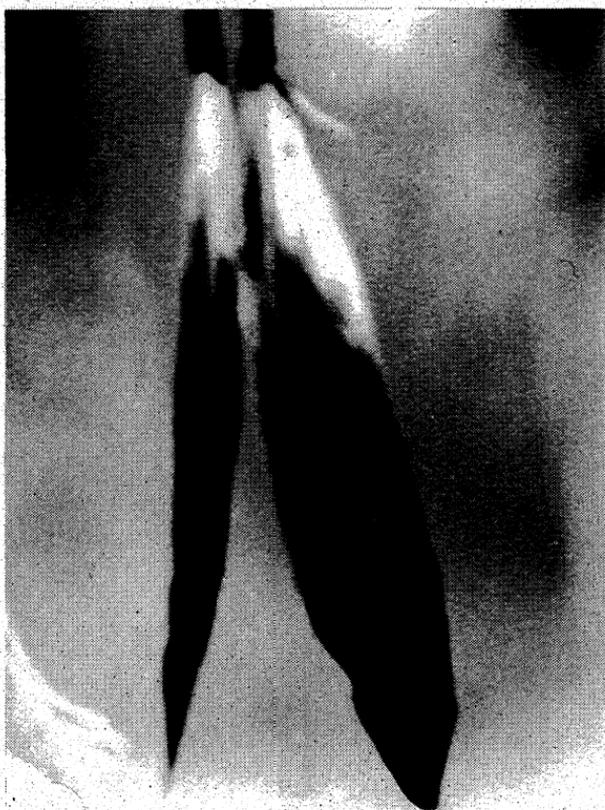


A *rchaeology*

Canadian
Archaeological
Association
27th Annual Meeting

Association
canadienne
d'Archeologie
27ième reunion annuelle

Edmonton, Alberta
May 4-8 1994



CAA EXECUTIVE

CONSEIL D'ADMINISTRATION DE L'ACA

President/Présidente: Jane Kelley

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Newsletter Editors/Rédacteurs du Bulletin d'information:

Terry Gibson, Luke Dalla Bona

Executive Secretary/Secrétaire exécutif: Bjorn Simonsen

COVER/COUVERTURE

Image from a photograph taken by Doris Freadrich, of a dancer at the Head-Smashed-In Powwow. Cover design by Doris Freadrich.

Image développée à partir d'une photo prise par Doris Freadrich d'un danseur participant à un powwow à Head-Smashed-In. Le design de la couverture est de Doris Freadrich.

WELCOME/BIENVENUE

On behalf of the '94 CAA Conference Committee, it is my great pleasure to welcome you to the 27th Annual Meeting of the Canadian Archaeological Association. We are joined this year by delegates attending the 19th Annual General Meeting of the Archaeological Society of Alberta. To all, please enjoy the conference, and have a pleasant stay in Edmonton.

Au nom du comité de la conférence 1994 de l'ACA, c'est avec grand plaisir que je vous accueille à la 27ième réunion annuelle de l'Association canadienne d'archéologie. Vous serez joint cette année par les délégués de la 19ième réunion annuelle de l'Archaeological Society of Alberta. Nous espérons que vous apprécierez la conférence et que vous passerez un agréable séjour à Edmonton.

Jack Ives
Conference Coordinator/
Coordinateur de la conférence

SPONSORS

The '94 CAA Organizing Committee is grateful to the following organizations for their support of our annual meeting:

The Edmonton Journal, for their generous promotion of the Time Travellers Lecture Series and Archaeology Week in Alberta;

CBC Radio, for their support of the Time Travellers Lecture Series and Archaeology Week in Alberta;

The Friends of the Provincial Museum of Alberta and the Archaeological Society of Alberta, for their support of Archaeology Week, the Time Travellers Lecture Series, and the Friday Reception;

Canadian Airlines International, Official Carrier, for their Conventionair package and assistance with Professor Konrad Spindler's travel;

Nova Corporation of Alberta, for their assistance with archaeological exhibits for the Friday Reception;

Alberta Transportation and Utilities, for their assistance with archaeological exhibits for the Friday Reception;

The Rose & Crown Pub of the Hilton Hotel, for their generous contribution to Pub Night;

Rebecca Balcom and Golder Associates, for providing wine for the banquet;

Fedirchuk McCullough and Associates, for their contribution to banquet entertainment by Tony Michael and the Foggy Minded Mountain Boys;

The University of Alberta, for their support of Professor Spindler's travel, book room planning, and abstract preparation;

Malagaya Travel Ltd., Official Travel Agent, for the special discount on conference fares;

Speedfast Printing and Unisource, for their assistance with letterhead and stock.

COMMANDITAIRES

Le comité organisateur de la conférence 1994 de l'ACA remercie les organisations suivantes pour avoir aidé notre réunion annuelle:

The Edmonton Journal, pour leur généreuse promotion de la série de conférences publiques et de la Semaine d'Archéologie de l'Alberta.

CBC Radio, pour leur aide à la série de conférences publiques et de la Semaine d'Archéologie de l'Alberta.

The Friends of the Provincial Musuem of Alberta et l'Archaeological Society of Alberta, pour leur aide à la série de conférences publiques et de la Semaine d'Archéologie de l'Alberta.

Canadien International, transporteur officiel, pour leur programme Conventionair et pour leur contribution au voyage du Professeur Konrad Spindler.

Nova Corporation of Alberta, pour aider l'exposition archéologique lors de la réception du vendredi.

Alberta Transportation and Utilities, pour aider l'exposition archéologique lors de la réception du vendredi.

The Rose & Crown Pub de l'Hôtel Hilton, pour leur généreuse contribution lors de la soirée du 5 mai.

Rebecca Balcom and Golder Associates, pour offrir le vin durant le banquet.

Fedirchuk, McCullough and Associates, pour leur contribution au divertissement du banquet avec la musique de Tony Michael et les Foggy Minded Mountain Boys.

The University of Alberta, pour leur contribution au voyage du Professeur Spindler, la planification de l'exposition des livres et la préparation des résumés.

Malagaya Travel Ltd., Agence de voyages officielle, pour les tarifs réduits offerts aux délégués.

Speedfast Printing and Unisource, pour leur contribution à l'en-tête et à l'approvisionnement en papier.

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'94 CAA CONFERENCE ORGANIZING COMMITTEE
COMITE ORGANISATEUR DE LA CONFERENCE 1994 de l'ACA

Conference Coordinator/Coordinateur de la conférence: Jack Ives, Provincial Archaeologist, Assistant Director, Provincial Museum of Alberta

Programme Chair/Organisateur du programme: Raymond Le Blanc, Department of Anthropology, University of Alberta, assisted by/aidé par Michael MacKinnon, Department of Anthropology, University of Alberta

Registration/Inscription: Rod Vickers, Archaeological Survey, Provincial Museum of Alberta

Marketing and Promotion/Marketing et promotion: Tim Willis, Assistant Director, Provincial Museum of Alberta

Audio Visual Services/Services audiovisuels: Alwynne Beaudoin, Archaeological Survey, Provincial Museum of Alberta

Local Arrangements/Arrangements locaux: Brian Ronaghan, Archaeological Survey, Provincial Museum of Alberta

Field Trip/Visite guidée: Jack Brink, Head, Archaeological Survey, Provincial Museum of Alberta; Martin Magne, Chief, Archaeological Services, Parks Canada, Calgary.

Translation/Traduction: Murielle Nagy, Department of Anthropology, University of Alberta

Coordination of First Nations Sessions/Coordination des sessions sur les Premières Nations: Sheila Greer, Canadian Circumpolar Institute, University of Alberta

Coordination with Avocational Community/Coordination avec les archéologues amateurs: Milt Wright, Archaeological Survey, Provincial Museum of Alberta

President, Archaeological Society of Alberta/Président de l'Archaeological Society of Alberta: Ned Toole, Strathcona Archaeological Society, Edmonton

Coordination of Student Volunteers/Coordination des étudiants bénévoles: Shelly Funston (Undergraduates), Caroline Hudecek-Cuffe (Graduates), Department of Anthropology, University of Alberta

Book Room/Exposition de livres: Trevor Peck and Raymond Le Blanc, Department of Anthropology, University of Alberta

Volunteers/Bénévoles: Maire Anderson-McLean, Cheri Balanko, Tracy Bissett, Celina Campbell, George Chalut, Mona Gallant, Eileen Heidler, Joanne Hooper, Beth Hrychuk, Barb Kleespies, Richard Lello, Angela Lieverse, Shaunna McGarvey, Lisa Mutch, Leslie Nogue, Tim Panas, Justin Potter, Frances Reintjes, Julie Ross, Meghan Scott, Jordan Sharon, Lisa Ursan, Kathleen Walsh, Cynthia Zutter

REGISTRATION/INFORMATION

CAA Registration will begin Wednesday, May 4, at 16:00, in the Rutherford Room, off the main floor lobby of the Hilton Hotel, 10235 - 101 Street, Edmonton. It will continue through to 20:00, with a cash bar.

A registration and information desk will be open from 08:00 to 17:00, Thursday, Friday and Saturday, May 5-7, in the second floor foyer.

Conference participants can use the information desk for messages, and any programme or event changes will be posted in this area.

Registration for the Archaeological Society of Alberta will take place in the second floor foyer from 15:00-17:00, Friday, May 6, and from 08:00-10:00, Saturday, May 7. Early Archaeological Society of Alberta registrants can pick up their programme packages by dropping in at the CAA Registration Desk Wednesday or Thursday.

PROGRAMME NOTES

The "Programme at a Glance" on the inside front cover of this booklet gives you a complete overview of all conference events. All conference symposia and meetings are being held in the Hilton's second floor conference facility, laid out in the map on the back cover of the programme.

There have been some room and minor time changes since the preliminary programme, so please check both the summary and detailed programme carefully.

Presentation time for papers is not to exceed 20 minutes; session chairs are asked to enforce this strictly so that session schedules can be maintained.

Participants are requested to supply their own slide carousels, which should be marked clearly with your name. If you do not have a carousel, please see the projectionist in your session room for access to a spare carousel. Slides can be previewed at a projector that will be set up in the Book Room (Emily Murphy).

CAA MEMBERSHIP AND TRAVEL FUNDING

Unless you are an invited guest presenter, please remember that only paid Canadian Archaeological Association members are eligible to give papers. A CAA membership desk will be open in the second floor foyer, by the registration/information desk, throughout the conference. Make certain your CAA membership is current!

Travel expenses within Canada can be partially reimbursed for members of the Canadian Archaeological Association who have presented a paper or organized a session. Forms may be picked up at the CAA membership desk. Please ensure that they reach the Executive Secretary of the CAA before May 31, 1994.

BUSINESS MEETINGS

The Canadian Archaeological Association Executive Meeting will be held at 9:00, Wednesday, May 4, in the Emily Murphy Room.

The Annual Meeting of the Canadian Association of Provincial and Territorial Archaeologists (CAPTA) will be held at 09:00 Wednesday, May 4, in the Rundle Room.

The Association of Consulting Archaeologists in Alberta will meet at 15:30, Thursday, May 5, in the Rundle Room.

The Annual Business Meeting of the Canadian Archaeological Association will take place at 16:00, Friday, May 6, in the Winter Lake Room.

The Annual Business Meeting of the Archaeological Society of Alberta will take place at 15:15, Saturday, May 7, in the Rowand Room.

WORKSHOP

The Applying to Graduate School Workshop will take place in an Ambassador Room, on the morning of Friday, May 6. Check the message board at the information desk for the room number.

BOOK ROOM, VIDEO PRESENTATIONS, AND EXHIBITS

The book room promises to be one of the best in a number of years. It will be located in the Emily Murphy Room throughout the conference. Drop by to see a wide selection of offerings, with order forms.

From Friday noon onward, the Rundle Room will be given over to video presentations and a Quebec Ministry of Transportation exhibit.

SERVICES

Coffee and tea will be provided each morning before the sessions as well as during morning (10:00-10:20) and afternoon (15:00-15:20) breaks.

The YWCA (10350-100th Avenue, about four blocks south of the Hilton) offers drop-in child care for babies, preschoolers and school-aged children (day camp). This service is available from 07:30 to 17:45 weekdays and Saturdays, at a cost of \$3.00/hour for each child over 18 months, and \$3.50/hour for each child under 18 months. Children can be brought unannounced at any time during those hours of weekdays, but conference organizers must give the YWCA notice of those requiring this service on Saturday. Please make arrangements with the Registration/Information Desk by noon, Thursday, May 5.

If you are in Lister Hall, don't forget that you have ready access to the Hilton on the Light Rapid Transit (LRT), running from the University through the downtown core. An adult fare costs \$1.60.

Other conference participants will also find the LRT convenient for getting around the greater downtown area.

SOCIAL FUNCTIONS

There will be a cash bar and informal reception during registration in the Rutherford Room, 16:00-20:00, Wednesday, May 4, 1994.

Later on Thursday, May 5 (21:00), come down to the Rose & Crown on the Hilton property to sample the many international and domestic beers on tap in one Edmonton's most popular nightspots. Look for a CAA welcome banner, and use your free drink coupon from the Rose & Crown.

the Provincial Museum of Alberta and the Archaeological Society of Alberta are
sting all delegates at a reception beginning at 19:30, Friday May 6 in the Provin-
l Museum of Alberta, 12845 - 102 Avenue. The evening will provide an opportu-
y to see a variety of new permanent galleries at the Museum, and to take part in
me improv theatre entertainment (aimed at archaeologists and provided by Rapid
re Theatre) from our Festival City.

ere is a \$2 fee to defray expenses for shuttle buses. This must be prepaid through
e Registration Desk. If you paid for this with your mail-in registration, your name
g will be stamped—just show your tag to the bus driver. Buses will begin leaving
e north side of the Hilton at 18:45, and will return to the Hilton beginning at
:45.

BANQUET

ocktails for the banquet in the Rutherford Room will begin at 18:30, Saturday
ay 7; the western style buffet will begin at 19:00. Tickets are \$32/person (GST
cluded). Cut off for purchase of banquet tickets will be Thursday noon.

ie after dinner speaker will be Professor Konrad Spindler, Innsbruck University,
io will make a slide presentation about research on the 5,300 year old "Ice Man"
om the Alps.

en Tony Michael and the Foggy Minded Mountain boys will entertain us with
uegrass, country, old jazz, traditional Irish, and Cajun music.

WALKING TOUR AND ARCHAEOLOGY WEEK

isk at the Registration/Information Desk for a brochure on the self-guided walking
ur in the North Saskatchewan River Valley. Lasting for about one and one half
urs, the tour begins at the Provincial Legislature Grounds. You can view ongoing
ovincial Museum of Alberta/University of Alberta field school excavations at Fort
imonton V (1830-1915), and continue with visits to Fort Edmonton II and IV.
her sites include the Pollard Brickyard, a Mazama Ash exposure, and aboriginal
mpsites. Much of the tour is on level paths, but it does require the use of wooden
ircases. You will return from the University on the LRT.

ilt Wright will offer guided tours at 10:00 either Saturday or Sunday if sufficient
mbers of delegates sign up through the Registration/Information Desk by Friday
on. There is no charge.

municipally and provincially declared Archaeology Week in Alberta will take
ace during the conference week (May 2-8, 1994). Longer public walking tours,
lucation theme days (May 3-6), and a collections workshop (Sunday, May 8) will
e held at the Provincial Museum of Alberta (12845 - 102 Avenue). Pick up a copy
the Museum's Storyteller at the information desk if you are interested.

CONFERENCE T-SHIRTS

neck out the conference T-shirts designed by Doris Freadrich of Edmonton.
eveloped from an image of a dancer at the Head-Smashed-In Powwow, some of
ese high quality, natural cotton T-shirts will still be available through the Registra-

tion/Information Desk, at \$15 regular sizes through XL, \$17 for XXL. Prices include GST.

ON YOUR DEPARTURE!!

Edmonton has a Municipal (YXD) and an International Airport (YEG). Do check your ticket prior to departure—it is not unheard of for people to head off to the wrong airport.

The Municipal is in downtown Edmonton, with an average cab fare from the Hilton of about \$7-8. Cab fares from the International have a flat rate of \$26. The Gray Goose Airporter Service from the Hilton to the Edmonton International is \$11/person, with service from the airport every 45 minutes from 05:10 to 23:25 hours Monday through Friday, or every hour from 05:40 to 22:40 Saturdays and Sundays.

INSCRIPTION

L'inscription pour la conférence de l'ACA aura lieu au salon Rutherford, près de l'entrée de l'Hôtel Hilton (10235-101 Street, Edmonton) après 16h00, le 4 mai. L'inscription se terminera à 20h00 avec un bar payant

Un comptoir d'information et d'inscription sera ouvert de 08h00 à 17h00, jeudi, vendredi et samedi (du 5 au 7 mai) au foyer du deuxième étage de l'Hôtel Hilton.

Les délégués de la conférence pourront utiliser le comptoir d'information pour des messages et les changements au programme y seront affichés.

L'inscription pour l'Archaeological Society of Alberta aura lieu au foyer du deuxième étage de l'Hôtel Hilton, de 15h00 à 17h00, le vendredi, 6 mai et de 08h00 à 10h00, le samedi, 7 mai. Les membres de l'Archaeological Society of Alberta désirant s'inscrire plus tôt pourront chercher leur trousse d'inscription au comptoir d'inscription de l'ACA, mercredi et jeudi.

NOTES SUR LE PROGRAMME

L'horaire du programme qui se trouve à l'intérieur de la dernière page du présent document vous donne un coup d'oeil complet sur tous les événements de la conférence. Tous les symposiums et réunions auront lieu dans les salons du deuxième étage du Hilton qui sont indiqués dans le plan que l'on retrouve à l'extérieur de la dernière page du programme.

Puisqu'il y a eu des changements mineurs depuis l'envoi du programme préliminaire, veuillez bien vérifier l'horaire du programme et lire le programme en détail.

La présentation des communications ne doit pas dépasser plus de 20 minutes. On a demandé aux responsables des sessions d'être très strictes à ce propos.

Les participants doivent amener leur propre carrousel qu'ils devraient bien identifier avec leur nom. Si vous n'avez pas de carrousel, veuillez contacter le projectionniste de votre session afin d'avoir accès à un carrousel. Les diapositives pourront être vues en pré-projection avec un projecteur situé dans la salle de l'exposition des livres (salon Emily Murphy).

COTISATIONS DE L'ACA ET FRAIS DE VOYAGES

À moins d'être un conférencier invité, seuls les membres de l'ACA ayant payé leur cotisation annuelle peuvent présenter des communications. Un comptoir d'inscription pour la cotisation de l'ACA sera ouvert au foyer du deuxième étage, près du comptoir d'inscription. Assurez-vous que votre cotisation est payée!

