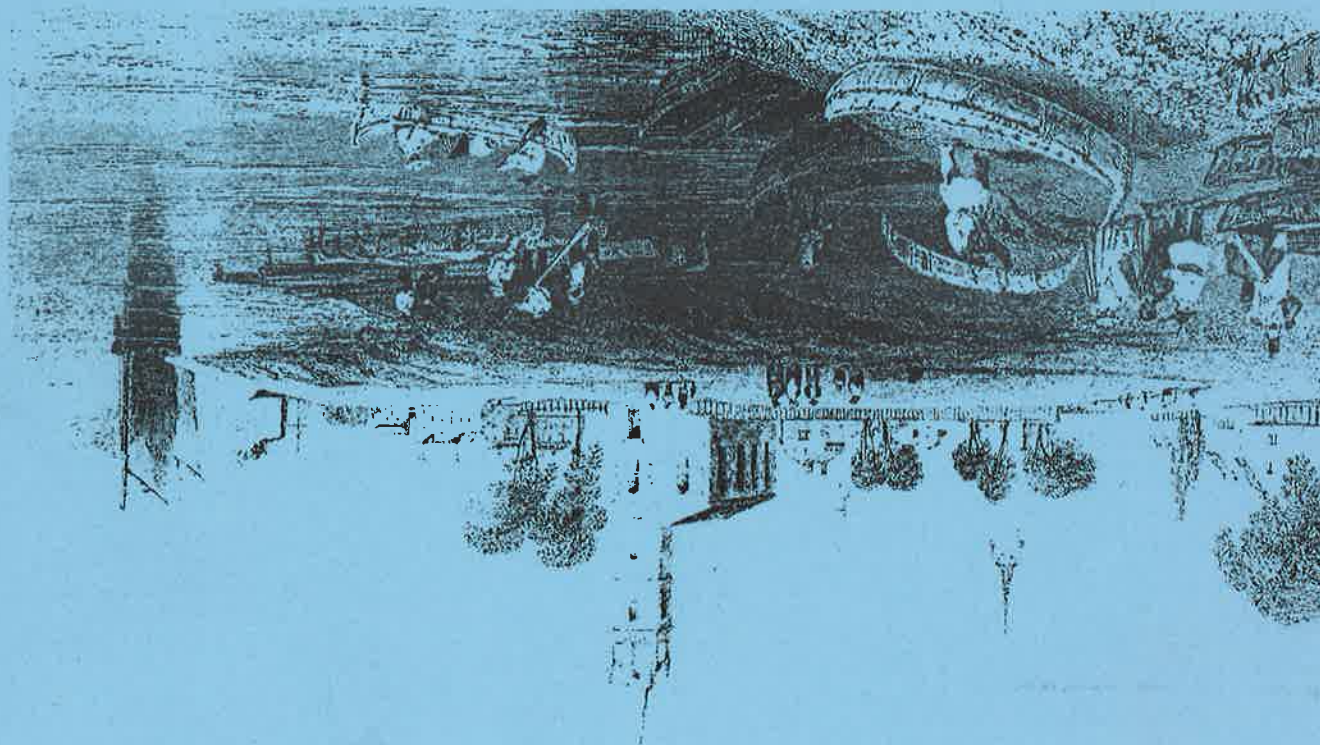


B.

PROGRAMME AND ABSTRACTS

PROGRAMME ET RÉSUMÉS



"The Green": Fredericton

W.H. Bartlett

1989

Annual Conference
Canadian
Archaeological
Association

10 May-13 May
Fredericton,
New Brunswick

Réunion annuelle
l'Association
canadienne
d'archéologie

10 mai-13 mai
Fredericton,
Nouveau-Brunswick

PROGRAMME AND ABSTRACTS

PROGRAMME ET RÉSUMÉS

Annual Conference

Réunion annuelle

1989



**Canadian
Archaeological
Association**

**l'Association
canadienne
d'archéologie**

Fredericton,
New Brunswick

Fredericton,
Nouveau-Brunswick

CAA Executive/Conseil d'administration ACA

President/Président.....	Robert McGhee
Vice-President/Vice-président	Frances Stewart
President Elect/Président élu.....	David Meyer
Secretary-Treasurer/ Secrétaire-trésorier	Lesley Nicholls
Executive Secretary/Secrétaire exécutif	Bjorn Simonsen
Editor, Newsletter/ Rédacteur du Bulletin d'information.....	Mina Kapches
Editor, Canadian Journal of Archaeology/ Réducteur du Journal canadien d'archéologie	James Tuck

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and Heritage
Fredericton,
New Brunswick
for the CAA.



publie par
Tourisme, Loisirs et
Patrimoine
Fredericton,
Nouveau-Brunswick
pour l'ACA.

Welcome

On behalf of the organizing committee, I would like to welcome you to the 22nd annual conference of the Canadian Archaeological Association. We are happy to host this event for the first time in New Brunswick, and hope that your stay in our beautiful Province will be an enjoyable one.

Have a great conference!

Christopher Turnbull,
Coordinator.

Bienvenue

Au nom du comité organisateur, je désire souhaiter la bienvenue à tous à l'occasion de la 22e réunion annuelle de l'Association canadienne d'archéologie. Nous sommes heureux de vous accueillir pour la première fois au Nouveau-Brunswick et nous espérons que votre séjour chez nous sera des plus agréables.

Bonne conférence à tous!

Christopher Turnbull,
Coordonnateur.

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Acknowledgements

The Conference Planning Committee would like to gratefully acknowledge the donations made by the following agencies:

The New Brunswick Department of Tourism,
Recreation and Heritage
The City of Fredericton
The Council of Maritime Premiers
Moosehead Breweries

We would also like to thank those individuals who freely gave their time towards the successful hosting of this Conference.

Remerciements

Le Comité de planification remercie les organismes suivants pour leurs contributions:

Le Ministère du Tourisme, des Loisirs et du Patrimoine.
La ville de Fredericton.
Le Conseil des Premiers ministres des Provinces Maritimes
La Brasserie Moosehead

Nous désirons également remercier tous les individus qui ont bénévolement donné de leur temps dans la préparation de cette conférence. Merci beaucoup.

1989 CAA CONFERENCE PLANNING COMMITTEE

Christopher Turnbull
Archaeological Services N.B.
Conference Coordinator

Patricia Allen
Archaeological Services N.B.
Program Coordinator

Albert Ferguson
Archaeological Services N.B.
Social Activities Coordinator

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Heritage Branch
Audio Visual Coordinator

Scott Finley
Public Session Coordinator

Lola Courchesne
Book Room Coordinator
Heritage Branch

LE COMITÉ ORGANISATEUR DE LA CONFÉRENCE ACA 1989

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Coordonnateur de la conférence

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Coordonnatrice de l'inscription

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la direction de la patrimoine
Coordonnateur de l'audio-visuel

Scott Finley
Coordinateur de la présentation publique

Lola Courchesne
la direction de la patrimoine
Coordonnatrice de la salle de livres

ATTENTION

Canadian Archaeological Association

Annual General Meeting

3:30 pm/15:30

Thursday May 11, 1989

St. John Room

Lord Beaverbrook Hotel

All members are encouraged to attend.

Association Canadienne d'Archéologie

L'assemblée annuelle générale

aura lieu jeudi, le 11 mai 1989 à 15:30

Salle St. John

Hôtel Lord Beaverbrook

Tous les membres sont invités et
encouragés à y assister.

Conference information

MEETING PLACE

The 22nd Annual Meeting of the Canadian Archaeological Association is to be held at the Lord Beaverbrook Hotel in Fredericton, New Brunswick beginning Wednesday evening May 10 and ending Saturday May 13, 1989. Sessions will be held in the Convention Meeting Rooms on the ground and the mezzanine floors.

REGISTRATION

On Wednesday May 10 and Thursday May 11, the registration desk will be located in the foyer of the Conference room area on the mezzanine floor. On Friday May 12 and Saturday May 13 the registration desk will be located in the St. Croix Room on the mezzanine floor. Persons who have preregistered may pick up their conference kits and receipts at the registration desk. The registration desk will be staffed during the following hours:

Wednesday May 10	4:00pm-9:30pm	16:00-21:30
Thursday May 11	8:00am-5:00pm	08:00-17:00
Friday May 12	8:30am-5:00pm	08:30-17:00
Saturday May 13	8:30am-5:00pm	08:30-12:00

Registration fees are:

Regular	\$55
Student	\$35
Underwater Session Saturday	\$10

CAA MEMBERSHIP

A membership desk will be open in the registration area throughout the Conference for those who wish to renew their memberships or join the Association.

TRAVEL GRANTS

Applications for reimbursement of travel costs for CAA members are included with your registration kits. Applications for reimbursement must be submitted to the Executive/Secretary of the Association by May 31, 1989.

MESSAGES

A message board will be set up in the registration area.

Renseignements généraux

LIEU DE LA RÉUNION

La 22e réunion annuelle de l'Association canadienne d'archéologie aura lieu à l'Hôtel Lord Beaverbrook à Fredericton, Nouveau-Brunswick. Elle débutera dans la soirée de mercredi le 10 mai, et se terminera samedi le 13 mai 1989. Les différentes séances des présentations auront lieu au premier et deuxième plancher.

INSCRIPTION

Mercredi et jeudi, les 10 et 11 mai, le bureau d'inscription sera situé dans le foyer de la mezzanine. Vendredi et samedi, les 12 et 13 mai, il sera situé dans la salle Ste-Croix du même plancher. Les personnes qui se seront pré-inscrites pourront prendre leur trousse de conférence et leur reçu au bureau d'inscription. Heures d'ouvertures:

Mercredi, le 10 mai	16:00-21:30
Jeudi, le 11 mai	08:00-17:00
Vendredi, le 12 mai	08:30-17:00
Samedi, le 13 mai	08:30-12:00

Frais d'inscription: régulier	55 \$
Étudiants	35 \$
Séance sur l'archéologie sous-marine seulement -	10 \$
Samedi le 13 mai	

MEMBRES DE L'ACA

Les personnes désireuses de devenir membres ou de renouveler leur cotisation pourront le faire au cours de la conférence.

DÉPENSES DE VOYAGE

Des formulaires de l'ACA pour le remboursement des dépenses de voyage sont inclus dans votre trousse d'inscription et devront être envoyés directement au secrétaire-exécutif de l'Association avant le 31 Mai 1989.

MESSAGES

Un tableau d'affichage sera en montre près du bureau d'inscription.

PAPERS

All papers are limited to 20 minutes. Session chairs are requested to strictly enforce this time limit and to maintain the session schedules.

SLIDES

Participants are requested to supply their own carousels. Please mark these clearly with your name (preferably with masking tape on the side). Carousels should be given to the projectionist at the beginning of the session or during the coffee break.

BOOK ROOM

The St. Croix Room on the mezzanine floor has been made available for the display and sale of recent archaeological publications. Order forms for publications may be left with display copies. Posters will also be displayed in this room. A VCR and television monitor will be set up for VHS film viewing. All publications etc. must be removed from the book room by 16:30/4:30 pm on Saturday, May 13. Book room hours will be:

Thursday May 11	12 noon - 5 pm	12:00-17:00
Friday May 12	9am - 5 pm	09:00-17:00
Saturday May 13	9am - 4 pm	09:00-16:00

T-SHIRTS AND COFFEE MUGS

A limited number of T-shirts and coffee mugs with the Portie logo will be available for sale in the book room. T-shirts are priced at \$8 and coffee mugs at \$3. Both may be purchased as a package for \$10, while quantities last.

COFFEE BREAKS

Twenty minute coffee breaks have been scheduled during the sessions. Coffee, tea and muffins will be available both before and during morning sessions. Beverages only will be served during afternoon coffee breaks.

CONFERENCE LOGO

The logo for the 1989 CAA conference was developed by New Brunswick artist, Angel Gomez, and is based on a 4000 year old fish effigy plummet. This artifact was recovered during excavations at the Portland Point site in our port city of Saint John. Portie welcomes you to the 1989 CAA conference.

PRÉSENTATIONS

Toutes les présentations sont limitées à 20 minutes. Les modérateurs sont demandés de faire respecter le temps alloué à chacun afin de suivre l'horaire prévu.

DIAPPOSITIVES

Les participants devront fournir leur carrousel avec diapositives. Veuillez, S. V. P., bien l'identifier avec votre nom. Le carrousel devra être donné au préposé technique à la pause-café ou au début de la présentation.

SALLE DE LIVRES

La salle St. Croix de la mezzanine sera mise à votre disposition pour y exposer vos publications. Vous pourrez déposer des bons de commandes pour les intéressés. Si vous avez des films vidéo, un magnétoscope VHS et un appareil de télévision seront également mis à votre disposition pour la durée de la conférence. La salle de livres devra être libérée samedi le 13 mai à 16:30 au plus tard. Elle sera ouverte les jours et les heures suivants:

Jeudi, le 11 mai	12:00-17:00
Vendredi, le 12 mai	09:00-17:00
Samedi, le 13 mai	09:00-16:00

CHEMISES ET TASSES COMMÉMORATIVES

Une quantité limitée de chemises commémoratives (T-shirt), ainsi que des tasses arborants le logo de la conférence seront en vente dans la Salle de livres. Les chemises se vendront 8 \$ chacune et les tasses 3\$. Les deux pourront être achetés comme un ensemble pour la somme de 10 \$

PAUSE-CAFÉ

Une pause-café de vingt minutes est prévue entre les différentes séances de présentations. Du café, du thé et des muffins seront servis le matin, et des breuvages seulement dans l'après-midi.

LE LOGO DE LA CONFÉRENCE

Le logo de la conférence de l'Association canadienne d'archéologie 1989 a été conçu par un artiste Néo-Brunswickois, Angel Gomez, à partir d'un artefact de 4000 ans en effigie d'un poisson, trouvé sur le site de la Pointe Portland, à Saint-Jean (N.-B.) lors de fouilles archéologiques.

PUBLIC SESSION

On Saturday afternoon May 13, a special public session sponsored by Archaeological Services New Brunswick will be held in the K. C. Irving Theatre at Fredericton's new Hugh John Flemming Forestry Complex. The session will include presentations by Dr. Jack Brink concerning the World Heritage Site at Head Smashed In Buffalo Jump, Alberta, by Dr. James A. Tuck on the Basque Whaling Station at Red Bay, Labrador and by Dr. Christopher Turnbull on highlights in New Brunswick Archaeology. Translation services will be offered; admission is free. Everyone is welcome.

TRANSLATION SERVICES

Translation services will be provided in the St. John Room for sessions 1, 5 and 9, and for the Annual CAA General Meeting.

KING'S LANDING HISTORICAL SETTLEMENT TOUR

A behind the scenes tour of King's Landing Historical Settlement is planned for Sunday, May 14. A meal may be purchased on site at the King's Head Inn during the tour. There are a limited number of bus seats available. Tickets must be purchased (\$10.00 each) from the sales desk in the book room (St. Croix Room) prior to 17:00/5 pm on Friday afternoon.

NEW BRUNSWICK TOURIST INFORMATION

A New Brunswick tourist information table will be set up in the book room.

PRÉSENTATION PUBLIQUE

Le public est invité à assister, samedi après-midi le 13 mai, à deux conférences sur l'archéologie canadienne, offert par les Services d'archéologie du Nouveau-Brunswick. Les conférenciers invités sont James A. Tuck, qui parlera de la station baleinière de "Red Bay" au Labrador, et Jack Brink, qui traitera du site du précipice à bisons, le "Head Smashed In" de l'Alberta. Christopher Turnbull parlera également de l'archéologie au Nouveau-Brunswick. Le tout se déroulera au théâtre "K. C. Irving" du complexe forestier Hugh John Flemming. Un service d'interprétation sera disponible. L'entrée est gratuite et tous sont bienvenus.

SERVICES D'INTERPRÉTATION

Un service d'interprétation sera disponible pour la réunion d'affaire de l'Association et pour les présentations des séances 1, 5 et 9 dans la salle Saint John.

VISITE AU VILLAGE HISTORIQUE DE "KING'S LANDING"

Une visite au village historique de "King's Landing" est prévue dimanche, le 14 mai. Les visiteurs pourront avoir un repas servi à l'auberge "King's Head" du village. Cette visite, hors-saison, portera sur une sélection de bâtisses du village. Le trajet se fera en autobus et un nombre limité de siège est disponible. Les billets comprenant le transport et l'entrée au village (10 \$) seront en vente à la Salle de livre (Sainte Croix) et devront être achetés avant 17:00 vendredi.

SERVICE D'INFORMATIONS TOURISTIQUES

Un kiosque d'information touristique du Nouveau-Brunswick sera en montre dans la Salle de livres.

Special events listing

WEDNESDAY MAY 10

- 09:00 The CAA Executive will meet in the hospitality suite at the Beaverbrook Hotel.
- 09:30 The annual meeting of the Canadian Association of Provincial and Territorial Archaeologists will be held in the New Brunswick Archaeological Services board room at the Old Soldiers' Barracks, corner of Queen and Carleton Streets.
- 20:00-21:30 A reception will be held in the Petitcodiac Room, Beaverbrook Hotel.
- 21:30-24:00 Hospitality suite open

THURSDAY MAY 11

- 15:30 Annual General Meeting, Canadian Archaeological Association, St. John Room.
- 20:00 A special social evening with live entertainment is planned for the St. John Room. (Admission to the party is free.)

