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ABSTRACTS
RESUMES

EDMONTON ALBERTA

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

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

ALBRIGHT, S. Simon Fraser University

Ethnoarchaeological investigations of Tahltan fish camps on the Stikine River, northern British Columbia

Through the combined use of ethnographic information and archaeological data it has been possible to reconstruct the behavioral patterns related to the formation of prehistoric fishing sites on the Upper Stikine River. In the yearly round of seasonal activities traditionally engaged in by the Tahltan people, summer fishing villages located along major salmon producing streams were occupied for longer periods of time, by larger groups of people, than other seasonally occupied sites. The intensity and range of activities carried out at these sites render them more visible in terms of archaeological remains. A thorough understanding of the behavioral processes involved in the formation of these sites is considered essential for interpreting their significance within the overall pattern of subsistence strategies and reconstructing cultural history in this area. Séance/session No. 17.

ALEXANDER, D. Simon Fraser University

Factors responsible for polish on flint woodworking tools

Woodworking can produce a distinctive polish on the working edge of a stone tool. However the amount of polish varies according to the type of wood modified. Controlled tool-use experiments are used to delineate the chemical and physical properties of wood which cause this differential polish. Séance/Session No. 2.

AMES, K. Boise State University

Towards a general model of social differentiation among foragers

I have recently proposed a model for the development of rank on the northwest coast of North America that rests on the postulate that social hierarchies arise as a result of increasing constraints on systemic responses to environmental changes. Applying that model to data from both the west and east coasts produces results which support a conclusion that social differentiation must be regarded not only as a result of change, but as a process as well, equal in importance to population growth, sedentarization and subsistence intensification. Séance/Session No. 4.

ANDREWS, T. University of Alberta

King Edward Spit-West: small sites and the late prehistoric occupation of the Old Crow Flats, northern Yukon Territory

Previous investigation into late prehistoric Athapaskan occupation of the Old Crow Flats region, northern Yukon Territory, has centered on large riverside sites. These localities provided the occupants a subsistence centered on caribou interception at river crossings and fishing, and represent warm season inhabitation. Recent excavations at King Edward Spit-West (MkVm-1), a small, late prehistoric campsite, located in an upland environment approximately 30 Km. from the nearest river is discussed. With the aid of 19th century explorers accounts and ethnographic documentation, the occupation of MkVm-1 is examined in light of the late prehistoric subsistence cycle and seasonal utilization of resources. Séance/Session No. 5.

ARNOLD, C. University of Toronto

A consideration of some aspects of Thule pottery

To date, there have been only casual assessments of the significance of pottery in Thule culture sites of arctic Canada. This paper reviews evidence for the origins, distributions, and varieties of Thule pottery. Information obtained from the analysis of a sample of Thule pottery is interpreted in light of ethnographic descriptions of pottery manufacture in the Arctic. The results of the study provide a basis for evaluating various ideas that have been put forward with regard to the distribution of this cultural trait. Séance/Session No. 13.

BADGLEY, I. Université du Québec à Montréal

La variation des structures d'habitation semi-souterraines dorsetiennes a DIA.4 (JfE1-4)

Les fouilles de 1978 et 1979 du programme Tuvaaluk au site DIA.4 ont révélé 13 structures d'habitation semi-souterraines dorsetiennes complètes ou partiellement définissables. La plupart de ces habitations sont interprétées comme ayant été réoccupées plusieurs fois. Quelques-unes de ces réoccupations sont associées aux réaménagements des structures d'habitation ainsi que des aménagements particuliers internes. La séquence chronologique des occupations, établie à partir des relations stratigraphiques ainsi que des datations 14C, permet l'examen de la variation temporelle des habitations. Certaines implications concernant l'occupation du site ainsi que des traits architecturaux dorsetiens sont discutées. Séance/Session No. 8.

Variation in Dorset Semi-subterranean dwellings at DIA.4 (JfE1-4)

The 1978 and 1979 Tuvaaluk programme excavations at the DIA.4 site revealed 13 complete or partially definable Dorset semi-subterranean dwellings. The majority of these dwellings are interpreted as having been subject to successive re-occupations, several of which were

accompanied by alterations in the form of the earlier structure and the re-organization of internal features. Stratigraphic relationships and radiocarbon dating allow the chronological ordering of these occupations and permit the examination of dwelling variation through time. Certain implications concerning occupation of the site and Dorset architectural techniques are discussed. Séance/Session No. 8.

BALCOM, R. University of Manitoba

A regional approach to the study of diet during the first century of the Hudson's Bay Company fur trade

The Hudson's Bay Company Archives contain a wealth of information pertaining to food and diet. This paper explores methods of systematically utilizing this data in conjunction with archaeological data in order to study British diet in a new environment. A regional approach is followed utilizing archival information for the first century of Bay-side trade. Three basic models are presented - a food chronology, a food classification, and a food flow diagram. These models are then exemplified with data from a specific site, New Severn (1685-1690). Séance/Session No. 17.

BALL, B. Archaeological Survey of Alberta. B. SPURLING, Heritage Conservation Division, Saskatchewan Culture and Youth

Some results from the study of small archaeological sites

Results from two separate studies carried out on small sites are presented. The importance of small, limited activity sites in hunter-gatherer systems is well known from a number of recent ethnographic and ethnoarchaeological studies. However, it is these kinds of sites which continue to receive little attention in archaeological projects, both at the pure research and applied levels. To underline the potential and importance of these site types we present results from studies undertaken on two separate projects, one of which was strictly research oriented and the other a CRM contract project. Séance/Session No. 5.

BEATTIE, O. University of Alberta

Patterns of cranial deformation on the prehistoric south coast of British Columbia

An analysis of 115 human skeletons from prehistoric sites located in the Gulf of Georgia region of British Columbia suggests the introduction of cranial deformation at around 2000 B.C. After this date, the patterns and extent of deformation change from a probable non-intentional form resulting from cradle board use to forms that are intentionally

produced and possibly cosmetic in nature. By very recent prehistoric periods, cranial deformation is seen to be a universal feature among the inhabitants of Georgia Strait. Séance/Session No. 6a.

BEAUDRY, M. Winnipeg

Pedological research and its application to Boreal Forest archaeology

Pedological research has much to offer in the evaluation of soil disturbances in prehistoric occupation sites. The application of soil analysis in a Boreal Forest environment is discussed in this paper. A review of previous methods and the specific problems encountered is also presented together with the results of several testing techniques conducted at the Wenasaga Rapids Site (EdKh-1) Ontario. Séance/Session No. 13.

BENNETT, C. University of Nebraska

Proton magnetometer results from the early Jomon Yagi site, Hokkaido

A proton magnetometer survey of Yagi, a large early Jomon community of southwestern Hokkaido, was carried out by an international crew during the 1978 and 1979 field seasons. The survey, as part of the archaeological research at the Yagi site, was an attempt to identify distinct features and their areal variations in order to guide subsequent excavation. Extrapolation from the correlations of the excavation results and their magnetic anomalies to areas not tested by excavation permits suggestions about the distribution of subsurface features and cultural debris within the Yagi site. This paper presents the theory of magnetic survey as applied in this situation together with the results of the survey at Yagi and an interpretation of the Yagi magnetometer data. Séance/Session No. 11.

BIBEAU, P. Université Quèbec à Montréal

Une structure d'habitation de surface dorsétienne: exemple provenant du site DIA.73 (JfE1-30)

Cette communication porte sur une structure d'habitation de surface dorsétienne de l'île de Diana, située au nord-ouest de la baie d'Ungava. L'analyse des vestiges architecturaux ainsi que des objets-témoins lithiques est privilégiée. Ces données permettent certaines comparaisons avec d'autres structures semblables de la culture dorsétienne. Séance/Session No. 8.

A Dorset surface habitation at DIA.73 (JfE1-30)

This paper focuses on the analysis of a Dorset surface habitation on Diana Island, northwestern Ungava Bay. Analysis centres primarily on architectural remains and the lithic collection. These data are then compared with similar Dorset structures elsewhere. Séance/Session No. 8.

BIELAWSKI, E. University of Calgary

Spatial behavior among prehistoric Arctic hunters

Four study hypotheses about spatial patterns in the archaeological site distribution on Aston Bay, Somerset Island, NWT are presented. These identify variables assumed to have affected site location choice made by early Arctic small tool tradition, Dorset Culture and Thule culture groups. The study indicates differences in spatial behavior among the three prehistoric groups, adding to understanding of changing adaptation to the Arctic environment through time. The study also yields the conclusions that a regional approach coupled with systematic data collection and quantitative analysis reveals subtle variability in the Arctic archaeological record, and that anthropology provides the explanatory theory for interpretation of prehistoric spatial behavior. Séance/Session No. 13.

BOBROWSKY, P. Simon Fraser University. B. BALL, Archaeological Survey of Alberta

A postscript on maximization of artifact recovery: methodological musings on multiple mesh

In this paper we present results of a screening study which sought to investigate the effects of using different sized meshes for the recovery of archaeological data. The implications of using various sizes of screen mesh on types and frequencies of archaeological material are discussed within the confines of statistical sampling procedures. That the quality of results from archaeological excavations and the direction of interpretations of prehistory are closely linked with the methodology is difficult to question, yet the variety of opinions regarding which of the data recovery techniques is most accurate is considerable. Statistical sampling serves to elucidate this situation and provide some structure to the kind of archaeological interpretation that is based on retrieval systems. The goal of proper sampling centers on obtaining statistically valid samples of sites, features, or artifacts existing within a defined sampling universe. In all cases, properly executed sampling schemes assume that information recovery is complete. This working assumption can be accepted if the item in question can be recovered in total. This study examines the practical validity of these highly structured approaches to archaeological interpretation. Séance/Session No. 2.