Les dépenses de voyage à l'intérieur du Canada peuvent être partiellement remboursées aux membres de l'ACA présentant une communication ou qui ont organisé une session. Les formulaires de remboursements seront disponibles au comptoir d'inscription pour la cotisation de l'ACA. Veuillez vous assurer que votre formulaire sera reçu par le secrétaire exécutif de l'ACA avant le 31 mai, 1994.

REUNIONS D'AFFAIRES

Le conseil d'administration de l'Association canadienne d'archéologie se réunira le mercredi, 4 mai, à 09h00 au salon Emily Murphy.

L'Association canadienne des archéologues provinciaux et territoriaux (CAPTA) se réunira le mercredi, 4 mai, à 09h00 au salon Rundle.

L'Association of Consulting Archaeologists in Alberta se réunira à 15h30, jeudi le 4 mai, au salon Rundle.

L'assemblée générale annuelle de l'Association canadienne d'archéologie aura lieu à 16h00, vendredi le 6 mai, au salon Winter Lake.

L'assemblée générale annuelle de l'Archaeological Society of Alberta aura lieu à 15h15, samedi le 7 mai, au salon Rowand.

ATELIER

L'atelier sur comment s'inscrire dans un programme d'études graduées aura lieu le vendredi matin, 6 mai, au salon Ambassador. Veuillez vous renseigner au comptoir d'information.

EXPOSITION DE LIVRES, VIDEOS ET D'AUTRES DOCUMENTS

L'exposition de livres devrait être une des meilleures depuis quelques années. Elle aura lieu au salon Emily Murphy durant toute la conférence. Allez-y pour voir une grande sélection de livres et pour obtenir des formulaires de commande.

A partir de vendredi, on pourra voir des vidéos ainsi qu'une exposition du Ministère des transports du Québec au salon Rundle.

SERVICES

Il y aura du café et du thé tous les matins avant les sessions ainsi que durant la pause du matin (10h00-10h20) et celle de l'après-midi (15h00-15h20).

Le YWCA (10350 - 100 Avenue, à quelques rues au sud du Hilton) offre un service de garderie pour les bébés, les enfants d'âge préscolaire et ceux d'âge scolaire. Ce service est offert de 07h30 à 17h45 durant la semaine et le samedi, au coût de \$3.00/heure pour les enfants de plus de 18 mois et \$3.50/heure pour les enfants de moins de 18 mois. Les enfants peuvent être amenés sans notification préalable durant les heures de la semaines mais les organisateurs de la conférence devront notifier le YWCA pour le service de garderie du samedi. Si vous avez besoin d'un tel service le samedi, veuillez contacter les responsables du comptoir d'inscription et d'information avant midi, le jeudi 5 mai.

Si vous êtes au Lister Hall, n'oubliez pas que vous pouvez facilement vous rendre à l'Hôtel Hilton en utilisant le service de métro (LRT) allant de la station University au centre-ville. Le prix d'un billet pour adultes sera de \$1.60 à partir du 1er mai, 1994.

Les autres délégués à la conférence devraient trouver le LTR bien pratique pour se déplacer autour du centre-ville.

EVENEMENTS SOCIAUX

Il y aura un bar payant et une réception informelle durant l'inscription au salon Rutherford, le mercredi 4 mai, de 16h00 à 20h00.

Le jeudi 5 mai à partir de 21h00, venez au Rose & Crown Pub du Hilton. Vous pourrez y goûter plusieurs bières domestiques et internationales dans ce bar très populaire à Edmonton. Le Rose & Crown aura une bannière saluant les délégués de la conférence et votre trousse comprendra un coupon pour une consommation gratuite dans cet établissement.

Les délégués de l'ACA sont cordialement invités à une réception au Provincial Museum of Alberta (12845-102 Avenue), le vendredi soir, 6 mai, à 19h30. Cet événement est organisé conjointement avec l'Archaeological Society of Alberta. Cette soirée vous permettra de visiter les nouvelles galeries permanentes du musée et de prendre part à du théâtre improvisé (visant les archéologues) par le Rapid Fire Theatre, une troupe d'Edmonton.

Il faudra payer \$2.00 pour les navettes entre l'Hôtel Hilton et le Provincial Museum of Alberta. Ce tarif doit être payé à l'avance au comptoir d'inscription. Si vous l'avez déjà payé lors de votre pré-inscription, l'étiquette à votre nom aura été tamponnée. Vous n'aurez qu'à la montrer au conducteur de la navette. Les autobus partiront du côté nord du Hilton dès 18h45 et retourneront au Hilton à partir de 21h45.

BANQUET

Le banquet aura lieu le soir du samedi, 7 mai, au salon Rutherford. Le cocktail du banquet commencera à 18h30 et un buffet de style western sera servi à 19h00. Les billets sont de \$32.00 par personne (TPS incluse). On ne pourra plus obtenir de billets après midi, le jeudi.

Après le repas, le Professeur Konrad Spindler de l'Université Innsbruck présentera une conférence avec diapositives sur l'Homme des Glaces de 5,300 ans trouvé dans les Alpes.

Après le banquet, les délégués pourront se divertir avec la musique de Tony Michael et les Foggy Minded Mountain Boys qui joueront de la musique bluegrass, country, jazz, cajun et irlandaise.

TOUR PEDESTRE ET SEMAINE D'ARCHEOLOGIE

Demandez au comptoir d'inscription et d'information une brochure pour le tour pédestre de la rivière North Saskatchewan. Ce tour durera une heure et demie. Le tour commencera sur le terrain de l'Assemblée législative provinciale, passera par l'école de fouilles dirigée par le Provincial Museum of Alberta et l'Université de l'Alberta sur le site du Fort Edmonton V (1830-1915), et continuera avec la visite des Forts Edmonton II et IV. On pourra aussi voir des sites autochtones et le site de la fabrique de briques Pollard. Le tour se fera surtout sur terrain plat mais il faudra aussi utiliser des escaliers en bois. Le tour se terminera près d'une station de métro, permettant ainsi aux délégués d'aller visiter le campus de l'Université de l'Alberta. Milt Wright offrira une visite guidée à 10h00, samedi et dimanche s'il y a suffisam-

ment de délégués ayant signé pour le tour au comptoir d'inscription et d'information. Ces tours seront gratuits.

La semaine de l'Archéologie de l'Alberta (2-8 mai, 1994) a été officiellement reconnue au niveau provincial et municipal. Cette semaine comprendra des journées éducatives pour les écoliers (du 3 au 6 mai) et un atelier sur l'identification d'artefacts apportés par le public (dimanche, le 8 mai). Ces activités auront lieu au Provincial Museum of Alberta (12845-102 Avenue). Pour plus de renseignements, veuillez prendre une copie du bulletin du Provincial Museum intitulé Storyteller au comptoir d'inscription et d'information.

T-SHIRTS DE LA CONFERENCE

Venez voir les t-shirts de la conférence dont le design est de Doris Freadrich d'Edmonton. Le design fut développé à partir d'une photo d'un danseur participant à un powwow à Head-Smashed-In. Ces t-shirts en coton peuvent être achetés au comptoir d'inscription et d'information au prix de \$15 pour les tailles régulières jusqu'à XL et de \$17 pour les tailles XXL. Ces prix incluent la TPS.

POUR VOTRE DEPART!!

Edmonton a un aéroport municipal (YXD) et un aéroport international (YEG). Veuillez bien vérifier votre billet avant votre départ pour savoir à quel aéroport vous devrez vous rendre afin de ne pas vous tromper.

L'aéroport municipal est au centre-ville d'Edmonton et le prix d'un taxi de l'Hôtel Hilton à cet aéroport est entre \$7.00 et \$8.00. Le prix d'un taxi d'Edmonton à l'aéroport international est de \$26.00. Le service de navette Grey Goose Airporter de l'Hôtel Hilton à l'aéroport international est de \$11.00/personne avec une navette toutes les 45 minutes de 05:10 à 23:25 du lundi au vendredi et toutes les heures de 05:40 à 22:40, samedi et dimanche.

Programme Schedule/Horaire du programme

THURSDAY 5 MAY/JEUDI 5 MAI

Session [1] History of Canadian Archaeology

Room/Salon: Wm. TOMISON

Chairs/Animateurs: Pamela Smith (Cambridge University) and William E. Taylor
(Canadian Museum of Civilization)

- 09:00 Taylor, William E. Jr.: Opening remarks
- 09:20 Killan, Gerald: Toward a Scientific Archaeology: The Canadian Institute
1852-1896
- 09:40 Davis, Steve: History of Archaeology in Nova Scotia
- 10:00 Dyck, Ian: A History of Archaeology in the National Museum of Canada,
1911-1950
- 10:20 Coffee Break
- 10:40 Richling, Barnett: Arctic Archaeology at the National Museum of Canada,
1910-1940
- 11:00 Badgley, Ian: On the History of Northern Québec Archaeology
- 11:20 Klimko, Olga: Nationalism and the Growth of Fur Trade Archaeology in
Western Canada
- 11:40 Noble, William C.: J. Norman Emerson (1917-1978)
- 12:00 Lunch Break
- 13:20 Kelley, Jane H. and Forbis, Richard G.: A Subjective View of the Depart-
ment of Archaeology, University of Calgary
- 13:40 Simonsen, Bjorn O.: The Role of the C.A.A./A.C.A. in the History of Cana-
dian Archaeology
- 14:00 Byrne, Bill: Title Unavailable
- 14:20 Mitchell, Don: Two Decades of Change: British Columbia Archaeology in
the 1960s and 1970s
- 14:40 Park, Robert: The Ongoing History of Thule Culture Research in Arctic
Canada
- 15:00 Coffee Break
- 15:20 Wright, J.V., Lemoine, G.: Discussants

THURSDAY 5 MAY – MORNING/JEUDI 5 MAI – AVANT MIDI

Session [2] Cultural Resource Management On First Nations Lands

Room/Salon: WINTER LAKE

Chair/Animateur: George Nicholas (Simon Fraser University/Secwepemc Cultural Education Society)

- 08:40 Nicholas, George: Introduction/overview
- 09:00 Yellowhorn, Eldon: Archaeology and the Sechelt Indian Self-Government Act
- 09:20 Fox, William: People and Parks
- 09:40 Nicholas, George: CRM Through Education and Research: Archaeology With, For, and By the Shuswap Nation, British Columbia
- 10:00 Syms, E. Leigh: Building Awareness and Involvement
- 10:20 Coffee Break
- 10:40 Zacharias, Sandra K.: CRM and the Concept of Wilderness in British Columbia
- 11:00 Whitebear, Joe: Bridging the Gap
- 11:20 Lawson, Kim: Cultural Brokerage in Times of Change
- 11:40 Andrews, Thomas D., Arnold, Charles D., Bertulli, Margaret M., and Hart, Elisa J.: Native Claims and the Future of Archaeological Research in the N.W.T.
- 12:00 Simonsen, Bjorn, Bastian Group: Discussant

THURSDAY 5 MAY – MORNING/JEUDI 5 MAI – AVANT MIDI

Session [3] Contributions to Zooarchaeological Research

Room/salon: ROWAND

Chair/Animateur: Jim Woollett (Department of Anthropology, Hunter College, CUNY)

- 09:00 Munro, Natalie: The Relationship between Population Aggregation and Faunal Intensification: A View from the Mesa Verde Region, Colorado
- 09:20 Burke, A. and Cinq-Mars, J.: Seasonal Indicators at Bluefish Caves, Yukon Territory: Seasonal Mortality and Age Profiles for Horse (*Equus lambei*)
- 09:40 Friesen, T. Max, Savelle, James M., and Smith, Thomas G.: Refinement and Application of Beluga Whale Mandible Ageing Techniques
- 10:00 Woollett, Jim: The Palaeoeconomy of Eskimo Island: A Preliminary Zooarchaeological Report

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- 10:20 Coffee Break
- 10:40 Morlan, Richard E.: Bison Bone Fragmentation and Survivorship: a Comparative Model
- 11:00 Lello, Richard: Shellfish and Seasonality: An Example from the Portuguese Mesolithic
- 11:20 Stewart, F.L., and Stewart, K.M.: Prehistoric Subsistence Patterns in Prince Rupert Harbour, B.C.
- 11:40 Rick, Anne M. and McCuaig Balkwill, Darlene: Mammal, Bird and Fish Remains from the Gupuk Midden, Mackenzie Delta, N.W.T.

THURSDAY 5 MAY – MORNING/JEUDI 5 MAI – AVANT MIDI

Session [4] Contributed Papers: Western North America

Room/Salon: NORTHCOTE

Chair/Animateur: Martin Magne (Parks Canada, Calgary)

- 09:00 Rahemtulla, Farid: Technological Organization between 10,000-6,000 B.P. at Namu, Central Coast of British Columbia
- 09:20 Magne, Martin: Comparative Analysis of Microblade Cores from Haida Gwaii
- 09:40 Cunningham, Jeremy J.: Use Wear Analysis of Pre-Mazama Lithics from Banff National Park
- 10:00 Fedje, Daryl: Early Period Archaeology in Gwaii Haanas
- 10:20 Coffee Break
- 10:40 Bernick, Kathryn: The Scowlitz Wet Site
- 11:20 Kennedy, Margaret: The Industrial Archaeology of Boom and Bust in Western Canada

THURSDAY 5 MAY – MORNING/JEUDI 5 MAI – AVANT MIDI

Session [5] Perspectives in Cultural Resource Management

Room/Salon: RUNDLE

Chair/Animatrice: Maureen Rollans (Western Heritage Services, Saskatoon)

- 09:00 Rollans, Maureen and Finnigan, Jim: Predictive Modelling: A Practical Application for Consultants
- 09:20 Finnigan, Jim: Post-Inundation Impacts within the Rafferty and Alameda Reservoirs
- 09:40 Heitzmann, Rod J.: How Much is Enough at Twentieth Century Sites?

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- 10:00 Hjernstad, Ben and Krozser, Kit: The Stone Circle Site Treatment Review and Workshop: Final Results
- 10:20 Coffee Break
- 10:40 Germann, Carlos: Towards Archaeological Resource Co-Regulation and Management
- 11:00 Krozser, Kit: Impact Assessment for Low-Impact Developments: Saving Surface Features in Saskatchewan

THURSDAY 5 MAY – AFTERNOON/JEUDI 5 MAI – APRES MIDI

Session [6] Traditional Knowledge And Archaeology

Room/Salon: WINTER LAKE

- Chairs/Animateurs: Tom Andrews (Prince of Wales Northern Heritage Centre) and Sheila Greer (Canadian Circumpolar Institute, University of Alberta)
- 13:20 Greer, Sheila: Traditional Knowledge in Site Recognition and Definition
- 13:40 Andrews, Tom: Ida (Down the Middle): Dogrib Traditional Knowledge and Heritage Resources Inventories
- 14:00 Petch, Virginia: Fitting Indigenous Knowledge into a Predictive Archaeological Model
- 14:20 Denton, David: The Nataawaau Bones: Cree Oral Tradition and Post-European Contact Archaeology in Subarctic Quebec
- 14:40 Nagy, Murielle: Long ago People: Applying Inuvialuit Oral History
- 15:00 Coffee Break
- 15:20 Hart, Elisa: Traditional Knowledge, Heritage Sites Research, and Archaeological Interpretations
- 15:40 Hanks, Christopher C.: Ancient Knowledge of Ancient Events: A Preliminary Examination of Dene Traditions and Late Pleistocene and Holocene Events
- 16:00 Urion, Carl: Formal Requirements for Interpretation of Indigenous Oral Narrative Concerning the Remote Past
- 16:20 Kritsch, Ingrid; Andre, Alestine; and Kreps, Bart: Gwich'in Traditional Knowledge and the Potential for Archaeology in the Gwich'in Settlement Area
- 16:40 Henderson, Lyle and Keith, Darren E.: Arviaq: A Community-based Project to Commemorate Inuit History

THURSDAY 5 MAY – AFTERNOON/JEUDI 5 MAI – APRES MIDI

Session [7] Canadian Archaeology Abroad

Room/Salon: ROWAND

Chair/Animatrice: Pamela Willoughby (Department of Anthropology, University of Alberta)

- 13:20 Zutter, Cynthia M.: The Cultural Landscape of Iceland: Preliminary Analyses
- 13:40 Lam, Yin: Confrontational Scavenging: Defining an Antecedent to Early Hominid Hunting
- 14:00 Willoughby, Pamela R.: Middle Stone Age Technology in Southwestern Tanzania
- 14:20 McDonald, Mary M.A.: Neolithic Projectile Points from Dakhleh Oasis, Egyptian Western Desert: Some New Approaches
- 14:40 MacEachern, Scott: Iron Age Archaeology in the Southern Lake Chad Basin: The Projet Maya-Wandala 1992-1994
- 15:00 Coffee Break
- 15:20 Langley, Susan B.M.: Samed Ngam and Koh Talu, Underwater Archaeology in Thailand
- 15:40 Allen, Tana: Canadians in Carthage: Explorations at Bir Ftouha
- 16:00 Delle, James A.: Archaeology and the Development of Irish National Identities
- 16:20 Garvin, Richard: Agricultural Resource Use and Core/Periphery Relations in the Penoles Region, Oaxaca, Mexico
- 16:40 MacKinnon, Michael: Creating and Testing a Zooarchaeological Model Derived from the Information in the Classical Roman Texts

THURSDAY 5 MAY – AFTERNOON/JEUDI 5 MAI – APRES MIDI

Session [8] Contributed Papers: Eastern North America

Room/Salon: NORTHCOTE

Chair/Animateur: Philip Woodley (Environmental Section, Central Region, Ontario Ministry of Transportation)

- 13:20 Hamilton, Scott: Landscape Evolution and the Distribution of Early Holocene Archaeological Sites
- 13:40 Woodley, Philip J.: A Middle Woodland View from the West End of Lake Ontario

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- 14:00 Levine, Mary Ann: Reconstructing Exchange Networks: Native Copper and Prehistoric Hunter-Gatherers in Northeastern North America
- 14:20 Kapches, Mima: An Iroquoian Unit of Measurement: Ramifications for the Study of Iroquoian Longhouses
- 14:40 Penney, Gerald: *Tagamkuk*
- 15:00 Coffee Break
- 15:20 McAleese, Kevin: The Lester/Garland House, Trinity, Trinity Bay, Island of Newfoundland
- 15:40 Keenlyside, David: Archaeology in a Maliseet Community on the Upper St. John, New Brunswick

FRIDAY 6 MAY/VENDREDI 6 MAI

Session [9] The Settlement Of Northwestern North America: New Approaches To An Old Problem

Room/Salon: Wm. TOMISON

Chair/Animateur: Alan Bryan (Department of Anthropology, University of Alberta)

