bones were clearly marked by cones of percussion and crescentic flake scars analogous to those seen in flaked lithic artifacts. The tendency to longitudinal breakage in some limb bones is thought to reflect an intentional practice of carefully placed multiple impact points, possibly followed by twisting, to make marrow recovery easier. The Head Hill site is thought to represent a virtually "aboriginal" pattern of butchering, despite evidence of limited contact, probably limited to scavenging of shipwrecks. The sample shows almost no evidence of the use of metal tools. Details on butchering patterns from early white explorers' journals are unfortunately vague and extremely limited.

Rocheleau, Claude
Université du Québec

Les maisons-longues de l'Ungava: analysis synthétique et comparative.
(Session 7)

Etude comparative concernant l'organisation des vestiges structuraux et la distribution du matériel lithique retrouvé dans cinq maisons longues du Nord-Ouest de la baie d'Ungava.

Schroedl, Alan R.
California State University, Fresno

Multivariate Analysis of Early Plains Archaic
Projectile Points (Session 12)

Projectile point typology for the Early Plains Archaic period (5000-7500 B.P.) is poorly developed and based on subjective criteria. A sample of notched projectile points from several Early Plains Archaic sites including Mummy Cave, Wyoming; Hungry Whistler site, Colorado; and the Gowen site, Saskatchewan, are subjected to discriminant analysis. Discriminant analysis is a multivariate technique that can be used to determine if there are any significant differences between several groups; in this case, types of projectile points. This analysis demonstrates that side-notched and corner-notched projectile points of the Early Plains Archaic period can be statistically distinguished. It is suggested that these mathematically defined point types be used as regional and chronological markers for the Early Plains Archaic period.

Shutler, Richard, Jr.
Simon Fraser University

The Cherokee Sewer Site. (Session 8)

Three cultural horizons have been defined in a stratified alluvial fan at the Cherokee Sewer Site, northwest Iowa. Horizons I (6350 RCYBP) and Horizon II (7200 RCYBP) are Archaic cultures, while Horizon III (8400 RCYBP) is late-Paleo-Indian. The recovery of fossil bison, molluses, seeds, micromammals and pollen from nearby bogs have permitted a broad Holocene cultural and paleo-ecological reconstruction at one geographic location.

Simonsen, Bjorn O.
Heritage Conservation Branch, British Columbia.

The Role of Volunteers in Archaeological Resource Management.
(Session 3)

The use of volunteers in both archaeological research (excavations and lab analysis) and museum programmes has a long tradition. In fact, most archaeological field work in Canada, in the not too distant past, was performed entirely with volunteer help and volunteers

still play an important role on such projects. The use of volunteers in the management of archaeological and other heritage resources, however, has been a very recent phenomenon. This paper summarizes and examines a number of volunteer programmes in archaeological resource management, both in Canada and elsewhere, with particular emphasis on the Regional Advisor Programme of British Columbia's Heritage Conservation Branch.

Simonsen, Bjorn
Heritage Conservation Branch, British Columbia.

Operation Rock (film) (Session 5)

This film shows the dramatic rescue of a large petroglyph slab on an island in the Skeena River, northern British Columbia.

Smith, Dave
McGill University

House Orientations as a Defensive Measure in Prehistoric Neutral Villages. (Session 13)

This paper discusses the interpretation of Iroquoian settlement patterns within the context of defensive measures. Aspects of settlement pattern such as site location, palisading, and intra-site arrangement of structures are examined. These aspects are also discussed in terms of the information that their inter-relationships may yield concerning the total defensive strategy of the occupants of any particular site or group of sites. Examples are drawn mainly from the region of southwestern Ontario west of the Grand River, but this area is compared with other regions in Ontario to indicate the possibility of regional variation and development of defensive strategies.

Snow, Elizabeth
Parks Canada

Archaeology in the Planning Process. (Session 3)

Knowledge of the steps in the planning and development process is becoming essential for archaeologists who undertake contract archaeology and for archaeologists who wish to have their legitimate concerns regarding research, conservation, salvage or site development recognized by responsible government planning bodies. For contractors, it is necessary to have a clear grasp of what the sponsor wants. However, the sponsor's information requirements will be quite different at the different stages of the planning and development cycle. For archaeologists pleading a cause, it is necessary to understand the formal planning process, especially the consultation phases, in order to best present the case. In this paper the steps in the planning and development cycle are outlined. Emphasis is placed on clarifying the type of information the archaeologist might be called on to provide at each stage and on identifying the planning steps where intervention by the archaeologists can most effectively influence the course of events.

Spurling, Brian E. and Ball, Bruce F.
Simon Fraser University

Spatial and Temporal Distributions Of The Oxbow Complex. (Session 8)

In this paper we investigate temporal, spatial and taxonomic distributions of the "Oxbow Complex". Oxbow is an ill-defined but widely recognized Archaic assemblage of the northern plains and southern Boreal Forest areas. Cultural contents and locational characteristics of Oxbow sites are treated using clustering and ordination techniques to identify the infrastructure of the complex itself. In addition, the spatial and temporal distributions of sites with dated components are mapped and assessed using trend surface analysis. Results from the 2nd analysis are: 1) a proximate map of the distribution of Oxbow sites as a function of time, and 2) by plotting residuals, Oxbow components which are undated or undateable are tentatively placed within a temporal framework.