BOBROWSKY, P. Simon Fraser University. J. CURTIN, Simon Fraser University

Armageddon in zooarchaeology, I: taphonomy

Zooarchaeologists are now focusing part of their research interests toward recognizing variations in patterns of bone distribution and morphology in both natural and cultural deposits. Field observations and experimental studies are widely used by researchers to identify those factors which variably affect recoverable skeletal remains and to recognize those similarities and differences which are manifest in the bone remains themselves. In this study we introduce the need for establishing a rigorous quantitative approach to taphonomic studies by examining variations in attritional states of a single element. Qualitative and quantitative characterizations of a sample of scapulae from Banks Island, N.W.T. form an explanatory base. Results of this study are discussed in terms of existing accomplishments in taphonomy and purported goals of the discipline. Séance/Session No. 9.

BRANDON, J. Parks Canada

A tale of two data bases

Computer data base management systems are becoming increasingly in vogue for archaeological research applications. Abundant literature exists pertaining to computer data base techniques in archaeology in particular describing coding schemes, data manipulation procedures and analytical software. However, to archaeologists proposing to adopt such systems much less information is available detailing the accompanying problems introduced to the process of "doing archaeology". Two examples of large-scale data base management systems used to analyze archaeological data from Batoche National Historic Site in Saskatchewan and the Lubbub Creek site in west-central Alabama are briefly compared. Emphasis is placed on key parts of the process prone to error resulting in user grief and the means of coping with them are discussed. It is proposed that the problem areas highlighted are likely to be encountered by researchers implementing such systems and can be avoided. Among the aspects to be addressed are sources, rates and effects of data base error; user behavior; and the availability and suitability of software. Séance/Session No. 3.

BRINK, J. Archaeological Survey of Alberta

Small sites in the northern Alberta mountains and foothills

Archaeological surveys and excavations in the Grande Cache/Wilmore wilderness region of Alberta have identified small sites as a dominant expression of the prehistory of the area. The nature, location and

content of these sites is discussed. The sites are compared to the larger, excavated sites from the same region, and relationships explored. Comments on the meaning of these small sites in a regional prehistoric context are offered. Séance/Session No. 5.

BROSSARD, J. programme Tuvaaluk, Laboratoire d'Archéologie de l'UQAM
Analyse lithique du site Akpatok 1 (JcEb-1), baie d'Ungava

La collection lithique d'Akpatok 1, ramassée en surface, est composée de deux sous-ensembles séparés dans l'espace par une vingtaine de mètres et associés respectivement à des vestiges architecturaux de surface mal définis: ce sont les structures dénommées A et B. Elles sont situées sur la plage de 9 mètres. La matière première est homogène (chert beige) et la collection totale comprend environ 2000 objets, dont une forte proportion d'éclats.

Les résultats de l'analyse technologique détaillée du sous-ensemble A sont ici présentés (450 objets) tandis que la structure B est échantillonnée. La distribution spatiale des catégories de débitage-façonnage et de d'autres catégories complémentaires nous permet, pour la structure A, de circonscrire des aires d'activité particulières. Des hypothèses concernant l'occupation du site sont avancées à partir de certaines comparaisons entre les deux unités architecturales. Séance/Session No. 5.

Lithic Analysis of the Akpatok 1 site (JcEb-1), Ungava Bay

This paper presents a technological analysis of a small surface collection of lithics gathered from two poorly defined architectural units. These units, designated structures A and B, are composed of ambiguous block and slab concentrations situated on the surface of the 9 m.a.s.l. gravel beach and are separated by a distance of approximately 20 metres. The homogeneity of raw material (a beige chert) and the high proportion of flakes are of special interest.

Structure A is analyzed completely and in detail while structure B is only sampled. The spatial distribution of different debitage categories and other complementary analytical data of A allow the definition of specific activity areas. Certain comparisons between the two units suggest hypotheses concerning occupation of the site. Séance/Session No. 5.

BURLEY, D. Parks Canada

Scarcity, abundance and steady state procurement systems: towards an understanding of east coast/west coast cultural developments

Despite similarities in the range of exploitable resources and associated technological capacities, the indigenous peoples of the northeast and northwest coasts of North America had markedly divergent paths in a cultural evolutionary perspective. It is argued that such a differential development is related to varied intensities of specialization on the salmon resource and basic differences in the anadromy of species within this resource. The Pacific salmon, due to its once-only spawning cycle, has been described as producing extreme periods of both scarcity and abundance. Procurement and preservation strategies require large scale cooperation, regularized labour organization and some formalized mechanism for intra group redistribution. These traits are suggested to be the foundation stones for the ethnographic northwest coast cultural pattern. The Atlantic salmon, on the other hand, is available throughout the warm weather period thus providing a steady state resource. Seasonal scheduling to exploit this species is integrated into a generalized subsistence strategy whereby several resources can be procured simultaneously. Subsistence pursuits are best carried out by small, mobile groups of egalitarian hunters and gatherers. Séance/Session No. 1.

CAMPBELL, S. University of Washington

Horizontal variability in shell midden composition: implications for interpretation of stratigraphic changes.

Shell midden sites are a common feature in the archaeological record of coastal areas and analysis of shell has played an important role in archaeological problems such as the evolution of subsistence systems. However, spurious conclusions may be reached when shell sampling and quantification give inadequate consideration to the structure of shell deposition. In particular, there is a tendency for differences in species representation between stratigraphically arranged samples to be conceptualized as trends of change through time, without regard for alternative explanations of variability such as sampling effects and horizontal inhomogeneity, or postdepositional effects. At the Duwamish site, 45Ki23, Seattle, Washington, shell lenses were collected as discrete features to provide analytic control in interpreting the variability of shell samples from larger depositional units. The results show that individual shell lenses are environment-specific collections, and that two contemporaneous samples may differ as greatly as two stratigraphically distinct samples. This has implications for the type of sampling necessary to achieve a representative species composition for a given component. Séance/Session No. 7.

CHISHOLM, B. Simon Fraser University

Northwest coast dietary patterns as indicated by stable carbon isotope ratios

Carbon isotope abundance ratios of protein from marine and terrestrial sources reflect the difference between carbon in oceanic and atmospheric reservoirs. This difference propagates through food chains. Measurement of carbon isotopic ratios in human bone collagen thus yields information about the relative proportions of marine and terrestrial foods in the diet.

Application of these measurements to northwest coast and British Columbia interior samples has given estimates of the extent to which marine resources and anadromous salmon were utilized by aboriginal peoples during the last 5000 years.

Indications are that the approach may be utilized in similar situations elsewhere in the world. Séance/Session No. 6a.

CHISM, J.

Is there an archaeologist in the house? : degrees of fact in the analysis of habitations

In recent years, archaeologists have been presenting a great deal of "detail" in conclusions rising out of their analyses of habitation units. Such attempts are sometimes said to resemble a person trying to split a hair into four quarters with an axe. Nevertheless, many would argue that this is the direction prehistoric archaeology must go if we are ever to leave the descriptive and "broad framework" stage of research.

Examples from the Quebec subarctic discuss the form and placement of structures without postmoulds, the size of groups occupying them, the organization of social space within and without these structures, the location of technical activities carried out by persons of each sex, the season(s) and intensity of occupation, purpose (within proposed schemes of exploitation) of occupation as well as its broader cultural affiliations and age. To date, these efforts are troubled by the application of lithic analyses based on "traditional" European data, or on data still insufficiently modified by experimentation. Still further, they suffer through the use of insufficiently researched or inappropriately applied ethnographic data.

Published, unpublished and ongoing Quebec examples are examined in the light of existing and perhaps more appropriate data and methodologies. Séance/Session No. 8.

CHOQUETTE, W. Eastern Washington University

Small sites and predator-prey relationships in the Kootenay region

The Kootenay region of southeastern British Columbia, northwestern Montana, and northern Idaho displays great environmental diversity in which small sites are a typical archaeological manifestation. Interpretation of data from individual sites by themselves is often difficult because of sparse cultural deposits. However, if the sites are considered as activity areas within larger environmentally defined units, hypotheses can be generated which will allow for efficient and meaningful data retrieval from individual sites if their excavation is necessary.

In this paper, site patterning in three distinct ecoiches is interpreted utilizing prey species ecology and ethnographic data. Site density, spatial relationships, and functional complexity are hypothesized to be strongly related to whether moose, deer, or bison were the prey. Séance/Session No. 5.

CINQ-MARS, J. Archaeological Survey of Canada

Cultural resource management and its relationships to archaeology

Using a number of examples drawn from the Canadian scene as well as from selected foreign contexts, we will attempt an examination of various conflicting trends that can be taken as symptomatic of a growing series of malaises and contradictions identifiable at many levels of Canadian archaeology (sensu lato). More specifically, we will scrutinize and discuss the integrative mechanisms that are believed to underly the current practice of archaeology. Séance/Session No. 15.

CLARK, D. Archaeological Survey of Canada

Terrain and Caribou Entrapments at Great Bear Lake

Traces of several short caribou fences were observed at Great Bear Lake in 1979. The apparent mode of construction seen in these vestiges is described. Of greater interest than construction details, however, are the fence layouts which not only capitalize on the presence of various terrain features but actually incorporate terrain elements into the animal entrapments or to extend their effective length. This frequently entails linking fence construction with small gorges. Speculations are offered on the possible functioning of these entrapments. Séance/Session No. 13.