- 09:00 Bryan, Alan: Introduction
- 09:20 Szathmary, Eموke J.E.: The Peopling of North America: Insights from mtDNA and Classic Genetic Markers
- 09:40 Bonnicksen, R., Field, K., Ream, W., Taylor, E., and Rendich, K.: New Techniques for Recovering and Analyzing Ancient Human and Animal Hair
- 10:00 Richards, Michael: Luminescence Dating of Quartzite from the Diring Yuriakh Site
- 10:20 Coffee Break
- 10:40 Gruhn, Ruth: The Early Coastal Entry Model: An Update
- 11:00 Harris, Heather: Remembering 10,000 Years of History: The Origins and Migrations of the Gitsan and related Peoples of the Northwest
- 11:20 Yesner, David R.: Late Pleistocene/Early Holocene Subsistence and Settlement In Interior Alaska
- 11:40 Cinq-Mars, Jacques: Beringian Expectations: Nouveau Regard on an Ancient Bone Technology
- 12:00 Lunch Break
- 13:20 Holen, S. R. and May, D. W.: Sites Without Lithics: Mammoth Bone Processing Sites in the Late Wisconsinan Loess of Nebraska

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- 13:40 Burns, James A.: Rights of Passage: Addressing Some Wrongs in the "Ice-free Corridor" Debate from a Paleontologist's Point of View
- 14:00 Chlachula, Jiri: Pre-Palaeoindian Occupation in the Calgary Area
- 14:20 Bryan, Alan: Evidence for the Early Settlement of Northwestern North America
- 14:40 Open Discussion
- 15:00 Coffee Break
- 15:20 Open Discussion (continued)

FRIDAY 6 MAY/VENDREDI 6 MAI

Session [10] Contributed Papers: Plains Archaeology I

Room/Salon: WINTER LAKE

Chair/Animateur: J. Rod Vickers (Archaeological Survey, Provincial Museum of Alberta, Edmonton)

- 08:40 Yansa, Catherine H. and Hjermstad, Ben: The Paleoenvironmental Record and Archaeology: Can there be a Correlation
- 09:00 Young, Robert R. and Burns, James A.: Late Wisconsinan Glaciation in Alberta: its Relationship to a Theoretical "Ice-free Corridor"
- 09:20 Brumley, John H. and Rennie, Patrick J.: A Culture History Model for the Plains of Alberta, Saskatchewan, and Montana
- 09:40 Nicholson, B.A.: Mississippian Influx and Influence in Southwestern Manitoba During the Late Prehistoric Period
- 10:00 Paquin, Todd: The Kisis Complex of the Selkirk Composite: Classification, Origins, and Possible Influences in the Boreal Forest of Northern Saskatchewan
- 10:20 Coffee Break
- 10:40 Unfreed, Wendy J.: Late Prehistoric Bison Killing in Southern Alberta: An Example from DkPi-2, near Fort Macleod
- 11:00 Brink, Jack: Bison Carcass Utilization at Kill Sites from the Great Plains
- 11:20 Landals, Alison J.: The Miniota Site (EaMg-12): An Avonlea Site in Southwestern Manitoba
- 11:40 Ramsay, Allyson M.: Frequency and Seasonality of Bison Kill Events at the Melhagen Site (EgNn-1)
- 12:00 Lunch Break

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- 13:20 Van Dyke, Stanley G.: The Austech Station: A McKean Processing Site in Cochrane, Alberta
- 13:40 Ramsay, Charles L.: Hanna and McKean on the Northern Plains
- 14:00 Head, Thomas: EeOv-68, a Stratified Middle Period Site Near Brooks, Alberta
- 14:20 Pyszczyk, Heinz W.: From Stone to Metal: a Consideration of Historic Metal Projectile Points and their Implications to Plains Prehistory (Part 2)
- 14:40 Dawe, Bob: Tiny Arrowheads: Toys in the Toolkit
- 15:00 Coffee Break
- 15:20 Peck, Trevor: A Statistical Evaluation of the Late Prehistoric Projectile Point Typology Used on the Northwest Plains

FRIDAY 6 MAY/VENDREDI 6 MAI

Session [11] Contributed Papers: Arctic and Subarctic Archaeology Room/Salon: ROWAND

Chair/Animatrice: Pat Sutherland (Archaeological Survey of Canada, Canadian Museum of Civilization)

- 09:00 Sutherland, Patricia: New Evidence for Prehistoric Occupation in the Mackenzie Delta: A Choris Culture Site on Richards Island
- 09:20 Helmer, James; LeMoine, Genevieve; and Hanna, Don: Judging a Book by its Cover: A Comparative Evaluation of Surface vs. Subsurface Artifact Distributions from a Late Dorset Site in the Central High Arctic
- 09:40 Darwent, Christyann M.: A Taphonomic Examination of Late Dorset Faunal Remains on Little Cornwallis Island, N.W.T.
- 10:00 Grier, Colin and Savelle, James M.: Bowhead Whaling and the Thule Eskimo Intrasite Structure: A Spatial Approach
- 10:20 Coffee Break
- 10:40 Whitridge, Peter: Spatial Patterning in the Surface Whale Bone Assemblage from a Thule Winter Village
- 11:00 Keenleyside, Anne and Bertulli, Margaret: NgLi-2: A Franklin Site on Erebus Bay, King William Island
- 11:20 Gordon, Bryan C.: Reindeer Herd Following in Northeast European Russia
- 11:40 Wayman, Michael L. and Andrews, Tom: Analyses of Native Copper Artifacts from a Dene Copper Workshop at Snare Lake, District of Mackenzie, Northwest Territories
- 12:00 Lunch Break

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- 13:20 Pokotylo, David: Lithic Reduction Strategies at *Vihtr'itshik* (MiTi-1), Lower Mackenzie Valley
- 13:40 Walde, K.: 1993 Activities in Southwest Yukon and Northeastern British Columbia
- 14:00 Meyer, David: Is This Really Laurel? Middle Woodland on the Northwestern Periphery

FRIDAY 6 MAY – MORNING/VENDREDI 6 MAI – AVANT MIDI

**Session [12] Advances in Computer Applications in Archaeology
Room/Salon: NORTHCOTE**

Chair/Animateur: Luke Dalla Bona (Pictographics, Thunder Bay, Ontario)

- 08:40 Dalla Bona, Luke: Introduction
- 09:00 Walker, Bethany J.: Computer Cartography for the Archaeologist: The Archival Potential of GRASS
- 09:20 Nickerson, Steve: CADD/Database Integration for Field Use (A Poor-man's GIS)
- 09:40 Adams, Gary and Finnigan, James: Northwestern Plains Prehistory Database: A New CRM Tool
- 10:00 Dalla Bona, Luke: A Predictive Model of Prehistoric Activity Location for Thunder Bay District, Ontario
- 10:20 Coffee Break
- 10:40 Biskowski, Martin F.: GIS and Artifact Classification at Urban Sites in Central Mexico
- 11:00 Chalmers, Alan; Tidmus, John; and Stoddart, Simon: Photo-Realistic Visualization of Archaeological Sites
- 11:20 Pakkanen, Jari: From Coordinates into Image: Building a DXF File from Theodolite Data
- 11:40 Magne, Martin and Gibson, Terry: Discussants

FRIDAY 6 MAY – MORNING/VENDREDI 6 MAI – AVANT MIDI

Session [13] From Georgian Bay to James Bay: Archaeological, Historical and Material Culture Investigations

Room/Salon: RUNDLE

Chairs/Animateurs: Diana Gordon (Dept. of Anthropology, Waterloo University, Ontario) and James Molnar (University of Albany, SUNY)

- 09:00 Gordon, Diana: Introduction
- 09:20 Carscallen, Charles: The Lake Temagami Site (CgHa-2): Comparing Materials and Manufacturing Methods from a Multi-Component Site in North-eastern Ontario
- 09:40 Molnar, James: Spatial Analysis of the Hunter's Point Site: Linking Artifact Patterning and Behaviour
- 10:00 Oberholtzer, Cath: Tied to the Past: James Bay Cree Material Culture
- 10:20 Coffee Break
- 10:40 Ross, Brian and D'Annibale, Cesare: Recent Investigations at Camp Kitchikewana: A Multi-Component Site in Georgian Bay Islands National Park
- 11:00 Pollock, John: Wahgoshig First Nation Cultural Heritage Project, Lake Abitibi Model Forest
- 11:20 Gordon, Diana: Rocks, Water and a Dog: Structural Variation between the Witch Point Site (CgHa-7) and the Three Pines Site (CgHa-6), Lake Temagami
- 11:40 Von Gernet, Alexander: Highland Lake: Archaeology, Ethnohistory and the Linguistic Affiliation of a Protohistoric Site on the Canadian Shield
- 12:00 Lunch Break

FRIDAY 6 MAY – AFTERNOON/VENDREDI 6 MAI – APRES MIDI

Session [14] From Georgian Bay to James Bay: Archaeological, Historical and Material Culture Investigations (continued)

Room/Salon: NORTHCOTE

Chairs/Animateurs: Diana Gordon (Dept. of Anthropology, Waterloo University, Ontario) and James Molnar (University of Albany, SUNY)

- 13:20 Hinshelwood, Andrew: Whitefish Island Site (CdIc-2), Sault Ste. Marie: Review of Existing Collections
- 13:40 Milner, Claire McHale: Regional Identity and Interregional Interaction during the Juntunen Phase, A.D. 12:00–16:20.

14:00 Brantsner, Christine N.: Archaeological Investigations at a Prehistoric Village Site on Drummond Island, Michigan

14:20 Discussion

SATURDAY 7 MAY – MORNING/SAMEDI 7 MAI – AVANT MIDI

Session [15] Charlie Lake Cave: Results of Recent Research

Room/Salon: Wm. TOMISON

Chair/Animateur: Jon Driver (Department of Archaeology, Simon Fraser University, Burnaby BC)

09:00 Fladmark, Knut: Introduction to Charlie Lake Cave

09:20 Sullivan, Gregg: Results of Sediment Sample Analysis from Charlie Lake Cave (HbRf-39), British Columbia

09:40 Handy, Martin: The View from the Parapet: Middle and Late Prehistoric Adaptations at Charlie Lake Cave (HbRf-39)

10:00 Frederick, Gay: The Fish Fauna of the Charlie Lake Cave Site, HbRf -39

10:20 Coffee Break

10:40 Preston, Randall: Small Mammal Taphonomy at Charlie Lake Cave

11:00 Driver, Jon: Large Mammal Taphonomy of the Paleoindian Component at Charlie Lake Cave

11:20 Discussion and questions

SATURDAY 7 MAY – MORNING/SAMEDI 7 MAI – AVANT MIDI

Session [16] The Access to Archaeology Programme: Project Examples

Room/Salon: WINTER LAKE

Chair/Animatrice: Sheila Greer (Canadian Circumpolar Institute, University of Alberta)

08:40 Greer, Sheila: Opening remarks

09:00 Joe, Pat and Gotthardt, Ruth: The Fish Lake Archaeology Project

09:20 Stevenson, Tom and Jones, Tim E.H.: Saskatchewan Archaeological Society Access to Archaeology Projects

09:40 Tremayne, Alan G. and Gibson, Terry H.: Cultural Resource Management: Metis Loss of a Land Base

10:00 Blaubeergs, Ellen: Access to Archaeology: The Ontario Archaeological Society's Education Resource Kits

10:20 Coffee Break

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- 10:40 Smardz, K.: Title Unavailable
- 11:00 Larose, François M.: Le potentiel archéologique préhistorique du Haut-Richelieu
- 11:20 Syms, Leigh: MMMN Archaeological Native Internships: Developing Awareness and Building Links with the Native Communities
- 11:40 MacDonald, Caroline: The Igloolik Archaeology and High School Education Project (Video)

SATURDAY 7 MAY – MORNING/SAMEDI 7 MAI – AVANT MIDI

**Session [17] The Oldman Dam Archaeological Mitigation Project in Review
Room/Salon: ROWAND**

Chair/Animateur: Brian Ronaghan (Archaeological Survey, Provincial Museum of Alberta)

- 09:00 Ronaghan, Brian M.: Managing Archaeological Mitigation for Oldman River Reservoir Project
- 09:20 Dau, Barry J.: The 1988-1990 Stone Features Component of the Oldman River Dam Prehistoric Archaeology Mitigation Programme - A Review
- 09:40 LANDALS, Alison: Prehistoric Kill-sites in the Oldman River Dam Project Area: A Summary
- 10:00 Van Dyke, Stanley G.: Precontact Native Campsites of the Oldman River Dam Archaeological Mitigation Project: A Postscript
- 10:20 Coffee Break
- 10:40 Brumley, John H.: Settlement and Subsistence Systems within Southwestern Alberta: A Summary of Data from the Oldman River Dam Archaeological Project
- 11:00 Middleton, Ron: On the Critical Path
- 11:20 Balcom, Rebecca: Historic Sites Excavation, Oldman River Dam
- 11:40 Langley, Susan B.M.: The AUS Oldman River Dam Monitoring Project

SATURDAY 7 MAY – MORNING/SAMEDI 7 MAI – AVANT MIDI

Session [18] Contributed Papers: Plains Archaeology II

Room/Salon: NORTHCOTE

Chair/Animateur: J. Rod Vickers (Archaeological Survey, Provincial Museum of Alberta, Edmonton)

- 09:00 Klassen, Michael: Spirit Images and Medicine Rocks: Results of the 1992-93 Alberta Rock Art Survey
- 09:20 Kulle, Barbara J.: A Re-evaluation of the Red Creek Medicine Wheel Complex of Southern Alberta
- 09:40 Malainey, Mary: A Consideration of Native Dietary Preferences and Implications for Archaeological Models
- 10:00 Freeman, Gordon R. and Freeman, Phyllis J.: Sacred Glyphed Boulders Near Viking, AB, and the Iron Creek Meteorite: Sites and Objects
- 10:20 Coffee Break

SATURDAY 7 MAY – AFTERNOON/SAMEDI 7 MAI – APRES MIDI

Session [19] Plenary: Relationships between First Nations and Archaeology

Room/Salon: Wm. TOMISON

Chair/Animateur: Jack Ives (Provincial Museum of Alberta, Edmonton)

- 13:00 Blondin-Andrew, Ethel: Cultural Heritage of the Mountain Dene
- 13:20 Asch, Michael: Cultural Property and the Question of Underlying Title
- 13:40 McGhee, Robert: Presenting Indigenous History: The First Peoples Hall at the Canadian Museum of Civilization
- 14:00 Hanna, Margaret: "We Can go a Long Way Together Hand-in-Hand": Some Thoughts on the Necessity of Respect as a Central Value in Archaeological Research
- 14:20 Ives, Jack and Yellowhorn, Eldon: Motives and the Creation of Archaeological Knowledge
- 14:40 Crowshoe, Reg and Brink, Jack: Whose Culture, Whose Artifacts? Towards Co-management of the Past
- 15:00 Coffee Break
- 15:20 Discussion

**FORUM ON GUIDELINES FROM THE ABORIGINAL
HERITAGE COMMITTEE
FORUM SUR LES RECOMMANDATIONS DU COMITE SUR LE
PATRIMOINE AUTOCHTONE**

Saturday/Samedi 16:00/16h00 – Wm. Tomison

**FRIDAY 6 MAY AND SATURDAY 7 MAY
VENDREDI 6 MAI ET SAMEDI 7 MAI**

Session [20] Posters

Room/Salon: MAIN FOYER PRINCIPAL

Harington, C.R., Gotthardt, R.M., Hare, P.G., and Morison, S.: Recovery of Ice Age Horse Remains from Last Chance Creek, near Dawson City, Yukon

Perry, William: Geographical Information Systems (GIS) Technologies in the Archaeological Services Unit, Parks Canada, Calgary

Young, Allison and Bernick, Kathryn: Hidden Dimensions: A Conference on the Cultural Significance of Wetland Archaeology

Zoe, John B. and Andrews, Tom: Ida (Up This Way) - The Camsell-Marion Heritage Resource Inventory

Blaubergs, Ellen: Access to Archaeology: The Ontario Archaeological Society's Education Resource Kits

Mills, Elsie: The Herschel Petroglyphs Project

Abstracts/Resumés

ADAMS, Gary, Canadian Parks Services, Winnipeg; FINNIGAN, James, Western Heritage Services, Saskatoon, SK

Northwestern Plains Prehistory Database: A New CRM Tool

Session [12] Advances in Computer Applications in Archaeology

Over the past two years, Parks Canada has commissioned Western Heritage Services Inc. to design and produce a tool to access and analyze Northwestern Plains prehistory through direct access to data. The project was conceived as a management and research tool that would allow users to identify resources within the study area that would relate to a wide variety of questions and management needs. The final product has the capacity to call up information on archaeological sites, historic records, cultural and natural features, and oral traditions, then sort and display textual or cartographic information. This report will outline objectives of the project, summarize how the database works, and discuss some examples of how it will be put to use.

ALLEN, Tana, Department of Classics, University of Alberta, Edmonton, AB

Canadians in Carthage: Explorations at Bir Ftouha

Session [7] Canadian Archaeology Abroad

In 1992, as part of the ongoing international UNESCO campaign to save Carthage, a team from the University of Alberta led by Dr. J.J. Rossiter undertook a small excavation at the suburban site of Bir Ftouha. Two separate areas of Bir Ftouha had been previously explored by Delattre and P. Gaukler. Delattre published a plan of a triple-apsed room containing a number of sarcophagi. A so-called baptismal font and bath building were also found, although their precise location was never published. Gaukler's findings of an early Christian basilica were even more sketchily recorded, as no plan or adequate description of the building or its whereabouts was ever published. Despite their close proximity, there seems to have been little interest in determining the nature of the relationship between the two sites.

The 1992 project aimed to further investigate this area. A magnetometer survey carried out by a University of Alberta team in 1991 had shown two areas of disturbance: one located near the bath-house complex and another approximately 60 m to the east. Several trenches placed near the bath-house complex revealed part of a building wall and a series of floor surfaces. The latest phase of these features has been tentatively dated to the late 6th or early 7th centuries A.D. Due to limited resources and time, a more thorough exploration of this building was not possible in 1992.

Of particular interest in the 1992 excavations were an extensive series of midden pits. The pits contained a dense mixture of pottery and organic remains. The pottery, consisting of local coarse wares, cooking wares, and Islamic glazed wares, has been provisionally dated to the 9th-11th centuries A.D., or the Early Islamic period. The faunal remains, studied by Michael MacKinnon, suggest that sheep, goat, and cattle formed a significant part of the diet of the inhabitants of the site in its later periods. The ceramic and faunal material is especially important as there has been very little information available about the early Islamic period in Carthage. Further study may suggest that there is greater continuity between the Late Roman and the Early Islamic periods than previously believed.