Steinbring, Jack
University of Winnipeg

Lake-of-the-Woods Petroglyph Style: Definition and Interpretation.
(Session 5)

The recently established Lake-of-the-Woods Petroglyph style relates a diverse scatter of mid-continental sites, many of them with Archaic assignments. The Jeffers site is seen as a central expression of ritual activity leading to northern influences at a slightly later time. Elements in the definition encompass form, technology, topographic and astronomical implications, distribution, timing, and archaeological associations.

Stevenson, Marc
Parks Canada Prairie Region

Pattern in Pattern Recognition? (Session 14)

Judging by the number of articles concerned with the recognition of patterned regularity and variability in the archaeological record in recent years, the basic concept, as expounded by Stanley South, has been grasped by relatively few. However, a good percentage of those that have beckoned to South's call have either misunderstood or misused the concept of pattern recognition. This paper investigates several of the more apparent abuses of pattern recognition and pattern explanation in recent archaeological research. Finally after considerable discussion it addresses the issues raised in the title of this paper.

Stromberg, Richard L.
University of Toronto

Improving Information Services Design: A Look at Ontario's Site Recording System. (Session 11)

An examination of the Archaeological Survey of Canada site records for Ontario shows that the scientific method has taken a firm hold on archaeological research design but that information theory is less strong. Information is a necessary tool and information services must be designed with science in mind. It is argued that the province is the most pragmatic level for synthesizing information and that provincial data bases allow cross-cultural comparisons to be refined into processual theory. Methods of improving this synthesis are discussed within the context of Ontario archaeology, and from this discussion models will be drawn for other regional data bases.

Sutherland, Pat
McMaster University

Understanding Prehistoric Cultural Relationships Across Heqate Strait. (Session 16)

This paper examines archaeological evidence from the Queen Charlotte Islands and Prince Rupert Harbour in an attempt to demonstrate that significant cultural differences existed between these two areas throughout much of the prehistoric period. Several interpretations are offered to

account for the observed cultural differences between the two areas; and a statement is made regarding the approaches that have been used in an effort to understand cultural relationships across Hecate Strait and throughout the Northern Northwest Coast.

Syms, E. Leigh
Brandon University

Changing Settlement Patterns in Southwestern Manitoba: An Analysis of a Stratified Random Archaeological Survey Sample and a Comparison with a Selected Total Sample. (Session 3)

In the summer of 1972 and 1973, R. Nash conducted a random survey of nine townships in southwestern Manitoba. The sample of 36 sections was stratified into riverine and upland sections and yielded 2,927 items representing 122 sites. These materials have been subdivided into 38 raw material categories and 43 artifact categories. The sites are discussed using spatial and functional taxonomies modified from Brown's (1979) research in Texas. Changing patterns from the Paleo-Indian to the historic period are noted. The random sample for one township is compared with the total sample recorded for several surveys. Important implications for evaluating and planning survey strategies are discussed.

Titus, L.W.
Simon Fraser University

Identification of Mammalian Hair for the Archaeologist. (Session 6)

Macroscopic and microscopic examination of hair has long been used to identify mammalian taxa by wildlife researchers, biologists, and forensic personnel. Most of the current identification schemes depend heavily upon those traits which rapidly deteriorate whether due to mechanical breakdown or biodegradation processes. Likewise, a complete comparative collection of samples of any particular faunal area must be available to the investigator for confident identification of remains - often a prohibitively expensive undertaking. The application of hair identification to archaeologically recovered material is, despite the aforementioned problems, an important aid to faunal analyses of frozen, wet, and dry sites where hair and other organic remains are preserved. The presence of specific taxa at a site may reveal cultural patterns of resource exploitation otherwise unrecognizable from the rest of the faunal record and may be of use in environmental reconstruction.

Wade, Wm.
University of Manitoba

Millar, J.F.V.
University of Saskatchewan

Dating the Gray Site. (Session 8)

A variety of methods have been used to determine the temporal span and utilization pattern of the Gray Burial Site, based on the data available from the excavated portion.

Warrick, Gary
Simon Fraser University

Chaos or Community?: A Theoretical Consideration of
Late Ontario Iroquoian Village Organization. (Session 13)

The most neglected but potentially the most profitable area of Late Ontario Iroquoian archaeological research is the detailed analysis and explanation of longhouse and village morphology and organization. It is postulated that Late Ontario Iroquoian longhouses and villages were highly structured entities; their morphology and organization being determined predominantly by economic and social factors. Environmental and human-induced (random) factors, affecting village and longhouse construction and space allocation within these, are rarely visible or demonstrated in the archaeological record.