CONATY, G. Simon Fraser University. P. BOBROWSKY, Simon Fraser University

Stratigraphic disturbance and artifact taphonomy: thoughts on the tyranny of the principle of depositional superposition

The principle of stratigraphic superposition remains one of the fundamental concepts employed in archaeological analysis. Lately, however, discussion has also been given to the effects of human and natural disturbance factors and their relationships to observed artifact sequences. The analysis of these factors is usually undertaken only when obvious disturbance features such as frost heaving, plowing or downslope mass wasting are apparent. Mixing of artifact assemblages may also occur in sites with less obvious pedological disruptions. Two methods of discovering and assessing unobvious disturbances are considered: one statistical; and one qualitative. The relative merits of each are discussed and their applicability to archaeological contexts is illustrated with case studies. The implications of intra-site artifact displacement are examined in terms of the interpretive paradigm of archaeological stratigraphy. Séance/Session No. 2.

CRAWFORD, G. University of Toronto

Plant and Human Relationships in early Jomon Hokkaido

Interpretation of plant remains analyzed to date from the Yagi site in southwestern Hokkaido document the hitherto unknown early Early Jomon plant-related subsistence ecology. Initial and late Early Jomon components at Yagi also exist and samples from these deposits are compared with Initial Jomon Hakodate Airport site and late Early Jomon Hamanasuno site plant remains. Barnyard grass, a millet, which becomes common in samples by 4000 BP in the area and which seems to have undergone some change from 5000 to 4000 BP, is a rare part of the Yagi plant remains assemblage. Nut remains, common at the Initial Jomon Hakodate Airport site, but rarely found in samples dating from the following two millennia, are in abundance in some components at Yagi, but not others. Preliminary thoughts on integrating the plant remains data with local palynological data, as well as with a catchment study, are presented. Séance/Session No. 11.

CYBULSKI, J. National Museum of Man. D. HOWES, British Columbia Ministry of Environment. J. HAGGARTY, British Columbia Provincial Museum. M. ELDRIDGE, University of Victoria

An early human skeleton from Gore Creek, British Columbia

Two previously reported early human skeletal remains in Canada are uncertainly dated and immature, precluding useful insights into the physical or biological characteristics of the populations they may represent. An adult male postcranial skeleton from south-central British Columbia has been collagen dated at 8,250 ± 115 years B.P. In situ parts were recorded below a volcanic ash lens identified with the Mount Mazama eruption of 6,600-7,000 years ago. The clavicle and

long bones, metrically and morphologically, suggest a tall, lineal body build, a form often associated with an inland hunting adaptation. The finding might be used to support the construct of a "Protowestern" cultural tradition populating British Columbia from the south in late Pleistocene - early Holocene times. Séance/ Session No. 6a.

DAMKJAR, E. Simon Fraser University

Life histories of some northwest coast celts

A collection of ground stone celts from 3 late prehistoric sites in the Bella Coola region is analyzed. The morphological variation seen in this collection is explained in terms of a life history model correlating changing morphology and function through time. The collection includes intact specimens, designed to be hafted, as well as heavily battered and splintered specimens reduced in a bipolar fashion to produce flakes suitable for use as cutting tools. Séance/Session No. 16.

DAVIS, A. University of Toronto

The pollen record as an indicator of site environment and economy

Pollen records from archaeological sites are generally limited in their value for paleoenvironmental reconstruction by problems of low concentration, poor preservation, and small variety. This is most obvious in well-drained sites with high pH. Concentration problems may be remedied by the processing of large samples. Ambiguities in interpretation may be deciphered with the aid of modern pollen spectra from the range of environments presently represented in the area (forested, non-forested, etc.). Pollen spectra from the Yagi site imply open, weedy habitats and in general, complement the seed analyses, although the latter are far more useful in the determination of economy. Séance/Session No. 11.

DEAL, M. Simon Fraser University

Tzeltal Maya disposal behavior and the archaeological record: an ethnoarchaeological perspective

It is generally conceded that the archaeologist most often works with artifacts known only by their discard locations, and that from this he must interpret relationships between these artifacts and features, as well as identify the presence or absence (and intensity) of any activities he believes to have been carried on at the site. Using one artifact class as an example, namely pottery, various modes of refuse disposal and abandonment are discussed in the context of Tzeltal Maya households. The distributional patterns of pottery and other

durable remains resulting from discard behavior are outlined. The reuse, or the more infrequent lack of reuse, of buildings before a house-site is abandoned and post-abandonment activities are identified as major factors affecting the final distribution of pottery fragments before the house-site enters the archaeological record, under most conditions. Séance/Session No. 16.

DENTON, D. McGill University

Variation in the size of prehistoric co-residential groups in the eastern sub-arctic: evidence from the central-interior of Quebec-Labrador

Recently collected archaeological data relating to prehistoric habitation size in the central-interior of Quebec-Labrador are employed in an attempt to describe variation in size of aboriginal co-residential groups. Ethnographic conceptions of aboriginal social organization and settlement patterns are examined in light of this analysis. The potential of archaeological data to address these questions of prehistoric social organization in the subarctic as well as the difficulties involved are discussed. Séance/Session No. 8.

DONAHUE, P. Archaeological Survey of Alberta

Archaeology in 1984

Alberta has, since the passage of the Alberta Historical Resources Act, been in the forefront of archaeological cultural resource management in Canada. Development proponents have spent untold dollars to conserve the past, and a staff of professionals has been hired by the Archaeological Survey to review development projects, undertake research, and review and evaluate the work of consultant archaeologists. Recorded sites in Alberta presently number approximately 12,000 and the total number of artifacts far exceeds that figure. Clearly many positive and necessary steps have been taken toward properly managing the resources; however, it still remains to take the next step into the world of directed and standardized archaeology. Does this represent shades of 1984 or only a tentative first step? Séance/Session No. 15.

DREWITT, B. University of Toronto

Indices of architectural relationship in Mesoamerica and eastern North America

A topic of continuing research and debate has been the spatial and temporal relationships within eastern North America of monumental civic architecture - one of the presumed Mesoamerican influences in the

area. Research concerned with similar topics within Mesoamerica has traditionally employed building orientation as one index of possible relationship. The paper summarizes work at Teotihuacán on two other potential indices of architectural relationship (units of measurement and relationship of building axes) and points out similarities between Teotihuacán and Tenochtitlán with respect to these indices. The potential for the use of these indices in eastern North America is discussed. Séance/Session No. 3.

ELLIS, C. Simon Fraser University. D. DELLER, Mt. Brydges, Ontario

A study of hi-lo points

A detailed analysis of a late Paleo-Indian point type (hi-lo) from the lower Great Lakes area is summarized. Emphasis is placed on the explanation of formal variability within this point form in terms of artifact life histories. The analysis includes: 1) a discussion of two variant manufacturing techniques for hi-lo points; 2) the delineation of the "original" morphology of the point type prior to resharpening; and 3) by examining how resharpening and breakage in use effects the form of finished points, the presentation of a complex flow model involving several outputs at which hi-lo points can be discarded or lost. Séance/Session No. 16.

FAWCETT, C. McGill University

The way in which archaeologists interpret their data depends on an often unstated conception of what they believe the archaeological remains mean in terms of the anthropological notions of society and culture. Since its inception over 100 years ago, Japanese archaeology has remained isolated from and relatively uninfluenced by western archaeological concepts. The result has been the development, in Japan, of an analytical and theoretical framework for interpreting archaeological data which is distinctly different from that used in North America and Europe. How does the Japanese conceptual scheme, particularly the notion of an archaeological culture, differ from that of the west? To what extent are these differences a reflection of contrasting views of the purpose and goals of archaeological research? To what degree is this dependent on modern cultural differences? Séance/Session No. 11.

FITZHUGH, W. Smithsonian Institution

Developmental aspects of Labrador Maritime Archaic social and mortuary systems: an example of marine-related cultural intensification

Recent archaeological work in Labrador has resulted in long-sought-after settlement data for Maritime Archaic cultures which occupied this region 7500-3500 years ago. Previous information on the development of these cultures has come from the field of technology, subsistence, culture area distribution, and mortuary and exchange systems. By themselves, these data suggested that Maritime Archaic culture was technologically and socially advanced compared with later prehistoric and ethnographic groups of the coastal northeast. Recent discoveries strengthen this view and provide our first clues about social organization and demography as revealed by site settlement patterns and domestic architecture. Changes in site size and complexity and in the size of dwelling structures through time suggests shifts from simple to larger and more complex forms of social organization, and are in turn related to intensification of mortuary patterns and increased movement of exotic materials. These changes are discussed together with local and regional environmental and culture history. The new data provide a more secure basis for supporting and understanding developmental processes in Maritime Archaic culture and their distinctions from later Indian groups of the far northeast. Comparisons are drawn to northwest coast and other cultures and speculation is offered on some of the factors that may be involved. Séance/ Session No. 1

FLADMARK, K. Simon Fraser University

A comparison of sea-levels and prehistoric cultural development on the west and east coasts

In an earlier work I proposed that the prehistory of the northwest coast could be broadly divided into 2 basic sequential culture stages: (1) an early lithic horizon which seemed to represent a relatively simple and generalized adaptation; and (2) a later shell-midden horizon which approximates the relatively complex and specialized culture pattern of the ethnographic Pacific coast. I attempted to explain the relatively radical and synchronous shift between these "horizons" all along the northwest coast, about 5000-4000 B.P., as an indirect result of the quasi-stabilization of regional relative sea-levels. The fundamental theoretical assumptions were: a. attainment of a specialized 'climax' cultural adaptation is not possible until the natural ecosystem reaches and maintains an optimum steady state; b. equilibrium of coastal ecosystems is most directly governed by the lateral location of the shoreline, and its rate of movement, which in turn is a product of various factors affecting regional sea-level, and bottom topography. Although specifically intended as a model attempting

to explain northwest coast culture change, the basic concept should be applicable to any maritime region.