ANDREWS, Thomas D., Prince of Wales Northern Heritage Centre, Yellowknife NT;
ARNOLD, Charles D., Prince of Wales Northern Heritage Centre, Yellowknife NT;
BERTULLI, Margaret M., Prince of Wales Northern Heritage Centre, Yellowknife NT;
HART, Elisa J., Prince of Wales Northern Heritage Centre, Yellowknife NT

Native Claims and the Future of Archaeological Research in the N.W.T.

Session [2] Cultural Resource Management on First Nation Lands

The recent enactment of settlement legislation for the Gwich'in, Inuvialuit and Nunavut land claim areas has altered the political reality of archaeological research in the Northwest Territories, requiring new relationships between researchers and claimant groups. This paper surveys the settlement legislation as it pertains to heritage resource management and through an examination of recent collaborative research projects constructive avenues for future research.

ANDREWS, Tom, Prince of Wales Northern Heritage Centre, P.O. Box 1320, Yellowknife, N.W.T. X1A 2L9

Ida (Down the Middle): Dogrib Traditional Knowledge and Heritage Resources Inventories

Session [6] Traditional Knowledge and Archaeology

Recent archaeological research conducted by the Prince of Wales Northern Heritage Centre has concentrated largely on completing heritage resource inventories of various regions of the Northwest Territories for which the archaeological record is poorly understood. Collaborative research with local communities has proven to be an effective way for eliciting information pertinent to past use of these landscapes. This paper discusses initial results of a three year inventory project conducted in collaboration with the communities of Rae Lakes and Rae, which used Dogrib traditions (oral narrative, subsistence strategies and place names) relating to a canoe and dog sled trail as a basis for determining field reconnaissance strategies.

ASCH, Michael, Dept. of Anthropology, University of Alberta, Edmonton, AB

Session [19] Plenary Session: Relationships between First Nations and Archaeology

Cultural Property and the Question of Underlying Title

In asking the question "who owns the cultural property found at a site," it is useful to ask "who owns the ground itself." By ownership in this sense I mean "jurisdiction." It leads to questions about underlying title, sovereignty and treaty rights. In this discussion, I will direct my attention to the question of underlying title as a means to determine ownership of cultural property. I will look at some difficulties this approach creates for accurate determination of ownership and advance possible solutions, both for the long-term and the present.

BADGLEY, Ian, Apt. 7, 7619 Cristae Colomb, Montreal, Québec H2R 2S8

On the History of Northern Québec Archaeology

Session [1] History of Canadian Archaeology

Abstract Unavailable

BALCOM, Rebecca, Golder Associates, Calgary

Historic Sites Excavation, Oldman River Dam

Session [17] The Oldman Dam Archaeological Mitigation Project in Review

Prior to inundation by the Oldman River Dam Reservoir, Environmental Management Associates (now Golder Associates) completed mitigative investigations at six sites representing a time span from 1885 to 1935. These sites were selected for excavation on the basis of historical data and visual observation. A summary of the results of the mitigation is followed by a critique of the methods employed at the assessment and mitigation stages.

BERNICK, Kathryn, 4203 West 14th Ave., Vancouver, BC V6R 2X7

The Scowlitz Wet Site

Session [4] Contributed Papers: Western North America

Recent investigations of the waterlogged component at Scowlitz (DhRI-16W) in the Fraser valley of southwestern British Columbia, illustrate the socio-political complexities of the process of doing archaeology. Aboriginal administrators, individual band members, university educators, students, volunteers, wet-site archaeologists, conservators, and government managers see the project from different, intersecting perspectives. The concerned parties do not have the same goals for research, resource management, and public awareness. Thus, the methods as well as the results of the archaeological investigations reflect multiple, sometimes conflicting, lines of thinking. This paper attempts to mirror reality through simultaneous consideration of disparate viewpoints.

BISKOWSKI, Martin F., Department of Anthropology, UCLA, Los Angeles, CA 90024

GIS and Artifact Classification at Urban Sites in Central Mexico

Session [12] Advances in Computer Applications in Archaeology

Artifact classification and spatial analysis traditionally are distinct procedures. In large settlements containing considerable socioeconomic and ethnic differentiation, however, artifact classificatory taxa developed without regard for context may be meaningful over only limited areas of the site. The analytical facilities available in different GISs allow one to integrate analyses of artifact characteristics more tightly with analyses of spatial context. This procedure has enhanced our ability to meaningfully classify maize-grinding tool in the Teotihuacan Valley, Mexico.

BLAUBERGS, Ellen, Ontario Archaeological Society

Access to Archaeology: The Ontario Archaeological Society's Education Resource Kits

Session [20] Poster Session

BLAUBERGS, Ellen, The Ontario Archaeological Society, Inc.

Access to Archaeology: The Ontario Archaeological Society's Education Resource Kits

Session [16] The Access to Archaeology Programme: Project Examples

In 1991, the Ontario archaeological Society received an Access to Archaeology Programme grant from the Federal Department of Communications to develop a series of education resource kits for schools. A most positive and productive alliance between the

Region of Peel Museum and the OAS resulted in a series of kits which feature an overview of Aboriginal prehistory and contact with Europeans, as understood from archaeological investigation. The kits are distributed to schools and other groups by participating local Ontario museums in partnership with the OAS.

This paper will outline the various phases which led to the official launch of the "Discovering Ontario Archaeology" kit in 1992: design and assembly; promotion and administration; and distribution and maintenance. A "DOA" kit, complete with reproduction artifacts, cultural booklets, teachers' directory, activity sheets and lesson plans will be available for examination during the duration of the CAA annual meeting.

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New Techniques for Recovering and Analyzing Ancient Human and Animal Hair

Session [9] The Settlement of Northwestern North America: New Approaches to an Old Problem

Human and animal hair appears to be an important source of information that is routinely overlooked at some archaeological and paleontological sites. Hair has the potential to make contributions to our understanding of paleoecology, paleontology, and human prehistory. The purpose of this paper is to illustrate the techniques and values of hair recovery by using a case study from the Mammoth Meadow site, southwestern Montana. Archaeological research conducted at the Mammoth Meadow site (24BE559) has led to the discovery of a deeply stratified workshop-habitation site with a Holocene and late Pleistocene archaeological record, which contains numerous flaked stone artifacts, animal bones, and features that date from the time of white contact to the end of the Pleistocene. A human and animal hair record occurs below a tephra lens that has been identified as Glacier Peak volcanic ash that is dated 11,000 yrs B.P. at a number of localities in the western United States. Hair and other organic remains including plant debris, fish scales, and feathers, occur in anaerobic silt and clay deposits at and below the water table. By using a process of pre-soaking sediments in sodium hexametaphosphate, it has been possible to disaggregate the hair from silts and clays and to use screen washing and flotation techniques to routinely collect human and animal hair. At the Center for the Study of the First Americans a series of related studies have been initiated. R. Ervin Taylor, U.C. Riverside is attempting to date hair keratin by AMS C-14 method. Drawing on Oregon State University Fish and Wildlife Department study skin collection, which contains over 8,000 specimens, Kate Rendich is: (1) developing comparative control samples of hair mounted on slides; (2) mounting hairs from Mammoth Meadow; (3) using a video-digital imagery system to compare the known samples with unknown specimens. Additionally, Walt Ream, Agricultural Chemistry and Katherine Field, Microbiology, are attempting to determine if DNA can routinely be extracted from ancient hair. Results of these related projects will be reported at the conference.

BRANTSNER, Christine N., Michigan State University Museum, East Lansing, Michigan 48824-1045

Archaeological Investigations at a Prehistoric Village Site on Drummond Island, Michigan

Session [13] From Georgian Bay to James Bay: Archaeological, Historical and Material Culture Investigations

During the summers of 1991 and 1992, field crews from the Michigan State University Department of Anthropology conducted excavations at the Cloudman site on Drummond Island, located in the St. Mary's River Valley of Michigan's eastern Upper Peninsula. Excavations revealed that the site contained occupationally stratified deposits dating from the Middle Woodland, Late Woodland, and protohistoric/contact periods. Analysis of the ceramic assemblage indicates strong connections with other Michigan and Ontario groups. The location of the Cloudman site along the boundary between major eastern and western cultural traditions underscores its importance for understanding prehistoric social and cultural dynamics in this region of the Upper Great Lakes.

BRINK, Jack, Archaeological Survey, Provincial Museum of Alberta, Edmonton, AB

Bison Carcass Utilization at Kill Sites from the Great Plains

Session [10] Contributed Papers: Plains Archaeology I

Quantitative measures of marrow and bone grease for bison have been produced by Emerson (1990) and Brink. Combined, these indices provide a new tool for the examination of faunal utilization at bison kill/butchery sites from the North American Plains. It is assumed that bones with the greatest amount of marrow and grease were preferentially processed. Testing this assumption for marrow at a number of bison kill sites reveals a large number of sites that conform to the prediction but a substantial number that contradict the expected pattern. Comparing bone grease content with faunal representation indicates a similar pattern of conformance with expectations at some sites but not others. Further analysis reveals that sites where optimal utilization of marrow is not evident are the same sites where maximum grease extraction was conducted. It is concluded that: (1) indices based on food quantity have the potential to elucidate seemingly contradictory patterns of faunal use, and (2) that subsequent stages of faunal utilization, such as grease rendering, can obliterate patterns of primary use, such as marrow extraction.

Des données quantitatives sur la moelle et la graisse des os de bison ont été produites par Emerson (1990) et Brink. Combinés, ces indices fournissent une nouvelle façon d'examiner l'utilisation des bisons dans les sites de dépeçage des plaines nord-américaines. L'hypothèse de base est que les os possédant le plus de moelle et de graisse seront sélectionnés préférentiellement. En testant cette hypothèse spécifiquement pour la moelle avec les données de plusieurs sites de dépeçage des bison, un grand nombre de sites se conforment au modèle initial. Par contre, un nombre substantiel de sites le contredisent. Les comparaisons du taux de graisse des os avec les fréquences des vestiges de la faune indiquent aussi une conformité avec le modèle initial dans certains sites mais d'autres font exception. Une analyse supplémentaire révéla que les sites où l'utilisation optimale de la moelle n'est pas évidente sont les mêmes sites où la fonte de la graisse eut lieu. On arrive donc à deux conclusions. Premièrement, les indices basés sur la valeur nutritive des os ont le potentiel d'expliquer des procédés d'utilisation de la faune qui pourraient sembler se contredire. Deuxièmement, les stades subséquents de l'utilisation de la faune,

comme la fonte de la graisse, peuvent oblitérer les procédés de l'utilisation initiale, comme l'extraction de la moelle.

BRUMLEY, John H., Ethos Consultants Inc., #14 Meadowlark Estates, Havre, Montana 59501; RENNIE, Patrick J., Ethos Consultants Inc., #14 Meadowlark Estates, Havre, Montana 59501

A Culture History Model for the Plains of Alberta, Saskatchewan, and Montana

Session [10] Contributed Papers: Plains Archaeology I

The authors argue that, for the period beginning 5-7,000 BP and extending to ca. 1,000 BP, presently identified cultural complexes within the defined region can all be related to two broad cultural traditions referred to as Alsask Mondak. The authors discuss the characteristics and spatial distribution of these two traditions through time.

During the last 1,000 years, two additional cultural traditions are introduced into the southern and eastern portions of the study area: the Wymont Tradition and the Extended Coalescent Tradition. The authors discuss the presently known characteristics and spatial distributions of these two traditions as well.

BRUMLEY, John H., Ethos Consultants Inc., #14 Meadowlark Estates, Havre, Montana 59501

Settlement and Subsistence Systems within Southwestern Alberta: A Summary of Data from the Oldman River Dam Archaeological Project

Session [17] The Oldman Dam Archaeological Mitigation Project in Review

The Oldman River Dam Archaeological mitigation project gathered considerable evidence regarding regional landuse, settlement and subsistence. The author presents a summary of that data within a regional cultural and temporal framework.

BRYAN, Alan, Department of Anthropology, University of Alberta, Edmonton AB T6G 2H4

Evidence for the Early Settlement of Northwestern North America

Session [9] The Settlement of Northwestern North America: New Approaches to an Old Problem

Presence of several Lower Paleolithic sites dated between 200,000 and 500,000 years BP in Siberia suggests that a similar level of technology should be expected in northwestern North America. Dates on wood and bone from Central Alberta indicate that the ice-free corridor was always open before about 22,000 but closed until about 11,600 BP; the Northwest Coast was also heavily glaciated during that period, but could easily have been traversed before then. Native oral histories suggest that people occupied the region when it was more glaciated; perhaps in refugia. Many geneticists agree that the great diversity of mtDNA lineages indicates that initial occupation occurred sometime before 20,000 BP. Some linguists have proposed that the great linguistic diversity in the American suggests an antiquity of 40,000 years. But archaeologists have the most reliable clock. Artifact assemblages lacking bifacial projectile points have been reported from deeply buried geological contexts dated between 30,000 and 14,000 BP in Yukon, Alberta and Nebraska. Now is the time to embark on a concerted search for more early sites, and this quest should incorporate new approaches, such as human hair, which is datable and can provide ancient DNA.

BURKE, A., Archaeological Survey of Canada, Canadian Museum of Civilization, 100 rue Laurier, P.O. Box 3100, station B, Hull, P.Q., J8X 4H2; CINQ-MARS, J., Archaeological Survey of Canada, Canadian Museum of Civilization, 100 rue Laurier, P.O. Box 3100, station B, Hull, P.Q., J8X 4H2

Seasonal Indicators at Bluefish Caves, Yukon Territory: Seasonal Mortality and Age Profiles for Horse (*Equus lambei*)

Session [3] Contributions to Zooarchaeological Research

In addition to having yielded the earliest evidence of human occupation of eastern Beringia, the Bluefish Caves of northern Yukon, Canada, have also provided us with the largest and most complex *in situ* late Pleistocene fauna ever recorded in this region, if not in all of Beringia. This paper presents some preliminary research results on an important component of the Bluefish fauna, the equids (*Equus lambei*). More specifically, it presents data derived from the study of seasonal mortality profiles of these now extinct Beringian small horses. Estimates of season of death, used in this research, are obtained from a skeleto-chronological study of a relatively large sample of horse teeth recovered from these three caves. Age profiles are also obtained using this technique. Seasonal mortality and age profiles of equid assemblages from the three Bluefish caves are compared. In contributing to the reconstruction of Full and Late Glacial landscapes in the Bluefish region, as well as in the large region of eastern Beringia, this research provides us with the means to investigate further the so-called "productivity paradox", and may thus lead to a better appreciation of very ancient and poorly understood forms of human adaptation.

BURNS, James A., Quaternary Paleontology, Provincial Museum of Alberta, 12845 - 102 Ave., Edmonton, AB T5N 0M6

Rights of Passage: Addressing Some Wrongs in the "Ice-free Corridor" Debate from a Paleontologist's Point of View

Session [9] The Settlement of Northwestern North America: New Approaches to an Old Problem

The advent of early humans in the New World has, for many years, assumed a route was available, likely through Alberta, at some time during, or just after, the Wisconsinan glacial stage. The notion dovetailed with the mounting evidence for habitation sites of that age in the contiguous United States. However, much was said and written without direct references to the evidence on the ground and in the ground of Alberta. In the last 9 years, over 70 dates exceeding 9000 y BP have been run for the Provincial Museum on animal bones and wood from paleontological sites across the province. These dates bracket a gaping hiatus from around 22,000 to 11,600 y BP. Big game hunters from Asia were absent from the region because conditions in the alleged "ice-free" or "western" corridor were unsuitable even for big game. The demonstrable explanation is extensive late Wisconsinan glaciation. The "First Albertans" so far discovered postdate the earliest postglacial bone dates by about 1000 y, but mounting evidence for a single glaciation in Alberta (=Late Wisconsinan) also suggests that the field was open for many millennia before glacial onset around 22,000 y BP. So, when was the New World occupied, and by what route? The search continues.

BYRNE, Bill, Alberta Community Development, Cultural Facilities and Historical Resources Division, Edmonton, AB

Title Unavailable

Session [1] History of Canadian Archaeology

CARSCALLEN, Charles, Department of Anthropology, University of Toronto

The Lake Temagami Site (CgHa-2): Comparing Materials and Manufacturing Methods from a Multi-Component Site in Northeastern Ontario

Session [13] From Georgian Bay to James Bay: Archaeological, Historical and Material Culture Investigations

The multi-component Lake Temagami Site consists of at least four discrete clusters of lithic artifacts spread over an area of approximately ten acres. These clusters are interpreted as discrete occupation areas. The excavations in the first season of work (1993) concentrated on a single late prehistoric component. The component yielded a lithic assemblage dominated by quartz artifacts manufactured using bipolar reduction. Based on test pit samples, this stands in sharp contrast to the other three components which are dominated by rhyolite, greywacke and rhyolite and quartz respectively. Preliminary analysis of this assemblage has focused on the need for a meaningful method for describing quartz assemblages as well as a means of comparing such assemblages with those manufactured on other materials.

CHALMERS, Alan, Department of Computer Science, University of Bristol, U.K.; TIDMUS, John, The Transputer Centre, University of the West of England, U.K.; STODDART, Simon, Department of Archaeology, University of Bristol, U.K.

Photo-Realistic Visualization of Archaeological Sites

Session [12] Advances in Computer Applications in Archaeology

Evidence from the archaeological record yields clues as to how our ancestors lived. However, our perceptions and analyses of this data may be clouded by the lack of surviving structures or unmodified landscapes that can be used to put this evidence into a better context. Recent developments in computer visualization are providing powerful tools for modelling multi-dimensional aspects of the data gathered by archaeologists. Computer graphic techniques can be used to reconstruct and visualize features of a site which may otherwise be difficult to appreciate. This new perspective may enhance our understanding of the environments in which our ancestors lived.

Recent developments have made it possible to "construct" virtual environments on a computer and view photo-realistic images of these scenes [4]. It is possible, therefore, to recreate an archaeological site on a computer and provide the viewer with an accurate representation of the actual remains. Furthermore, geometric modelling techniques enable extrapolations from existing evidence to reconstruct the site as it may have appeared to the original inhabitants [5].

Although static images are useful for providing impressions of a site, far greater insight can be obtained by making it possible for the user to navigate through the three dimensional representation. This experience will be enhanced by the photo-realistic nature of the computer model including accurate illumination and the presence of environmental factors such as smoke dust or fog. It is essential that such a navigation system is interactive, responding immediately to the operator's directions [3].

In all image synthesis techniques, the fundamental step is computing the amount and nature of light from the three dimensional environment reaching the eye from any given direction. This computation is carried out by simulating the behaviour of light in the environment. This simulation must allow for the medium participation of light emitters such as flames, light absorbers such as soot clouds, and light scatterers such as dust or smoke.