FRIDAY MAY 12

- 19:00 Informal tour of Frances Stewart's faunal lab, 248 Willington Street
Informal tour of N.B. Archaeology lab, Soldiers Barracks, Queen Street
- 19:00-21:00 Archaeology Display, National Exhibition Center, 503 Queen Street
- 19:30-24:00 Hospitality Suite Open/Cash bar

SATURDAY MAY 13

- 9:00 Avocational Archaeologist Meeting - Boardroom - mezzanine.
- 13:30-16:30 Public Archaeology Session - Hugh John Flemming Forestry Complex
- 15:15 The executive of the Canadian Maritime Heritage Federation will meet in the hospitality suite at the Lord Beaverbrook Hotel.
- 18:30 A banquet offering a surf and turf menu will be held in the Lord Beaverbrook Hotel Ball Room (St. John Room entrance).
- 21:00-01:00 A dance with music by the band Hip Deep will follow the banquet. A combined banquet/dance ticket may be purchased at the Registration desk for \$25.00. Dance tickets only are \$5.00.

SUNDAY MAY 14

- 09:00-13:00 Hospitality Suite Open with coffee and tourist information
- 10:00-14:30 Tour of the King's Landing Historical Settlement (behind the scenes)

Événements spéciaux

MERCREDI, LE 10 MAI

- 9:00 Réunion du conseil d'administration de l'ACA dans la salle d'accueil de l'Hôtel Lord Beaverbrook.
- 9:00 Réunion annuelle de l'Association canadienne des archéologues provinciaux et territoriaux. Elle aura lieu dans la salle de conférence des Services d'archéologie du Nouveau-Brunswick, dans l'ancienne Caserne des soldats située à l'intersection des rues Queen et Carleton.
- 20:00-21:30 Ouverture officielle avec réception dans la salle Petitcodiac de l'Hôtel Lord Beaverbrook.
- 21:30-24:00 La salle d'accueil sera ouverte.

JEUDI, LE 11 MAI

- 15:30 Réunion annuelle de l'ACA, salle Saint John.
- 20:00 Une soirée sociale aura lieu pour tous les participants de la Conférence dans la salle Saint John de l'hôtel. (Entrée gratuite.)

VENDREDI, LE 12 MAI

- 19:00 Visite au laboratoire faunique de Frances Stewart au 248, rue Willington
Visite au laboratoire des Services d'archéologie du N.-B. de la rue Queen.
- 19:00-21:00 Exposition d'archéologie, Centre nationale d'exposition du 503, rue Queen.
- 19:30-24:00 Salle d'accueil.

SAMEDI, LE 13 MAI

- 9:00 Rencontre du groupe "Avocational Archaeologist" - Salle de conférence - mezzanine.
- 13:30-16:30 Conférence sur l'archéologie canadienne, ouvert au public - Complexe forestier Hugh John Flemming.
- 15:15 Réunion du Conseil d'administration de la "Canadian Maritime Heritage Federation" dans la salle d'accueil de l'Hôtel Lord Beaverbrook.
- 18:30 Banquet - Salle de bal de l'Hôtel Lord Beaverbrook. Au menu: homard et bifteck.
- 21:00-01:00 Danse avec les "Hip Deep". Les billets pour le banquet et la danse sont en vente au bureau d'inscription au coût de 25 \$. Danse seulement: 5 \$.

DIMANCHE, LE 14 MAI

- 09:00-13:00 La salle d'accueil sera ouverte avec café ainsi que le service de renseignements touristiques.
- 10:00-14:30 Visite au village historique de "King's Landing." (hors saison)

Current Shell Midden Research On The Northeast And Northwest Coasts

Recherches courantes sur les sites d'amas de coquillages sur les côtes
du Nord-est et du Nord-ouest

- 8:30 David Johnstone- Layers, Lenses and Levels: Excavation Strategies in Shell Middens
8:50 William Belcher- Stratigraphic Considerations of Housepit Construction Along the Maine Coast
9:10 Linda Jefferson- The Minister's Island Site: Stratigraphic Analysis and the Separation of Cultural Components
9:30 David C. Skinas- Shell Midden Formation: A Look at a Coastal Maine Site
9:50 David W. Black, Becky A. Southern and Pamela E. Kaufman- Strata as a Complex Patchwork: Stratification and Stratigraphic Analysis of the Weir Site
10:10-10:30 Coffee break / Pause-café
10:30 Bruce Bourque- A Model for Midden Formation at the Turner Farm Site
10:50 Arthur Spiess- Quantifying Archaic and Woodland Shellfish Gathering at the Turner Farm Site, Penobscot Bay, Maine
11:10 Aubrey Cannon- Quantifying Change in Archaeofaunal Abundance: The Economic Prehistory of Namu, British Columbia, (EISx-1), 6500-2200 B. P.
11:30 Birgitta Wallace- Selective Exploitation of Shellfish at Rustico Island, Prince Edward Island
12:00 Lunch / Déjeuner
13:30 Leonard C. Ham- The Cohoe Creek Site: a Moresby Tradition Shell Midden
13:50 David Maxwell- Shellfishing Seasonality: Some Midden Sampling Requirements
14:10 Geordie Howe- Looking at the Little Guys: An Examination of Small Size or Pocket Shell Middens
14:30 David Sanger- From Site to Area: Strategies for Reconstructing Adaptations to Marine Environments
14:50 Coffee break / Pause-café

On The Fringe In The Homeland : Non-Iroquoian Archaeology In Southern Ontario

Les marginaux de la patrie: Archéologie non-iroquoienne du sud-ouest ontarien

- 8:30 James Molnar- Modelling Algonquian- Iroquoian Interaction
8:50 Philip Woodley- And Then There Were Two: An Examination of Late Archaic House Features, Artifacts and Micro-Environment Exploitation at the Thistle Hill Site (AhGx-226)
9:10 Chris J. Ellis, William Fox and Stanley Wortner- Nettling: A Preliminary Overview of an Early Archaic "Kirk Corner-notched Cluster" Site in Southwestern Ontario
9:30 Hugh J. Daechsel- Towards a Greater Understanding of the Prehistory of Frontenac County: The Frontenac County Inventory
9:50 Nick Adams- 'A Great Collection of Indian Relics' From a Destroyed Late Archaic and Early Woodland Mortuary Center in Eastern Ontario
10:10-10:30 Coffee break / Pause-café
10:30 Chris J. Ellis And D. Brian Deller- Meadowood Phase Occupations on the Caradoc Sand Plain
10:50 Peter Timmins- The Middle Woodland Occupation of the Middle Thames River Drainage: A Preliminary Examination
11:10 Neal Ferris- Late Woodland Central Algonquian Autumn Settlement-Subsistence Patterns from the Van Bommel Site
11:30 Carl Murphy- Late Woodland Central Algonquian Winter Settlement-Subsistence Patterns from the Sherman Site

Session 3 Petitcodiac Room Chair/Modérateur: Luke Dalla Bona

Archaeological Method And Theory
Méthode et théorie en archéologie

- 13:30 Bryan C. Hood- Everything in Its Proper Place: Post-Processual Perspectives on Hunter-Gatherer Spatial Relations
13:50 Luke Dalla Bona- Visual Possibility Statements: A Preliminary Study into Predictive Modelling Using a Macintosh-Based Geographic Information System-Map 11
14:10 Henry T. Epp- Beyond Disorder: Chaos in Culture Change
14:30 Maurice Lanteigne- The Bihedral Core Tradition of the Central Precambrian Shield
14:50 Coffee break / Pause-café

Session 4 Miramichi Room Chair/Modératrice: Susan M. Jamieson

Historical Archaeology
Archéologie historique

- 13:30 Kevin E. McAleese- Artifact Model Comparisons: The Archaeology of a late 18th Century Sealing/Fur Trading Post
13:50 Kevin Leonard- Salvaging the Aboiteau de Barachois
14:10 Susan M. Jameison- The Lake Lodge Site: Niagara, Ontario
14:30 Susan M. Bazely and Earl Moorhead- A Historical and Archaeological View of the Molly Brant Property
14:50 Coffee break / Pause-café

ATTENTION

Canadian Archaeological Association
Annual General Meeting

3:30 pm/15:30

Thursday May 11, 1989

St. John Room

Lord Beaverbrook Hotel

All members are encouraged to attend.

Association Canadienne
d'Archéologie

L'assemblée annuelle générale

aura lieu jeudi, le 11 mai 1989 à 15:30

Salle St. John

Hôtel Lord Beaverbrook

Tous les membres sont invités et encouragés à y assister.

Session 5

St. John Room

Chair/Modérateur: David Keenlyside

Recent Studies In Northeastern Prehistory: The Maritimes, Maine and Beyond
 Etudes récentes dans la préhistoire du Nord-est: les Maritimes, le Maine et au-delà

- 9:10 Moira T. McCaffrey- Archaeology of the Magdalen Islands, Québec
 9:30 Stephen A. Davis- Prehistory of Southeastern Nova Scotia
 9:50 Patricia Allen- The Oxbow Site Revisited
 10:10-10:30 Coffee break / Pause-café
 10:30 Helen Kristmanson- An Interpretation of the Melanson Site Ceramic Assemblage
 10:50 James B. Peterson and David Sanger- An Aboriginal Ceramic Sequence for Maine and the Maritime Provinces
 11:10 Scott Buchanan- The Dune Site: A Late Archaic Cobble Industry on Prince Edward Island
 11:30 Michael Deal- Scots Bay Chalcedony: Its Distribution and Exploitation
 12:00-13:30 Lunch
 13:30 Michael J. Heckenberger, James B. Petersen and Louise A. Basa- The Boucher Site (VT-FR-26): Implications for Mortuary Variability During the Early Woodland Period in Northeastern North America
 13:50 John S. Krigbaum- Bio-Cultural Adaptation in Prehistoric Vermont
 14:10 Douglas Rutherford- Something Old, Something New, Reconsidering Middlesex in the Maine/Maritimes Region
 14:30 Jack Steinbring and Maurice Lanteigne- The Rush Bay Road Complex in Northwestern Ontario, Canada
 14:50-15:10 Coffee break / Pause-café
 15:10 Mary Ann Levine- An Analysis and Interpretation of Radiocarbon Age Estimates from Fluted Point Sites in Northeastern North America
 15:30 Deborah Brush Wilson and Arthur Spiess- Paleoindian Lithic Distribution Patterns in the New England-Maritimes Region

Session 6

Petitcodiac Room

Chairs/Modérateurs: Louise Basa and Bjorn Simonsen

Cultural Resource Management And Public Access
 La gestion des ressources culturelles et son accessibilité au publique

- 8:50 Morgan J. Tamplin- Recent Changes in Ontario's Archaeological Licencing: An Historical Perspective
 9:10 Margaret Hanna and Martin Kondzielewski- Presenting Archaeology on the Small Screen
 9:30 Ellen Lee- Archaeology in the Canadian Parks Service Prairie and Northern Region
 9:50 Albert M. Ferguson- Impact Assessment in New Brunswick: A Coordinated Approach
 10:10-10:30 Coffee break / Pause-café
 10:30 Thomas R. Baker- Cultural Resource Management Archaeology in Maine : A View from the University of Maine at Farmington
 10:50 Louise A. Basa- Cultural Resource Management for U.S. Water Pollution Control Facilities in New York State, 1976-1988.
 11:10 Jim Finnigan and Maureen Rollans- Development Archaeology/Public Archaeology: The Souris Basin Heritage Study
 11:30 Bjorn Simonsen- Native Heritage Issues and Archaeology: A View from British Columbia
 12:00-13:30 Lunch/Déjeuner
 13:30 Gerald T. Conaty- Archaeology, Museums and the Public
 13:50 Robert McGhee- Who Owns Prehistory? The Bering Land Bridge Dilemma
 14:10 Janette M. Ginns- Sub Aqua 1, Holyrood, Newfoundland: A Field School Experience for Scuba Divers
 14:30 W. Bruce Stewart- The Kingston Archaeological Master Plan Study
 14:50-15:10 Coffee break / Pause-café
 15:10 Rod Pickard- Archaeological Resource Description in the National Parks of Alberta and British Columbia
 15:30 Kevin Montgomery- Cultural Resource Management: Data Collection at Canadian Parks Service
 15:50 N. Alexander Easton and Ruth Gotthardt- The 1988 Fort Selkirk Culture-History Project: A Community Based Ethnoarchaeological Programme

Session 7 Miramichi Room Chair/Modérateur: David Morrison

7

Recent Arctic / Subarctic Studies

Recherches courantes dans l'arctique et la sub-arctique

- 9:10 David L. Pokotylo and Christopher C. Hanks- The Organization of Prehistoric Lithic Technology at Drum Lake, Mackenzie Mountains, North west Territories
- 9:30 Charles D. Arnold- Artifact Conservation in Beaufort Sea Archaeology
- 9:50 Patrick Plumet and Serge Lebel- Technologie des roches métavolcanic chez les Dorsetières de l'Ungava
- 10:10-10:30 Coffee break / Pause-café
- 10:30 Steven L. Cox- Cultural Stability and Change During the Pre-Dorset Period In Labrador
- 10:50 David Morrison- Radiocarbon-Dating Thule Culture
- 11:10 Ian G. Robertson- Metric Variability in Early Palaeo-Eskimo Spalled Burins

Session 8 Miramichi Room Chairs/Modérateurs: B. A. Nicholson and David Meyer

8

Ceramic Variation and Population Dynamics of the

Late Prehistoric Period on the Grassland-Parkland Interface

La variation dans la céramique et la dynamique de la population sur l'interface "Grassland-Parkland"

- 13:30 B. A. Nicholson- Ceramic Affiliations and the Case for Incipient Horticulture in Southwestern Manitoba
- 13:50 Kit Krozser- The Distribution of Avonlea Net Impressed Ceramics
- 14:10 Margaret Hanna- Making It in the Marshes: The Case for Near Endogamy at Duck Bay
- 14:30 Dale Walde- Mortlach on the South Saskatchewan Plains: Social Implications of Seasonal Movements Patterns
- 14:50-15:10 Coffee break/ Pause-café
- 15:10 Terrance H. Gibson- Ceramic Variation and Population Dynamics: Interpretive Implications from a Single Selkirk Occupation
- 15:30 Dale Russel- Population Dynamics of the Grassland/Parkland Interface: Southeastern Saskatchewan and South-western Manitoba in the Early Historic Period
- 15:50 Gaye Burton and Teresa Hill- An Interpretation of Population Dynamics in the Grassland/Parklands as Evidenced by Research at the Mullett Site in Southwestern Manitoba
- 16:10 Silvia Nicholson- Material Evidence for Demographic Shifts in Southwestern Manitoba

Session 9

St. John Room

Chair/Modérateur: N. Alexander Easton

Underwater Archaeology And Conservation
L'archéologie sous-marine et la conservation

- 8:50 André Lepine-Le projet Molson: Fouilles et études de l'épave du Lady Sherbrooke c.1817-1826 quatrième bateau à vapeur construit pour "la Molson Line" coulé dans le fleuve St-Laurent près de Montréal, Québec
- 9:10 Jean Belisle- Le projet Molson: Fouilles et études de l'épave du Lady Sherbrooke c.1817-1826 quatrième bateau à vapeur construit pour "la Molson Line" coulé dans le fleuve St-Laurent près de Montréal, Québec
- 9:30 Janette M. Ginns- Conception Bay Underwater Survey 1988
- 9:50 N. Alexander Easton- Paleo-Shoreline Reconstruction of Southern Georgia Strait, Pacific Coast
- 10:10-10:30 Coffee break / Pause-café
- 10:30 Thomas F. Beasley- New Initiatives in Federal Ship Wreck Legislation
- 10:50 Judith A. Logan- The Cost of Conservation
- 11:10 André Bergeron- L'excavation et la conservation des matériaux gorgés d'eau: une symbiose parfois difficile, souvent compliquée et toujours nécessaire
- 11:30 Fred Gregory- Non-Disturbance Archaeology is O.K. Too
- 12:00-12:30 Lunch/Déjeuner
- 13:30 Bessel J. Vanden Hazel- The Problems and Challenges of the Conservation of Iron from Shipwrecks
- 13:50 Gary R. Brewer and Bradford Botwick- The Anthropology of Underwater Archaeological Sites
- 14:10 James P. Delgado- The National Park Service and Maritime Archaeology in the United States
- 14:30 Lorne D. Murdock- Conservation Support to Archaeology Underwater
- 14:50 Coffee break / Pause-café

Session 10

Miramichi Room

Chair/Modératrice: Frances Stewart

Recent Faunal Studies

Recherches faunistiques courantes

- 8:50 Frances Stewart- Unexpected Faunal Findings from a St. Lawrence Iroquois Site
- 9:10 Beverley A. Smith- Protohistoric Odawa Fishing at the Providence Bay Site, Manitoulin Island: Further Evidence of the Inland Shore Fisheries of the Upper Great Lakes?
- 9:30 Howard Savage, Heather McKillop and Lawrence Jackson- Caribou Hunting in the Middle Archaic Period in Southern Ontario
- 9:50 Max Friesen- Of Moose and Maggots: Experimental Breakage of Decomposed, Fresh and Frozen Longbones by Pressure and Percussion
- 10:10-10:30 Coffee break / Pause-café
- 10:30 Peter T. Bobrowsky- Intra and Inter-Assemblage Comparisons of Faunal Data Using Graphic and Moment Statistics
- 10:50 Richard Morlan- Zooarchaeology at Tipperary Creek: Interpreting Comminuted Bone
- 11:10 Murielle Nagy- Bone and Antler Technology from the Trail River Site, Northern Yukon

Session 11

Petitcodiac Room

Chair/Modératrice: Alison Landals

Recent Research: The West and Beyond

L'Ouest et au-delà: Recherches courantes

- 13:30 Martin Magne and John Ives- The First Albertans Project and the Role of a Western Corridor in the Peopling of the Americas
- 13:50 John Ives- The Heilongjiang-Alberta Archaeological Research Project and the Peopling of the New World
- 14:10 Alison Landals- The 1988 Oldman River Dam Kill Sites Field Program: Preliminary Results
- 14:30 Karen Nachtigall and Maurice Lanteigne- The Rock Paintings of Northern Manitoba: General Applications in Spatial Modeling
- 14:50- 15:10 Coffee break / Pause-café
- 15:10 Martin Magne- Rock Art Conservation Research at Writing-On-Stone Provincial Park, Alberta
- 15:30 Mzalendo Kibunja- The Lower Paleolithic Archaeology West of Lake Turkana, Kenya
- 15:50 Cathleen Sykes- Residential Segregation in a Late Pre-Hispanic Village in the Central Andes

ATTENTION

Archaeological Services
New Brunswick
Presents--
**A PUBLIC SESSION ON CANADIAN
ARCHAEOLOGY**

1:30 pm
Saturday May 13, 1989
Forestry Complex

Le Service d'archéologie du Nouveau-
Brunswick
Présente
**UNE PRÉSENTATION PUBLIQUE SUR
L'ARCHÉOLOGIE CANADIENNE**

13:30
samedi, le 13 mai 1989
Complex forestier

Tour of
KING'S LANDING
Historic Settlement
(behind the scenes)

Bus leaves the Lord Beaverbrook Hotel
Sunday, May 14, 1989
at
10:00am
returns at 2:30pm

cost: \$10

Visite du
Village Historique De
KING'S LANDING
(hors saison)

L'autobus partira de l'hôtel Lord Beaverbrook
dimanche, le 14 mai, 1989
à
10:00
retour à 14:30

coût: 10\$

Adams, Nick (Cataraqui Archaeological Research Foundation, Kingston, Ontario)

"A Great Collection of Indian Relics" from a Destroyed Late Archaic and Early Woodland Mortuary Centre in Eastern Ontario

During the 1930's a burial mound and associated domestic sites on the old Wattam farm, near Verona, Ontario, were dug in the search for Indian Relics. A newspaper report from the period indicates that numerous bodies had been buried at this location, and a wide variety of artifacts were discovered during the spadework. Although the burial mound has been totally destroyed and the majority of the Wattam collection is now dispersed, approximately one third of the artifacts are still available for study. Contrary to the picture of intertribal warfare and battles suggested by the newspaper report, analysis of the remaining artifacts indicates a more peaceable and long term use of the area. Artifacts associated with Terminal Archaic Red Ochre, and Early Woodland Meadowood and Middlesex burial complexes have been recognized indicating that this Shield edge site operated as a significant mortuary center over a broad time span. A variety of more utilitarian items from these periods indicates that considerable non-mortuary activity also took place in the area. The findings from the Wattam farm are discussed in the context of, and compared with, mortuary and domestic sites from the surrounding area.