In this paper I will apply this model to the prehistory of the Atlantic region of Canada and adjacent northern New England. Local sea-level curves and prehistoric sequences will be compared and contrasted to those of the northwest coast. It will be argued that northeastern Atlantic sea-levels have been significantly less stable than those of the northwest coast, particularly over the last 3-5000 years. This may be a fundamental indirect cause preventing the development of complex maritime oriented cultures in late coastal Algonquian prehistory. Séance/Session No. 1.

GIBSON, T. University of Alberta

Magnetometer surveying: revitalizing an old archaeological technique

Since the first application of the proton magnetometer to archaeological site prospection, archaeologists have repeatedly attempted to improve their ability to locate subsurface archaeological features on prehistoric and historic sites using magnetic survey techniques. More often than not, such attempts have resulted in questionable benefits or outright failure. Inevitably, the most successful surveys have occurred in conjunction with large archaeological programs blessed with ample budgets and long range research strategies, permitting sufficient time to perform pre-excavation magnetic surveys and enabling sophisticated computer analysis and mapping programs to be applied to raw magnetic data obtained. Though magnetic surveying has in such cases proved to be a profitable exercise, ironically, it is the director of a research project with a limited budget or an archaeological contractor with limited site salvage time who could most benefit from magnetic survey techniques.

Recent advances in magnetic survey methodology and data analysis have greatly improved the potential of the proton magnetometer to reliably define subsurface archaeological features in sites formerly considered impossible to assess using remote sensing techniques. In addition, newly developed micro-computer hardware has usurped the traditional role of the often inaccessible institutional and commercial mainframe computer in carrying out complex statistical manipulations and plotting of raw field data. This development has enhanced the effectiveness of magnetic site assessment by increasing interpretation accuracy while decreasing survey time and cost. These technological and methodological advancements can now enable even small research and salvage projects to take advantage of timesaving remote sensing techniques with full expectation of valuable pre-excavation data being retrieved.

This paper reviews the current state-of-the-art of archaeological magnetometric assessment, and presents suggestions on how magnetometer

surveys can be applied to various archaeological sites with maximum potential of yielding useful results. Séance/Session No. 2.

GORDON, B. Archaeological Survey of Canada

Of men and reindeer in French Magdalenian prehistory

Physical manipulation of reindeer teeth, plus the ageing of teeth to determine seasonality of death, were covered in the last annual meeting. It was found that control specimens accurately reflect known age of animal and hence, seasonal occupation by hunters of archaeological sites.

Additional information on annular increments of reindeer-caribou and other teeth using sheltered animals on fixed diet will re-open the discussion. This will be followed by interpretation of increment counts of teeth taken from 54 Magdalenian sites, chiefly from S.W. France. Observations of suggested reindeer and hunting band movements 10-15,000 years ago will be discussed. Séance/Session No. 9.

GRABERT, G. Western Washington University

The micro-evolutionary frontier and northwest prehistory

This paper attempts on a limited scale to assess the recent prehistoric period of the northwest coast in terms of an interactional model. Cultural (technological) changes over the past 2 or 3 thousand years are viewed not so much as distinct cultural changes as evidence for the dynamics of social interaction and the changes in intercommunity interaction preferences.

Given that there have been some environmental and demographic changes over the past 3 thousand years and given also that only technological changes are recorded, the stance is taken that these reflect more of intercommunity relational changes than they do of adaptive strategy evolution. They may be taken instead as tactical variations, as much socially derived as subsistence motivated.

It is assumed that territorial margins, the outer limits of a community's catchment area are the articulation points of social change. Two cases are examined. In both a limited amount of archaeological investigation has been carried on. In both also there has been a rather limited amount of ethnographic study. Using this model it should be possible to explain some of the supposed anomalies in localized variants in regional archaeological cultures, phases and other units of definition. Séance/Session No. 1.

GRAINGER, D. Parks Canada

Data management and manipulation in archaeology: assessment criteria applied against two computerized systems in Canada

Objectives and methods of archaeological data management and manipulation are discussed within the context of developing criteria for the evaluation of data management systems. Within such a framework two existing computerized systems in the Canadian archaeological community, the National Inventory and the Parks Canada Prairie Region System, are assessed. Séance/Session No. 3.

GUY, C. Service D'archaeologie et D'Ethnologie Province du Quebec

The future of cultural resource management in Quebec.

No abstract available. Séance/Session No. 15.

HALEY, S. Simon Fraser University

Cobble choppers on the northwest coast: a reexamination

Cobble choppers, seemingly ubiquitous stone tools found in archaeological sites all over the northwest coast of North America, were examined using a technological perspective combining attribute analysis with gross use-wear analysis. This analysis of material from the Crescent Beach site led to the development of two hypothetical models: 1) a manufacture/use/maintenance system and 2) a curation model. Both of these models suggest that cobble choppers have a long and complex use-life possibly involving shifts in form and function through a predetermined sequence. This paper outlines the two models and discusses some of their implications. Séance/Session No. 16.

HAMILTON, S. Ontario Ministry of Culture and Recreation

Intrasite artifact patterning at the Wenasaga Rapids site (EdKh-1)

Excavations at the Wenasaga Rapids site at the northwest end of Lac Seul in northwestern Ontario were conducted through the summer of 1980 through the support of the Ontario Ministries of Culture and Recreation, and Northern Affairs. Analysis of the artifacts reveals a horizontally stratified site with components of the Archaic, Laurel, Blackduck and Selkirk cultures. Block excavations were carried out resulting in the recovery of large quantities of reconstructable ceramics. Extensive soil tests were conducted in order to identify concentrations of trace elements such as phosphorus, calcium, potassium and magnesium that are expected to represent disintegrated organic refuse.

Continued research is expected to represent basic data concerning the construction and decoration of Laurel and Blackduck ceramics as well as information regarding intra-site patterning of refuse middens, possible structures, hearths, and concentrations of fire modified rock. Séance/Session No. 12.

HANKS, C. Ontario Ministry of Culture and Recreation

The 1980 Inco-Spanish River survey: new evidence for the middle and early archaic in N.E. Ontario

During the summer and fall of 1980, archaeological survey and excavation was carried out on the Spanish River and adjoining systems north of Sudbury, Ontario. That work resulted in the identification and excavation of two archaic sites. The first on Agnew Lake was dated at $5,910 \pm 115$ B.P. and the second on Fox Lake was dated on $7,670 \pm 120$ B.P. These dates expand the scope of the archaic on the shield north of Lake Huron and open the way for further research on the early archaic in the region. Séance/Session No. 12.

HATHAWAY, G. Toronto

Computers in Archaeology

No abstract available. Séance/Session No. 11.

HEITZMANN, R. and J. PRIEGERT, Heitzmann Consulting Ltd.

Systematic data recovery and archaeological interpretation based on linear highway survey in Alberta

One problem of 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 three years, 600 km of proposed roadway construction has been examined and unique data relevant to archaeology has been recorded on topography, surficial geology and vegetation. These results have been recorded using a simple tripartite code. The results are new information on site preference and site density in various areas of Alberta. Séance/Session No. 2.

HINSHELWOOD, A. York University

Lithic analysis of two southern ontario archaic components

Several analytical procedures were applied to analysis of lithic material recovered from excavations on two immediately adjacent southern Ontario Archaic sites. Results of the analyses demonstrate significant differences in the lithic activities on the two sites. Separate cultural identities for the two sites are confirmed statistically and through typological association of diagnostic projectile points. It is hypothesized that lithic analysis of this type will serve to effectively separate activity areas and/or cultural components. Séance/Session No. 6b.

HOBBLER, P. , Simon Fraser University

Settlement location determinants for coastal maritime peoples: an example from the northwest coast

The northwest coast provides an excellent testing ground for hypotheses concerning archaeological site locations and distributions. Compared with the east coast, northwest aboriginal technological and subsistence systems persisted into recent times. Aboriginal resource use patterns are still partly recalled for many individuals. Much that has been forgotten is documented in the voluminous ethnographic literature. Such ethnographic detail is generally of great benefit to archaeological interpretation but often frustrates attempts to employ simplistic explanations of site distributions. Various models that attempt direct correlation between resource distributions and site locations meet with only limited success. Only the richness of the ethnographic record prevents serious misinterpretation of the results of such analyses. Séance/Session No. 4.

HORSFALL, G. Simon Fraser University

Variability in grinding stones from the Maya Highlands

Grinding stones are tools of primary adaptive significance in the subsistence economies of many peoples and deserve considerably more attention than they generally receive. Information relevant to the life history of grinding stones in a traditional Maya Highland village is presented, from material selection to discard patterns, and some implications for interpreting archaeological materials are discussed. Séance/Session No. 16.

HURLEY, W. University of Toronto

Side blow burins and ceramics from southwest Hokkaido

Completion of a three year research excavation at the YAGI site in southwest Hokkaido has produced evidence of a long Initial through

Early Jomon series of occupations dating from ca. 5300 B.C. to 2300 B.C. with distinctive burin manufacturing techniques and a wide range of ceramic styles. The site will be introduced and the results of our preliminary analyses will be presented according to both technological and computer oriented studies. Séance/ Session No. 11.

IVES, J. Archaeological Survey of Alberta

Small sites as indicators of prehistoric economic patterns in the Birch Mountains of northeastern Alberta

Eaglenest and Clear Lakes, situated at the northeast end of the central Birch Mountain depression, appear to have been most intensively occupied during the last 3,000 years. A series of 40 sites recently discovered near these lakes provides the context in which 3 sites are examined for evidence of ephemeral use, repeated specialized use and repeated residential use. Debitage and tool assemblages from the Eaglenest Portage Site (HkPa-4), the Mamowechiwun Lookout Site (HkPa-11) and the Tumaxale Site (HkPa-13) are considered. Assemblage content and refitting analyses document these site use histories. This information permits us to address questions which concern the structure of contributing prehistoric economic organizations. Séance/Session No. 5.