The particle tracing technique traces the path of photons as they are emitted from light sources and uses the reflected/refracted/emitted particle flux given by a large number of these particles as a measure of the illumination of the environment [4]. This model accurately simulates the physical propagation of light, and can be used for complex scenes involving medium participation. Experience, based on sequential implementations of the particle tracing method, has shown that even for relatively simple environments the number of particles that have to be considered in the simulation can be of the order of a few hundred thousand. On the single processor machine this can amount to many minutes and even hours of computing time. The application of advanced parallel processing methods should allow the visualization to be accomplished in real-time [1,2].

This paper will describe a parallel computer system, currently under development as a joint project between computer scientists and archaeologists, for reconstructing and photo-realistically visualizing archaeological sites.

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CHLACHULA, Jiri, Department of Geology, University of Alberta, Edmonton, AB

Pre-Palaeoindian Occupation in the Calgary Area

Session [9] The Settlement of Northwestern North America: New Approaches to an Old Problem

Evidence from geo-archaeological investigations will be provided to suggest two episodes of an early prehistoric occupation in the upper Bow River valley, SW Alberta during the late Mid- to early Late Wisconsinan. The cultural record from two deeply buried sites in the northwestern part of the city of Calgary, referred to as Site 1 (Varsity Estates) and Site 2 (Silver Springs), consists of pebble and flake artifact assemblages produced exclusively from local clastic raw materials, and manifesting general technological and typological similarities with Late Pleistocene Palaeolithic stone industries from north-eastern Eurasia. The contextual data and the patterned cultural evidence explicitly docu-

ment ice-free conditions in this part of southwestern Alberta prior and shortly after onset of the last glacial period. The archaeological record from the Calgary sites implies the presence of people in Western Canada prior to the last (Late Wisconsin) Laurentide glaciation, thus negating the necessity for an "Ice-free Corridor," traditionally viewed as the decisive timing factor of the initial peopling of North America south of the continental ice-sheet. Moreover, it is argued that the New World Palaeolithic inhabitants were physically and culturally capable of coping with cold climatic conditions in periglacial environments.

CINQ-MARS, Jacques, Canadian Museum of Civilization, Archaeological Survey of Canada

Beringian Expectations: Nouveau Regard on an Ancient Bone Technology

Session [9] The Settlement of Northwestern North America: New Approaches to an Old Problem

Following a synthetic overview of the Bluefish Caves evidence, this paper will focus on the particular set of data that pertains to the presence of human population in easternmost Beringia during the late Wisconsinan/Full Glacial. More specifically relating to matters of bone technology, it will be examined with emphasis on the rapport that can be shown to exist between it and that which has been postulated by various workers, a few years ago, for Old Crow Flats. Discussion will be directed at demonstrating that a full appreciation of the significance of this Beringian technology is best achieved by viewing it in the context of a highly variable and very ancient palaeolithic, inter-hemisphere, and time-transgressive technological continuum.

CROWSHOE, Reg, Director of the Cultural Centre, Peigan Nation; BRINK, Jack, Provincial Museum of Alberta, Edmonton, AB

Whose Culture, Whose Artifacts? Towards Co-management of the Past

Session [19] Plenary Session: Relationships between First Nations and Archaeology
Abstract Unavailable

CUNNINGHAM, Jeremy J., 1189 Northmount Dr. N.W., Calgary, AB T2L 0C5

Use Wear Analysis of Pre-Mazama Lithics from Banff National Park

Session [4] Contributed Papers: Western North America

Use wear studies are now becoming an important part of the archaeological analysis of stone tools. By using pre-Mazama lithic materials from three sites within Banff National Park, this paper will demonstrate the application of models in depicting use wear traces, present the study's findings and its implication on present interpretation of tool usage, and argue for the incorporation of both low and high power techniques in practical lithic studies.

DALLA BONA, Luke, Pictographics, Thunder Bay, ON

A Predictive Model of Prehistoric Activity Location for Thunder Bay District, Ontario

Session [12] Advances in Computer Applications in Archaeology

This paper will summarize in fifteen minutes, three years of research conducted for the Ontario Ministry of Natural Resources by the Centre for Archaeological Resource Prediction, Lakehead University, Thunder Bay. The result of this research is a predictive model of prehistoric activity location that combines two of the traditional methods for

developing predictive models. An 'inductive archaeologist's model' and a 'deductive cultural model' are combined to develop maps presuming favourable locations for the existence of archaeological sites. Three examples of this model's application will be presented and avenues of future work will be discussed.

DARWENT, Christyann M., Department of Archaeology, Simon Fraser University, Burnaby, B.C. V5A 1S6

A Taphonomic Examination of Late Dorset Faunal Remains on Little Cornwallis Island, N.W.T.

Session [11] Contributed Papers: Arctic and Subarctic Archaeology

During the 1992 and 1993 field seasons, the McDougall Sound Archaeological Research Project undertook an analysis of the Late Dorset site of Tasiarulik (QjJx-10) on Little Cornwallis Island in the Central High Arctic. Due to permitting difficulties, the 1992 field season involved an intensive examination of the cultural materials exposed on the surface. The surface faunal remains were mapped and identified *in situ* and have allowed for an examination of the spatial distribution of the bone across the site. In the following field season excavation proceeded on a number of semi-subterranean houses, tent rings, and middens, with a subsequent analysis of the collected faunal remains. In the past, faunal studies did not normally constitute a significant part of a High Arctic project. Bone element mapping of the surface remains has allowed for a unique opportunity to examine the horizontal variation in species and element representation, along with bone deterioration and modification. This paper will focus on the taphonomic processes which have created and altered the surface and sub-surface faunal assemblages at Tasiarulik, and present an assessment of the relationship between these two data sets.

DAU, Barry J., Ethos Consultants Ltd., Box 20, Route 5, Medicine Hat, AB T1A 3M9
The 1988-1990 Stone Features Component of the Oldman River Dam Prehistoric Archaeology Mitigation Programme - A Review

Session [17] The Oldman Dam Archaeological Mitigation Project in Review

In the period from 1988 to 1990 a major study of stone features was undertaken in conjunction with the development of the Oldman River dam. Primary emphasis in the study was placed on ascertaining if this most common of all archaeological features on the northern Plains could add significant data to the understanding of Native utilization of the Oldman, Castle and Crowsnest River systems. During the course of the study information was recovered from 201 stone features and one buried camp in 19 sites. With the exception of one extremely significant winter camp (DjPm-115) all the examined sites appear to represent short term camps occupied briefly by Native groups in the period from late spring to early fall. Cultural diagnostics from the sites point towards occupation in the period from the Late-Middle Prehistoric to Proto-Historic Period.

DAVIS, Steve, Saint Mary's University, Halifax, Nova Scotia, B3H 3C3

History of Archaeology in Nova Scotia

Session [1] History of Canadian Archaeology

The beginnings of archaeology in Nova Scotia can be documented to over one hundred and sixty years ago. The pioneering efforts involved a few members of the Nova Scotia Institute of Science. The discipline moved through various phases of development based upon key individuals and in the modern era the establishment of institutional programs.

The paper chronicles the personalities, sites and institutions that laid the foundation for the discipline as we know it today.

DAWE, Bob, Archaeological Survey, Provincial Museum of Alberta, Edmonton, AB

Tiny Arrowheads: Toys in the Toolkit

Session [10] Contributed Papers: Plains Archaeology I

Excavations in the processing area at Head-Smashed-In Buffalo Jump have produced numerous tiny, poorly made arrowheads. I propose that many of these are toys and did not function as adult weapons. A review of Plains ethnographies indicates that youths were invariably supplied with small scale bows and arrows to practice archery skills at an early age. An examination of Late Prehistoric projectile points from Head-Smashed-In was undertaken to determine whether toys could be distinguished in this assemblage. The comparative workmanship and neck widths of projectile points are evaluated as useful indices to distinguish toys from adult weapons. The results of this study may have important ramifications beyond Head-Smashed-In. The occurrence of toys in an assemblage may affect considerations of social organization and site function at Plains sites. Also, the inappropriate classification of toys may hamper interpretations of culture history based on point typology.

DELLE, James A., Department of Anthropology, University of Massachusetts, Amherst, MA 01003

Archaeology and the Development of Irish National Identities

Session [7] Canadian Archaeology Abroad

This paper considers how archaeology and archaeologists contributed to the development of Irish national identities in what was to become Northern Ireland and the republic of Ireland. By reconsidering how turn-of-the-century archaeologists interpreted ancient monuments, this paper will suggest how modern political and social boundaries have been shaped and legitimated by extending them into the mists of prehistory. In doing so I will examine the relationship between political institutions and archaeological institutions, including museums, universities, periodicals and avocational societies.

DENTON, David, Archaeologist/Heritage Consultant, Cree Regional Authority, 1450 de la Québécoise, Val d'or, Québec, J9P 5H4

The Nataawaau Bones: Cree Oral Tradition and Post-European Contact Archaeology in Subarctic Québec

Session [6] Traditional Knowledge and Archaeology

There is a vast potential for developing an archaeology that integrates indigenous traditions and perspectives as well as dangers and contradictions inherent in trying to bring together two fundamentally different ways of seeing the world and understanding the past. This paper will discuss both these aspects using examples from the Cree archaeology of the post European contact period in subarctic Québec. Examples will be taken from recent research conducted within the Cree Heritage and the Land Program of the Cree Regional Authority. The program has emphasized both archaeology and the collection of Cree traditions (stories, legends, place names) relating to places within the Québec Cree territories.

FLADMARK, Knut, Department of Archaeology, Simon Fraser University, Burnaby, BC
Introduction to Charlie Lake Cave

Session [15] Charlie Lake Cave: Results of Recent Research

Excavations at Charlie Lake Cave in 1983, 1990 and 1991 produced a significant sequence of deposits spanning Late Pleistocene and Holocene times. This symposium presents recent research on sediments, artifacts and fauna, followed by a discussion period. Artifacts from the site will be on display.

DRIVER, Jon, Department of Archaeology, Simon Fraser University

Large Mammal Taphonomy of the Paleoindian Component at Charlie Lake Cave

Session [15] Charlie Lake Cave: Results of Recent Research

All identified large mammal bones from two Paleoindian components dating c.10,500 to 9800 B.P. at Charlie Lake Cave can be assigned to *Bison* sp. Human involvement in the accumulation of the bones is demonstrated by evidence for butchering, and for selection of certain elements. Subsequent taphonomic processes included gnawing and dispersal by large carnivores, downslope movement, and rapid burial. This paper attempts to delineate the human behaviours which resulted in the accumulation of the bones. Competing hypotheses for the accumulation of bones and artifacts include: kill site; refuse area adjacent to a kill/processing site; redeposition; children's play.

DYCK, Ian, Archaeological Survey of Canada, Canadian Museum of Civilization, Hull, Québec, J8X 4H2

A History of Archaeology in the National Museum of Canada, 1911-1950

Session [1] History of Canadian Archaeology

The anthropological interests of the Geological Survey of Canada were given a legislative mandate in 1907. First action on the new mandate was taken in 1910, just before the opening of the new Victoria Memorial Museum Building. With support from the nationalistic Government of Sir Wilfred Laurier, the Geological Survey undertook major expansion and specialization of museum functions including establishment of a new anthropology division with an archaeology section. Harlan Smith, an accomplished mid-career American archaeologist with extensive West Coast Canadian experience, was hired to head the professional archaeology section, his engagement on 15 June 1911 marking the beginning of full-time professional archaeology at the federal level. The archaeology of Canadian native peoples was poorly developed in 1911. In Smith's view that of southern British Columbia, for which he was a major contributor, was fairly good. Next best was that of Ontario with its large, but poorly studied collections. Arctic prehistory was beginning its emergence, but for all other areas knowledge was minuscule. Smith's plan was to survey the great cultural areas, build reference files, and undertake intensive study of at least one important site in each area in order to create a standard which would facilitate additional studies. The plan got a good start during the first several years, but changes in government and the vicissitudes of two world wars coupled with minor and major economic depressions made the next thirty years very difficult. Nevertheless, staff brought landmark studies to fruition for all culture areas and provided leadership in public education, in situ preservation of archaeological resources, disciplinary development, and attempts to find broader economic and social values in archaeological knowledge. Decades of budget restrictions brought the archaeology section to a low

point in the mid 1940s. However when the post World War II economic boom took effect in the Museum, the archaeology section began a renewal which led to the hiring of the first new staff since 1924, the severing of a long association with the Geological Survey of Canada, a marked expansion in funding, and an invigorated program for the 1950s.

FEDJE, Daryl, Archaeological Services, Parks Canada, Calgary

Early Period Archaeology in Gwaii Haanas

Session [4] Contributed Papers: Western North America

Results of preliminary archaeological and paleoecological investigations in the Juan Perez Sound area of Haida Gwaii on the Northwest Coast are presented. These include reconnaissance at several Early Period intertidal lithic sites as well as archaeological excavations and paleoecological analysis of two sites on Arrow Creek, Matheson Inlet. Results show that the sites were occupied during a time of rapid sea-level change. The oldest archaeological remains date to shortly before 9,200 RCYBP and the youngest to 5,650 RCYBP. The discovery of well-preserved archaeological deposits in a setting that has been subject to marine transgression and regression offers promise for the eventual discovery of earlier archaeological sites at much lower sea-levels and a better understanding of early human occupation of the Northwest Coast.

FINNIGAN, Jim, Western Heritage Services, 563 - 5th Avenue North, Saskatoon, SK S7K 2R1

Post-Inundation Impacts within the Rafferty and Alameda Reservoirs

Session [5] Perspectives in Cultural Resource Management

The Rafferty and Alameda Reservoirs were constructed in the late 1980s as part of an integrated water management project in southeastern Saskatchewan. Although precipitation within the region has been below normal, portions of both reservoirs have been inundated since the early 1990s. In 1993, the author had the opportunity to re-visit both reservoirs after a partial draw-down. This paper will compare current hypotheses on reservoir impacts to heritage sites with the results of the 1993 field work. In general, site impacts were quite severe despite the relatively short period of inundation. While the filling rate for the Rafferty Reservoir may be atypical, the information obtained in 1993 has implications for managing important sites during drawdowns. Finally, there are a large number of reservoirs on the prairies and few, if any, have an explicit strategy for heritage site protection. This paper will touch on some of the issues that must be considered in such a plan.

FOX, William, Parks Canada, Winnipeg, Manitoba

People and Parks

Session [2] Cultural Resource Management on First Nation Lands

The last twenty-five years have witnessed a progressively consultative approach on the part of Canada's Federal Government in the establishment and management of National Historic Sites and National Parks. Ten years ago, the first comprehensive claim involving northern Aboriginal peoples was settled with the Inuvialuit of the western Arctic. While CRM issues were not a significant concern in this claim, they have increased in importance to the point where sixteen pages of the Nunavut Final Agreement implementation contract are devoted to archaeology and its practice. The present parks Canada commitment to cultural resource co-management with local Aboriginal communities extends far

beyond the northern claims areas, as witnessed by the range of initiatives outlined in this presentation.

FREDERICK, Gay, Royal B.C. Museum and University of Victoria, Victoria B.C.

The Fish Fauna of the Charlie Lake Cave Site, HBRf -39

Session [15] Charlie Lake Cave: Results of Recent Research

The Charlie Lake Cave Site, radio-carbon dated to between 10,700±120 B.P. and 1400±400 B.P., is the oldest known, well-dated habitation site in the northern interior of British Columbia. Excavations undertaken at the site in the 1980s and 1990s by Dr. Knut Fladmark and Dr. Jon Driver of Simon Fraser University, recovered extensive samples of well preserved faunal material, including bones of mammals, reptiles, birds and fish. The mammalian, reptilian and avian remains are reported elsewhere. This paper discusses the fish remains recovered from Stratigraphic Zones IIa through IV. 1,235 specimens of the 2,157 fish bones recovered in the 1983 excavations were examined. Of these, 770 specimens were identified to species, genus or family. Fully 98.5% of the identified elements are from a single genus, *Catostomus*. Cultural, depositional and biological variables are considered as explanations for the strikingly singular nature of this fauna over 10,000 years.

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Sacred Glyphed Boulders Near Viking, AB, and the Iron Creek Meteorite: Sites and Objects

Session [18] Contributed Papers: Plains Archaeology II

Glyphed boulders in what is now Alberta were in ancient times placed on the highest hills in their vicinity. We have studied nine such sites, from Viking (111.613°W, 52.990°N) to Foremost (111.469°W, 49.403°N). Two are described here. The sites are a major part of the artifacts.

The Viking "Ribstones" are on the summit (744 m above sea level) of a gently rising hill, 16 km SE of Viking. The summit was artificially extended by 4 m to the NNE; two glyphed boulders are on the E side of the extension. The boulders form an open ended V which points to a lake 5 km SSE, and to Wolf Ears Hill 26 km SSE, which is the probable site from which the Iron Creek Meteorite was taken in 1886. The style of the engravings on both boulders is cup and groove (probably the most ancient style in North America, Grant 1967). The dominant feature in high angle light is the grooves. In low angle light the cups gain prominence. Combinations of light and shadow make features that change with time of day and season. The grooves are satiny smooth. Some cups are moderately smooth and others are roughly pecked.

The Iron Creek Meteorite is now in the Provincial Museum, Edmonton, in the display of minerals. The location of its venerable site has been the subject of speculation for more than 30 years. Considerable evidence now indicates that the site was the summit of Wolf Ears Hill (705 m above sea level, 10 km NE by E of Loughheed). The hill has a long N-S axis, and there is a large "North marker rock" 3 km, 359° from the hole in the summit.

Slides of the sites and artifacts will be shown.

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Refinement and Application of Beluga Whale Mandible Ageing Techniques

Session [3] Contributions to Zooarchaeological Research

One of the principal methods currently used to investigate prehistoric hunting techniques involves the construction of mortality profiles based on growth layers in the teeth of hunted animals. However, archaeologists have paid much attention to the fact that in addition to teeth, the bones of some vertebrate taxa also contain annual growth layers. Research reported here builds on earlier published evidence that beluga whale (*Delphinapterus leucas*) mandibles incorporate regular annual growth layers. For the present study, thin-sections were cut from eight beluga mandibles of known age, in order to determine the most reliable location on the mandible for observation of growth layers. This methodology was then used to establish a mortality profile based on over 50 beluga whale mandibles recovered from Elwin Bay, the site of a large-scale historic whale hunt on Somers Island, Northwest Territories.