Allen, Patricia (Archaeological Services New Brunswick)

The Oxbow Site Revisited

During the 1978 and 1979 field seasons, a large area of the deeply stratified Oxbow site from the Miramichi River district of New Brunswick was excavated in 10 cm arbitrary levels. A chronological framework for the Ceramic Period in northeastern New Brunswick was formulated by separating the data recorded into Early, Middle and Late Ceramic Period indicators. Some early dates and some surprising artifact

associations lead some to question the excavation method. In 1984 additional excavations at the site were conducted by natural/cultural levels. The 1984 data from the earliest, middle and most recent cultural levels were found to compare most favorably with the previously published chronological framework. The reinforced framework will be presented with commentary.

Au cours des années 1978 et 1979, une fouille fut effectuée sur une partie du site Oxbow situé dans le Nord-est du Nouveau-Brunswick le long de la rivière Miramichi. Une échelle chronologique de la stratification fut constituée à partir de 22 niveaux de 10 cm chacun pour les artefacts de la période céramique. Des doutes ayant été émis relativement à cette méthode, une seconde fouille fut entreprise en 1984. Les résultats de cette deuxième fouille, basée sur la stratification naturelle et culturelle, furent les mêmes. La position des artefacts, des pointes de projectiles et des divers caractéristiques des céramiques étaient semblables. Cela me permit de conclure que les résultats de la fouille de 1978-1979 restaient les mêmes et ne changeaient pas.

Arnold, Charles D. (Prince of Wales Northern Heritage Center, Yellowknife, Northwest Territories)

Artifact Conservation in the Beaufort Sea

Artifact conservation has been an essential component of the archaeological work undertaken by the Prince of Wales Northern Heritage Center in the Beaufort Sea Region. Since 1983, conservators and archaeologists have worked together in the field and in the laboratory to develop procedures which minimize physical alteration of artifacts following their excavation from frozen sites. Our experience demonstrates the need for archaeologists to learn about artifact conservation as part of their academic training, and for conservators to gain first-hand experience with archaeological sites.

La conservation des artefacts a constitué une partie essentielle du travail archéologique entrepris par le

Centre du patrimoine septentrional Prince de Galles dans la région de la mer de Beaufort. Depuis 1983, les conservateurs de musées et les archéologues ont travaillé ensemble sur les sites et en laboratoire à l'élaboration de moyens de réduire au minimum l'altération physique des artefacts après leur extraction des sites gelés. Notre expérience révèle le besoin pour les archéologues d'approfondir leur connaissance de la conservation des artefacts lors de leur formation académique, et pour les conservateurs de musées d'acquérir une expérience directe des sites archéologiques.

Baker, Thomas R. (University of Maine at Farmington)

Cultural Resource Management Archaeology in Maine: A View from the University of Maine at Farmington

Since 1984 the University of Maine Archaeology Research Center has completed nearly 30 Cultural Resource Management assessments in the state of Maine. These projects have been mandated by state and federal statutes and have been completed for both private and public concerns primarily in previously understudied interior settings of Maine. This work is not simply "rescue" or "salvage" archaeology but is research-oriented. As a result of these investigations, data from more than 500 archaeological sites (prehistoric aboriginal, historic aboriginal, and Euroamerican) or at least one-fifth of all of the recorded sites in Maine has been recovered and is undergoing assessment. This data will permit us to clarify and expand existing models of aboriginal occupation and utilization of the interior of Maine as well as allow us to pose new ones. An example of the wealth of information recovered during Archaeology Research Center investigations is drawn from the Androscoggin River valley located in western Maine and will be discussed in this presentation.

Basa, Louise A. (New York State Department of Environmental Conservation)

Cultural Resources Management for U.S. Water Pollution Control Facilities in New York State, 1976-88

The presentation will begin with a description of the evolution of cultural resources management tech-

niques and practices in the New York State Construction Grants Program. Management of these resources is achieved by integrating federal environmental and historic preservation reviews into one effective process for the identification, evaluation and protection of historic properties. Successful and problematic case studies will be presented. These will include: the use of remote sensing in identifying an urban historic archaeological district; integration of data on factory complexes into exhibits at the treatment plant and in the local school; protective measures for a 200 acre prehistoric and settlers' site; unique problems posed by accidental discovery on two separate construction sites of cemeteries (one Native American, the other Colonial).

Bazely, Susan M. with Earl Moorhead (Cataraqui Archaeological Research Foundation, Kingston, Ontario)

An Historical and Archaeological View of the Molly Brant Property

During the summer of 1988 the field investigation component of the "Kingston Archaeological Master Plan Study" was carried out. A survey along the upper portion of the Great Cataraqui River shoreline, just south of Belle Island, revealed evidence of the final abode of the Mohawk Matriarch, Molly Brant. A review of this initial assessment under the terms of the Kingston Archaeological Master Plan Study will be presented.

Au cours de l'été 1988, nous avons procédé à l'analyse du terrain, ce qui constitue une partie de l'étude archéologique globale de Kingston "Kingston Archaeological Master Plan Study". Un relevé le long de la portion supérieure du rivage de la rivière Great Cataraqui a révélé des preuves de la dernière résidence de l'autorité matriarcale des Mohawks, Molly Brant. Nous allons vous présenter un sommaire de cette évaluation initiale conformément à l'étude archéologique globale de Kingston.

Beasley, Thomas B. (Underwater Archaeological Society of British Columbia)

New Initiative in Federal Shipwreck Legislation

After several years of lobbying efforts by underwater archaeological groups throughout Canada, the Department of Communications has recently embarked upon a review of Federal Shipwreck Legislation. In particular, Part X of the *Canada Shipping Act* may be significantly revised. The new underwater archaeological legislation should be heritage based, providing an enforcement mechanism to protect and possibly enhance Canada's rich but fragile maritime heritage lying under water. British, American and Australian shipwreck legislation will provide models for this new federal initiative. Such heritage based legislation should protect for future generations our cultural resources lying underwater while enhancing our ability to learn about our past, and providing new recreational opportunities. This initiative is an exciting development for the diving, heritage and archaeological communities.

Après plusieurs années de pression exercées par différents groupes d'archéologie sous-marine, le Ministère des Communications a commencé à reviser la législation fédérale sur les naufrages. En particulier la section X de la loi sur la navigation pourrait probablement être révisée de manière significative. La nouvelle législation archéologique sous-marine devra être basée sur "Heritage Canada" à condition qu'un mécanisme de coercition soit mis en place afin de protéger et éventuellement renforcer l'héritage canadien, riche mais fragile situé dans les profondeurs de la mer. Les législations britanniques, américaines et australiennes serviront de modèles à cette nouvelle initiative fédérale. Une telle législation, si basée sur "Heritage Canada" devrait servir de protection pour les générations à venir, nos ressources culturelles situées dans les profondeurs de la mer et renforcera notre capacité à découvrir notre passé tout en nous offrant de nouvelles opportunités récréationnelles. Cette initiative est un développement hautement intéressant pour les communautés d'exploration sous-marine, "Heritage Canada" et d'archéologie.

Belcher, William R. (University of Maine)

Stratigraphic Considerations of Housepit Construction Along The Maine Coast

Housepit remains are common in the Maine-Maritime region. Many have been recognized along the coastal zone of Maine and New Brunswick. Housepits present problems in the qualitative interpretation of stratigraphy. Aboriginal digging activities disturb, destroy and reorganize pre-existing strata. By digging into subsoil, no pre-existing strata would be damaged; however, subsoil could be re-deposited over other strata. Excavation of a pit into pre-existing shell midden or a pre-existing housepit disturbs cultural strata and their associated artifacts. To conceptualize digging activities, the term "Building Episode" is used. Building Episodes consist of cultural and natural events leading to the development of archaeological remains referred to as housepits. Examples of building episodes and their implications for shell midden deposition are drawn from the Knox site, East Penobscot Bay.

Bergeron, André, (Centre de conservation du Québec)

L'excavation et la conservation des matériaux gorgés d'eau: une symbiose parfois difficile, souvent compliquée et toujours nécessaire

Parmi tous les types de traitement en conservation, les objets en matériaux gorgés d'eau constituent sans doute la catégorie la plus frustrante et difficile à traiter, mais aussi des plus gratifiantes lorsque les travaux sont couronnés de succès. A travers quelques exemples de travaux québécois, l'auteur veut essayer de cerner les paramètres d'intervention, ainsi que les responsabilités morales et éthiques de la relation excavation/conservation et du manque de liaison entre les deux disciplines.

Of all the different types of conservation treatment, objects made of waterlogged materials constitute one of the most frustrating and difficult to treat, albeit the most gratifying when success is achieved. Using some samples of work done in the province of Quebec, the author will try to outline the guiding factors well as the moral and ethical responsibilities behind the relationship between excavation and conservation, and the lack of liaison between the two disciplines.

Black, David W. with Becky A. Southern and Pamela E. Kaufman (McMaster University)

"Strata as a Complex Patchwork": Stratification and Stratigraphic Analysis of the Weir Site

The Weir site, located on the Bliss Islands in the insular Quoddy region of southern New Brunswick, is a large deep, complexly and distinctly stratified shell midden in an unusually intact state of preservation. The site was occupied from ca. 2400 B.P. to ca. 1200 B.P. An excavated area of 22m² contains 15 major layers and features, most of which are internally stratified. The site has been analyzed using the techniques developed by Edward Harris, *Principles of Archaeological Stratigraphy*. In this paper the stratigraphy of the site is summarized, and some general issues in the stratigraphic analysis of anthropogenic deposits, such as shell middens, are addressed.

Le site de Weir, situé dans les îles Bliss de la région insulaire de Quoddy, dans le sud du Nouveau-Brunswick, est un vaste et profond amas de coquillages stratifié de façon complexe et distincte et dont l'état de préservation intacte est exceptionnel. Le site a été occupé de l'an 2400 jusqu'à l'an 1200 avant aujourd'hui, à peu près. La superficie d'excavation est de 22m² et est formée de 15 couches et de vestiges majeurs, dont la plupart sont stratifiés intérieurement. Le site a été analysé au moyen des techniques mises au point par Edward Harris, *Principles of Archaeological Stratigraphy*. Cet article résume la stratigraphie du site et présente des questions générales au sujet de l'analyse stratigraphique de dépôts anthropogéniques, tels que les amas de coquillages.

Bobrowsky, Peter T. (Geological Survey of Canada, Pacific Geoscience Centre)

Intra and Inter-Assemblage Comparisons of Faunal Data Using Graphic and Moment Statistics

All unbiased faunal assemblages can be shown to be lognormally distributed. This phenomenon is not unique to faunal remains, and it can be shown that this type of distribution is a common property of many other elements including artifacts and sediments. In fact, geologists have recognized for sometime that most sedimentary deposits show a lognormal distribution, but that each distribution can show minor variations. For example, modality, mean grain sizes, etc. can vary from sample to sample. Several parameters can be

identified as characterizing individual sediment assemblages and quantitative descriptive measures have been developed to summarize these parameters. These measures include: median, mean, sorting, skewness, and kurtosis. The measures can be obtained through conventional moment statistical calculations or by graphic plotting methods. Both of these approaches have proven to be very useful in geologic studies and now occupy routine positions in geologic research. By analogy, the same parameters exist for faunal assemblages and, therefore, the same descriptors can be used to compare various faunal samples. This study illustrates the importance of using the above measures with historic faunal data from north-central Alberta.

Botwick, Brad with Gary Brewer (Preserve Our Wrecks, Kingston, Ontario)

The Anthropology of Underwater Archaeological Sites

The study of culture through the study of archaeological materials must be the goal of underwater archaeology as it is in terrestrial archaeology. This paper sets forth a taxonomic system for underwater sites based on cultural activities related to these sites' creation. The system, therefore, presupposes a goal beyond the study of artifacts in isolation from the culture which produced them.

Bourque, Bruce (Maine State Museum)

A Model for Midden Formation at the Turner Farm Site

During the past two decades, archaeological excavations on the central Maine coast have examined numerous shell midden sites. Normally, excavators have made detailed observations on midden structure, including stratigraphic and plan drawings. In general, however, the sites sampled represent a small number of components dating after c. 2,500 B.P. and the areas opened at the larger, more complex ones have not exceeded 5% of the midden surface area. The Turner Farm site represents a qualitatively different case. Its numerous components, which date between c. 5,000 B.P. and the early historic period, present a uniquely long sequence of generally well stratified deposits. Furthermore, excavations carried

out there between 1971 and 1978 were extensive, opening a total of 25% of the midden's surface area. Therefore, the Turner Farm excavation allows observations on long term midden formation processes that are not possible from smaller excavations at younger sites. These include factors influencing relative shell abundance, degree of shell fracturing, discreteness of horizontal patterning and post-depositional movement of artifacts.

Buchanan, Scott (Simon Fraser University)

The Dune Site: A Late Archaic Cobble Industry on Prince Edward Island

The excavation of the Dune site in eastern King's County, Prince Edward Island further documents a Late Archaic presence along the southern shore of the Gulf of St. Lawrence. Debitage recovered from the site demonstrates a technological differentiation between quartz and quartzite, both of which were obtained locally. The former resulted from a bipolar, expedient core reduction process while the latter represents bifacial reduction. Discreet activity areas associated with various stages of reduction were identified at the site. The social implications of this lithic patterning and source are discussed for the Maritime Archaic period.

La fouille du site Dune dans l'Est du comté de King, l'île-du-Prince-Édouard, témoigne de plus d'une présence de l'Archaique tardive sur le littoral du Golfe St-Laurent. Le débitage lithique recouvert du site démontre une différence technologique entre l'usage de quartz et de quartzite, les deux se sont trouvés dans les environs. Celui-là arrive avec un processus de fabrication des trognons bipolaires et expédients et celui-ci représente la fabrication bifaciale. Les zones caractérisant des occupations uniques associées avec des étapes de la fabrication lithique étaient identifiées au site. Les conséquences sociales de cet échantillon et de l'obtention des lithiques sont discutées par rapports à la période Archaique Maritime.

Burton, Gaye with Teresa Hill (Brandon University)

An Interpretation of Population Dynamics in the Grassland/Parklands as Evidenced by Research at the Mullett Site in Southwestern Manitoba

This paper presents results of recent excavations at the Mullett site in southwestern Manitoba within the framework of how data accumulated contributes to understanding population dynamics in the Grassland/Parklands ecological zone. The site demonstrates occupations dating from early Archaic to late historic times, but the focus here is on Besant through Late Woodland occupations. The paper discusses the ecology of the region and speculates on how ceramic and lithic material provide clues on population dynamics in the Grassland/Parklands interface region.

Cannon, Aubrey (University of Toronto)

Quantifying Change in Archaeofaunal Abundance: The Economic Prehistory of Namu, British Columbia (EISx-1), 6500-2200 B. P.

The observation that divergent faunal taxa co-occur in equal stratigraphic proportions is the basis for developing a faunal deposition rate index to standardize taxonomic abundance among major stratigraphic units. This standardization method yields an unambiguous indication of changes in taxonomic abundance. In application, the method is used to monitor change in faunal utilization during 4000 years of economic prehistory at the site of Namu (EISx-1) on the central coast of British Columbia.

L'observation que les classes fauniques divergentes existent en proportions égales stratigraphiques, c'est la base pour la formation d'une table pour standardiser l'abondance taxonomique en ce qui concerne le taux de déposition des faunes entre les unités stratigraphiques principales. Cette méthode de standardisation rend une indication non ambiguë des changements en abondance taxonomique. En application, la méthode est utilisée pour contrôler le changement dans l'exploitation des faunes au cours de quatre mille ans de préhistoire économique au site de Namu (EISx-1) sur la côte centrale de la Colombie-Britannique.