JAMIESON, S. McMaster University

Catchment analysis of the Slack-Caswell site

Catchment of the Ontario Iroquois Slack-Caswell site can be visualized as a series of rings. The innermost ring, one kilometer around the hamlet, provided most subsistence products and some toolstone resources within a specific land/riverine environment. The outermost ring, five kilometers from the site, encompassed a cluster of toolstone outcrops. Two nearby sites, also of late Middleport date, exhibit a similar subsistence catchment pattern with diminished emphasis on toolstone acquisition. Although this pattern determined site location on the landscape, it would appear not to determine spacing between sites. Séance/Session No. 6b.

JULIG, P. York University

Soil chemistry of an archaic site in southern ontario in relation to excavated soil features

Forty square meters of the site E.N.500 on the Eldorado Nuclear development near Port Hope, Ontario, were excavated and soil samples taken from below the plow zone (23 cm depth). Excavation revealed four hearths and one large pit feature plus associated other visible

features. This study examines the correspondence between the relative levels of calcium, phosphorus, magnesium, potassium and other elements and aspects of the soil in relation to the excavated site features and hearths. The possibility of soil chemistry as a pre-excavation tool in locating hearths and other anomalous soil features on Archaic and earlier sites will be discussed. Séance/Session No. 6b.

KEENLYSIDE, D. Archaeological Survey of Canada

Lagoon/estuary adaptation on the northeast coast of Prince Edward Island

Archaeological survey of Prince Edward Island's northeast coast in 1980 identified major and minor archaeological sites chiefly associated with saltwater lagoon/estuary environs. Temporally, most sites would appear to represent habitations dating from the past two thousand years, although isolated "fluted" points seen in local private collections suggest a considerably greater antiquity for man in this region. Surface collected and excavated assemblages exhibit similarities to coastal mainland Nova Scotia and New Brunswick sites. Proposed is a common adaptive strategy based on a mobile year-round resource exploitation of the southern Gulf basin littoral lagoon/estuary environs. Séance/Session No. 7.

LABRECHE, Y. Université Québec à Montréal

DIA.4-T: vestiges immobiliers et analyse des sous-espaces d'un site dorsétien

L'aire DIA.4-T fouillée en 1978 a révélé des restes architecturaux suggérant plusieurs structures d'habitation: une structure de creusement et des structures de surface. Ces vestiges sont partiellement déstructurés, étant donnés entre autres les réaménagements successifs se chevauchant en cet emplacement à occupations multiples. Ces observations permettent de formuler des propositions concernant la succession des événements survenus à cet endroit, hypothèses qui doivent être testées face à la distribution spatiale des témoins lithiques. Séance/Session No. 8.

DIA.4-T: spatial analysis and architectural remains at a Dorset site

The area DIA.4-T excavated in 1978, revealed architectural remains suggesting several habitation structures: a semi-subterranean dwelling and surface habitations. Among other factors, these remains were disturbed by successive partially superimposed reoccupations. These observations were used to formulate propositions concerning the sequence of

events which occurred at this particular location. The resulting hypotheses are tested by the spatial distribution of the lithic material. Séance/Session No. 8.

LAMBERT, P. Ontario Ministry of Culture and Recreation

Lac Seul, survey of a dammed lake

In 1980, archaeologists from the northwestern region, Historical Planning and Research Branch conducted an extensive survey of the western portion of the Lac Seul Reservoir. Sixty-five sites from this lake and one from a tributary lake were documented for the West Patricia Land Use Project. An overview of the regional history is presented using information derived from subsequent research.

Some of the difficulties contingent upon radical environmental disturbance are discussed. Séance/Session No. 12.

LOY, T. B. C. Provincial Museum

The identification of ancient blood residues

As part of a larger study of lithic tool use-residue, techniques have been developed to identify ancient blood films which have remained on prehistoric tools in spite of millennium of burial in sites. In addition, a chemical and microscopic procedure has been developed to crystallize blood haemoglobin and thus identify the blood residue to genus and/or species level. Successful species identification has been done on both obsidian and chert tools from coastal and interior sites on tools dating from between 500 and 5000 B.P. Séance/Session No. 6a.

MACDONALD, G. Archaeological Survey of Canada

Comparison of coastal adaptation patterns northwest and southeast

The comparison of the coastal adaptation pattern on the southeast coast of Florida, particularly among the Calusa Indians, and those of the northwest coast, particularly the northern tribes, Haida and Tsimshian, was made by William Sturtevant in 1964. In both regions a very low energy coastline produced high shell midden sites with great time depth. The combination of shell-fish exploitation with other economic practices allowed for settlement stability and relatively dense population on the coastal and riverine areas, backed by inhospitable forests and swamps. Trade, warfare and social stratification in these two areas provide interesting topics for comparison, that suggest certain conclusions about this form of coastal adaptation.

The heavy reliance in both areas on shell-bitted woodworking tools and the development of elaborate wood carving complexes will also be discussed. Séance/Session No. 4.

MCCORMICK, J. McGill University

Establishing criteria in archaeological faunal analysis

Many of the methods used in modern research are the logical development of work started in the last century. An examination of our current knowledge about natural and cultural systems suggests that archaeologists need to re-examine archaeological faunal analysis and remove the methods and theoretical stances which are outmoded.

A possible framework for assessing past faunal analysis and structuring new research is presented and the results of several field projects are used to illustrate where analysts are making choices which significantly affect the quality of their conclusions. Establishing a set of 'criteria' for specific research and for comparative purposes seems a necessary step in the evolution of archaeological faunal analysis. Séance/Session No. 9.

MCGLADE, J. Wilfrid Laurier University

An analysis of intra-site spatial organization: some preliminary results from the Ball Site.

While Huron archaeology has concentrated on the gross nature of inter-site comparisons for chronological seriation, it has largely ignored the heuristic potential of intra-site analyses. Moreover, the lack of rigorous statistical method, combined with a heterogeneous sampling strategy, has resulted in unknown biases in cultural-historical reconstruction.

A more profitable strategy of micro-settlement studies is presented, one which is based on intra-site analyses of the proto-historic Ball Site, Ontario. The appearance of a section of "pallisade" bisecting the Ball Site suggested that longhouses on either side were potentially non-contiguous. To test whether this hypothesis was tenable, a series of univariate and multivariate statistical analyses were performed on house dimensions, orientation, and contents. Significant differences between houses on either side of the "pallisade", led to the rejection of the null hypothesis of site contemporaneity. Furthermore, the spatial distribution of European trade goods supports the thesis of two non-contemporaneous settlements. Séance/Session No. 2.

MCLEOD, D. Historical Planning and Research Branch, Province of Ontario

No title or abstract available.

Séance/Session No. 15.

MCLEOD, K. Ontario Ministry of Culture and Recreation

The Mather-Walls House: the archaeology of the late historic period in the northwest region

The results of the 1979 and 1980 excavations on the Mather-Walls House property, Keewatin, Ontario, will be discussed. This historic site, owned by the Ontario Heritage Foundation, dates to the late 1880's and early 1900's. The recovered materials were analyzed using several of Stanley South's ideas. The data provided a glimpse of culture during the late historic period in the northwestern region. Séance/Session No. 12.

MCLEOD, M. Lakehead University

Archaeology: it's in the pits

A series of circular depressions have been recorded on various lakes in the Thunder Bay areas. They usually measure about 1 metre by 0.5 metres and are often found on high sand banks overlooking the lake. Their known distribution in this vicinity, cultural affiliation(s) and possible purpose are commented upon. Séance/Session No. 12.

MATSON, R. University of British Columbia

Intensification and the development of cultural complexity: the northwest versus the northeast coast

The relationship between the development of complex forms of social organization and the intense exploitation of regional resources is the subject of this paper. Both the notion of cultural complexity and intensification are defined before being investigated further. The settings in which intensification occurs and those in which it does not occur are discussed with examples given. The development of the important salmon resources on the northwest coast is outlined with reference to published ideas on how it developed. The contrasts between the interior and coastal use of salmon, cultural situations and environments are developed to highlight the differences between ideas. It is concluded that the regularity, abundance, and length of time of availability are critical for intensification of salmon to develop a

feedback situation. Given this situation once the ownership of resources is introduced (if it was not already present) the northwest coast culture pattern would develop very rapidly.

The situation on the northeast coast appears to be different. There does not appear to be any single resource with the regularity, abundance and length of time of availability of Pacific salmon. The group examined, the Micmac, appear to be at a lower lever of complexity for this reason. The conclusion reached is that intensification is a process largely dependent on the nature of the resource being exploited and the technology used to exploit it and thus is not something easily predicted. Séance/Session No. 1.

MILLER, V. Dalhousie University

Political complexity on the east coast: the Micmac case

This paper will consider the political complexity of the Micmac Indians of eastern Maritime Canada. It will show that Micmac political structure was significantly more complicated than the egalitarian band organization commonly found in the sub-Arctic. On a three-level scale of band, tribe, and chiefdom adapted from Service and Sahlins, Micmac political structure combined characteristics of all three levels. Séance/Session No. 4.

MITCHELL, D. University of Victoria

Tribes and chiefdoms of the northwest coast

The northwest coast is examined with reference to the familiar distinction between tribal and chiefdom levels of society. It is concluded that northwest coast societies, while variable in complexity, are in general more like tribes than chiefdoms. The case for Tsimshian, Kwakiutl, and Nun-chah-nulth-aht chiefdoms is considered in greater detail. Séance/Session No. 4.

MORGAN, G. University of Regina

The beaver: sacred cow of the northern Plains

The aversion of several northern Plains tribes to the hunting of beaver is demonstrated in the historic record and archaeological evidence suggests that the origins of this aversion may be very ancient.