GARVIN, Richard, Department of Archaeology, University of Calgary

Agricultural Resource Use and Core/Periphery Relations in the Penoles Region, Oaxaca, Mexico

Session [7] Canadian Archaeology Abroad

This paper will focus upon prehispanic agricultural resource use in a high altitude, marginal zone of the Mixteca Alta, Oaxaca. The study area is located between 350-400 km south of Mexico City in an area long referred to simply as Los Penoles. The Penoles region forms a boundary zone between the Mixtec culture to the north and west and the Zapotecs of the Valley of Oaxaca to the east. Archaeological survey of the area has revealed a long history of occupation in the region and of contact with neighbours on all sides. The evidence also points toward the development of a local Penoles polity in the Formative period which by the mid-Postclassic was comparable in size to petty kingdoms which had evolved in the Valley of Oaxaca. The paper explores how the Penoles population was able to support itself in such a marginal environment for agriculture and the nature of their contact with other groups.

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Towards Archaeological Resource Co-Regulation and Management

Session [5] Perspectives in Cultural Resource Management

First Nations are expressing increasing interest in the management of aboriginal heritage. Although involvement to date in Western Canada has been mainly concerned with the disposition of sacred sites and objects, trends in the U.S., Australia, and elsewhere suggest that greater involvement in the co-regulation and management of aboriginal archaeological resources on the non-Indian lands can be expected here. What is co-management, and what can provincial regulatory agencies and the archaeological community generally expect in this new bilateral partnership? In this paper archaeological

resource co-management is examined by considering basic objectives and operating principles, possible co-management opportunities primarily as they relate to resource regulation (e.g. land development review, investigation permitting and compliance, impact management, etc.), and some of the main problems or issues that may hinder co-management. Finally, prospects and recommendations for making archaeological resource co-regulation and co-management work are presented.

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Reindeer Herd Following in Northeast European Russia

Session [11] Contributed Papers: Arctic and Subarctic Archaeology

The Bolshoi or Big Tundra is bordered west by the White Sea, north by the Kara Sea, east by the northern Urals and south by the east-west flowing lower Pechora River. Here, biologists have mapped four reindeer migration routes leading to one calving ground on the White and three on the Kara Sea. The Kara Sea calving grounds are on the Ugor Peninsula, a low Ural extension leading to Novaya Zemlya. Its two eastern calving grounds and migration routes are of archaeological interest because of dozens of archaeological sites and their proximity to the Vorkuta airport and railhead. Both routes run north from the Pechora, the western route following the Rogobaya River upstream where it crosses to the headwaters of the Korotaika. Partly descending the Korotaika it crosses to a tributary of the Kara River which enters Baidaratskaya Bay of the Kara Sea. The eastern route parallels the Usa Valley and crosses to another Kara tributary. The archaeological sites have many Neolithic, Mesolithic and Bronze Age tools, plus artifacts of the current Nentsy Samoyed reindeer herders who have lived here for a thousand years. In the summer of 1994 the tool and art styles and trade goods of the Nentsy and their predecessors will be compared to quantify the type and amount of past human contact between the western and eastern routes.

GORDON, Diana, Department of Anthropology, University of Waterloo

Rocks, Water and a Dog: Structural Variation between the Witch Point Site (CgHa-7) and the Three Pines Site (CgHa-6), Lake Temagami

Session [13] From Georgian Bay to James Bay: Archaeological, Historical and Material Culture Investigations

Excavations in 1993 at the Witch Point Site revealed structural and ceremonial features not previously encountered by the author on other Lake Temagami sites. The prehistoric inhabitants in the Archaic, Middle Woodland and late Woodland periods spent considerable effort in collecting and transporting beach cobbles onto the 4 m high esker top. The cumulative effect is a rock pavement in a sandy substrate. Sweat baths, roasting pits, hearths and lithic raw material caches are among the likely functions for these rock structures.

In the unusually thick, organic enriched Ah horizon, Late Woodland pottery (Huron Incised style) dominates, compared to the predominantly Middle Woodland components at Three Pines Site which is located on a low sand terrace on the opposite lake shore. Of particular note at Witch Point, is the occurrence of red ochre nodules, red ochre paste pottery, clear quartz crystals and a dog burial, which all suggest ritual and ceremonial activities.

This paper examines variation in site structure, settlement features and stratigraphic sequence between the Witch Point Site and the Three Pines Site. It considers several explanations for these major differences based on seasonality, changing lake levels, technological change and social factors influencing variation in site usage and function over time.

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Traditional Knowledge in Site Recognition and Definition

Session [6] Traditional Knowledge and Archaeology

Archaeology in the western subarctic has a relatively long history of using Indigenous Tradition Knowledge. Examination of the role of Traditional Knowledge has played in the recognition of sites in the Yukon and Dene area of the Northwest Territories shows that only in the past few years is Traditional Knowledge being truly integrated into research.

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Bowhead Whaling and the Thule Eskimo Intrasite Structure: A Spatial Approach

Session [11] Contributed Papers: Arctic and Subarctic Archaeology

Recent attempts to model hunter-gatherer intrasite organization have stressed the correlation between physical distance and relative level of interaction, that is, "social distance." Since labour cooperation increases interaction, differences in the level of cooperation for subsistence tasks are expected to be reflected in the spatial organization of residential sites.

Four spatial dimensions (habitation density, degree of site structure, site integration, and nearest neighbour distances) were examined for 18 Classic Thule Eskimo sites in the central Canadian Arctic. The 18 sites were grouped into three zones according to bowhead whale abundance, and thus the probable importance of the bowhead whale in the Thule diet at the respective sites. Expectations for the four spatial variables were then generated on the premise that the greater importance of bowhead whales in the diet, the greater the level of cooperation, and thus the closer the "social distance."

Results indicate that there are interpretable differences in the spatial organization of sites from the three zones. These differences will be discussed in relation to the importance of bowhead whaling in Thule diet, labour cooperation, and "social distance." It is concluded that these factors must be considered in models for Classic Thule intrasite spatial organization.

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The Early Coastal Entry Model: An Update

Session [9] The Settlement of Northwestern North America: New Approaches to an Old Problem

The early coastal entry model continues to be a viable alternative to the interior ice-free corridor route for the initial settlement of the New World. A review of early archaeological sites distributed along the west coasts of both of the Americas indicates that there

were populations with a littoral adaptation well established on both continents by at least 10,500 years ago. Middle Pleistocene archaeological sites in northeast Honshu may represent an ancestral population pool for early coastal movements along the Pacific rim. Paleoenvironmental evidence for marked sea level changes on the northwest coast of North America indicates why Pleistocene coastal archaeological sites are so unlikely to be discovered. The most concrete evidence for a coastal route of initial entry remains linguistic: the comparatively high degree of language diversification on the west coast.

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Landscape Evolution and the Distribution of Early Holocene Archaeological Sites

Session [8] Contributed Papers: Eastern North America

A persistent problem for archaeologists engaged in interpreting prehistoric settlement pattern is the reconstruction of the physical environment at various times in the past. This has important implications for where sites are expected, where we search for sites and, especially, how we interpret human land use from the known distribution of sites. Recent investigations upon the Kaministiquia River delta, near Thunder Bay, Ontario, reveals the importance of palaeo-hydrological and landscape reconstruction for explaining site function, and predicting where other similar sites might be located.

The currently known distribution of Plano (Lakehead Complex) sites in the Thunder Bay area is examined in terms of their spatial association with landscape features defined by conventional topographic maps, air photos, satellite images, and Pleistocene geomorphological reconstructions. With an expanded inventory of "contextualized" archaeological sites, current interpretations of local Plano land use can be refined. The utility of Geographic Information Systems (GIS) for managing and interpreting this range of cartographic data is also addressed.

HANDLY, Martin, Kutenai West Heritage

The View from the Parapet: Middle and Late Prehistoric Adaptations at Charlie Lake Cave (HbRf-39)

Session [15] Charlie Lake Cave: Results of Recent Research

Archaeological research in the Peace River Country has often neglected the presence of well-dated Middle Prehistoric (7,500 to 1,500 BP) and Late Prehistoric (1,500 to 200 BP) assemblages in the area. This paper discusses these two periods in northeastern British Columbia prehistory through an analysis and interpretation of Components 4 through 7 (Middle Prehistoric) and Components 8 through 10 (Late Prehistoric) at Charlie Lake Cave (HbRf-39). Lithic analyses indicate that predominately basecamp activities were occurring during the Middle Prehistoric, whereas Late Prehistoric adaptations display a shift towards game-monitoring activities. It is suggested that changing rock-shelter morphology over the last 7,500 years, and continuing sediment deposition on the 'platform', significantly impacted upon aboriginal site use.

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Ancient Knowledge of Ancient Events: A Preliminary Examination of Dene Traditions and Late Pleistocene and Holocene Events

Session [6] Traditional Knowledge and Archaeology

The oral traditions of the Dene of the Mackenzie Valley contain some intriguing clues to natural events that occurred at the end of the pleistocene and during the holocene. The Yamorina cycle describes beaver ponds that fill the basins of post-glacial lakes. Other narratives seem to describe the White River ash fall of 1250 B.P. This paper seeks to examine Dene views of the past and the archaeological and geomorphological literature in an attempt to understand the cultural perspectives of these two different views of "history".

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"We Can go a Long Way Together Hand-in Hand": Some Thoughts on the Necessity of Respect as a Central Value in Archaeological Research.

Session [19] Plenary Session: Relationships between First Nations and Archaeology
In 1992, the Saskatchewan Association of Professional Archaeologists (SAPA) held a workshop with seven Cree elders to discuss issues of mutual concern. The workshop included a field trip, ceremonies, and discussion groups. Participants discussed burials, sacred places, the Cree word for "archaeologist", the roles of Elders, the use of tobacco, when and how to consult with Elders, and the need for respect. SAPA members received invaluable insight into the significance of places and things as encoded in story and ceremony.

The workshop was primarily an opportunity for Elders and archaeologists to get to know one another and to begin to appreciate each other's concerns and perspectives. It has begun to change archaeologists' attitudes about their profession and how they conduct their work.

Initiatives such as the SAPA workshop are one way to foster respect between archaeologists and Aboriginal people. However, if archaeologists and Aboriginal are ever to work together to protect and understand the past, we must be prepared to make individual commitments to pursuing three avenues of change: making archaeology relevant to Aboriginal communities, becoming aware of our own cultural biases, and acknowledging the validity of traditional knowledge.

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Recovery of Ice Age Horse Remains from Last Chance Creek, near Dawson City, Yukon

Session [14] Poster Session

A partial carcass of a small extinct horse (*Equus lambei*) was found by placer miners Lee Olynyk and Ron Toews in September 1993 on Last Chance Creek near Dawson City, Yukon. AMS dating of a bone sample indicated an age of 26,280±210 B.P. (Beta-67407) for the horse. It is the best preserved carcass of one of this species found in Canada to date, comprising most of the right foreleg with dried flesh, skin and hair on the lower parts, and a large part of the hide, with long blondish mane. In addition, parts of the gut and gut contents were recovered.

Examination of the remains by C.R. Harington reveals that the horse represents an adult in the upper size range for *Equus lambei*, and that its hair ranged from blackish-brown above the hoof, through chestnut, to blondish on the mane. Further studies are planned, including DNA studies, examination of ectoparasites on the hide, and plant macrofossil analysis of the well-preserved gut contents. The latter will contribute significantly to our understanding of Late Pleistocene environments in the warm period prior to the last glacial maximum, and to an understanding of the diet of one of the principal species in the Late Pleistocene Eastern Beringian landscape.

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Remembering 10,000 Years of History: The Origins and Migrations of the Gitksan and related Peoples of the Northwest

Session [9] The Settlement of Northwestern North America: New Approaches to an Old Problem

Although the oldest archaeological date obtained from the territory of the Gitksan and surrounding peoples is 5,500 B.P., the oral histories of these peoples describe a history in the area stretching back to the late Pleistocene. They view oral histories as the exclusive properties of the kinship units involved in the historical events. The accuracy of the stories is maintained by frequent public tellings where they can be confirmed or corrected by hundreds of witnesses. The oral histories are not to be confused with the Raven or trickster stories which the Gitksan do not claim are true.

The oral histories relate how the ancestors of the Gitksan and related peoples came into the northwest by two routes: along interior routes from the north and up the river valleys from the coast. The first people into the area, those from the north, were Raven and Wolf Clan people with matrilineal kinship and speaking a Dene language. The coastal people had a social structure based on smaller kinship units, settled villages and brought the Ts'imsian language. These two early peoples combined to create the foundation of the northwest societies we know today.

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Traditional Knowledge, Heritage Sites Research, and Archaeological Interpretations

Session [6] Traditional Knowledge and Archaeology

The Tuktoyaktuk Traditional Knowledge Project uses a heritage sites approach to impact assessment to determine which may be important to Inuvialuit heritage and to locate archaeological sites on the basis of traditional land use. Among the benefits of this approach are documenting aspects of elders knowledge that are useful to the interpretation of archaeological remains pertaining to the late pre-contact and early-contact periods of Inuvialuit history.

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EeOv-68, a Stratified Middle Period Site Near Brooks, Alberta

Session [10] Contributed Papers: Plains Archaeology I

In 1990, Bison Historical Services Ltd. excavated three areas of site EeOv-68. This stratified Middle Period site is near Brooks, Alberta.

Five occupations (Oxbow [n=2], McKean Complex, Pelican Lake, and unknown) were identified in the first block (42 square metres) and a date of (4,320±50 years B.P.) was acquired on the lowest Oxbow occupation. Six occupations (Oxbow [n=3], McKean Complex, Pelican Lake, and unknown) were identified in the second excavation block (25 square metres) and the Oxbow occupations were dated (4,300±90 years B.P., 3,130±150 years B.P. [rejected] and 4,270±80 years B.P.). The third block of 30 square metres included four occupations (Oxbow [n=2], McKean Complex, and unknown) with a date of 2,860±90 years B.P. on the upper Oxbow floor.

Cross correlation suggests that the five occupations in the first block are correlated with the upper five occupations in the second block. Oxbow occupations in the third block are thought to relate to the Oxbow occupations in the first blocks.

Stratified Oxbow sites in Alberta and on the northwestern plains are relatively uncommon. Given this scarcity, EeOv-68 must be viewed as a significant site. The presence of McKean Complex and Pelican Lake materials only serves to further enhance its significance.

HEITZMANN, Rod J., Western Parks Service Centre, Parks Canada, Calgary

How Much is Enough at Twentieth Century Sites?

Session [5] Perspectives in Cultural Resource Management

Cultural resource managers are increasingly being requested to provide expert advice on archaeological management of late-nineteenth to mid-twentieth century sites. This paper presents five examples of these management issues considered by Archaeological Services, Western Service Centre, Parks Canada. Three sites in British Columbia are discussed. The issues of Gulf of Georgia Cannery focus on questions of mixed deposits, subsequent analysis, adequate and representative samples, limited accesses to site resources and *in situ* archaeological resource protection. The issues at Field CPR yard include contamination and health hazards, volumes of artifacts recovered and their subsequent analysis and storage; and the use of heavy equipment. For the R.B. McLean Lumber Co. National Historic Site, the issues include the role of archaeology in reconstruction activities, identification of the research potential of archaeology at recent sites; and the application of social archaeology. This review of the issues and problems will demonstrate a variety of responses in management of sites of this period.

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Judging a Book by its Cover: A Comparative Evaluation of Surface vs. Subsurface Artifact Distributions from a Late Dorset site in the Central High Arctic

Session [11] Contributed Papers: Arctic and Subarctic Archaeology

In 1992 we reported on our difficulties in obtaining archaeological permits to excavate in the Resolute Bay area of the central Canadian High Arctic. Because of these difficulties we implemented a non-invasive, intensive and extensive surface examination rather than

more traditional excavations at QjJx-10, a late Dorset "village" site on Little Cornwallis Island. In the following year (1993) we were able to satisfy the concerns of the hamlet council and we were granted a full permit. Consequently we were able to undertake a more conventional archaeological approach involving systematic excavations and artifact collection. A comparison of data quality and quantity recovered by these two techniques reveals both the promise and the pitfalls associated with low-impact techniques of archaeological investigation. The complementary nature of the two recovered data-sets suggests that the use of both approaches permits more sophisticated analysis than either technique alone.

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Arviq: A Community-based Project to Commemorate Inuit History

Session [6] Traditional Knowledge and Archaeology

Parks Canada has been working with the community of Arviat, N.W.T., to record the traditional knowledge associated with the island of Arviq. The island was chosen by the community as a site of significance to local Inuit history. The research will be presented to the Historic Sites and Monuments Board of Canada for consideration as a national historic site. This paper will compare the research complete to date against the background of past Parks initiatives in the area of Inuit history.

HINSHELWOOD, Andrew, Old and In the Way Consultants

Whitefish Island Site (CdIc-2), Sault Ste. Marie: Review of Existing Collections

Session [13] From Georgian Bay to James Bay: Archaeological, Historical and Material Culture Investigations

The Sault Ste. Marie fishery was an important seasonal focus for the native populations of the Upper Great Lakes. Early historic records note that the fishery was controlled by one specific nation, the Batchewana or Saulteur, who in turn allowed other diverse groups to fish there. Archaeological evidence from Whitefish Island suggests that this pattern of organizing the fishery was in place from the Middle Woodland Period on. Artifacts collected at the site between 1975 and 1979 reflect a cultural diversity at the rapids rarely seen at other regional sites. Unfortunately, the archaeology of the site has never been presented in a single overview report, although a number of short articles have appeared detailing specific aspects of the site or collections. In this paper, the present condition and disposition of the collections are reviewed, with particular emphasis on the potential this site holds for future research.

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The Stone Circle Site Treatment Review and Workshop: Final Results

Session [5] Perspectives in Cultural Resource Management

During the spring of 1993, the Saskatchewan Heritage Branch sponsored a workshop on the treatment of stone circle sites in Saskatchewan. In attendance were 39 archaeologists representing various private consultant companies, government agencies and universities from every province and state on the Northern Plains. At issue was the way in which tra-

ditional impact assessment and/or mitigation studies treat stone circle sites. Five topic-related sessions were debated in round table discussions led by individual moderators considered expert in the questions under discussion. These debates centred on the research potential of stone circle sites, alternate strategies for retrieving information, and the minimum acceptable levels of assessment and mitigation needed at such sites. A report discussing the results of both the conference and an extensive literature review was later produced with some recommendations for stone circle site treatment guidelines.

This paper will report on the findings of this review. It will examine in turn the five session topics that were debated in the workshop, including issues of both consensus and contention. These debates will be discussed together with the conclusions drawn from the review of the published literature on stone circles. The authors will then make recommendations on the future treatment of stone circle sites.

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Sites Without Lithics: Mammoth Bone Processing Sites in the Late Wisconsinan Loess of Nebraska

Session [9] The Settlement of Northwestern North America: New Approaches to an Old Problem

Situated in the late Wisconsinan (Peoria) loess of southwestern and south-central Nebraska, the La Sena and Jensen Sites date 18,500 and 14,000 B.P. respectively. Radiocarbon dates and stratigraphic positions are consistent with well-dated regional stratigraphy. Thus, the ages of the sites are firmly established. Paleocological reconstruction based on phytoliths indicates a cool steppe environment during the glacial maximum at La Sena. Both sites have disharmonious microfaunal assemblages indicating a cool, dry steppe and a less-seasonal climatic regime.