Conaty, Gerald T. (Saskatchewan Museum of Natural History)

Archaeology, Museums and the Public

Interpreting the past for the public is a basic task for museum archaeologists. The public is a mosaic of groups with special needs and expectations of a museum and includes children, professional and avocational archaeologists, tourists and Native people. For many, the subject matter concerns a culture not only far removed in time, but also one with a fundamentally different premise and world view. The redevelopment of the Native Peoples Gallery at the Saskatchewan Museum of Natural History has provided an opportunity to examine critically our premises about Native cultures and the interpretive techniques used to convey an understanding of those cultures.

Cox, Steven L. (The Center for Northern Studies, Vermont)

Cultural Stability and Change During the Pre-Dorset Period in Labrador

Site Nuasornak-2 is located on Nuasornak Island in the Okak region of the north-central Labrador coast. The site contains a minimum of 39 Pre-Dorset structures, mostly tent rings, on a series of raised beach terraces. Investigation of the site in 1987 indicated that Pre-Dorset occupation of the island had been nearly continuous from about 4000 B.P. to about 2500 B.P. The evidence suggests a long period of cultural stability, with little change in lithic technology, lasting to about 3000 B.P., at which time there was rapid change to a Dorset-like cultural form.

Daechsel, Hugh J. (Catarauqui Archaeological Research Foundation, Kingston, Ontario)

Towards a Greater Understanding of the Prehistory of Frontenac County: The Frontenac County Inventory

Over the past 2 years the Catarauqui Archaeological Research Foundation has been developing an inventory of archaeological sites in Frontenac County, which is situated at the northeastern end of Lake Ontario. The inventory is primarily designed to pro-

vide a basis from which more specifically focused research projects can be undertaken in an area the prehistory of which is still poorly understood. The initial results of the inventory provide for a range in prehistoric cultural occupations extending from Late Palaeo-Indian to Late Woodland on sites distributed in association with Lake Ontario and the inland drainage systems encompassed by the County. Some of the identified sites including Armstrong, Belle Island and Page hold considerable potential for understanding the pre-Iroquoian cultural development in eastern Ontario.

Dalla Bona, Luke (University of Manitoba)

Visual Possibility Statements : A Preliminary Study into Predictive Modelling Using a Macintosh-Based Geographic Information System-Map II

This paper will present the preliminary results of an investigation into the prediction of possible areas of site location based upon known locations of prehistoric sites in British Columbia's Thompson River Valley. A Macintosh-based Geographic Information System (GIS) called MAP II was employed to examine an area of approximately 725 square kilometers of the Thompson River between Spence's Bridge and Ashcroft. Archaeological information concerning known site locations, functions and temporal associations and "natural variables" such as elevation and hydrology were each stored on a different digital "map". Using the GIS to essentially "add" and "subtract" these separate maps, an attempt was made to determine if associations exist between areas of site location and these "natural variables". The GIS was subsequently employed to identify localities exhibiting potential for these same associations. The resulting maps (labelled visual possibility statements) have the potential for providing insight into undiscovered areas of site locations.

Cette communication présente les résultats préliminaires d'une recherche portant sur les possibilités de prédiction de l'emplacement des sites sur la base des situations déjà connues des gisements préhistoriques de la vallée de la rivière Thompson en Colombie-Britannique. Un Système d'Informations Géographiques (SIG) dénommé MAP II, et basé sur ordinateur Macintosh, nous a permis d'examiner en détail une région d'environ 725 kilomètres carrés de la rivière Thompson entre Spence's Bridge et Ashcroft. Les

donnés archéologiques concernant l'emplacement, l'utilisation et les coordonnées chronologiques des sites déjà connus, de même que les conditions hydrologiques, furent enregistrés séparément sur autant de "cartes" numériques différentes. Essentiellement, le SIG nous permet d' "additionner" et de "soustraire" les cartes individuelles afin de chercher à déterminer la présence d'associations particulières entre les zones de gisements et ces "variables naturelles". Le SIG fut utilisé subséquemment pour découvrir des zones ayant le potentiel de révéler ces même associations. Les cartes ainsi produites (dénommées "exposés visuels de possibilités") promettent d'apporter un aperçu plus détaillé des zones encore non découvertes d'établissements archéologiques.

Davis, Stephen A. (Saint Mary's University)

Prehistory of Southeastern Nova Scotia

In the past two years the focus of research into the prehistory of Nova Scotia has been in the southeast end of the province. The Yarmouth area has a number of prominent private collections which are presently being catalogued, photographed and entered into a computer data base at Saint Mary's University. The existence of the collections, along with cooperation from the owners, has led to the recording of 46 sites in this part of Nova Scotia. A joint effort between Saint Mary's University and the University of Maine, Orono was directed towards the extensive testing of the Bain Site. The paper will address the progress to date with a summary of the chronology of southeastern Nova Scotia.

Durant les deux dernières années le point de recherche dans la préhistoire de la Nouvelle-Écosse a été dans la partie du Sud-est de la province. La région de Yarmouth a un nombre proéminent de collections privées qui sont présentement cataloguées, photographiées et entrées dans un ordinateur de données à l'université Sainte-Marie. L'existence des collections, avec la coopération des propriétaires, nous a menés à l'enregistrement de 46 sites dans cette partie de la Nouvelle-Écosse. Un effort conjoint entre Sainte-Marie et l'Université du Maine à Orono a été dirigé vers la mise à l'essai approfondi du site Bain. L'article va discuter du progrès jusqu'à date avec un sommaire de la chronologie du Sud-est de la Nouvelle-Écosse.

Deal, Michael (Memorial University of Newfoundland)

Scots Bay Chalcedony: Its Distribution and Exploitation

Scots Bay, on the Blomidon Peninsula, Nova Scotia, has often been cited in the archaeological literature as a major chalcedony source in the Maine-Maritimes region. However, despite a long standing interest by geologists, no extensive survey was undertaken in the area until 1988. This paper focuses on the nature, distribution and prehistoric exploitation of Scots Bay chalcedony. Further, results of a preliminary investigation at a major quarry-workshop site at Davidson Cove are presented.

Delgado, James P. (National Park Service, Washington, D. C.)

The National Park Service and Maritime Archaeology in the United States

The National Park Service is the primary federal agency responsible for the preservation and interpretation of America's cultural, natural, and scenic resources. While the NPS has been involved with underwater and maritime archaeological projects since the 1930's, a comprehensive maritime archaeological program has been in place only since 1980. This paper discusses NPS work in the field since 1980, including work in and outside of National Parks. The NPS role in drafting guidelines for state management of historic shipwrecks as required by recent Federal legislation, a Nationwide inventory of historic maritime resources, and a new NPS policy urging international cooperation in shipwreck preservation and research will be emphasized.

Le Service des Parcs nationaux est le plus important des organismes fédéraux chargés de la conservation et de l'interprétation du patrimoine culturel, naturel et paysagiste des Etats-Unis. Le Service des Parcs nationaux participe à des projets d'archéologie maritime et sous-marine depuis les années 1930; cependant, ce n'est qu'en 1980 qu'un vaste programme d'archéologie maritime a été mis en place. Ce rapport traite des travaux réalisés par le Service des Parcs nationaux depuis 1980, ainsi que des travaux d'autres organismes fédéraux et non-fédéraux. L'auteur axe son rapport sur l'importance du rôle du Service des Parcs nationaux en rédigeant pour les différents Etats des directives pour la conservation des épaves historiques, comme l'ordonne une législation

fédérale récente. Ce rapport accorde également une grande importance à l'inventaire national du patrimoine maritime historique ainsi qu'à la nouvelle directive de politique générale du Service des Parcs nationaux, laquelle fait appel à la coopération internationale en matière de recherche et de conservation des épaves.

Easton, N. Alexander (Yukon College)

Paleo-shoreline Reconstruction of Southern Georgia Strait, Pacific Coast

Continuing research into the nature of post-glacial sea-levels in the Georgia Strait region and their relation to the prehistoric record will be reviewed. Potential application of similar research strategies to Canada's eastern coastal regions will be discussed.

Seront révisés: les recherches sur la nature des niveaux post-glaciaires de la mer dans la région du Détroit de Georgie et leurs rapports au déroulement préhistorique. Les possibilités de stratégies de recherches semblables aux régions côtières de l'Est canadien seront aussi discutées.

Easton, N. Alexander (Yukon College) with Dr. Ruth Gotthardt (Yukon College)

1988 Fort Selkirk Culture-History Project: A Community Based Ethno-archaeological Programme

The 1988 Fort Selkirk Culture-History Project presented the opportunity for meaningful research and cross-cultural experiences at several different levels. On one level it was a traditional archaeological field school in which students were given exposure to methods and techniques of archaeological survey and excavation. On a second, and more important level, the participation of native elders provided both students (14 to 20 years old - none of whom had finished high school) and anthropologists with instruction in traditional culture and history, transforming a typical field school concept into something quite different and, we believe, much more valuable. This paper will discuss both the results of archaeological survey and excavation in the Fort Selkirk, Yukon, area and make suggestions for further projects which might attempt to unify archaeological research with the knowledge, experience, and values of local native groups.

Ellis, Chris J. (University of Waterloo) with D. Brian Deller (Mt. Brydges, Ontario)

Meadowood Phase Occupations on the Caradoc Sand Plain

Surface surveys of the Caradoc Sand Plain west of London, Ontario have been carried out by D. B. Deller since the 1960's. This work has documented a large number of sites indicating extensive Early Woodland Meadowood phase occupations in the area. The data base, and comparisons with sites from other areas, allow the development of at least preliminary models of Meadowood settlement types in the region. Especially notable is the first reported evidence from southern Ontario of large "base camps" comparable to those reported for western New York state. The available lithic assemblages from the sites also provide a large sample with which to evaluate and refine existing models of Meadowood lithic manufacturing and recycling strategies.

Ellis, Chris J. (University of Waterloo) with Stanley A. Wortner (Ontario Archaeological Society) and William A. Fox (Ontario Ministry of Culture and Communications)

Nettling: A Preliminary Overview of an Early Archaic "Kirk Corner-Notched Cluster" Site in Southwestern Ontario

This paper reports preliminary results of analysis of a large lithic assemblage from the Nettling site, located near the modern Lake Erie shore southwest of London, Ontario. Nettling is the first extensive Early Archaic site to be located in the Great Lakes region. Although largely a surface collection, there is little evidence of other occupations at the site. Moreover, the 800 + tools/preforms in the assemblage are quite homogeneous in terms of the stone sources represented and the tool forms recovered. Ohio cherts dominate the artifact assemblage with Pipe Creek chert from the northwestern part of that state predominating. The tools themselves are virtually identical to those of the Kirk cluster or horizon reported from the southeastern United States, including corner-notched serrated points, expanding base drills, large trianguloid bifacial blades or knives, small end scrapers with parallel-flaked dorsal surfaces, cobble chopper/scrapers, and chipped celts with ground bits. As such, the site should date to ca. 9500-8900 B.P. Implications of the Great Lakes area, continuity and change from earlier Paleo-Indian occupations, and the origin of ground stone tools will be discussed.

Beyond Disorder: Chaos in Culture Change

Ecological and other biological concepts are employed commonly by archaeologists and anthropologists to explain cultural adaptation and change processes. Often, cultural evolution is compared to biological evolution, meaning speciation. Cultural systems dynamics, however, are related more realistically to ecosystem dynamics. Especially suitable is the application of non-linear dynamical systems theory to ecological and cultural systems changes. The result is a new emphasis on life history evolution rather than speciation only.

Self-organized life systems maximize long-term survival by adjusting to non-linear external influences, such as climate, via punctuated or pulsating unrepeated system state changes. All macroscopic systems, cultural systems included, are non-reversible, time-dependent and, therefore, non-linear or dynamical, each with its own sequence of unrepeated states or trajectory, entropically drawn to states of increasing disorder. When plotted mathematically, dynamical systems trajectories behave as fractals, bifurcating and separating exponentially with unpredictable yet infinite repetition in finite space. This causes the trajectories to fold over and wind around loci called *strange or chaotic attractors*, the basis of *chaos theory*.

Chaotic trajectories cut ordered paths through a morass of random influences. The result is simplicity within complexity, order within seeming disorder or chaos, a basic structure of self-organization common to systems which are subject to unpredictable, random influences. This recently proposed chaos paradigm in science is the result of a new search for non-regularities or unrepeated phenomena, rather than the traditional search for regularities only which relegates chaos to background "noise."

The new paradigm includes a new deterministic emphasis in science. This is in the form of a new causality in which the order within seeming disorder cuts a predetermined path through chaotic or non-regular influences, the structure of the macroscopic order determined by the confinement of the disorder within finite boundaries. The change process is fractal, the trajectories of change bifurcating exponentially until they reach the limits of their physical

parameters. Should a trajectory break out of these parametric limits, the bifurcation process begins all over again. Each bifurcation point is, in effect, a decision point, determining the paths of the trajectories until they reach further bifurcation points. This is similar to the "pulsating" ecosystem change process newly proposed by Howard Odum, is related to Stephen J. Gould's "punctuated equilibrium" evolutionary theory and is based directly on chaos theory. It is a case of entropy sowing the seeds of its own demise - increasing randomization can result only in the chaotic order which springs from random behaviour, resulting in re-affirmation of the order to disorder to restructuring sequence.

The suggested chaotic cultural order functions so that uncertainty alternates with certainty on a pulsating basis, with a new system state path partly determined by its former state, and partly by chance changes occurring during the chaotic or decision intervals. Thus, the deterministic nature of cultural systems changes is due to an ordered form of disorder which occurs on a pulsating basis, and which provides "choice" or trajectory alternatives. However, once a state emerges from a chaotic interval, its trajectory is predetermined by the system order until it collapses once more into a chaotic state.

Ferguson, Albert M. (*Archaeological Services New Brunswick*)

Impact Assessment in New Brunswick: A Coordinated Approach

The Government of New Brunswick recently passed Regulation 87-83 under the Clean Environment Act to provide the legislative framework for Environmental Impact Assessment. The regulation sets out criteria for the scope and nature of the undertakings that have to register with the Department of Municipal Affairs and Environment and be screened for potential impact. The major difference between this new regulation and the previous EIA policy is that the requirement for registration and screening now extends to projects proposed by municipalities and private developers, as well as government-sponsored projects. The Environmental Sciences Branch of the Department of Municipal Affairs and Environment acts as the coordinator in this multidisciplinary planning approach. This paper outlines the EIA process in New Brunswick, with special emphasis on how

heritage concerns are addressed.

Le gouvernement du Nouveau-Brunswick a récemment promulgué, dans le cadre de la Loi sur l'assainissement de l'environnement, le règlement n° 87-83 sur les études d'impact sur l'environnement (EIE). Le Règlement liste les critères concernant les projets qui doivent se soumettre à l'exigence relative à l'enregistrement et l'analyse auprès du ministère des Affaires municipales et de l'Environnement. La principale différence entre le règlement et l'ancienne politique sur les EIE est que l'obligation d'enregistrer et de soumettre les projets à l'analyse s'étend désormais aux projets municipaux et privés plutôt qu'aux seuls projets subventionnés par le gouvernement provincial. La Direction des sciences environnementales du ministère des Affaires municipales et de l'Environnement agit comme coordinatrice dans cette planification multidisciplinaire. Ce communiqué résume le processus d'EIE au Nouveau-Brunswick, en portant une attention particulière à la préservation des ressources du patrimoine.

Ferris, Neal (Ontario Ministry of Culture and Communications)

Late Woodland Central Algonquian Autumn Settlement-Subsistence Patterns from the Van Bemmelen Site

Until recently, the Western Basin Late Woodland Tradition of southwestern-most Ontario has been an unknown archaeological entity. However, several salvage excavations conducted over the last two field seasons have substantially increased the database for this cultural group. In particular, data recovered suggests that the settlement-subsistence pattern for this group was characterized by band coalescence-dispersal over the course of the seasonal round, based on periods of resource abundance and scarcity. Consequently, sites tend to reflect subsistence strategies utilized for relatively specific periods of the seasonal round. This is so for the Van Bemmelen site (AdHm-31), a Younger phase (900-1200 A. D.) habitation located on McGreagor's Creek in west Kent County. Preliminary results suggest that site function was as a late fall hunting camp, where butchering and processing of mainly deer was the primary (almost exclusive) activity. This is reflected in both settlement data, faunal remains, and material culture.

Finnigan, Jim and Maureen Rollans (Saskatchewan Research Council)

Development Archaeology/Public Archaeology the Souris Basin Heritage Study

The province of Saskatchewan is building reservoirs along the Souris River and Moose Mountain Creek. The Saskatchewan Research Council is directing a multi-year archaeological study of these reservoirs for the Souris Basin Development Authority (the proponent). One of the components of this study is public archaeology. This is the first time in Saskatchewan that a program of public archaeology has been incorporated into an impact mitigation study. This paper discusses the range of public programs offered in 1988 and the public response to date. Suggestions for an improved program are offered.

Friesen, T. Max (University of Toronto)

Of Moose and Maggots: Experimental Breakage of Decomposed, Fresh and Frozen Longbones by Pressure and Percussion

Despite the importance of fresh "spiral" fracture of bone to zooarchaeological interpretation, many factors potentially affecting bone breakage are poorly understood. The experiments reported here consist of controlled breakage of small samples of bone while altering a number of variables, including holding position (single or double anvil), nature of applied force (static or dynamic), age of bone when broken (fresh or weathered), and temperature (frozen or unfrozen). Bone fragments resulting from breakage episodes were compared on the basis of continuous and discontinuous data.