Watson, Gordon D.
Trent University

The Wyght Site: A Multicomponent Woodland Occupation on the
Lower Rideau Lake, Leeds County, Ontario. (Session 1)

Excavations during 1978 and 1979 at the Wyght Site (BfGa-11) confirm a multicomponent Woodland site. Radiocarbon dates indicate at least four occupations between 510 B.C. and A.D. 1060. An update of the analysis of the site evidence will be presented.

Wilson, Michael
University of Calgary

Postglacial Mammalian Faunas Of The Northern Plains. (Session 6)

The Late Glacial/Early Postglacial mammalian fauna of the Northern Plains includes at least eight taxa now extinct. Radio-carbon dates on Mammuthus sp., Camelops sp., and Equus conversidens at several sites suggest extinction about 10,000 years B.P. The timing of extinction allows climatic and human-inspired overkill hypotheses to be considered. This author favors the hypothesis that the Fluted Point tradition arose as an adaptive response to the ongoing depletion of megafaunal populations, which had environmental causes. Muskox (Ovibos moschatus) persisted in a tundra belt marginal to Lake Agassiz in Manitoba until 8500 yr B.P. or later. Bison underwent progressive reduction in size through Late Glacial and Holocene times, but by 6500 yr B.P. were still very large. There is no clear evidence for accelerated dwarfing in Atlantic Episode (Altithermal) times. Faunal remains from early post-Atlantic times have a very modern appearance, though bison remain larger than modern forms. Most species occupy their modern ranges. The Sub-Boreal Cactus Flower Local Fauna from S.E. Alberta includes the characteristic dryland forms Antilocapra americana, Sylvilagus nuttallii, and Vulpes velox; however, Dipodomys ordii and Neotoma cinerea are slightly north of their modern ranges. This suggests conditions are warm/dry as, or slightly warmer/dryer than, today. There is as yet no evidence that Atlantic climatic stress was extreme, although some geologic evidence for increased aeolian activity is available.

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The Taber Hominid Site, Alberta: 1979 Excavations
(Session 12)

1979 excavations at the Taber Hominid Site were concentrated on the 3 m "Orange Sand" unit from which the human bones were recovered in 1961. Pits totalling 100 m² were excavated from a prepared surface stripped to the upper contact of sands with till. They were excavated to an average depth of 2.5 m, most reaching water table or the basal contact of sands with a blue till-like clay unit. The sands were banded in greys, browns, and oranges, with rhythmically interbedded blue-grey clay laminae near the base. A coarse sandy unit near the basal contact of the "Orange Sands" was close in color to the Taber Hominid fossil. The "Orange Sands" were coarser at the top than bottom; uppermost beds were poorly sorted and gravelly. It is suggested that underlying beds

are glaciolacustrine clays over one or more tills; while the uppermost "Orange Sands" are overlain by a grey till. Conspicuous folding of the "Orange Sands" and underlying beds was caused by overriding ice; while abundant minor reverse, "offset" faults probably resulted with relaxation of this compressive force. There is no evidence for modern slumping. A thin Holocene cap on the slope face yielded butchered bison and antelope bones with charcoal; these were derived as slopewash from a late site at prairie level. These bones are stained a pale red brown but are not mineralized and do not resemble the Taber Hominid specimen in preservation. It is hoped that trace element studies, particularly of postmortally acquired elements, will allow empirical characterization of the difference in preservation. Paleomagnetic samples have been taken from tills and clays in the section, and it is hoped that this will allow temporal assessment of the Taber Hominid. The presence of three tills above the "Orange Sands" is suggestive of considerable antiquity. So far, however, no additional bones beyond the original Taber Hominid find have been recovered from the "Orange Sands." Monitoring of the site will continue.

Wright, J.V.
National Museum of Man

Radiocarbon: Panacea or Poltergeist. (Session 4)

A series of radiocarbon dates on a range of non-charcoal substances from a well-dated (Seriation and charcoal carbon #14) village site and a stratified seasonal campsite have provided a range of readings that require explanation. Although not wishing to play the role of amateur physicist/chemist, it is suggested that, in addition to old carbon ingestion by some species, other factors, such as rapidity of species growth, may contribute to variable readings obtained from different organic materials.

Wright, Milt
Simon Fraser University

Interior Household Patterning: Pits to the left,
pits to the right, and into the house interior
strode the archaeologist! (Session 13)

The investigation of Iroquoian settlement patterns (particularly longhouse interiors) provides a wealth of data on past human activities and has become an increasingly

emphasized aspect of Iroquoian site excavation research design. Unfortunately while a large proportion of field time, money, and manpower is expended in the acquisition of longhouse interior feature data this investment is not mirrored in the report aspect of the research. Far too often the reporting process involves a maximum of quantitative data but very little qualitative consideration of these interior features. It is suggested that while ethnographic analogy and inference has and continues to be a valuable interpretive device it is timely at this juncture to suggest and critically evaluate alternate lines of inquiry.

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