These sites offer the opportunity to study highly fractured mammoth bone in an eolian taphonomic setting. Three hypotheses, mammoth trampling, human modification and carnivore modification, are presented which could explain the observed patterns of limb bone breakage. The presence of high velocity impact fractures, bone flakes, the selective breakage of certain elements, and the position of some bones suggest the most plausible explanation is human modification. This interpretation is based on analogies with Clovis mammoth bone reduction, replicative experiments reducing and flaking modern elephant bone, and ethnographic studies of modern elephant hunters. The trampling and carnivore modification hypotheses are discussed and rejected. Probable reasons for the lack of chipped stone tools and stone percussion tools are presented.

IVES, Jack, Provincial Museum of Alberta, Edmonton, AB and YELLOWHORN, Eldon, Independent archaeologist, Vancouver, B.C.

Motives and the Creation of Archaeological Knowledge

Session [19] Plenary Session: Relationships between First Nations and Archaeology
Archaeologists are passing through a time in which the conduct and results of their work have been under intense and frequently hostile scrutiny from members of aboriginal communities. While this has resulted in a steady shift in how Canadian archaeologists

feel they should approach their work, there has been a good deal less reflection on the issue of why archaeological research should be done. We pose the question, "Should archaeological knowledge be created at all?" Although there is a tendency to focus on the results of archaeological research, we suggest that it is important to examine our motives for creating archaeological knowledge. The motives themselves can help to answer the question and suggest useful new directions for the discipline. We call for a clearer recognition that archaeological information is closely connected with the fabric of aboriginal histories. Incorporative approaches to a larger vision of anthropology, traditional knowledge, and oral history can yield results that satisfy the standards of rigorous scholarship as well as the aspirations of aboriginal communities today.

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The Fish Lake Archaeology Project

Session [16] The Access to Archaeology Programme: Project Examples

The Fish Lake Archaeology was a joint project of the Kwanlin Dun First Nation and the Yukon Heritage Branch to investigate the history and archaeology of the Fish Lake area, just west of Whitehorse, Yukon. While the exploration of the past was one of the main objectives of the project, public awareness of Kwanlin Dun history and prehistory, community participation, and student training were equally important components. Partnership projects, such as the Fish Lake Archaeology Project, are considered an effective initial step in fulfilling the provisions of the Yukon Land Claim with specific reference to First nations ownership and management of heritage resources on settlement lands.

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An Iroquoian Unit of Measurement: Ramifications for the Study of Iroquoian Longhouses

Session [8] Contributed Papers: Eastern North America

In this paper discussion will focus on the identification of an Iroquoian unit of measurement. Once defined, the recognition of this unit of measurement allows for discussion concerning the superstructure of longhouses, and the interior arrangement of space inside the structures.

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NgLi-2: A Franklin Site on Erebus Bay, King William Island

Session [11] Contributed Papers: Arctic and Subarctic Archaeology

In the summer of 1992, a previously unrecorded site related to the last Franklin expedition was located on Erebus Bay, King William Island. Artifactual and human skeletal remains scattered across the surface of a small island were recovered in the summer of 1993.

The human skeletal remains represent a minimum of eight individuals. An osteological analysis reveals that all individuals are Caucasian males. At least one individual is a sub-adult. Pathological conditions recorded in the remains include osteoarthritis, periostitis,

and dental pathology. A number of elements have elevated lead levels. Most noteworthy is the discovery of cut marks on many of the bones, a finding suggestive of possible cannibalism.

The artifacts include fragments of leather, glass, boots, copper and iron tacks and nails, buttons and fabric. Another possible Franklin site bearing the remains of three disturbed graves was located about 1.5 kilometres away.

KEENLYSIDE, David L., Archaeological Survey of Canada, Canadian Museum of Civilization, Hull, Québec

Archaeology in a Maliseet Community on the Upper St. John, New Brunswick

Session [8] Contributed Papers: Eastern North America

Fieldwork in 1993 continued investigations into the pre-contact history of the Upper St. John River region. An urgent request by the Tobique Indian Band near Perth-Andover resulted in mitigation of a sewage lagoon planned for construction on the 2000 year old Bernard site on the Tobique Reserve. Public health concerns, the site's traditional importance as a sacred place, preservation of medicinal plant collecting areas, and heritage conservation questions, posed difficult choices for the Council and Band members. Preliminary archaeological results helped convince Council to select an alternate lagoon location. Continued interest and support for archaeology by the Council and Tobique Reserve community with assistance from New Brunswick's Provincial archaeological programme and Native Studies programme at St. Thomas University, made possible an eight week site excavation combined with a productive aboriginal training and educational programme.

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A Subjective View of the Department of Archaeology, University of Calgary

Session [1] History of Canadian Archaeology

During the middle 1960s, the Social Sciences were playing catch-up in Canada. Academically, many sub-fields including Archaeology had lagged far behind the United States. Graduate students were forced to leave Canada for advanced education elsewhere if they hoped to compete for museum and academic positions in their own country. The time was ripe for Canadian universities to meet their needs. For its part, the fledging University of Calgary (with backing from the Glenbow Foundation) was wide open to developing innovative programs. With some urging, it broke with the convention and launched a separate Department of Archaeology, unique for North America, which would incorporate relevant aspects of anthropology, and branch out into related fields to become truly inter-disciplinary. Over time, the commitment to a partnership with the natural and social sciences has been diluted, and the department has moved closer to the North American anthropological mode. This shift, which in part has been imposed by the loss of resources, is welcomed by some, deplored by others.

If for no other reason than to salute the many exceptional and talented archaeologists who have completed their academic training at the University of Calgary over the past 30 years, we are unabashedly if immodestly pleased to have played roles in this experiment. It's been fun and, from our perspective, successful more often than not.

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The Industrial Archaeology of Boom and Bust in Western Canada

Session [4] Contributed Papers: Western North America

The cycle of boom and bust is a familiar one to many areas of western North America, particularly where mining occurred. Some of the typical characteristics of boom and bust situations are the relatively rapid influx of an initially predominately male population (often consisting of individuals who were participants in a fairly fluid movement of workers from boom to boom); uncontrolled settlement plan; lack of environmental control; low-level technological approaches replaced by often foreign capitalized higher-end technology; frequent examples of ill-considered scope of development (location, type of technology, scale of development). Two related areas in the Rocky Mountains typify boom and bust beginnings particularly well. These are the Crowsnest Pass of southwestern Alberta and southeastern B.C. and the Kootenays of southeastern B.C. (In the early 20th century, coal and coke from the Crowsnest Pass was vital to the silver/lead/zinc mines and smelters of the Kootenays.) By focusing on how decisions were made regarding the appropriateness of technology chosen in the two areas, some general thoughts on common patterns of industrial boom and bust situations visible in the archaeological record will be discussed.

KILLAN, Gerald, King's College, The University of Western Ontario

Toward a Scientific Archaeology: The Canadian Institute 1852-1896

Session [1] History of Canadian Archaeology

From 1852 to 1896 the Canadian Institute played a pivotal role in transforming antiquarian archaeological endeavour in Ontario into a more scientific proposition. This transformation began with Daniel Wilson who articulated a scientific rationale for archaeological research and who turned the Canadian Journal into the first publication in Canada to discuss archaeological matters on a regular basis. Subsequently, David Boyle, curator-archaeologist of the Canadian Institute Museum (1884-96) developed the program which laid the ground work for the emergence of Ontario as a systematic and scientific discipline.

KLASSEN, Michael, Department of Anthropology, Trent University, Peterborough ON K9J 2Y5

Spirit Images and Medicine Rocks: Results of the 1992-93 Alberta Rock Art Survey

Session [18] Contributed Papers: Plains Archaeology II

The rock art sites of Alberta range from a few pictographs in mountain caves to extensive panels of petroglyphs at Writing-On-Stone. As sacred places for many native groups, rock art sites graphically represent the relationship between a people, the landscape and the spirit world. Despite their cultural and historical significance, rock art sites in Alberta continue to face threats from defacement and development. In the hopes of broadening the appreciation and protection of these vulnerable sites, this project represents the first systematic survey of the province's rock art. During the summers of 1992-93 a total of 119 rock art sites (of which 34 are newly inventoried) were recorded and documented, and their condition and threat from natural and human disturbances were assessed. Although primarily an inventory, the survey produced a number of interesting observa-

tions. Potential cultural functions, possible ethnic associations, and affinities to regional traditions were noted for many sites. A unique site was also identified which may represent a significant cultural association with Southwestern rock art traditions. Finally, contextual associations suggest a significant relationship between rock art sites and sacred landscapes.

KLIMKO, Olga, Western Heritage Services Inc.

Nationalism and the Growth of Fur Trade Archaeology in Western Canada

Session [1] History of Canadian Archaeology

Archaeology plays an important role in nation building, self-identity, and awareness, and is subject to the political, social and economic conditions of the time—the context. These contexts—in which archaeology is practiced—structure or influence how the past is interpreted. Context becomes important in that it gives insight into people's or institution's attitudes toward the world and plays an important role in the recovery of meaning in a particular case. Archaeologists function in a culture composed of certain beliefs and social relations which they inherit. Rarely, however, do researchers reflect on how these conditions or modes of thought arose. An historical approach helps establish the social and cultural contexts in order to examine the connections or interplay between the two in a broader historical perspective. Such a self-critical historical analysis should reveal why certain paths were followed, what the end results were and whose interests they served. In this study fur trade archaeology in western Canada and its development in the 20th century, particularly the last half century, form the context for the production and use of knowledge. The political, cultural and academic climates which influenced the development of fur trade archaeology will be examined within the context of nationalism.

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ANDRE, Alestine, Gwich'in Tribal Council, P.O. Box 1509, Inuvik, NT X0E 0T0;

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Gwich'in Traditional Knowledge and the Potential for Archaeology in the Gwich'in Settlement Area

Session [1] Traditional Knowledge and Archaeology

Over the last two years, we have been working with the Gwichya Gwich'in Elders from Tsiigehtchic (Arctic Red River, Northwest Territories) on a traditional knowledge study. This project was initiated in 1992 by the Northern Oil and Gas Action Plan (NOGAP), and continued in 1993 under the auspices of the Gwich'in Tribal Council, which believed that this work would help to meet their objective of actively preserving and promoting Gwich'in heritage.

The main objective of this study has been to map and record land use and occupancy in the Gwichya Gwich'in homeland (place names, trails, resources and camp sites used). Besides the mapped information, we also asked a number of more general questions that would provide further insight into the archaeological record of the area. We recorded information on the layout of camps, locations and use of traditional houses, trade relationships with neighbouring Slavey, Inuvialuit, and White traders, use and locations of ochre, lithic sources, caribou fences and boiling rocks, the treatment and disposal of bones and hair from moose, caribou, fish, beaver, muskrats and waterfowl.

This paper will present the results of this research focussing on the vital role that Gwich'in traditional knowledge played in the project and how this information could be used to elicit archaeological information in the area. It will also discuss the role the Gwich'in Tribal Council has played and is planning to play in the future through a newly created Gwich'in Social and Cultural Institute.

KROZSER, Kit, Environmental Programs, 3NE, SaskPower, 2025 Victoria Avenue, Regina, SK S4P 0S1

Impact Assessment for Low-Impact Developments: Saving Surface Features in Saskatchewan

Session [5] Perspectives in Cultural Resource Management

Archaeological impact assessments on relatively low-impact linear development projects such as plowed-in cable and overhead distribution lines are becoming increasingly more common in Saskatchewan. Disturbances associated with these projects are mostly limited to the surface, with some minimal and/or sporadic subsurface disturbance. In the past, these developments may have been by-passed in the screening process, due to the limited degree of impact involved. However, the increasing quantity of such development projects, and the growing awareness of the significance of stone circles and other surface features has motivated a second look at low impact development impacts. This paper describes SaskPower's relatively intensive heritage impact assessment program for low-impact linear projects. Some of the unique concerns and problems of assessing low-impact linear projects are presented, as well as the resulting research benefits.

KULLE, Barbara J., Fedirchuk McCullough & Associates Ltd., 200, 1719-10th Avenue S.W., Calgary, AB T3C 0K1

A Re-evaluation of the Red Creek Medicine Wheel Complex of Southern Alberta

Session [18] Contributed Papers: Plains Archaeology II

The Red Creek Medicine Wheel Complex (DgPa-1) was originally recorded in 1965, west of the two of Coutts, Alberta on the Alberta/Montana border. In 1968, prior to the establishment of the Alberta Historical Resources Act, the central cairn of the medicine wheel was impacted by pipeline construction. Although considered 'destroyed' during a reassessment in 1976, a subsequent examination in 1991 by Fedirchuk McCullough & Associates Ltd., clearly indicated that approximately one-half of the central cairn is intact. In addition, in excess of 285 cultural features were recorded and mapped within the site complex area, including the medicine wheel, 85 stone circles/arcs, 198 cairns (isolated features and alignments), and an extremely well preserved segment of the historic Whoop-Up Trail. Dozens of additional prehistoric sites have been identified during subsequent cultural resource management assessments within a 5 kilometre radius of the site complex. An evaluation of the site's integrity and significance is offered, using comparative examples from the Sundial Hill Medicine Wheel (EaPe-1) in Alberta and the Halbrite Medicine Wheel Complex (DiMv-2, 4, and 133) in Saskatchewan to illustrate the discussion.

LAM, Yin, Department of Anthropology, SUNY, Stony Brook

Confrontational Scavenging: Defining an Antecedent to Early Hominid Hunting

Session [7] Canadian Archaeology Abroad

During the course of its evolution, the hominid lineage has progressively risen in trophic level to take its current dominant position. For decades, archaeologists have attempted to interpret the meat-procuring strategies of hominid populations at different evolutionary stages. While debate continues, it has been proposed that early hominid species in the Plio-Pleistocene obtained meat primarily by scavenging but that, by the late Pleistocene, hominids had become potent hunters. In the past decade, researchers have attempted to identify behavioural grades along this scavenging-hunting continuum - most notably, marking an increase in hunting ability between the Middle and Upper Palaeolithic and, more recently, defining a stage of "active," or "confrontational," scavenging in the Plio-Pleistocene and Early Pleistocene.

Confrontational scavenging - a strategy through which hominids obtain meat by displacing carnivores from their prey - has been proposed as a likely early hominid foraging behaviour that would fill a hypothetical grade between passive scavenging and the earliest opportunistic hunting. The transition from passive to confrontational scavenging, especially if it significantly predates the origin of hominid hunting, has important causal and consequential implications for the interpretation of early hominid behaviour. First of all, it implies a certain social and technological sophistication among its practitioners. Secondly, the resulting, and presumably consistent, access to meat would have rendered possible activities heretofore unexpected of pre-hunting hominids, such as the ability to colonize environments in which plant resources were seasonally limited (e.g. glacial Europe).

From an ecological perspective, observations of the behaviours of extant carnivore species do not support the likelihood of a confrontational scavenging niche for early non-predatory hominids. From an archaeological perspective, the cumulative nature of most faunal assemblages would obscure the features necessary to distinguish confrontational scavenging from other meat-procuring strategies.

LANDALS, Alison, Fedirchuk McCullough & Associates,

Prehistoric Kill-sites in the Oldman River Dam Project Area: A Summary

Session [17] The Oldman Dam Archaeological Mitigation Project in Review

The Oldman River Dam Archaeology Project was a multi-year Historical Resources Impact Mitigation conducted in southern Alberta. One subcomponent of the overall project was the Killsites Mitigation Programme, undertaken by Environmental Management Associates. The three year Killsites Mitigation Programme included an exploratory backhoe programme and investigation of 21 sites within the reservoir. The 21 sites varied widely in terms of size, scope and complexity. Of particular interest is the Smyth site (DjPm-116) interpreted as a large communal buffalo jump to which groups of people returned periodically on a seasonal basis during the Pelican Lake Phase. In this paper the results of the Killsites Mitigation Programme will be summarized with attention to the implications for modelling regional subsistence and settlement patterns in the study area.

LANDALS, Alison J., Fedirchuk McCullough & Associates Ltd., 200, 1719-10th Avenue S.W., Calgary AB T3C 0K1

The Miniota Site (EaMg-12): An Avonlea Site in Southwestern Manitoba

Session [10] Contributed Papers: Plains Archaeology I

In the late summer of 1992, Fedirchuk McCullough & Associates Ltd., conducted trench monitoring of the Assiniboine River crossing near Miniota, Manitoba on behalf of Trans-Canada PipeLines Ltd. During the monitoring programme a highly significant deeply buried site (EaMg-12) dating to the Avonlea phase was encountered. Major mitigative excavations were subsequently undertaken. The Miniota Site is interpreted as representing a relatively rare archaeological find in southwestern Manitoba, consisting of a single Avonlea occupation floor with no admixture of cultural material from former or subsequent occupations. Flooding of the Assiniboine River very soon after the occupation sealed the cultural level, resulting in remarkable faunal preservation, particularly of fetal bison and fish bone. The rich array of cultural material included lithics, ceramics, unusual bone tools, charred seeds, and faunal remains, sheds new light on the nature of Avonlea subsistence patterns in the Parkland periphery. A second Avonlea site, the Broadview site from southeastern Saskatchewan, also discovered during TCPL pipeline monitoring, will be briefly considered for comparative purposes. Together, the two sites show consistency both in cultural context and method of discovery which is of great archaeological interest, particularly for the field of cultural resource management.

LANGLEY, Susan B.M., Department of Archaeology, University of Calgary
Samed Ngam and Koh Talu, Underwater Archaeology in Thailand
Session [7] Canadian Archaeology Abroad

In 1986, Canada joined Australia, France and New Zealand as an Associate Member of the Southeast Asian Ministers of Education Organization (SEAMEO). An initial SEAMEO Project in Archaeology and Fine Art (SPAFA) led to the establishment of the headquarters of these programs in Bangkok, Thailand. CIDA funding has enabled the Member nations (Thailand, Malaysia, Indonesia, Philippines, Brunei Darussalam, Singapore, Laos, and Kampuchea) to offer a variety of museum, archival and archaeological training courses. Included in these have been a number of underwater archaeology projects. Two of the most recent involved the excavations of an 18th-Century Chinese vessel in a water-saturated context (mangrove swamp) and of a 19th-Century merchant vessel in the gulf of Thailand. Participants came from museums, government and military positions, as well as universities and from four of the Member countries. Instructors came from Thailand, France, Australia and Canada. This paper discusses Canada's role in these projects as well as presenting the work undertaken. Possibilities for future involvement, both underwater and in more traditional settings, are also examined.