Gibson, Terrance H. (Saskatchewan Research Council)

Ceramic Variation and Population Dynamics: Interpretive Implications from a Single Selkirk Occupation

Theoretical studies of Selkirk ceramic variability have always emphasized a regional perspective when attempting to characterize prehistoric human interaction. However, though rarely considered by archaeologists, significant ceramic variability occurred within

Selkirk occupations as well as between them. In fact, intrasite variability in style, manufacture and use of ceramics can reflect a wide variety of human interactions that are usually not detectable at the regional, inter-site level of interpretation. Some of these intrasite ceramic behaviours have profound implications for our understanding of regional Selkirk variability as reflected in the ceramic record. This paper will discuss some types of intrasite ceramic behaviour which are of potential import to regional interpretation of the Selkirk Composite, drawing upon specific data collected from Bushfield West, a large single component Selkirk camp-site located in central-eastern Saskatchewan.

Ginns, Janette M. (Newfoundland Marine Archaeology Society)

Conception Bay Underwater Survey 1988

Four harbors in Conception Bay, on the northern shore of the Avalon Peninsula of Newfoundland, became the target of a series of short surveys undertaken by avocational divers with the Newfoundland Marine Archaeology Society. A total of eleven underwater sites were identified at Brigus, Bay Roberts, Harbour Grace and Bristol's Hope. These sites have been registered and include shipwrecks, anchorage points, old wharves, middens, and related shoreline activity areas.

Documentary sources indicate that Conception Bay was known to Europeans in the 16th century and was the first area of English influence in Newfoundland in the early 17th century. The settled population gradually increased and strong mercantile interests were established in the 18th and 19th centuries. Archaeological surveys on land have produced limited historical data for the area and no systematic underwater archaeological surveys had been conducted until this time. The results of the underwater survey in Conception Bay will be discussed. This will include an assessment of the contribution made to the inventory of submerged cultural resources in Newfoundland waters, communications with historical societies and people in local communities to protect the marine heritage, and the experience provided to divers to become involved in archaeological surveys in the province.

Ginns, Janette M. (Newfoundland Marine Archaeology Society)

Sub Aqua 1, Holyrood, Newfoundland: A Field School Experience For Scuba Divers

The inventory of submerged cultural resources in Newfoundland waters is limited. Archaeological surveys conducted by avocational groups have covered only a very small percentage of underwater areas in a systematic manner. Site assessments and surveys of specific areas conducted for archaeological clearance for proposed development projects will add to that data base. However, it is only when individual archaeological resources are recorded in specific areas that a clearer understanding of the distribution and types of submerged cultural resources will result. Thus, the requirement for accurate reporting of underwater sites is important. In recent years a problem has arisen in providing scuba divers with sufficient theoretical and practical knowledge of the technical skills required by the underwater archaeologist. The situation needed to be improved through diver education. In the fall of 1988, a diving course specifically in underwater archaeology was set up with Sub Aqua 1982 Ltd. in St. John's. The course was taken by a small group of students for the NASDS (National Association of Scuba Diving Schools) Expert Diver Program. The introductory course provided a sound background in technical skills and emphasized hands-on experience. Open water work, to include the survey of a wreck site at Holyrood, Conception Bay, formed the interface between the theoretical knowledge gained by students in the classroom and the practical knowledge required for archaeological field-work. The successful field school experience, operated under an archaeological research permit granted by the Historic Resources Division, Department of Culture, Recreation and Youth, Government of Newfoundland and Labrador, will be outlined using the highly visual format of still photography and video presentation. -

Gregory, Fred (Save Ontario Shipwrecks)

Non-Disturbance Archaeology is OK, Too

Most archaeological activity in Ontario is performed by amateurs employing non-disturbance techniques. They are recording valuable data without excavating (destroying) sites. However, their work is equally

important for it is they who are documenting the resource and preserving it, in situ, for future generations. The professional marine archaeological community in Ontario (indeed across Canada) is small and they could never hope to interpret the many thousands of marine sites without the assistance of the sport diving community working through avocational or marine heritage conservation organizations. This paper will relate the efforts of amateurs with Save Ontario Shipwrecks (SOS) in protecting and documenting marine sites (without the need for conservation) so that professionals may interpret seafaring activities in past centuries.

Hanna, Margaret G. (Saskatchewan Museum of Natural History) with Martin Kondzielewski (Regina Cable)

Presenting Archaeology of the Small Screen: The Saskatchewan Experience

The Saskatchewan Archaeological Society has identified public education as one of its functions. Most of its programs are aimed at SAS members. However, the SAS has been seeking ways of broadening its scope to include "the general public". In 1987, the SAS approached Cable Regina, a community cable station, to jointly produce a TV series about Saskatchewan archaeology. The SAS chose the format because of the success of the Manitoba television series. In addition, Cable Regina provided production personnel and facilities at no charge. One disadvantage is that a significant proportion of Saskatchewan's population does not have direct access to community cable TV. To offset this, the SAS decided to make copies to lend to its members. The series, entitled *Discovering Saskatchewan's Past*, is designed for the reasonably well-educated person. Most programs focus on archaeology per se, but historic interpretation and palaeontology are also included. Getting from the idea to the final product requires cooperation between archaeologist and producer. The archaeologist must learn how to plan scripts and how to speak plain simple English. The producer must learn how to cope with sites that are in almost inaccessible locations. Both must be flexible to be able to cope with problems that arise in the field and in the editing suite. Both must have a sense of humour. The program seems to be well received. Both the SAS and Cable Regina agreed to continue the series in 1988-1989. Neither was prepared for the many inquiries

from individuals, school boards, and museums who wanted to purchase copies. Marketing the series has been a weak point in the program.

Hanna, Margaret G. (Saskatchewan Museum of Natural History)

Making It In The Marshes: The Case for Near-endogamy at Duck Bay

The people who made Duck Bay ware occupied, as their primary territory, the area around Lake Winnipegosis in west central Manitoba. Duck Bay ware occurs rarely outside that area, but this meager distribution extends up to 500 km away.

The model developed to explain this distribution addresses the characteristics of the primary territory and the characteristics of the society inhabiting that kind of territory. The area around Lake Winnipegosis has a rich and varied resource base which could support a small population year round. Models of the relationship between social organization and resource exploitation (e.g., Syms, Wertman, Vickers) and actual examples (e.g., Meyer, Russell, Reid) are the basis for the model explaining the distribution of Duck Bay Ware. This society attempted to reduce access by other groups to their resource base by maintaining endogamous, insofar as that is possible in a band society. Nevertheless, some exogamous marriages occurred to facilitate access to desired resources outside their primary territory.

Heckenberger, Michael J. (University of Pittsburgh) with James B. Petersen (University of Maine) at Farmington and Louise A. Basa (New York State Dept. of Environment Conservation)

The Boucher Site (VT-FR-26): Implications for Mortuary Variability During the Early Woodland Period in Northeastern North America

Recent analyses of artifacts and mortuary practises from the Boucher cemetery site (VT-FR-26) in north-western Vermont have produced unique data regarding burial ceremonialism during the Early Woodland period. The site, which contains 45 unburned inhumations, 17 cremations and numerous nondescript burials, is dated to ca. 700 B. C. - A. D. 1. Intrasite correlation of diverse utilitarian and ritual

artifacts, including lithic, ceramic, copper, shell, and perishable artifacts, reveals distributions most likely attributable to episodic burial events rather than differential status between interments. Taken in concert, these analyses are used to reconstruct site specific mortuary practises and broader regional patterns.

Hood, C. Bryan (University of Massachusetts)

Everything in Its Proper Place: Post-Processual Perspectives on Hunter-Gatherer Spatial Relations

Processual archaeology treats space as a neutral adaptive landscape. The "new archaeology" borrowed theoretical models and quantitative techniques from neo-positivist "new geography", but has virtually ignored recent work in human geography which views space as meaningfully constructed, inherently imbedded in social and ideological relations. This new social geography and Giddens' "structuration theory" are central for a post-processual re-orientation of archaeological conceptions of space. The potential of such an approach is illustrated using chert sources and rock carvings from the north Norwegian Stone Age.

Howe, Geordie (Simon Fraser University)

Looking at the Little Guys: An Examination of Small Size or Pocket Shell Middens

Excavation of small shell midden sites on the Northwest Coast have traditionally dealt with large area habitation or village sites. If the development of shell midden sites is viewed as a continuum of site formation processes then a significant portion of the shell midden site spectrum has been almost wholly ignored. This paper examines the historical trend of shell midden excavation on the Northwest Coast and discusses some recent examples dealing with the excavation of smaller shell midden sites. If questions of shell midden development and refuse disposal patterns are to be addressed then some attempts for controlling the data are needed. It is suggested that by examining small scale or pocket middens these questions may be more easily answered.

Ives, John W. (Archaeological Survey of Alberta)

The Heilongjiang-Alberta Archaeological Research Project and the Peopling of the New World

Although Siberia has attracted considerable attention, northern China is geographically situated so that it quite likely contributed to the early phases of the peopling of the New World. Alberta has entered a sister relationship with Heilongjiang Province in northeastern China. Under these auspices, the Archaeological Survey of Alberta is engaging in a series of scientific exchanges with the Heilongjiang Provincial Relics Committee. Findings from several late Pleistocene archaeological sites in Heilongjiang are reviewed, in conjunction with an assessment of Heilongjiang's potential to contribute to late Pleistocene human population movements.

À cause de sa situation géographique, il est permis de croire que la Chine septentrionale ait pu contribuer aux premières phases du peuplement du Nouveau Monde, et ce, malgré l'importance accordée à la Sibérie, sous ce rapport. La province de l'Alberta et la province de Heilongjiang située au nord-est de la Chine, ont établi une relation de "provinces jumelées". Sous ces auspices, la Commission archéologique de l'Alberta (the Archaeological Survey of Alberta) a entrepris une série d'échanges scientifiques avec le "Heilongjiang Provincial Relics Committee". Le présent exposé passe en revue les travaux provenant de plusieurs sites archéologiques du Pléistocène supérieur, concurremment avec l'évaluation du potentiel archéologique de Heilongjiang et de sa contribution aux connaissances sur les mouvements de population humaine de cette période du Pléistocène.

Jamieson, Susan M. (Trent University)

The Lake Lodge Site, Niagara, Ontario

Lake Lodge was constructed in 1792 by Jacob Servos, a former Butler's Ranger. In 1799, Reverend Robert Addison, the first Anglican clergyman and missionary in Niagara, purchased the property from Servos. Lake Lodge functioned as a residence and a meeting place for worship from 1799-1809 and again from 1813-1822. The building also served as headquarters for both American and British forces during 1813. After the mid-nineteenth century, Lake Lodge was lived in by a series of owners and has only recently been vacated for restoration. Salvage excavations were conducted during the summer of 1988 in

order to recover a sample of those remains slated for destruction during the restoration process. A sizeable collection of artifacts was obtained along with structural information about the configuration of the original building. The implications of these are discussed.

Le Lake Lodge fut bâti en 1792 par Jacob Servos, un ancien garde de Butler. En 1799, le révérend Robert Addison, le premier pasteur et missionnaire anglican à Niagara, a acheté l'immeuble à Servos. Lake Lodge a fonctionné comme une résidence et une église depuis 1799 jusqu'à 1809, et encore de 1813 à 1822. La bâtisse a été utilisée comme quartier général par les armées américaines et anglaise en 1813. A partir du milieu du siècle dernier, Lake Lodge fut habité par des propriétaires successifs; et évacué récemment pour la restauration. Les fouilles de sauvetage effectuées à l'été de 1988, ont sauvé quelques fragments d'objets des ravages de la restauration. Une grande collection d'artefacts et les indications structurelles ont été trouvés. On discute la signification des évidences artefactuelles et structurelles.

Jefferson, Linda (Government of Newfoundland and Labrador)

The Minister's Island Site: Stratigraphic Analysis and the Separation of Cultural Components

The Minister's Island Site (BgDs10), a large, multi-component, shell midden located near the town of St. Andrew's, Passamaquoddy Bay, New Brunswick was excavated on four occasions over a period of 24 years. Although marginal evidence for a late Archaic occupation exists, the site was occupied primarily by Acramic and Ceramic period peoples, from ca. 2,300 to 600 B.P. . Stratigraphy at the site is complex and somewhat disturbed as a result of human activity and natural factors. This paper opens with a discussion of the methodology employed in the identification and separation of cultural components at the site, including an examination of artifactual, feature and stratigraphic data. Excavation methodology is discussed in terms of the efficacy of utilizing arbitrary versus natural levels for purposes of interpreting cultural information contained within a shell midden site. In conclusion, although some spatial separation of cultural components has been possible, excavation methodologies have served to obscure the site's components and have limited the degree of confidence which can be placed on any interpretation of the cultural remains contained within the site.

Johnstone, David (Simon Fraser University)

Layers, Lenses and Levels: Excavation Strategies in Shell Middens

Historically, shell midden excavations on the Northwest Coast have been dominated by trench and test units. Recently, two Simon Fraser University projects in the Georgia Strait region of British Columbia have employed areal excavations within limited portions of the sites. The advantages and disadvantages of intensive versus extensive excavation strategies are discussed.

Kibunja, Mzalendo (Rutgers University, New Jersey)

The Lower Paleolithic Archaeology West of Lake Turkana, Kenya

West Turkana in northern Kenya has become well-known in recent years following the discovery of important Plio-Pleistocene hominid remains. This paper describes a sequence of Late Pliocene and Middle Pleistocene archaeological traces which have recently been discovered and test excavated in, and adjacent to, sediments containing these finds. These sites are significant because they sample a time range of human evolution whose archaeology is poorly understood because of the paucity of available evidence. The paper will discuss artifacts found, dating, and preliminary paleoenvironmental setting of the sites.

Krigbaum, John S. (New York University, New York)

Biocultural Adaptation in Prehistoric Vermont

Little is known about the biocultural adaptation of the prehistoric inhabitants of Vermont's Champlain Valley. Subsistence and health data were obtained from remains (n=45) recovered from the Early Woodland Boucher cemetery. Stable carbon and nitrogen isotope ratios were determined for nine Boucher adult skeletons; six other burials (Late Archaic to Late Woodland) from the area were assessed for comparison. Dental pathologies were also scored. All results are consistent with a broad spectrum hunting, gathering and fishing economy. Nitrogen values suggest that certain populations may have had differential access to marine foods such as anadromous fish.

L'adaptation bioculturelle des habitants préhistoriques du "Champlain Valley", au Vermont, est très peu connue. Les informations sur la santé et le régime présentées ici ont été obtenues l'aide de vestiges (n=45) provenant du cimetière Boucher (Early Woodland). Une examination radio-isotopique à base de carbone et de nitrogène a été accomplie sur neuf squelettes adultes du site Boucher; six autres inhumations (Late Archaic à Late Woodland) de la région ont été analysées pour une comparaison. Les pathologies dentaires ont été quantifiées. Tous les résultats suggèrent une économie à base de chasse, de cueillette et de pêche. Les valeurs de nitrogène obtenues suggèrent que certaines populations ont eu un accès plus ou moins important aux ressources marines tels le saumon.

Kristmanson, Helen (University of Calgary)

An Interpretation of the Melanson Site Ceramic Assemblage.

This paper examines the ceramic material recovered from excavations at the Melanson Site near the Gas-pereau River in Wolfville, Nova Scotia. A radio-carbon date range of 1760 ± 60 B. P. to 560 ± 60 B. P. confirms a Late Woodland Period MicMac occupation that extended into Proto-historic years. The ceramic assemblage depicted three stages in ceramic style which included one transitional period. The three chronologically significant Types established are outlined and compared to two other sites in the region.

Krozser, Kit (University of Saskatchewan)

The Distribution of Avonlea Net Impressed Ceramics

This paper examines the temporal and geographical distribution of Avonlea net impressed ceramics. Comparisons are made to the grooved paddle finish ceramics that are also associated with Avonlea. The relationship between the two surface finish types are discussed, along with some ideas about the origin and ethnographic association of the net impressed variety.

Landals, Alison (Environment Management Associates, Calgary)

The 1988 Oldman River Dam Kill Sites Field Program: Preliminary Results

During the summer of 1988, archaeological studies were undertaken at fourteen prehistoric bison kills in the Oldman River Dam project area in southern Alberta by Environment Management Associates. An exploratory backhoe test programme was also conducted. This paper will describe the scope and results of the 1988 field season. Preliminary interpretations of several kill sites within the study area will be presented, with emphasis on DjPm-126, an important Late Prehistoric bison jump.

Lanteigne, Maurice (University of Winnipeg)

The Bihedral Core Tradition of the Central Precambrian Shield

An analysis is presented of the bihedral core industry of the Rush Bay Road Complex in the Precambrian Shield region of northwestern Ontario. Refinements in empirical methodology and application of specialized statistical modeling procedures in lithic classification suggest inadequacies in traditional concepts of "bifacialism". Procedures for inter-assemblage comparisons by independent lithic researchers are included in this study.

Une analyse est présentée d'une industrie lithique du complexe *Rush Bay Road* de la région du bouclier précambrien dans le Nord-ouest ontarien. Les perfectionnements de méthodologie empirique et l'application des techniques statistiques en classification suggèrent l'insuffisances dans les concepts traditionnels de "bifacialisme". Les procédures pour permettre des comparaisons avec d'autres ensembles lithiques sont définies.

Lebel, Serge and Patrick Plumet (Université du Québec à Montréal)

Etude Technologique de l'exploitation des blocs et des galets par les Dorsetiens au site Tuvaaluk (Diana.4, JfEl-4)

L'analyse d'un assemblage de galets et blocs du site de Diana.4 vise à attirer l'attention des archéologues travaillant dans l'Arctique sur ce type d'objets. Une étude du mode d'exploitation de ces roches en metabasalte a été entreprise afin de retrouver les techniques de fabrication. Ces témoins ont permis de reconstituer certaines étapes de la réduction lithique depuis le matériel brut jusqu'à l'outil. Les paléoesquimaux ont recherché une catégorie d'outils caractérisés par leur robustesse et leur grand format et certains sont associés à des travaux de percussion. Dans ce cas, l'outil utilisé se confond souvent à l'outil façonné et les formes de transition sont nombreuses. Leur observation technologique apporte ici des éléments nouveaux à l'interprétation.