It is proposed that the non-use of beaver is a response to ecological conditions peculiar to the Plains region and is important in enhancing the survival potential of the resident human populations.

On the Canadian Plains, surface water supplies, even under average climate conditions, are generally limited by autumn to the mainstreams of the Saskatchewan and Qu'Appelle Rivers. During drought, these conditions are enhanced - many tributaries and lakes becoming dry beds. Beaver dams, by stabilizing stream flows, would significantly modify these effects. Beaver ponds because of their wider geographic distribution - being located on tributaries rather than mainstreams - would increase perhaps crucially the accessibility of forage areas for the bison herds. Séance/Session No. 9.

MORLAN, R. Archaeological Survey of Canada

Microdebitage from northern Yukon mid-Wisconsinan deposits

The mid-Wisconsinan archaeological record from northern Yukon Territory has been enlarged by the discovery of microdebitage - tiny (1-2 mm) struck flakes of chert and other lithic types - in sediments underlying till at one locality and glaciolacustrine clays at another. Although lithic workmanship of such antiquity has been inferred previously on the basis of butchering marks on early and mid-Wisconsinan bones, the recovery of microdebitage from samples collected for paleo-environmental analysis represents the first direct evidence of lithic craftsmanship in the 20,000-60,000 year time range in this region. The localities are situated in the Bonnet Plume basin and the Bell basin, and the overlying glacial deposits are in each case attributed to the Laurentide advance of classical Wisconsinan times. Séance/Session No. 5.

MORRISON, D. University of Toronto

Thule occupations in the western central Arctic

Excavations undertaken by the author in 1980 in the western Coronation Gulf area, Arctic Canada, are described. Work concentrated on the Clachan site (NaPi-2), a small Thule village located approximately 50 km northwest of Coppermine, N.W.T. Stylistic analysis of the artifacts recovered suggests a distinct regional variant of Thule culture, combining both western and Canadian Thule traits with others particular to the area. Subsistence strategies and settlement patterns likewise appear distinctive. Taken in conjunction with the faunal material they suggest a cultural adaptation to an environment more limited than that characteristic of most other areas of Thule occupation. Séance/Session No. 13.

NASH, R. St. Francis Xavier University

General theory and Maritime archaeology

In recent years, there has been increased interest in developing general subsistence-settlement models for hunters and gatherers. Coastal systems have sometimes been subsumed by these models, in other cases, coastal systems are regarded as a special type. These models have largely been generated within the ethnographic or ecological paradigms and are less suitable for dealing with evolutionary problems. Further progress in general theory may also await better integration of the paradigms in which archaeologists work. This paper concludes by proposing a general dialectical model to explain some aspects of coastal systems. Séance/Session No. 1

NICHOLSON, B. Simon Fraser University

An investigation of the reliability of macroscopic aging techniques of freshwater mussels

The early researchers of this century uncritically accepted the assumption that the observed lines on the exterior surface of bivalves were an accurate reflection of the annual passage of a succession of winters. From this assumption it was inferred that counting these annuals was a simple and accurate means of aging individual valves. Recent paleontological literature has questioned this simplistic approach.

In order to evaluate the reliability of this technique, a series of independent observer and individual observer tests were conducted upon 60 Lampsilis siliquoides valves which were randomly selected from a population of 175 collected under controlled conditions in the Canadian Interior Basin. The growth ring counts were compared to counts made with a light microscope using transmitted light to examine radial thin sections of the valves. The results of these experiments confirm the unreliability of macroscopic techniques of aging. Séance/Session No. 9.

PENNEY, G. Memorial University of Newfoundland

L'Anse à Flamme: new developments in late Palaeo-Eskimo and Early Beothuck occupations of Newfoundland.

The excavation of the L'Anse à Flamme site (CjAx-1) during the summer of 1980 significantly contributed to our understanding of Newfoundland and Labrador prehistory. The site contained three prehistoric components: Maritime Archaic, Dorset and Beothuck.

The Archaic sample recovered was small but it is the first evidence of their occupation along the south coast. Three technologically, but not stratigraphically, distinct Dorset occupations have been observed

at the site. The early Dorset component (in the Newfoundland sense) consisted of a tiny burin-like tool (the only one found), high side-notched end blades and notched uniface points. The other two Dorset occupations are typical Newfoundland Dorset. Soapstone was absent, but a Point Peninsula rim sherd was unearched with the Dorset material. A radiocarbon determination of 1335 ± 115 B.P. was obtained on wood charcoal from this occupation.

The Indian component at the site proved to be the most exciting. When the site was tested, in 1979 the writer was unable to assign a cultural affiliation to the numerous small corner-notched expanding base projectile points. Subsequent excavation and other developments in Newfoundland prehistory, confirm a Beothuck cultural tradition. The Beothucks have an ethnographic and linguistic history in Newfoundland, but the prehistoric identification of this ethnic group is in its infancy. Séance/Session No. 13.

PILON, J. Toronto

L'analyse du débitage du gisement Neskuteu, Misuau Nipi. Un exemple de l'importance de la structure d'habitation comme unité d'analyse.

L'analyse du débitage du gisement Neskuteu dont l'occupation archaïque remonterait au troisième millénaire avant J.-C. fournit des données additionnelles quant aux activités domestiques et technologiques de plusieurs ordres grâce à la délimitation de deux aires d'habitation distinctes et contemporaines. Séance/Session No. 8.

POKOTYLO, D. University of British Columbia. P. FROESE, University of Michigan

Ethnographic and prehistoric utilization of floral subsistence resources in the southern interior plateau of British Columbia

This paper evaluates the role of floral resource utilization in the prehistoric subsistence economy of Southern Interior Plateau aboriginal groups. From ethnographic and environmental data, archaeological expectations are generated for the material correlates of plant root procurement and processing activities. Ethnographic and archaeological information indicate that small sites are crucial in reconstructing floral resource use patterns and, therefore, constitute the focus of this study. The expectations are compared with both surface survey and excavated archaeological data from a number of regions of the British Columbia Southern Interior Plateau. While analysis shows some congruity between the expectations derived from ethnography and the archaeological record, a number of discrepancies suggest that the prehistoric pattern differed in several important aspects from the ethnographic. Séance/Session No. 5.

PRAGER, G. Simon Fraser University

Cultural formation processes in the fur trade

Quantitative comparisons were made between Hudson's Bay Company and North West Company inventories of fur trade goods, and archaeological collections from two eighteenth century fur trade posts. This study was designed to determine the relationships between material items in cultural context and in corresponding archaeological context. Hypotheses were formulated concerning archaeological effects of differential behavior in regulating the condition of, and the manner in which different cultural objects are deposited. Séance/Session No. 17.

PRIESS, P. Parks Canada

The archaeological investigation of St. Andrew's Rectory

The first season of excavations at St. Andrew's rectory, 15 miles north of Winnipeg recovered substantial structural information on construction of the extant rectory and an original annex. Similar data was also gathered during a period of archaeological consultations for a stabilization project on the extant structure. The artifacts recovered, from a complexity of fill layers, span a period of occupation beginning before initial use of the rectory, in 1854, but do not appear to reflect the buildings long association with church related activities. Séance/Session No. 17.

PYSZCZYK, H. Simon Fraser University

Stone flakes as bone wedges: smashed fingers and bone splinters

Experimental archaeologists endeavor to duplicate stone tool manufacturing methods and use, thus providing a basis for inferences on past human behavior.

A great deal of controversy exists among archaeologists on whether stone flakes can effectively split fresh animal bone (MacDonald 1968; Kaminga 1978; Flenniken 1980; Hayden 1980). In addition, many investigators make no morphological or functional distinction between these stone flakes (*pièces esquillées*) and exhausted bipolar cores. Bone fracturing experiments were conducted to investigate these problems.

Stone wedges, consisting of unmodified flakes, were hammered into 30 unmodified and longitudinally scored fresh deer metapodials. The results indicate that unmodified flakes will fracture bone and be modified during the process. However, these wedges differ morphologically from exhausted bipolar cores. These experiments suggest

that there exist morphological and functional reasons for typologically separating pièces esquillées and bipolar cores. Séance/Session No. 2.

RAJNOVICH, G.

Possible correlations between wild rice stands and woodland sites on Lake of the Woods

The earliest record of wild rice harvesting on Lake of the Woods in northwestern Ontario is La Verendrye's 1732 account of Cree and Monsoni Indians ricing in August.

Seeds from archaeological sites in other areas of the northeastern woodland place rice harvesting as early as 2,400 years ago in Michigan, and palynological studies show that wild rice was available by about 2,000 years ago in northern Minnesota. No direct evidence for pre-historic wild ricing has yet been found on Lake of the Woods archaeological sites. However a study of locational data for wild rice stands and sites and suggests wild rice was harvested as early as the Middle Woodland period. Séance/Session No. 12.

RIDDLE, D. Ministry of Culture and Recreation, Province of Ontario

The West Patricia project 1978-80

This paper will discuss the results of a major three year survey project conducted in the central area of northwestern Ontario as a component of a large land-use planning exercise.

Emphasis will be placed on the description of the area, the problems encountered with remote work, and the material culture recovered during the three year period. Séance/Session No. 12.

ROBERTS, A. York University

ENL resource survey and southern Ontario Archaic

At the request of Eldorado Nuclear Limited a proposed development area of several hundred acres near Port Hope Ontario was surveyed for archaeological resources. Due to the general characteristics of southern Ontario Archaic sites very intensive survey using cultivation and surface examination was employed to locate 14 archaeological sites ranging from Paleo Indian to Late Woodland. None of the sites located would have been found using normal test-pit survey procedures. Excavation results of three of these sites demonstrates they were occupation areas. A C-14 date was obtained for each excavated site and other survey work along the north shore of Lake Ontario reveals that most

sites in the region are similar. It is concluded that to improve our understanding of southern Ontario Archaic excavation of similar tiny sites ("chipping stations") is absolutely necessary; they are clearly in the majority and few large and rich presumed summer camp sites have been located. Séance/Session No. 6b.

ROCHELEAU, C. Université de Montréal

L'environnement et les structures d'habitation préhistoriques esquimaudes du Nouveau-Québec

Cette communication porte sur l'étude des relations entre l'environnement et différents types de structures d'habitation néoet paléo-esquimaudes du Nouveau-Québec. Cette étude implique dans un premier temps l'utilisation des structures fouillées et non-fouillées pour leur identification culturelle. Dans un deuxième temps, une explication préliminaire des systèmes d'établissements de ces deux cultures est discutée. Séance/Session No. 8.

Environment and prehistoric Eskimo habitations in Nouveau-Québec

This communication deals with the study of the relationships between the environment and different types of Neo- and Paleo-Eskimo habitations in Nouveau-Quebec. This study involves, firstly, the use of structures, both excavated and non-excavated, for cultural identification. Secondly, a preliminary explanation of the settlement systems of these two cultures is discussed. Séance/Session No. 8.

ROSEN, R.

Title and abstract not available

Séance/Session No. 4.

ROSS, W. Ontario Ministry of Culture and Recreation

The late paleo occupation of northwestern Ontario - an overview

This paper will describe the known material culture and settlement distribution patterns of the Palaeo-Indian occupation of northwestern Ontario in light of recent discoveries by several researchers working in the area.

The areas referred to and the material described will primarily be those associated with and between glacial Lakes Agassiz and Minong. Séance/Session No. 12.

SANGER, D. University of Maine, Orono

Changing views of aboriginal seasonality and settlement in the Gulf of Maine

The study of settlement patterns, especially seasonal transhumance, has assumed a greater significance in the last decade of archaeological research in the Gulf of Maine. This paper traces the history of discussion on seasonal transhumance commenting critically on the adequacy of the reconstruction. Included are topics such as theoretical assumptions and the methodology for seasonal determination. Critical to the reconstructions has been various workers' interpretations of the ethnohistorical record, which ranges from total acceptance to near rejection.

The paper concludes with some ideas and recommendations for future research on seasonality in the Gulf of Maine area. The methodology advocates increasing the range of seasonal indicators, the cautious use of negative evidence, a recognition of the role of local environments, and an appreciation of the flexibility of the aboriginal hunters and gatherers. Séance/Session No. 4.

SAVELLE, J. University of Alberta

Cultural and natural formation processes of an historic Netsilik Inuit winter site

Analysis of the remains of an historic Netsilik Inuit winter site, in conjunction with information supplied by the original inhabitants, demonstrates that despite post-occupational disturbance in the form of snow melt and associated downslope movement, the original internal site structure was maintained. Specific activity loci are identified for two snow houses, one occupied during early winter and the other during late winter. Changes in internal characteristics and patterning of respective activity loci are shown to reflect adjustments in various hunting and domestic activities from early to late winter. These are in turn related to site function in the context of the larger cultural system operating in the area during the period associated with the site occupation. Séance/Session No. 17.

SAVELLE, J. and O. BEATTIE, University of Alberta

Dental annuli in muskoxen as an indicator of archaeological site seasonality

Dental annuli in musk-oxen from 19th century archaeological sites on Banks Island, N.W.T., are demonstrated to be reliable indicators of seasonality. Analytical techniques described include those involving

decalcification/staining, standard thin sectioning, scanning electron microscope, and electron probe. Although dental annuli studies for several other taxa have previously been successfully employed in determining site seasonality, the present results are significant in that a) reliability of various techniques are examined or are compared, and b) the specimens have been fully exposed to weathering phenomena since primary deposition. Séance/Session No. 9.

SHAY, T. University of Manitoba

Aspects of the human paleoecology of the Boreal forest

One aspect of human ecology, the acquisition of food resources, can be analyzed in terms of the range of foods chosen as well as the ranking of foods according to some cost:benefit measure. A useful means of estimating the costs of a particular food item, a game species for example, is to assess the time and energy expended in searching for and pursuing the prey. Search costs are not only related to prey density but also to hunter search tactics and mobility. Pursuit costs are largely a function of the range and accuracy of the weapons employed. This presentation explores the role of technology as it may have affected the efficiency of search and pursuit among prehistoric hunters of the Boreal forest. Séance/Session No. 13.

SIMONSEN, B. Resource Management Division, Province of British Columbia

A strategy for resource management; the British Columbia experience

British Columbia has been evolving an archaeological resource management programme for the last ten years, since the appointment of a Provincial Archaeologist in 1971. The programme has had mixed success and is presently undergoing a change of direction.

This paper examines the history of the programme briefly, pointing out some of the successes and failures. The major portion of the presentation outlines some of the major changes to the programme, presently taking place, and proposes an overall strategy for cultural resource management in Canada. Séance/Session No. 15.

SNOW, B. Simon Fraser University

How to diversify your holdings while living within your limitations:
a case study in the life histories of end scrapers

This paper suggests that due to the absence of locally abundant cherts and the subsequent need to import non-local materials, the Seed site inhabitants had adapted their chipped stone technology to operate under

conditions of resource restriction. It was therefore necessary to exploit to a maximum all raw materials brought to the site. This was accomplished through the practice of certain methods of core preparation, blank selection and tool recycling. The present paper will highlight these practices for end scrapers; a morphological class of artifacts commonly interpreted as hide-working implements. It will describe the diversity of lithic artifacts in or derived from end scraper production, maintenance and recycling. Furthermore, it will explain the technological methods by which these artifacts are manufactured. Finally, it will graphically illustrate, in flow chart form, the various sequences or pathways along which the life histories of end scrapers may be traced. Séance/Session No. 16.

SPIESS, A. Maine Historic Preservation Commission. B. BOURQUE, Maine State Museum

Five thousand years of hunting and gathering on the Fox Islands: thoughts on the causes of cultural efflorescence

Detailed faunal analysis of the Turner Farm shell midden, Penobscot Bay, Maine, has produced a detailed subsistence record spanning 5,000 years, the first such record for the northeast. These data document dramatic subsistence changes in the sequence.

Occupation II (Moorehead Phase, 4300-4600 B.P.) maintained a specialized summer fishery for swordfish and fall fishery for codfish as well as a background multiseasonal terrestrial hunting orientation (primarily for white-tailed deer), and moderate shellfish gathering. Marine mammals were hunted only incidentally. The Moorehead Phase people made extensive use of ground stone and participated in a fancy mortuary-ceremonial complex extending as far north as northern Labrador.

By 3800 B.P., Occupation III people related to the Susquehanna tradition were involved in an adaptation including substantial shellfish gathering, extensive terrestrial hunting, minor inshore fishing for sturgeon and flounder, and incidental birding and sea mammal hunting. The succeeding Ceramic occupations begin with this general subsistence orientation, but add increasing and accelerating intensity of exploitation of inshore fish, seabirds, sea mammals, especially fur trapping, and probably shellfish gathering. Ethno-historic and faunal evidence point to the faltering beginnings of a bowhead-whale-hunting adaptation toward the end of the sequence.

Throughout the length of occupation, the site was used multi-seasonally, possibly year-round; but permanent villages of substantial wooden houses with large (over ? 100) populations were never built in the northeast.

Two periods of low-level (compared with the Northwest coast) cultural "efflorescence" occur in the sequence: during the Moorehead Phase

participation in the burial tradition, and at the end of the Ceramic sequence. The first was possibly encouraged by the boating abilities and leadership qualities needed in a swordfish hunting adaptation, but at a moderate population level. The second "efflorescence" is based on a drastic increase in trade contacts with the Maritimes, involving at least furs, copper and lithic raw materials, and coincident with accelerating population increase.

The first "efflorescence" seems to have been terminated by environmental change affecting the fishery. The second was probably terminated by European contact, beginning with extirpation of the Gulf of St. Lawrence bowhead whale population in the late 16th century, followed by European disruption of the native fur trade, and finally epidemic disease before 1620. Séance/Session No. 4.

SPURLING, B. Archaeological Resources Management, Saskatchewan Culture and Youth

A decade of archaeological resource management in western Canada

Concern with the management and conservation of archaeological resources in western Canada in the last decade has been most visibly manifested in the passage, by all 4 western provinces, of discretionary legislation protecting heritage resources. More subtle and important indicators of this concern has been the establishment of provincial agencies mandated to initiate, permit, and review archaeological researches and resource preservational programs and the staffing and budgetary allocations made to these agencies. Aggressive efforts towards resource inventory, impact mitigations, setting of professional and law constituencies, and developing interpretational facilities are apparent. However, the net impact of archaeological resource management programs on both the discipline's image and traditional commitment to research has received scant analytical attention. In an attempt to acquire information on the factors responsible for the growth of archaeological resource management and its shaping of the discipline in western Canada, a series of questionnaires was distributed to resource managers in B.C., Alberta, Saskatchewan, and Manitoba. Questions were asked, on a year-by-year basis, concerning annual budgets, number of permanent staff, number of research vs resource management investigations, the number of sites known to have been disturbed and so on. These data along with gross provincial products, populations, the political party in power, and other variables pertaining to each province over the past decade are utilized in an investigation of the development of resource management in western Canada. The results of this analysis are presented and a tentative summary of the state-of-the-art is presented for the west. Séance/Session No. 15.