The analysis of a pebbles and blocks assemblage from Diana.4 aims to draw the attention of archaeologists working in the Arctic to these kind of objects. A study of the mode of exploitation of those igneous rocks has been undertaken in order to rediscover the techniques of fabrication. The study allowed the identification of some stages of the lithic reduction process from the raw material to the finished tool. Paleoeskimos searched for raw materials distinctive by their robustness and their large size. Some of their tools were manufactured by percussion. In this case the utilized tools conform often to the shaped tools and the forms of transition are numerous. These technological observations bring new data to the interpretation.

Lee, Ellen R. (Canadian Parks Service, Winnipeg)

Archaeology in the Canadian Parks Service, Prairie and Northern Region

The Archaeological Services Division of the Canadian Parks Service, Prairie and Northern Region is responsible for managing the cultural resources in nine National Parks and Park Reserves and nine major National Historic Parks and numerous small Historic Sites. These range in latitude from Grasslands near the 49th parallel to Northern Ellesmere, a few hundred miles from the north pole, and in time

from the early prehistoric to the late 19th and early 20th centuries in Dawson City. During the past year work has focussed primarily in two areas, the Forks of the Red and Assiniboine Rivers in downtown Winnipeg and the gold rush area of northern B. C. and the Yukon. During the coming year, in addition to an on-going cultural resource management program, we will undertake projects at the Forks and Lower Fort Garry in Manitoba, Fort Battleford in Saskatchewan, the Chilkoot Trail in northwestern B. C., Dawson City in the Yukon, and in Ellesmere Island National Park Reserve in the North West Territories. The range of projects includes a resource inventory, a public archaeology program, salvage projects in advance of restoration, a major artifact cataloguing and inventory project and various environmental screenings and assessments.

La division des services d'archéologie du Service canadien des parcs, région des Prairies et du Nord, est chargée de gérer les ressources culturelles de neuf parcs nationaux et réserves de parc, de neuf grands parcs historiques nationaux et de nombreux petits lieux historiques. En latitude, ces parcs et lieux sont disséminés sur un territoire qui s'étend du parc national des Prairies, situé près du 49^e parallèle, à la serpentrionale île d'Ellesmere, à quelques centaines de milles du pôle Nord. Dans le temps, ils couvrent une période allant des débuts de la préhistoire à la fin du XIX^e siècle et même au début du XX^e siècle à Dawson. L'année dernière, les travaux ont porté sur deux régions en particulier, le parc La Fourche, au confluent des rivières Rouge et Assiniboine au centre-ville de Winnipeg, et la région de la ruée vers l'or, dans le nord de la C.-B. et au Yukon. L'année prochaine, nous poursuivrons notre programme permanent de gestion des ressources culturelles et nous mettrons des projets en train à La Fourche et au Lower Fort Garry au Manitoba, à Fort Battleford en Saskatchewan, sur la piste Chilkoot dans le Nord-ouest de la C.-B., à Dawson au Yukon et dans la réserve de parc national de l'île d'Ellesmere dans les Territoires du Nord-Ouest. Ces travaux comprennent un inventaire des ressources, un programme d'archéologie pour le public, des projets de récupération en vue d'une restauration, un projet important de catalogage et d'inventaire des artefacts et enfin, différentes études et évaluations environnementales.

Leonard, Kevin (University of Toronto)

Salvaging the Aboiteau de Barachois

The *Aboiteau de Barachois* is a sea-dyke that was constructed by the first Acadian settlers in Barachois, a village along the Northumberland Strait in south-eastern New Brunswick. Constructed circa 1810, the *aboiteau* drained the marsh to provide pasturage for livestock. Abandoned around the turn of the century, it lay beneath a sand-bar until a severe storm washed one of the wooden sluice channels ashore in late November of 1987. Following a salvage operation, the sluice channel has been conserved and soon will be on display in a local museum.

L'*aboiteau de Barachois* est une aboiteau de mer situés près du détroit de Northumberland dans le Sud-est du Nouveau-Brunswick. Cet *aboiteau* a été construit au début du 19^e siècle par les premiers paysans de Barachois. L'*aboiteau* servait naguère au drainage des marais situés près de la mer afin d'y cultiver le foin servant de pâturage aux animaux domestiques. Lors d'une tempête de grands vents du "nord-est" en novembre, 1987, une dalle simple fut réjetée sur la grève. Après une opération de sauvetage, elle sera entreposée à l'église historique de Barachois.

Lepine, André avec Jean Belisle (Comité d'histoire et d'archéologie subaquatique du Québec)

Le projet Molson: Fouilles et études de l'épave du Lady Sherbrooke c. 1817-1826 quatrième bateau à vapeur construit pour la "Molson line" coulé dans le fleuve St-Laurent près de Montréal, Québec.

Depuis 1983, les archéologues du Comité d'Histoire et d'Archéologie Subaquatique du Québec fouillent les vestiges d'un des premiers bateaux à vapeur canadien le **LADY SHERBROOKE**, abandonné sous cinq mètres d'eau dans une petite baie près de l'île Sainte-Marguerite non loin de Montréal (îles de Boucherville). La problématique de cette recherche à long terme, est de comprendre qu'elles ont été les conséquences de l'introduction de la machine à vapeur sur l'architecture du bateau et de son impact sur la révolution industrielle dans le Bas-Canada. De 1984 à 1988, des tranchées en largeur et en longueur ont été creusées dans plus de deux mètres de sédiment recouvrant la coque du vapeur. Ces tranchées effectuées dans un premier temps sur la largeur de la coque non loin de la proue, et sur la longueur vers la

section de la poupe, ont permis de mettre au jour les éléments structuraux de ce que nous avons appelé la "Salle des Machines", et les "Appartements des passagers et cargos". Étant donné que la machine et ses composantes mécaniques furent démantelées et ré-utilisées sur un autre vapeur à l'époque, ce que nous avons mis à jour sont une série d'éléments structuraux longitudinaux en bois formant l'axe intérieur de la coque et sur lesquels on retrouve les "ancrages" où s'emboîtent les composantes mécaniques de la machine. De plus, nous avons mis à jour une section du pont et du flanc babord dans un état presque parfait de conservation, emplacement où était installé l'axe de la roue à aubes du bâtiment. Cette découverte nous a permis de mieux comprendre l'arrangement de toute cette mécanique dans la "Salle des Machines". Les fouilles révèlent entre autre un échantillonnage hétéroclite d'artefacts liés à la construction, la mécanique et la combustion, la cargaison, et la vie à bord d'un bateau à vapeur du début du 19^e siècle.

Since 1983, the archaeologists of the Committee of Underwater Archaeology and History of Quebec have been undertaking a systematic excavation of the remains of one of the first Canadian steamers "the **LADY SHERBROOKE**", abandoned in fifteen feet of water in a small bay near St-Marguerite Island (in the vicinity of Montreal Island) in the St-Lawrence River. The goal of this long term project is to understand how the introduction of a steam engine will affect the architecture of the boat, thereby increasing our knowledge of the impact on the industrial revolution in Lower-Canada. From 1984 to 1987, a diagonal trench has been dug up in more than 2 meters deep in the sediment covering the buried hull of the steamboat. This trench done in the width of the hull at precisely one third from the bow section has yielded the remnant of what we call the **ENGINE ROOM**. Since the engine and its components have been removed and re-used on other steamboats, what we have found is the longitudinal wood seating beams and metal "anchorage" of the engine and its mechanical components. Also, the port side section of the deck with the wood and metal seating for the paddle wheel shaft have been found in a very good state of preservation, enabling us to understand its "spacial pattern of arrangement" in the boat. The diggings have yielded also an interesting sampling of artefact linked to its construction, mechanical and combustion components, cargo, and life on board an early 19th century steamboat.

Levine, Mary Ann (University of Massachusetts)

An Analysis and Interpretation of Radiocarbon Age Estimates from Fluted Point Sites in Northeastern North America

Radiocarbon is insufficiently understood by most archaeologists. This regrettable situation has led to serious misconceptions about radiocarbon and about the role of "dating" in general. I will examine problems that have resulted from a lack of critical thinking concerning radiocarbon and the Paleo-Indian period. I will evaluate the precision and accuracy of radiocarbon assays associated with Northeastern fluted point sites and discuss how radiocarbon has been used to interpret these sites. I will also examine the difficulties associated with the way in which radiocarbon age estimates have been used to construct time-dependent hypotheses concerning human behaviour in Paleo-Indian times.

Pour la majorité des archéologues la compréhension du radiocarbone est insuffisante. Cette situation regrettable a amené à de sérieuses erreurs au sujet du radiocarbone et du rôle de "datations" en générale. J'examinerai les problèmes qui ont résultés d'un manque de raisonnement critique concernant la radio-carbone et la période paléoindienne. J'évaluerai l'exactitude et la précision des résultats du radiocarbone associé aux sites à pointes cannelées du Nord-est, et discuterai comment la radiocarbone a été utilisé pour interpréter ces sites. J'examinerai aussi les difficultés associées avec la façon dont l'estimation d'âge de la radiocarbone a été utiliser pour suggérer l'hypothèses déterminer par la référence temporel concernent le comportement des humain durant la période paléoindienne.

Logan, Judith A. (Canadian Conservation Institute, Ottawa)

The Cost of Conservation

Conservation is perceived by most archaeologists as a costly and time consuming activity. The results of conservation do not always appear to warrant the apparent effort, expense and in some cases inconvenience to an archaeologist. This paper will examine the costs involved in three projects that the Canadian Conservation Institute's Archaeology lab has carried out. Reasons for the decisions that were made regarding CCI's level of involvement with these pro-

jects will be discussed. The paper will include suggestions on how to integrate conservation with archaeology, in a cost-effective manner.

Magne, Martin P. R. (Archaeological Survey of Alberta)

Rock Art Conservation Research at Writing-On-Stone Provincial Park, Alberta

Review of the international literature dealing with rock art conservation reveals that this field is still largely in its infancy, with significant advances still to be made in all areas of concern. This paper describes preliminary conservation research being undertaken at Writing-On-Stone Provincial Park in southeastern Alberta, one of the most outstanding rock art locales in North America. Conservation research is being directed in four main problem areas: 1. Detailed inventory; 2. Pictograph deterioration; 3. Stereophotogrammetric monitoring of petroglyph erosion; and 4. Macro-and micro-mechanical erosion processes. Preliminary results, key problems, and future research directions are discussed.

La littérature internationale concernant la conservation de l'art rupestre indique que cette recherche est préliminaire, cependant qu'il y a plusieurs du progrès à venir. Cette exposé traitera des travaux préliminaires au parc provincial Writing-On-Stone au Sud-est de l'Alberta, un des lieux les plus remarquables de l'Amérique du Nord. Les recherches sont de quatre sortes: 1. Inventaire; 2. Détérioration des pictographes; 3. Analyses stéréophotogrammatiques; 4. L'érosion machinale des petroglyphes. On discutera les premiers résultats, des problèmes majeurs, et des recherches à venir.

Magne, Martin P. R. with John W. Ives, (Archaeological Survey of Alberta)

The First Albertans Project and the Role of a Western Corridor in the Peopling of the Americas

Assumptions concerning the exact route of the initial human entry to the New World have been much more common than field research. A majority of archaeologists apparently favour a western or "ice-free" late Pleistocene corridor, running from Alaska and the Yukon, through to the eastern slopes of the

Rockies in Alberta. Others have argued for a route extending along coastal Alaska and British Columbia. Fladmark has advocated the Northwest Coast alternative, but it is likely that existing sea levels will prohibit discovery of the earliest sites in this region. Since the western corridor is accessible for more concerted investigation, the Archaeological Survey of Alberta has undertaken a series of studies geared to discover early sites within or near the corridor. Research design, search strategies and initial results for the Bow River, North Saskatchewan River, and Grand Prairie regions will be presented.

L'itinéraire exact qui a permis l'arrivée des premiers humains dans le Nouveau Monde est davantage fondé sur des hypothèses que sur le résultat de travaux sur le terrain. Les archéologues, dans la majorité, semblent préférer l'idée du corridor occidental « libre de glace » datant du Pléistocène supérieur, au départ de l'Alaska et du Yukon et traversant les versants de l'Est des Rocheuses en Alberta. Les autres soutiennent qu'une voie s'étend le long des régions côtières de l'Alaska et de la Colombie-Britannique. Alors que Fladmark préconise l'alternative de la côte nord-ouest, il est très probable que le niveau actuel de la mer empêchera la découverte des plus anciens sites dans cette région. Étant donné l'accessibilité du corridor occidental pour une enquête plus concertée, la Commission archéologique de l'Alberta (the Archaeological Survey of Alberta) a entrepris une série d'études orientées vers la découverte de sites anciens, soit à l'intérieur ou à proximité du corridor. Cet exposé traitera de la conception des travaux, des stratégies de la recherche et des premiers résultats obtenus pour les régions des rivières Bow et Saskatchewan-Nord, ainsi que de Grande Prairie.

Maxwell, David (Simon Fraser University)

Shellfishing Seasonality: Some Midden Sampling Requirements

This paper will discuss some of the problems inherent in determining the season of death in marine shells, and how these problems are further complicated by archaeological excavation. Suggestions for reducing and eliminating these problems through extensive sampling and provenience data will be offered. Minimum requirements for reliable

season of death estimates for archaeological shell will be explained, including the need for statistically reliable and representative samples. It will be suggested that a relatively large number of individual valves (ca. 40 individuals) from a known provenience within a midden are required for reliable season of death estimates to be made.

McAleese, Kevin E. (Memorial University of Newfoundland)

Artifact Model Comparisons: The Archaeology of a Late 18th Century Sealing/Fur Trading Post

The artifact assemblage recovered from a late 18th century British sealing/fur trading post in southern Labrador, Stage Cove, is compared with the artifact models developed by Stanley South. Initially, the Stage Cove assemblage did not fit well with either South's Frontier or Carolina models. A large quantity of lantern glass, classified first as a Furniture Class artifact, appeared responsible for the poor fit. After reclassifying the lantern glass as a Kitchen Class artifact the Stage Cove assemblage fit well with South's Carolina Model. It is argued that this good fit can be attributed to glass lanterns functioning more as technical rather than socio technical artifacts.

McCaffrey, Moira T. (McGill University)

Archaeology of the Magdalen Islands, Québec

The summer of 1988 saw the completion of the first archaeological survey of the Magdalen Islands, located in the Gulf of St. Lawrence. The goals of the project were to evaluate a number of reported prehistoric sites, and to search for new sites in predetermined zones of high archaeological potential. The southern part of the Islands, particularly the shore bordering a large lagoon, proved very productive. This region was once well-known for its seal and walrus population, and a diverse range of aquatic fauna is still found there. Diagnostic artifacts recovered from the surface and in sub-surface tests signal occupations dating from the Ceramic Period back to the Late Paleo-Indian period. These data, though preliminary in nature, illustrate the extent of both maritime specialization and seafaring prowess among some prehistoric groups that occupied the Maritime Provinces.

La première reconnaissance archéologique des îles-de-la-Madeleine, sises dans le Golfe du Saint-Laurent, a eu lieu au cours de l'été 1988. Les objectifs du projet étaient, d'une part, d'évaluer un certain nombre de sites préhistoriques déjà connus et, d'autre part, de chercher de nouveaux sites dans des zones pré-déterminées à haut potentiel. La partie sud des îles, particulièrement la berge d'une grande lagune, a révélé plusieurs sites. Cette région était connue dans le passé pour sa population de phoques et de morses; même, il y existe toujours une faune aquatique très diversifiée. Des artefacts diagnostiques, collectionnés en surface et dans des sondages démontrent des occupations datant de la période Sylvicole jusqu'à la période Paléoindienne récente. Quoique préliminaires, les données montrent déjà l'étendue de la spécialisation maritime et des prouesses de navigation de certains groupes préhistoriques qui ont occupé les provinces maritimes.

McGhee, Robert (Canadian Museum of Civilization)

Who Owns Prehistory? The Bering Land Bridge Dilemma

Prehistoric archaeologists are confronted by a growing world-wide movement by indigenous peoples to reclaim their history and heritage. In some countries, this movement has resulted in significantly decreased access by archaeologists to the basic data of their study. Recent statements by Canadian Indian leaders indicate that prehistoric archaeology in Canada may soon be similarly constrained. The argument for such constraint will be based on the contention that archaeological interpretations of the past denigrate native cultural heritage and belief, and contribute to the cultural and social problems of contemporary native communities. Archaeologists should be aware of the divergences between archaeological interpretations of the past and those of native leaders; the question of Indian origins is discussed as an example of such divergence.

Les spécialistes de la préhistoire se heurtent dans le monde entier à une opposition de plus en plus forte de la part des peuples autochtones qui revendiquent leur histoire et leur patrimoine. Dans certains pays, ce mouvement restreint considérablement l'accès à l'information essentielle aux travaux des archéologues. Les dirigeants amérindiens du Canada ont fait récemment des déclarations permettant de croire

que l'archéologie préhistorique au Canada sera peut-être bientôt soumise à des contraintes similaires. Pour justifier ces contraintes, on affirmera que les interprétations des archéologues dénigrent le patrimoine culturel et les croyances des autochtones et contribuent à l'apparition de problèmes culturels et sociaux au sein des collectivités autochtones contemporaines. Les archéologues devraient être conscients des divergences entre leurs interprétations et celles des dirigeants autochtones. La question des origines des Amérindiens est traitée à titre d'exemple de telles divergences.