STEVENS, W. Parks Canada

The application of stratigraphic analysis in Maritime archaeology:
a case study from a sixteenth century Basque whaling site

In the summer and fall of 1980 an archaeological excavation program was conducted in the harbor of Red Bay, Labrador. This work was carried out by the marine archaeological research unit of Parks Canada. It was part of an ongoing research project centered around what is believed to be the wreck of a Spanish Basque whaling ship, the San Juan, which sank in Red Bay in 1565. This particular paper will examine the data collected from one area of the wreck site known as the shore trench. The excavation resulted in a study of the application of stratigraphic analysis to maritime archaeology. It is emphasized that such analysis cannot stand alone but when examined in relationship to plan data a sound basis of interpretation can be achieved. The overall result is presented in the form of an event sequence chart, an approach which recognizes the importance of cultural processes as a means of better understanding the archaeological record. Séance/Session No. 17.

STEVENSON, M. Parks Canada

Small sites archaeology on the Victoria-mining frontier

The archaeology of recent and historic sites, with their expanded data bases, offers a vast and until recently untapped potential for refining our knowledge of culture process and our understanding of how the archaeological record is formed. Nowhere is this more evident than on the Victorian mining frontier where small, archaeologically neat and historically documented mining camps which flourished then died within a few short years or months are common. Such single component sites, have been noted to be (Baker 1978) virtual looking glasses for the study and reflection of Victorian culture process. This paper briefly investigates several turn-of-the-century gold rush sites in the southwest Yukon and their potential for understanding acculturative processes on the rural Victorian mining frontier and how differing abandonment processes contribute to the formation of the archaeological record. Séance/Session No. 5.

STIMMELL, C. University of Toronto

Resource utilization in a Jomon Ceramic industry

Jomon pottery is now dated as the earliest ceramics in the world. Early Jomon pottery from southern Hokkaido is examined using a number of scientific techniques (x-ray diffraction, thin-section petrography, neutron activation) to discover what local resources were available and

utilized and to determine what level of manufacturing skill was developed. One possible reconstruction of Jomon pottery production by a local Japanese potter is examined. Séance/Session No. 11.

SUTTON, D. Smithsonian Institution

Resource control and intensification of production: concepts germane to the explanation of cultural evolution in hunter-gatherer societies

Ethnographically recorded cultures of the coastal Salish of the Vancouver Island region and the Naskapi-Montagnais of central Labrador are compared. Attention is focussed upon subsistence strategies, human population densities and seasonal-spatial distribution, sociopolitical organization and complexity of material culture. An explanation is offered of the marked contrast between Salish and Naskapi cultures. It involves comparison of potentials for resource control and intensification of production. Both of these were present and realized in Salish territory but effectively absent from the Naskapi country. The inheritance of rank, property and privilege, the practise of competitive gifting and greater complexity of material culture amongst the Salish are then causally related to this difference. Finally, some archaeological implications of the hypothesized relationship between resource distribution, sociopolitical organization and complexity of material culture are explored. Séance/Session No. 1.

THOMSON, C. Memorial University of Newfoundland

Dorset soapstone art from Shuldham Island, northern Labrador

Preliminary archaeological investigations of a Middle/Late Dorset site have revealed what appears to be a unique Dorset soapstone art industry in Saglek Bay. In the 1980 field season, representations were found of polar bears, human figures, walrus, eggs, a shell, a human skull and part of a tattooed mask. The subjects of the carvings, coupled with their time period and location on the north coast of Labrador, indicate the possibility that at least part of the collection may have served to ward off Norse, Thule or southern Indian groups. The presence in the site of diagnostic Thule and Point Revenge artifacts suggests, however, that they may not have been successful. These and other possible functions will be discussed and comparisons drawn to other examples of Dorset art. Séance/Session No. 13.

TISDALE, M. Historic Resources Branch, Province of Manitoba

Exploratory studies in north central Manitoba

Between 1969 and 1975 survey and excavation were carried out on the Rat and Burntwood Rivers as part of a program of impact assessment and archaeological salvage. Research interest was focussed on Laurel Phase components.

The research area probably did not serve as a core territory for aboriginal populations until recent times. It did serve as a transport corridor both to the north and south. Evidence suggests coexistence between Blackduck and Laurel phases, some regional specialization of Laurel and a lithic assemblage distinct from that of the Shield Archaic. Séance/Session No. 3.

TITUS, L. Simon Fraser University

Analysis of Thule midden matrix

During the summer of 1978 approximately 500 kg of midden material was removed from a western Thule site on Herschel Island, Yukon. The midden is a matrix of degraded fatty material which often preserves artifacts, bone, and a variety of organic remains.

Gas chromatography of the fatty debris shows the continued presence of a range of fatty acids in various quantities. While fatty acid composition may be family specific (whale vs. seal, for example), the quantifications of this preliminary work would indicate that degradation processes have altered the fats so that resource identification is problematic. Séance/Session No. 13.

TUCK, J. Memorial University of Newfoundland

A 16th century whaling station in southern Labrador

Since 1977 Memorial University has carried out excavations at a Spanish Basque whaling station at Red Bay, Labrador. This paper describes the results to date (excavations are expected to continue for 2-3 additional years). Emphasis is placed upon the shore station where remains of ovens, a cooperage, and other structures have been wholly or partially exposed. These structures and the artifacts found in and around them - including some remarkably well-preserved organic remains - will be discussed and evidence for their functions presented. Brief mention will be made of the wreck of the galleon San Juan (1565) being excavated by Parks Canada and the possibility of Basque contact with native people on the Strait of Belle Isle. Séance/Session No. 17.

TURNBULL, C. Historical Resources Administration, Province of New Brunswick

Archaeology in the Maritimes

No abstract available. Séance/Session No. 15.

WEETALUKTUK, D. Makivik Research Department

Cultural identity of archaeological sites/structures in the central eastern Hudson Bay region

Recent archaeological sites survey in the central eastern Hudson Bay have shown that the region has had prehistoric occupiers of the Paleo and Neo Eskimos. Though there are numerous archaeological sites in the region, the exact nature of their temporal sequence, occupation span, seasonality, cultural affinity of some sites and the regional variation and adaptation is not yet fully known.

Emphasis is made on the Paleo Eskimo sites and structures ie. boulder-field pits, axial and mid-passage structures, the Dorset "mini" and longhouses, semi-subterranean and pot-rest structures and the others.

Of particular interest are the distinctive structures with vertical stone arrangements like "multiple hearth" and other curious structures.

Whether those structures were regional variants caused by the availability of certain shaped stone building material, isolation or the opposite, the influence from the other groups or cultures will also be discussed. Séance/Session No. 8.

WHITE, R. University of Alberta. J. CINQ-MARS, Archaeological Survey of Canada

Henri-Marc Ami: a forgotten Canadian prehistorian

This paper attempts to give due recognition to Henri-Marc Ami, an internationally recognized Canadian prehistorian and geologist whose archaeological contributions have been ignored in this country. Ami's collection of French Paleolithic artifacts (well over 100,000 artifacts from more than 50 sites) is among the most important outside of France. In some instances, Ami's assemblages are the only ones known from given Stone Age sites. In other cases, Ami excavated the backdirt of previous and contemporary excavators. The current importance of the collection is outlined and reasons are sought for the scientific neglect of the fruits of Ami's research. Séance/Session No. 3.

WHITLAM, R.

Models of coastal adaptation: the northwest coast and Maritimes

Ecological theory pertaining to optimal foraging behaviour and anthropological knowledge about the variability of hunter-gatherer scheduling strategies and group organization are employed to develop a general model of coastal exploitation. This model is used to characterize the nature of prehistoric aboriginal adaptations to coastal environments along the northwest coast and in the Maritimes. Diachronic and synchronic aspects of this model are discussed and compared with our present knowledge of the archaeological record from these areas. The necessity of regional research orientations and the importance of understanding Holocene environmental changes are stressed. Séance/Session No. 1.

WILSON, M. University of Calgary. E. MCCULLOUGH, and G. FEDIRCHUK, McCullough Consulting Ltd.

The Duckett site: Paleo-Indian in east-central Alberta

The Duckett site, a multicomponent camp site on Ethel Lake, in the Cold Lake area of east-central Alberta, has been surface-collected by the Edgar Duckett family for several decades. In 1980 Esso Resources Ltd. generously provided research funds to McCullough Consulting Ltd. for testing of the site and analysis of the Duckett collection, even though the site was not threatened by development. These excavations revealed buried components in old beach and aeolian sands and underlying gravels; and underscored the high potential of the site for detailed excavations. Surface finds include a variety of Paleo-Indian points, referred tentatively to the Clovis, ?Plainview or Frederick, and Alberta types. Younger materials include Oxbow, corner-notched (?Besant), Taltheilei, and small side-notched projectile points. Typological affinities with complexes both to the north and south are evident. Corner-notched and small side-notched point components have been documented in subsurface tests, along with deeper material of uncertain affinity. Faunal remains including duck and large ungulate are present in the ?Besant component. Preliminary geological considerations suggest the possibility of horizontal as well as vertical separation of components as the beach has migrated westward. It is hoped that additional excavations can be conducted soon, and that an interpretive display can be made available in the Cold Lake area. Séance/Session No. 3.

WRIGHT, M. Simon Fraser University. J. WILLIAMS, Simon Fraser University

Experimental evaluation of the effects of fresh water inundation on archaeological sites: a case study from British Columbia

An experiment to assess the disruptive capability of the 'Active Zone' within a fresh water reservoir is described. In the last decade much attention has been focused on the effects of inundation on archaeological sites, but little in the way of empirical experimental results

have been forthcoming. Materials of known shape and weight were placed within the active zone and monitored to determine differential movement rates. The results of the experiment suggest the type of biases and errors that might be resultant in analyzing archaeological assemblage provenience from an inundated context. Séance/Session No. 2.