Molnar, James (University at Albany, SUNY)

Modelling Algonquian-Iroquoian Interaction

A model to explain the presence of mainly Iroquoian ceramics on Algonquian sites in the upper Great Lakes is presented and evaluated. Using data derived from published sources, and the excavations at Providence Bay (BhHk-3), the model is derived from Ian Hodder's *Symbols in Action* (1982). Hodder holds that intense interaction between two unrelated ethno-linguistic groups results in marked contrasts in material culture rather than the reverse. By controlling for the ecological variables between the Iroquoians and Algonquians, primarily the feasibility of agriculture, the model presented in Hodder is applied to the interaction between these two groups of people.

Un modèle pour expliquer la présence prédominante des céramiques Iroquoises sur les sites Algonquins dans la région du haut des Grands lacs est présenté et évalué. En utilisant les données tirées de sources publiées et des excavations à Providence Bay (BhHk-3), le modèle découle de *Symbols in Action* (1982) écrit par Ian Hodder. Hodder maintient que l'interaction intensive entre deux groupes ethno-linguistique non-apparentés mène à un contraste marqué dans leurs biens culturels plutôt qu'à l'inverse. Prenant en considération les différences écologiques entre les Iroquois et les Algonquins, principalement les possibilités de pratiquer l'agriculture, le modèle présenté par Hodder est appliqué à l'interaction entre ces deux groupes de gens.

Morlan, Richard E. (Canadian Museum of Civilization)

Zooarchaeology at Tipperary Creek: Interpreting Comminuted Bone

Wherever bone is well preserved, archaeological sites often contain large quantities of comminuted bone. Bone fragmentation is often interpreted as evidence of bone grease manufacture without, however, any specific observation or argument to justify the inference that such an activity took place at the site. The production of bone grease is known to have been a labour-intensive activity, the cost of which was returned through improved storage potential and nutritional value. Bone grease manufacture represented an important aspect of some subsistence economies, but it was not universally practiced. Other activities that produce comminuted bone include marrow extraction and tool production, while non-cultural processes such as carnivore gnawing and diagenetic fractures can fragment bone in superficially similar ways. To distinguish different processes that produce comminuted bone, the analysis of bone-rich features at the Tipperary Creek site, in south-central Saskatchewan, employed several criteria: anatomical element, condition of bone when fractured, proportions of cancellous and cortical fragments, particle-size frequencies, superficial markings, and artifact associations. Although not yet completed, the analysis is expected to identify a signature peculiar to bone grease manufacture.

Morrison, David (Canadian Museum of Civilization)

Radiocarbon-Dating Thule Culture

In 1927, Therkel Mathiassen defined Thule as a prehistoric whale-hunting Eskimo culture which he suggested might date to about a thousand years ago. There are now almost 200 radiocarbon dates available from Thule culture and allied sites in Canada, Alaska and Greenland. However, Thule radiocarbon dates are often considered unreliable. This may be why they have rarely been summarized in total, but in consequence the dating of stylistic phases (Classic vs Modified Thule, etc.), and of major events (such as the Thule migration into Arctic Canada), often rests on a bare handful of not necessarily representative dates. This paper discusses problems in the comparability of dates, and criteria for their selection, along with a compilation of all available dates by sty-

listic phase. Dates are found to cluster fairly well, suggesting that their unreliability has been much over-estimated. A number of chronological problems are investigated, including the timing of the Thule migration (probably a century earlier than generally accepted), and priority of the so-called High Arctic route (rejected). One surprising result is the total absence of reliable dates for the Birnirk/Thule transition in northwestern Alaska.

Murdock, Lorne D. (Canadian Parks Services, Ottawa)

Conservation Support to Archaeology Underwater

The traditional role of the archaeological conservator on a marine excavation has usually been limited to providing conservation support on the surface. These functions include the safe handling and storage of artifacts and relative documentation. This paper describes some of the additional ways in which Canadian Parks Service conservators with scuba diving capabilities have assisted Parks Archaeologists with technical problems over the years. Our involvement and participation in these technical developments has been as a result of the establishment of a close working relationship with the archaeologists and a mutual desire to understand each others' roles and objectives. The subjects to be discussed are: safe and effective means of excavating and raising a variety of artifacts to the surface; underwater molding of artifacts and hull sections; core sampling ships' timbers for dendrochronology studies; a system for the reburial and monitoring of artifacts and wooden hull components following recording and excavation; conservation assessments of submerged cultural resources in newly established National Marine Parks.

Murphy, Carl (Ontario Ministry of Transportation)

Late Woodland Central Algonquian Winter Settlement-Subsistence Patterns from the Sherman Site

Rescue excavation of the Sherman site near Thamesville in southwestern Ontario, identified a well preserved house pattern of the Western Basin Springwells phase (A. D. 1200-A. D. 1400). The associated material remains indicate winter occupation, possibly over a single season, by a small family group.

Structures with similar construction, orientation, and internal patterning were in use among Central Algonquian peoples of the western Great Lakes and northern Mississippi Valley throughout the 18th and 19th centuries. Central Algonquian winter cabins were remarkably standardized in external form and interior organization, and played an integral role in the social and economic life over the colder months of the year. The identification of a prehistoric analogue at the Sherman site reveals the conservatism inherent within Algonquian house types, and the probable prehistoric origins of the historic winter settlement pattern.

Nachtigall, Karen with Maurice Lanteigne, (University of Winnipeg)

The Rock Paintings of Northern Manitoba: General Applications in Spatial Modeling

An analysis is presented of 35 recorded rock painting sites in the Province of Manitoba - according to stylistic and contextual parameters. Evaluation of the symbolic infrastructural codes reveals a complex set of divergent processes which developed into boundary markers between two major regionalized groups of a macro-Algonkian language family. Cognitive perception is posited as an identifying aspect and reinforcing mechanism fundamental to the evolution of these boundary markers.

L'application des techniques qualitatives et quantitatives est utilisée dans l'analyse de 35 emplacements de peinture rupestre dans la province du Manitoba - suivant les conditions stylistiques et contextuelles. L'évaluation des codes symboliques révèle un assortiment complexe de processus divergents qui établissent des démarcations entre deux groupes régionaux importants appartenant à une famille linguistique macro-algonquins. La perception cognitive est postulée comme un mécanisme fondamental à l'évolution de ses démarcations.

Nagy, Murielle (University of Alberta)

Bone and Antler Technology from the Trail River Site, Northern Yukon

A technological analysis of the bone and antler material was undertaken to identify personal gear, situational gear and their associated debris found at the Trail River site, Northern Yukon. Manufacturing actions performed by prehistoric artisans were analyzed in order to determine which raw material was more heavily worked. It was hypothesized that a heavily worked raw material is associated with personal gear while one less worked is associated with situational gear. Nine manufacturing actions were identified. They are: 1). Abrading, 2). Chopping 3). Cutting, 4). Drilling, 5). Grooving, 6). Incising, 7). Polishing, 8). Scraping, and 9). Whittling. The results of the technological analysis indicate that antler was mainly worked by the processes of grooving, cutting and scraping. Bone was worked by polishing and abrading-techniques that leave no debitage. Personal gear, made from antler, was manufactured with considerable effort and skill. These tools would have been prepared in anticipation for future caribou hunting. Situational gear, made from bone obtained on site was manufactured expediently and meant for immediate use.

Une analyse technologique du matériel en os et en bois de caribou fut entreprise afin d'identifier l'équipement personnel, l'équipement de "situation" et le débitage associé à leur production, tous trouvés au site de la rivière Trail dans le nord du Yukon. Les techniques de confection utilisées par les artisans préhistoriques furent étudiées afin de déterminer quelle matière première fut la plus travaillée. L'hypothèse de base était que la matière première la plus travaillée serait associée avec l'équipement personnel alors que celle qui fut la moins travaillée serait associée à de l'équipement de "situation". Neuf techniques de confection furent identifiées; 1) Abraser; 2) Hachurer; 3) Couper; 4) Perforer; 5) Rainurer; 6) Inciser; 7) Polir; 8) Gratter; et 9) Racler. Les résultats de l'analyse technologique indiquent que le bois de caribou fut travaillé principalement en rainant, coupant et grattant. L'os fut travaillé en polissant et en abrasant des techniques qui ne laissent pas de débitage. L'équipement personnel fait en bois de caribou, fut confectionné avec un effort considérable et beaucoup d'élaboration. Ces outils furent préparés en vue de futures chasses. L'équipement de situation, fait d'os obtenus sur le site fut fabriqué plus grossièrement pour un usage immédiat.

Nicholson, B. A. (Brandon University)

Ceramic Affiliations and the Case for Incipient Horticulture in Southwestern Manitoba

The prevailing models of Late Prehistoric subsistence in Southwestern Manitoba have been based upon the premise of a straight forward hunter/gatherer economy relying upon the local ecology of the Forest/Parkland/Plains biomes. In some cases, trade with the Middle Missouri Village Tribes has been incorporated as a 'risk reducing' mechanism. These models propose a seasonal round exploiting the available natural subsistence resources at peaks of productivity and quality. Recent work at the Lovstrom and Johnas sites near Brandon, on the Souris and Assiniboine Rivers respectively, and at Lockport and Winnipeg on the Red River suggest that these models may be inadequate. The Lovstrom and Johnas sites indicate extended occupations by people using agricultural tools and whose ceramic affiliations appear to relate to groups in western Minnesota and eastern North Dakota known to practice horticulture. Many of the distinctive ceramic traits which characterize vessels in these sites are not found in the usual Woodland assemblages recorded in this area. It seems probable that these sites represent an expansion into southern Manitoba by groups from the southeast who practiced horticulture as a part of their normal subsistence strategy. It remains to be demonstrated whether these sites represent short term incursions by horticultural groups normally resident well to the south, or whether their regular production of surpluses affected the overall subsistence strategies of other groups normally resident in the region.

Nicholson, B. A. (Brandon University) with David Meyer (University of Saskatchewan)

Ceramic Variation And Population Dynamics Of The Late Prehistoric Period On The Grassland/Parkland Interface (Symposium)

Research conducted over the past two decades has clearly shown that early ideas concerning prehistoric tribal/cultural territoriality are clearly in error. The pattern which emerges is one of flexible movement and interaction in which the sharing of land and resources appears to have been the norm. The mechanisms of trade and alliance have been proposed as methods by means of which these goals were

achieved, but there is relatively little published hard data to evaluate these propositions. The direction of movement and associated questions of seasonality have been largely inferred from the ethnohistoric record rather than demonstrated from the archaeological record. It is a primary goal in this symposium to identify patterns and directions of group movements and to determine the ecological basis for the distribution of archaeological remains in the Grassland/Parkland interface region. Ceramics are a sensitive indicator of cultural affiliations and in the Late Prehistoric period serve as a useful diagnostic marker for tracing group movement and interaction within a geographic area. Other classes of material also serve a useful function as indicators of ecological adaptation and/or seasonality.

Petersen, James B. (University of Maine at Farmington) with David Sanger (University of Maine at Orono)

An Aboriginal Ceramic Sequence for Maine and the Maritime Provinces

Aboriginal ceramics have been long considered an important component of the archaeological record in Maine and the Maritime Provinces. Given their common occurrence in sites of the last few thousand years over much of the region, ceramics have provided a reliable material marker for the final major period of regional prehistory, known variably as the Woodland or the Ceramic period, and the subsequent Contact period. Conditions of shallow and often mixed stratigraphy, a paucity of absolute dates, and cursory modes of analysis have hampered past efforts to differentiate aboriginal ceramic industries in temporal and spatial contexts. This paper attempts to rectify this situation through documentation of a seven part ceramic sequence for Maine and the Maritimes that spans the period from ca. 3000 B. P. to 250 B. P. Diagnostic attributes are specified for aboriginal ceramics manufactured across the region during each of the seven currently recognizable temporal subdivisions. Spatial variations are also outlined and the implications of the overall ceramic data are given preliminary consideration.

Pickard, Rod (Canadian Parks Service, Calgary)

Archaeological Resource Description in the National Parks of Alberta and British Columbia

The Archaeological Research Services Unit of the Canadian Park's Service's Western Region has developed a computerized site data collection and management system to aid in the development of Archaeological Resource Descriptions and to support the maintenance of the Archaeological Resource inventory for the region. This computer data management system has been in use for a year and has directly increased the accuracy and consistency of site data collection and presentation as well as enabling "on the fly" analysis and self generating site reports. The paper will discuss this computer system and how it integrates with Western Region's archaeological resource management programme. The adoption of a particular cultural resource management approach by a government agency depends on several factors. The direction of a program will depend on statutory and policy frameworks, the availability of both human and financial resources, the demands of the public/client groups and the nature of the resource base. Archaeological resource management programs within the Canadian Parks Service of Canada are presently undergoing a period of adjustment. The basic trend within the Canadian Parks Service of Western Region is toward an emphasis on resource conservation and protection. This paper will discuss the approach developed by the Archaeological Research Services Unit of Western Region to describe and manage the varied archaeological resources within the National Parks of British Columbia and Alberta. The Archaeological Resource Description (ARD) program, as it has been developed within Western Region, will be the main focus of the paper. The paper will outline the kinds of site data information which are deemed to be important in significance rating, predictive modeling, priority rating and site monitoring. Archaeological information collected during the inventory and data analysis phases of the Jasper, Banff, Kootenay and Waterton programs will be used in the paper to illustrate certain key points and approaches.

Pokotylo, David L. (University of British Columbia) with Christopher C. Hanks (Prince of Wales Northern Heritage Centre, Government of the Northwest Territories)

The Organization of Prehistoric Lithic Technology at Drum Lake, Mackenzie Mountains, Northwest Territories

Lithic assemblages from survey and test excavations at Drum Lake in the Mackenzie Mountain foothills, NWT, are studied from the perspective of technological organization. The effects of mobility, tool curation, and the regional distribution of raw material are considered in conjunction with lithic reduction sequences to identify prehistoric subsistence-settlement activities carried out in the locality. The potential of current lithic analysis methods to differentiate site classes from assemblages produced under conditions of high settlement mobility and curated technological organization is also evaluated.

Robertson, Ian G. (University of Calgary)

Metric Variability in Early Paleo-Eskimo Spalled Burins

Recent research suggests that the morphology of spalled burins contains stylistic information relevant to the formulation of culture-historical sequences for the Eastern High Arctic. Patterning revealed by statistical analysis demonstrates that a sequence of cultural units comprising Independence I, Early, Middle and Late Pre-Dorset is characterized by a gradual, uni-directional change in size and form. Assemblages from Sarqaq contexts are incompatible with this pattern, however, and may reflect a separate developmental sequence. The general conclusion reached is that an increased emphasis on descriptive and classificatory studies may provide researchers with a more stable empirical basis for the writing of northern culture-history.

De récentes recherches suggèrent que la morphologie des burins nous fournit de l'information stylistique nous aidant à clarifier la séquence culturelle de l'Arctique polaire canadien de l'Est. Le modèle tel qu'identifié à partir d'une analyse statistique révèle que les unités culturelles connues sous les noms Indépendance I, Pré-Dorsétien Ancien, Moyen, et Tardif sont caractérisées par un changement unilinéaire de la dimension et de la forme de leurs burins.

Les assemblages de la culture Sarqag ne se conforment point à ce modèle et il est suggéré que cette unité culturelle pourrait représenter une toute autre séquence dans le développement de la tradition paléoesquimaude. Une conclusion générale tirée de cette recherche est que l'emphase sur des études descriptives et classificatoires pourraient donner aux chercheurs une base de données empirique utile dans l'études de l'histoire culturelle.

Russel, Dale (Saskatchewan Research Council)

Population Dynamics of the Grassland/Parkland Interface: Southeastern Saskatchewan and Southwestern Manitoba in the Early Historic Period

Ethnohistoric data from southeastern Saskatchewan and adjacent southwestern Manitoba are examined to determine the degree to which land and resources were shared in the early historic period. The scant information indicates that the area was seldom used by groups other than the Assiniboin and Cree. The seasonal movement of the two groups from the Grassland to the Parkland depended on the winter location of bison herds which was unpredictable and primarily a result of the severity of weather, degree of snow cover, and incidence of autumnal grassfires. The Mandan/Hidatsa, although within 150 km to the south, are not documented in the area apart from occasional raids or, more rarely, under the direct aegis of fur-traders. Although the group may have played a more important role in the area before 1750, the reasons for their later absence are unclear.

Rutherford, Douglas (Memorial University of Newfoundland)

Something Old, Something New: Reconsidering 'Middlesex' in the Maine-Maritimes Region

The nature of the grave inclusions and other aspects of ritual association for Middlesex burials in Maine and the Maritime Provinces are examined. Comparison with previous Susquehanna Tradition burials in the region indicates that, in many ways, Middlesex burial ritual does not represent a major shift in mortuary ceremonialism for the region. These comparisons are examined in the perspective of the conservative nature of culture. The similarities which exist between Middlesex and previous burial ritual make

it easier to understand why this may have been acceptable to indigenous Maine-Maritimes people. Further, the appropriateness of the term "Middlesex" for the region is considered in light of its original definition.

Sanger, David (University of Maine at Orono)

From Site to Area: Strategies for Reconstructing Adaptations to Marine Environments

Solitary sites, well stratified, have long been the "stuff" of archaeology. However, with the goals of reconstructing settlement and subsistence patterns have come problems of research area definition and sampling strategies. Faced with hundreds of sites arrayed in linear fashion along a coastline, a research design must define a sampling universe, and from that universe a sample. While coastal archaeology is not unique in having to cope with sample bias, there are some special problems, such as logistics, political borders and site preservation. Three regions taken from the New Brunswick-Maine coastline illustrate some of the problems and attempted solutions. For each area the theoretical and practical considerations are discussed, together with the actual strategies implemented. It is suggested that the subsistence and settlement reconstructions currently available owe much to basic sampling decisions, many of them implicit, rather than an explicit "scientific" approach to the problem.

Savage, Howard with Heather McKillop and Lawrence Jackson (University of Toronto)

Caribou Hunting in the Middle Archaic Period in Southern Ontario

In the mosaic of data re caribou (*Rangifer tarandus*) in Southern Ontario during its Archaic Period (7000-3000 years B. P.), the establishment of the presence of caribou in the Rice Lake Area as late as 4950± 80 years B. P. is additional evidence. The recovery of an adult male human skeleton from the Caledon area, north of Lake Ontario, and dated as 5910±165 years B. P. is the earliest osteological evidence of humans in Southern Ontario. Caribou herds on migration would be a useful source of subsistence for nomadic hunter groups.

Dans le mosaïque des données concernant des caribous (genus *Rangifer tarandus*) en Ontario du sud à l'époque archaïque (7.000-3.000 ans B. P.), la constatation de l'existence des caribous dans la région de Rice Lake à une période aussi ancienne que 4.950 ± 80 ans B. P. est une constatation complémentaire. La découverte du squelette d'un homme adulte de la région de Caledon, au nord du Lac Ontario, daté de 5.910 ± 165 ans B. P. , forme l'évidence ostéologique la plus ancienne de l'existence du humains en Ontario du sud. Les foules de caribous en migration auraient fourni une source alimentaire importante pour des groupes de chasseurs nomades.

Sharp, Eric with Gary Brewer (Preserve Our Wrecks, Kingston, Ontario)

The Kingston 1812 Freshwater Fleet Research Project

The 1812 freshwater fleet was part of a unique episode in Canadian history and naval technological development. The Kingston 1812 Freshwater Fleet Research Project has been organized to undertake a detailed study of the fleet in the context of Kingston's development, it's role in the War of 1812 and as a technological adaptation of saltwater technology to the freshwater environment. To date 4 wrecks in the Kingston area have been identified as warships from this period.

Simonsen, Bjorn (Canadian Archaeological Association)

Native Heritage Issues and Archaeology; A View from British Columbia

This paper examines various concepts and definitions of "Native Heritage" in British Columbia and attempts to put these in a national context. The paper examines both traditional and contemporary native concepts of heritage and compares these to similar concepts held by archaeologists. The author concludes that native people have a greater concern over spiritual sites and landscapes and the preservation of aural traditions and language than they do about archaeological sites, especially where burials are not an issue. The paper examines the causes for conflict between archaeologists and native people and concludes with a number of recommendations for

resolving questions of ownership and control of native heritage sites and how government legislation and policies can assist in the protection and administration of native heritage sites.

Skinas, David C. (Vermont Division for Historic Preservation)

Shell Midden Formation: A Look at a Coastal Maine Site

The complexity of stratified refuse deposits at multi-component shell midden sites creates problems in correlating occupational episodes with cultural strata. Results of artifact density and distribution plots, soil chemical and faunal analysis, geothermometric modeling and other techniques complemented each other in reconstructing the complex depositional history of the Todd site, a coastal Maine shell midden. Analysis shows that this site's midden stratigraphy, formed by patterned refuse deposition and feature construction and use, resulted from domestic activities over two millennia. A model to explain discrete episodes of site formation and their correlation with specific temporal occupations is presented.

La multiplicité des dépotoirs stratifiés à diverses décharges de coquillages pose plusieurs problèmes pour mettre en correlations les métiers de l'époque avec leur couche culturelle. Les résultats de nombreux articles artisanales et de terrains de distribution, l'analyse du sol chimique et de la faune, des modèles géothermométriques et d'autres techniques s'accordent pour reconstruire l'histoire compliquée des dépôts au chantier Todd, un dépôt coquillier sur la côte du Maine. Les analyses démontrent que les lits de dépôts en cet endroit, formés selon un plan de construction, d'utiliser et de déposer ces déchets, sont les résultats d'activités domestiques pendant plus de deux mille ans. Une modèle pour expliquer ces époques discontinues de la formation de sites et la corrélation avec des travaux spécifiques du temps seront présentées.

Smith, Beverley A. (Michigan State University)

Protohistoric Odawa Fishing at the Providence Bay Site, Manitoulin Island: Further Evidence of the Inland Shore Fishery of the Upper Great Lakes?

The Providence Bay site is a large village on Manitoulin Island and is dated to the protohistoric period (ca. A. D. 1590-1620). The faunal assemblage documents ritual use of animals and early participation in the fur trade, and also presents unique evidence regarding the subsistence practices of the Odawa people. The main source of food is fish. Exploitation of the spring sucker runs is well documented in the faunal sample. It is only through the examination of fish vertebrae that we can appreciate the importance of the contribution of fall spawners, especially Lake trout, in the diet. This evidence has methodological implications for assessing the empirical data base for the model, proposed by Cleland in 1982, of the Inland Shore Fishery of the Upper Great Lakes.

Spiess, Arthur (Maine Historic Preservation Commission)

Quantifying Archaic and Woodland Shellfish Gathering at the Turner Farm Site, Penobscot Bay, Maine

Even recently some archaeologists have commented that shellfish gathering in the Northeast was either an activity confined to the Woodland period, or substantially increased during the Woodland period. The Turner Farm site, in central coastal Maine, is a perfect test case for these hypotheses, since it contains three Archaic occupations (I,II,III) and at least 3 Woodland habitation floors with associated shell dumping layers, all carefully excavated by Bruce Bourque. Shellfish species diversity, total weight, size, and seasonality information was quantified by a variety of techniques applied to samples recovered from the midden. Shellfish harvesting, throughout the sequence of occupation, consistently concentrated upon soft-shelled clam (*Mya arenaria*), most of which were harvested during winter and early spring. We compute that 15,000 to 13,000 kg. of shell were deposited in the excavated areas of the Turner Farm site by Late Archaic occupations II and III, while 39,000 kg. of shell were deposited by Woodland Period inhabitants. Based upon a size-weight histogram developed for the assemblage, and specific-gravity data on shell weight loss over time, we estimate that these shell

weights represent 1 million clams in the excavated area of Occupation II, 800,000 in Occupation III, and roughly 6 million in the excavated Woodland levels. It is not possible to be precise about the relative contributions of vertebrates (mammals, fish and bird) and shellfish to the diet at the Turner Farm. However, standard treatment of mammal and shellfish counts allows comparison between levels at the Turner Farm. The relative contribution of shellfish versus mammals actually decreases from late Archaic Occupation II to the Woodland occupations. If fish and bird data are included, then shellfish probably contributed roughly the same proportion of meat weight to the diet throughout the 5000 year long Turner Farm sequence.

Steinbring, Jack with Maurice Lanteigne (University of Winnipeg)

The Rush Bay Road Complex in Northwestern Ontario, Canada

A refugium-based non-bifacial lithic complex is identified on the alluvial outwash fans of a terminal glacial moraine in Northwestern Ontario. Distributed throughout exposed positions at, or above, the lower Campbell stand of Glacial Lake Agassiz, the "Rush Bay Road" Complex is re-assigned, from a "Shield Archaic" tradition, to a descendant population of an "Early Lithic" tradition trapped on the high ground of a periglacial island northwest of Lake Superior at about 12,000 B. P. The lowering of Lake Agassiz, and the retreat of the Wisconsin Glacier to the Hartman moraine at 9,900 B. P., allowed full accessibility to the Rush Bay Road moraine no later than 9,500 B. P.

Un complexe lithique est identifié sur une moraine glaciaire dans le Nord-ouest de l'Ontario. Étant distribué partout dans les positions exposées à, ou au-dessus de la position inférieure Campbell du lac glaciaire Agassiz, l'ensemble "Rush Bay Road" est réassigné d'une tradition "Shield Archaic", vers une tradition lithique primitive isolée sur une île périglaciaire au Nord-ouest du Lac Supérieur vers 12,000 B. P. L'abaissement du lac glaciaire Agassiz, et la retraite du glacier Wisconsin jusqu'au moraine de Hartman en 9,900 B. P., ouvrirent l'accès au moraine de "Rush Bay Road" vers 9,500 B. P.

Stewart, W. Bruce (Cataraqui Archaeological Research Foundation), Kingston, Ontario)

The Kingston Archaeological Master Plan Study

In the fall of 1987 the City of Kingston initiated an Archaeological Master Plan Study. The goals of the study are to produce a comprehensive inventory of the archaeological resources and to develop sound management and preservation strategies for incorporation into the City's by-laws and planning process. Strategies are being designed to incorporate the protection presently afforded heritage resources under municipal, provincial and federal legislation and integrate this with a heightened level of municipal involvement.

The development of heightened public awareness, which in turn generates political action, is key to the success of the master plan study. Kingston's master plan study will be discussed within the context of public participation, legislative action and the planning process.

Stewart, Frances L. (University of New Brunswick, Department of Anthropology)

Unexpected Faunal Findings from a St. Lawrence Iroquois Site

The 4536 faunal specimens excavated by Dr. James F. Pendergast from three houses of the Maynard-McKeown Site, a St. Lawrence Iroquois village near Maynard, Ontario, were studied to determine the subsistence patterns of the Indians living there around 1500 A.D. From the remains from seven classes of animals, the seasonal exploitation pattern of the villagers was reconstructed. Of significance to faunal analyses in general was the unexpected variation in the fauna among the three houses. Of specific interest to Iroquoian studies was the absence of dog remains mirrored by a relatively high number and percentage of black bear elements.

Sous la conduite du Docteur James F. Pendergast, une étude du mode de subsistence des Amérindiens vivant aux alentours du XVI^{ème} siècle après J.C. fut entreprise basée sur les spécimens fauniques 4536 provenant des fouilles de trois des maisons du site de Maynard-McKeown, un village iroquois de St-Laurent /près de Maynard en Ontario. Les restes de sept catégories d'animaux ont permis d'établir les

modes saisonniers d'exploitation des villageois. D'intérêt général, un changement faunique inattendu apparaît dans chacune des trois maisons; par contre, l'absence de chien contraste avec le nombre relativement grand et le pourcentage relativement élevé de restes d'ours noir et représente un élément d'importance dans les études iroquoises.

Tamplin, Morgan J. (Trent University)

Recent Changes in Ontario's Archaeological Licensing: An Historical Perspective

The 1974 Ontario Heritage Act requires persons conducting archaeological field research in Ontario to have a licence issued by the Minister of Culture and Communications on the recommendation of the Archaeology Committee of the Ontario Heritage Foundation. Licence regulations have evolved gradually over the past fifteen years in response to changing conditions. Following a two year review, the Committee has proposed substantial changes to these regulations. This should speed the response time to applications and provide more effective monitoring of site destruction and mitigation.

Timmins, Peter A. (Museum of Indian Archaeology, Ontario)

The Middle Woodland Occupation of the Middle Thames River Drainage: A Preliminary Examination

The Middle Woodland Saugeen occupation of southwestern Ontario remains poorly understood in all regions except northerly Bruce County. The recent investigation of a series of Middle Woodland sites in the Thames River drainage near London has provided the opportunity to conduct research on a more southerly Saugeen group. This paper presents data compiled during the initial stage of this research and provides preliminary interpretations concerning the settlement-subsistence system of these people and their relationship with Western Basin Tradition groups located to the west.

VandenHazel, Bessel J. (Canadian Shipwreck Archeology and Conservation Institute, North Bay, Ontario)

The Problems and Challenges of the Conservation of Iron from Shipwrecks

A presentation for the non-technical archeologist. The nature of iron and the differences between cast and wrought iron will be discussed. Experiments will be outlined that demonstrate the rate of diffusion of iron rusts (iron hydroxides) throughout a wreck and into the wood and other organic matter. Conservation treatments such as electrolysis, heating, drying, passivation and surface coatings will be explained. Finally the challenge of museums without climate controls will be considered. The Institute will be active in: (1) diver training, (2) underwater mapping and surveying, (3) the planning of courses in underwater archeology and (4) the planning of shipwreck heritage centres.

Walde, Dale

Mortlach on the South Saskatchewan Plains: Social Implications of Seasonal Movement Patterns

Relationships between seasonal movement patterns and aspects of social organization of the peoples responsible for the Mortlach archaeological culture are explored. An initial non-quantitative interpretation of the variability of Mortlach ceramic form and decoration which incorporates gender roles in subsistence activities is offered. Contacts with groups to the north and south of the Mortlach area are discussed.

Wallace, Birgitta (Canadian Parks Service, Halifax)

Selective Exploitation of Shellfish at Rustico Island, Prince Edward Island

The Rustico Island shell midden in Prince Edward National Park has been the subject of a number of archaeological testings over the past century. The midden, which is of Late Prehistoric date, had been badly eroded, and the Canadian Parks Service excavated what remained of it in 1987-88. By stripping the midden in its entirety and using overhead photography, we were able to detect configurations not readily noted in limited excavations. Sorting patterns

were detected, the result of a selective subsistence strategy. The subsistence system also included walrus hunting, and walrus bone is prominent in the faunal assemblage. A small living site dating from the Late Archaic period was found directly beneath the shell midden. No shell remains were associated with it.

Nous retrouvons sur l'île Rustico, au parc national de l'île-du-Prince Édouard, un dépôt de coquillages qui a fait l'objet de plusieurs travaux de recherches archéologiques depuis les cent dernières années. Ce dépôt, qui date de la période Préhistorique supérieure, a été fortement érodé. En 1987-88 le Service canadien des parcs a procédé à des fouilles sur ce qu'il restait du dépôt. Chaque couche du dépôt a été étudiée entièrement et la méthode de photographie surélevée nous a permis de détecter des configurations reflétant des assortiments difficilement visibles par des fouilles de moindres importances. Les patrons d'assortiment retrouvés, témoignent d'une stratégie d'alimentation sélective. Parmi les activités de subsistance, la chasses aux morses était importante. Les os de morses étaient d'ailleurs un élément proéminent de la collection faunique. Un petit site d'occupation, datant de la période Archaïque supérieure, a été découvert directement sous le dépôt de coquillages. Cependant, aucun vestige de coquillages n'a pu y être associé.

Wilson, Deborah Brush (Maine Archaeological Society) with Arthur E. Spiess (Maine Historic Preservation Commission)

Paleoindian Lithic Distribution Patterns in the New England-Maritimes Region

A limited number of widely separated lithic sources were exploited by Paleoindians in the New England-Maritimes region. The distribution and frequency of these lithic materials in regional Paleoindian sites are used to analyze Paleoindian lithic procurement patterns. Three hypotheses are examined: 1) lithic procurement was imbedded within the regular movement patterns of a Paleoindian group; 2) lithic material was obtained by logistically-organized task groups; 3) the pattern of lithic distribution during the Paleoindian period is a result of exchange networks.

Woodley, Philip (McMaster University)

And Then There Were Two: An Examination of Late Archaic House Features, Artifacts and Micro-environment Exploitation at the Thistle Hill Site (AhGx-226)

This paper discusses excavations at the Southern Ontario Late Archaic Thistle Hill Site (AhGx-226). Plough zone and subsoil feature excavation methods and two house floor features with internal storage pits and hearth(s) are described. Artifacts recovered and analytical methods are discussed considering environmental and geographical factors. Artifacts and site location suggest a correlation to microenvironment exploitation within the Southern Ontario paleo- or macroenvironment.

PETITCODIAC

Wednesday evening
mercredi soir

RECEPTION
OUVERTURE OFFICIELLE

Thursday morning
jeudi matin

2/Non-iroquois Ontario
Non-iroquoienne du
sud-ouest ontarien

Thursday afternoon
jeudi après-midi

3/Method and Theory
Méthode et théorie

Friday all day
vendredi toute la journée

6/Cultural resources
Ressources culturelles

Saturday afternoon
samedi après-midi

11/The West and beyond
L'Ouest et au-delà

ST. CROIX

Friday and Saturday
vendredi et samedi

Bookroom, registration
Salle de livres, le bureau
d'inscription

ST JOHN

Thursday all day
jeudi toute le journée

1/Shell midden
Sites d'amas de coquillages

Thursday 3:30
jeudi 15:30

AGM
Assemblée annuelle générale

Thursday evening
jeudi soir

SOCIAL OCCASION
Une soirée sociale

Friday all day
vendredi toute la journée

5/Northeastern
Le Nord-est

Saturday all day
samedi toute le journée

9/Underwater
Archéologie sous-marine

Saturday evening
samedi soir

BANQUET & DANCE
BANQUET ET DANSE

MIRAMICHI

Thursday afternoon
jeudi après-midi

4/ Historic archaeology
archéologique historique

Friday morning
vendredi matin

7/Arctic and Subarctic
L'Arctique et la sub-arctique

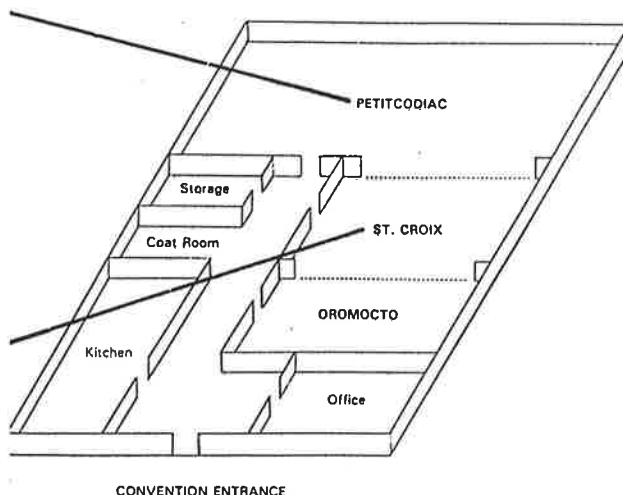
Friday afternoon
vendredi après-midi

8/ Ceramic and Population
Dynamics
La céramique et la dynamique
de la population

Saturday morning
samedi matin

10/Faunal studies
Recherches faunistique
courantes

Hotel /Hôtel Lord Beaverbrook

Mezzanine**Main floor****Rez-de-chaussée**