LANGLEY, Susan B.M., Department of Archaeology, University of Calgary, Calgary AB T2N 1N4

The AUS Oldman River Dam Monitoring Project

Session [17] The Oldman Dam Archaeological Mitigation Project in Review

A variety of sites throughout the Oldman River Reservoir were selected, as part of a larger project, to study the taphonomic (chemical and mechanical) processes affecting submerged cultural remains. The project serves three main purposes. First, it provides information about the taphonomic processes, both cultural and natural, occurring as a result of the freshwater inundation of both historic and prehistoric cultural resources. Second, it records a number of specific sites and documents the processes these are undergoing. Third, it provides a management tool for these and other comparable archaeological resources. The value as a tool is evident in that the research makes specific refer-

ences to reservoir situations, is long term, and includes an experimental component. The latter tests and evaluates a variety of means of protecting sites *in situ*; it examines the effects of inundation on buried sites, surface features and on the movement of artifacts on the surface. This facilitates the formulation of both predictions about the effects of inundation on different types of sites under various conditions, and, recommendations as to how these predictions may be implemented.

The research encompassed by this project provides sufficient information to permit reliable statements, even as generalization, about the taphonomic effects of inundation on both historic and prehistoric cultural remains.

LAROSE, François M., Musée régional du Haut-Richelieu, 182 rue Jacques-Cartier Nord, Saint-Jean-sur-Richelieu, Québec J3B 7W3

Le potentiel archéologique préhistorique du Haut-Richelieu

Session [16] The Access to Archaeology Programme: Project Examples

Il s'agissait d'évaluer les zones du territoire quant à la probabilité d'y découvrir des sites préhistoriques. Ces derniers font référence à une occupation amérindienne (algonquienne et iroquoise) antérieure à l'arrivée des Européens dans la région, au XVIII^e siècle.

Le mandat comprenait les éléments suivants: (1) Inventaire des matériels archéologiques déjà recueillis dans la région et dans les régions voisines (Basses Terres du Saint-Laurent et région du Vermont); (2) Inventaire des ressources documentaires; (3) Établissement d'une cartographie détaillée des zones à haut potentiel; (4) Production d'un outil pédagogique permettant au personnel du musée de répondre, au moins sommairement, à toute interrogation concernant la période préhistorique de la région et les traces archéologiques qu'y laissèrent les populations humaines.

L'étude comprend 116 pages recto-verso de format 8 1/2 x 14 auxquelles sont jointes en pochette tableaux, cartes archéologiques, cartes de végétation et photos aériennes. Pour la réaliser, une première étape a consisté à inventorier l'ensemble des sources de documentation archéologique et historique disponibles. Une deuxième étape fut la prise de contact avec les représentants des communautés amérindiennes concernées, dans le but de prendre connaissance de leur point de vue en lien avec leurs traditions orales. Puis, nous avons communiqué avec des archéologues professionnels travaillant dans la région. Ces échanges nous ont permis d'intégrer nos recherches aux travaux actuellement en cours et de dégager un cadre d'analyse pertinent. Finalement, nous avons procédé à une sélection des regroupements significatifs, nous avons proposé différentes hypothèses de séquences d'occupation, particulièrement pour les zones à haut et moyen potentiel. Des recommandations sont émises en conclusion quant à la poursuite des travaux archéologiques futurs. Parmi ces recommandations, figurent principalement la recherche d'un village iroquoien d'importance majeure que plusieurs archéologues supposent enfoui dans la région sud du Haut-Richelieu. On peut certainement envisager, que suite à la découverte probable d'un important village iroquoien dans le Haut-Richelieu, celui-ci devienne un parc archéologique unique au Québec.

Parce que ces résultats touchent au plus haut point les peuples amérindiens concernés, nous avons remis l'étude, lors du lancement, aux représentants de l'Alliance autochtone locale. Ceux-ci se sont montrés vivement intéressés à participer activement à un projet d'inventaire archéologique visant à retrouver le village iroquoien. Nous travaillons

présentement, conjointement avec l'Alliance autochtone, à rechercher des fonds pour financer notre projet. Notre but est d'amorcer les travaux au printemps 1995.

LAWSON, Kim, B.C. Archaeology Branch

Cultural Brokerage in Times of Change

Session [2] Cultural Resource Management on First Nation Lands

CRM today operates in a rapidly changing social and political context. Archaeologists doing CRM projects find themselves places in the role of the "broker" between First Nations communities and clients with respect to cultural issues. Cultural brokerage has therefore become an essential part of CRM archaeology. While improving communications between those directly involved is an immediate goal, educating the general public about CRM is also crucial. Respect, investing time, and listening are all basic to building bridges.

LELLO, Richard, 10032 - 115 St., Apt. 11, Edmonton, AB T5K 1T1

Shellfish and Seasonality: An Example from the Portuguese Mesolithic

Session [3] Contributions to Zooarchaeological Research

Seasonality determinations were undertaken on specimens of *Cerastoderma edule* Linnaeus (the common European cockle) recovered in midden deposits during test excavations at the Portuguese Mesolithic site of Pandeiro. Modern specimens were used for calibration purposes. Acetate-peel replicas of shell sections were prepared, and growth structures were examined using an optical microscope. Winter growth disturbance lines and tidal growth increments were identified on modern and archaeological specimens. Growth increment patterns were observed on the archaeological sample, and were identified as monthly growth increment groups. The analysis indicates that cockles were collected from high-shore levels at Pandeiro between mid-August and early October.

LEVINE, Mary Ann, Department of Anthropology, University of Massachusetts, Amherst, MA 01003

Reconstructing Exchange Networks: Native Copper and Prehistoric Hunter-Gatherers in Northeastern North America

Session [8] Contributed Papers: Eastern North America

Native copper artifacts have been unearthed from a variety of Late Archaic and Early woodland sites in the Northeast. Although most scholars have assumed that native copper was procured exclusively from Lake Superior deposits, this assumption has not been tested. This paper questions the dominant model of native copper procurement in Northeastern prehistory and reports on preliminary findings from trace-element fingerprinting analyses of copper from numerous archaeological sites and geological deposits. This research investigates whether Late Archaic and Early Woodland hunter-gatherers utilized one dominant source of copper or procured copper from several deposits. The implications of this work are examined.

MacDonald, Caroline, Ataguttaaluk School, Igloolik

The Igloolik Archaeology and High School Education Project

Session [16] The Access to Archaeology Programme: Project Examples
Video

MacEACHERN, Scott, Department of Archaeology, University of Calgary, Calgary, AB T2N 1N4

Iron Age Archaeology in the Southern Lake Chad Basin: The Projet Maya-Wandala 1992-1994

Session [7] Canadian Archaeology Abroad

The Projet Maya-Wandala, based at the University of Calgary, has two primary research goals: (1) the investigation of the transition from earlier Iron Age communities to the centralized Wandala state around the northern Mandara Mountains of Cameroon and Nigeria, between AD 1000 and AD 1800, and (2) the examination of relationships between different Iron Age cultural/ethnic groups in this region, and especially between state-level and 'peripheral', non-state-level societies. We are particularly interested in the processes through which local societies become politically stratified. To this end, we have conducted two seasons of archaeological and ethnoarchaeological research, one on each side of the Nigeria-Cameroon border and within the traditional boundaries of the Wandala state. We have to this point discovered 135 sites and conducted excavations on nine of these.

In this paper, I will discuss the result of these investigations. These offer significant data on the establishment and political nature of the Wandala state, the relationship between Muslim Wandala and non-Muslim 'pagan' groups and—serendipitously—on the Neolithic-Iron Age transition in this area. I will also discuss future Projet Maya-Wandala research.

MacKinnon, Michael, Department of Anthropology, University of Alberta, Edmonton, AB
Creating and Testing a Zooarchaeological Model Derived from the Information in the Classical Roman Texts

Session [7] Canadian Archaeology Abroad

In Roman Archaeology it is often the case that some written texts survive that can be used in reconstructing aspects of the ancient culture. These documents, records, inscriptions, and literary works include numerous references to animals. The greatest volume of information about the role of animals in Roman life is contained in the treatises on farming and husbandry by the four principal agricultural writers: Cato, Varro, Columella, and Palladius. Pliny the Elder records much relevant information in his encyclopedic volumes about nature, while Apicius lists recipes requiring animals resources in his cookbook. Combined, these sources provide a general picture of the role of animals in the Roman world which acts as a basis from which to compare results obtained from zooarchaeological analyses. This paper synthesizes this information in an attempt to develop a model with a list of expectations which may be applied to the faunal record from Roman period sites in Italy. Attention will concentrate on the pig, by far the most important animal in the Roman diet. Its remains from several major archaeological sites will be used to test the validity of the model.

MAGNE, Martin, Archaeological Services, Parks Canada

Comparative Analysis of Microblade Cores from Haida Gwaii

Session [4] Contributed Papers: Western North America

Microblade cores recovered from intertidal contexts in Gwaii Haanas are compared to others from the northern Northwest Coast. Metric analyses clearly differentiate the ear-

lier, ca. 9,000 BP technology from the later, ca. 7,000 BP specimens. Cores from Richardson Island are closely related to those from Lawn Point while Kasta and Skidegate Landing cores are clearly different. Non-metric characteristics also differentiate assemblages and appear to indicate development of less-specialized lithic technology through time.

MALAINEY, Mary, Department of Anthropology, University of Manitoba, Winnipeg, Manitoba, R3T 2N2

A Consideration of Native Dietary Preferences and Implications for Archaeological Models

Session [18] Contributed Papers: Plains Archaeology II

The diet of Native peoples on the northern plains, parkland and southern boreal forest played a major role in determining their seasonal movements. From historic and ethnographic accounts, there was a clear hierarchy of foods; bison was the first preference of groups who inhabited the plains and parkland. Bison hunting likely occurred throughout much of the winter on the grassland edge of the parkland, where bison herds generally wintered. The seasonal availability, or even abundance, of other food resources did not necessarily imply their exploitation. Some seasonally abundant food resources, such as fish, probably had deleterious effects on those whose diet consisted predominately of red meat. These resources were probably avoided, contrary to archaeological models.

McALEESE, Kevin, 31 New Cove Road, St. John's, Nfld.

The Lester/Garland House, Trinity, Trinity Bay, Island of Newfoundland

Session [8] Contributed Papers: Eastern North America

The Lester/Garland House, an 18th/19th century merchant's mansion in Trinity, Trinity Bay, Island of Newfoundland, is probably the oldest standing brick building on the Island. Built c. 1760, renovated c. 1820, and occupied up until the mid-20th century, the house is presently an unstable ruin without a roof or side walls and only two, two storey end walls. In its prime it was a three storey home to a series of merchants who ran one of the largest mercantile businesses on the Island.

Archaeology conducted there in 1993 contributed to the building's architectural history, especially the sequence and nature of renovations. Remains of an attached wooden kitchen were also unearthed and a faunal sample recovered. This assemblage will be discussed in terms of economic and cultural connections between Newfoundland and the British counties of Dorset and Devon. References will also be made to proposed plans for rebuilding the mansion and the use of recovered data in those plans.

McDONALD, Mary M.A., Department of Archaeology, University of Calgary

Neolithic Projectile Points from Dakhleh Oasis, Egyptian Western Desert: Some New Approaches

Session [7] Canadian Archaeology Abroad

From the deserts of North Africa come some of the finest chipped stone arrowheads found anywhere in the world. To date however, prehistorians have used these rich Saharan collections almost exclusively in the construction of time-space charts. In the meantime archaeologists working elsewhere -- in North American, the Levant and Europe -- have developed new lines of research on projectile points in which, for

instance, experimentation, use wear analysis, and ethnographic studies help elucidate the role of these hunting tools within prehistoric societies. In this paper, a collection of some 200 arrowheads from mid-Holocene Dakhleh Oasis in the Egyptian Western Desert is considered in the light of some of these new approaches. In particular, changes noted in oasis arrowhead design through time may reflect a change in subsistence practices as former hunter-gatherers moved to a greater dependence upon pastoralism.

McGHEE, Robert, Archaeological Survey of Canada, Canadian Museum of Civilization, Hull, Québec, J8X 4H2

Presenting Indigenous History: The First Peoples Hall at the Canadian Museum of Civilization

Session [19] Plenary Session: Relationships between First Nations and Archaeology
Archaeologically-ground versions of ancient history are offensive to many indigenous North Americans. The proposed presentation of this material to the public, in a publicly-financed museum, has met with varied objections. For the past two years, a team of individuals representing the cultural, social and artistic interests of First Peoples, has worked with CMC archaeologists and ethnologists in developing a major exhibition hall devoted to First Peoples' history and culture. From an initial position of mutual suspicion, this group has attained consensus on a mode of presenting ancient history which is satisfactory to both First Peoples representatives and archaeologists.

MEYER, David, Department of Anthropology and Archaeology, University of Saskatchewan, Saskatoon, SK S7N 0W0

Is This Really Laurel? Middle Woodland on the Northwestern Periphery

Session [11] Contributed Papers: Arctic and Subarctic Archaeology

Laurel components have now been excavated at three sites along the upper Saskatchewan River and one on the adjacent North Saskatchewan River. Recoveries from these components have included potsherd, small side-notched arrowheads, and ground stone celts. With regard to ceramics, typical coiled, smooth-surfaced Laurel pottery is present but, in addition, net-impressed pottery has been recovered from two sites. Net-impressed pottery and small arrowheads (made on thin flakes) are not characteristic of Laurel assemblages elsewhere - and celts are rare or absent. These unusual aspects are believed to relate to the late (even relic) date of this occupation, and to interaction with peoples of the Avonlea phase on the adjacent parklands.

MIDDLETON, Ron, Civil Projects Division, APWSS, 15th Floor, College Plaza, Edmonton AB T6G 5A9

On the Critical Path

Session [17] The Oldman Dam Archaeological Mitigation Project in Review

As Program Manager for the Historical Resources Mitigation Program for the Oldman River Dam Project my first responsibility was to ensure that the archaeological teams had adequate time and resources to complete their work while not interrupting the project's construction schedule or blowing the budget. At the same time I had to deal with those critical of the program. These critics ranged from those who felt that the entire program was a waste of money to those who believed that no amount of "mitigation" could compensate for the loss. How did we deal with them and how can the lessons of the Oldman help us on future projects?

MILLS, Elsie, High Hopes Rural Development Corporation, Kelfield, Saskatchewan

The Herschel Petroglyphs Project

Session [14] Poster Session

The RDC High Hopes Access to Archaeology Grant for 1994 will be used to learn more about the prehistoric rock art in the vicinity of Herschel, Saskatchewan. This will be for the purpose of future interpretation as part of long term development plans, and for planning the protection of these exceptionally significant heritage assets. The 1994 grant will also aid in the involvement of the native community, some of whom were trained in the 1993 field work. The Herschel project is part of a major ongoing investigation of the rock art of southwestern Saskatchewan. Its general direction is the archaeological placement of the art, both temporally and culturally. Secondary foci are its conservation, protection, and long-term public involvement.

MILNER, Claire McHale, Matson Museum of Anthropology, Penn State

Regional Identity and Interregional Interaction during the Juntunen Phase, A.D. 1200 - 1620.

Session [13] From Georgian Bay to James Bay: Archaeological, Historical and Material Culture Investigations

From the thirteenth to the early seventeenth centuries, populations inhabiting the Lower and Upper Peninsulas of Michigan and southern portions of the Canadian Shield manufactured stylistically similar ceramic vessels. Analysis of 1907 vessel fragments from 66 sites demonstrates considerable stylistic homogeneity during the Juntunen phase that reflects a strong regional identity. However, the sharing of certain style markers with adjacent ceramic traditions discloses critical interaction beyond the Juntunen region, particularly after A.D. 1400. The relative lack of diversity among the Juntunen phase assemblages and the interaction with neighbouring traditions is linked to social strategies to buffer risk.

MITCHELL, Don, University of Victoria, Victoria, B.C.

Two Decades of Change: British Columbia Archaeology in the 1960s and 1970s

Session [1] History of Canadian Archaeology

Transition from the 1960s to the 1970s coincided with a marked change in the nature of British Columbia archaeology. From a discipline serving largely "academic" goals, it shifted to one with primarily "resource management" objectives. Causes for this significant change in orientation were partly politically inspired, mostly economically driven.

MOLNAR, James, University of Albany, SUNY

Spatial Analysis of the Hunter's Point Site: Linking Artifact Patterning and Behaviour

Session [13] From Georgian Bay to James Bay: Archaeological, Historical and Material Culture Investigations

The Hunter's Point Site, on the Bruce Peninsula, Ontario, was excavated during 1990-92. Over 10,000 faunal elements were recovered and some 40% of these can be identified to family, genus or species. The spatial analysis considers these elements, examining patterning and/or clustering in their distribution. Methods employed vary according to the complexity of the site portion being analyzed. Emphasis is placed on the fish species. Patterns will be considered in the context of the habits of former fish populations in

Georgian Bay, attempting to find correlations between hypothesized availability and actual distribution. Results will be used to evaluate models of Native fishing practices.

MORLAN, Richard E., Canadian Museum of Civilization, Archaeological Survey of Canada

Bison Bone Fragmentation and Survivorship: a Comparative Model

Session [3] Contributions to Zooarchaeological Research

Zooarchaeologists usually describe a bone fragment as a particular portion or segment using terminology based on skeletal orientation (e.g., proximal, anterior, lateral). A more precise understanding of bone fragmentation can be achieved by naming portions for discrete anatomical features and defined zones. Since the anatomical features are the diagnostic criteria for identifying and orienting bones, each specimen normally has at least one such portion, and a complete element contains all of them. This recording method facilitates study of the relationship between survivorship and volume density, and it enhances inter-site comparisons. The method employs the minimum number of elements (MNE) and the minimum animal units (MAU) across a site-wide aggregate. Although illustrated with an analysis of bison bones from Harder (FbNs-1) and Sjøvold (EiNs-4) sites in Saskatchewan, the method can be adapted for the study of other taxa as well as for inter-species comparisons.

MUNRO, Natalie, Department of Archaeology, Simon Fraser University, Burnaby, B.C., V5A 1S6

The Relationship between Population Aggregation and Faunal Intensification: A View from the Mesa Verde Region, Colorado

Session [3] Contributions to Zooarchaeological Research

Analysis of thirteenth century domestic turkeys (*Meleagris gallopavo merriami*) from the Colorado Plateau reveals that an intensification in domestic faunal sources occurred in response to similar factors which led to aggregation of the Anasazi populations. It is proposed that population pressure, resource stress and restricted mobility led to a reduction in the wild game populations in the region, creating impetus for the increased production of locally controlled faunal sources. Previous research has emphasized the 'why' behind aggregation and often assumes that it was caused by the need to intensify food production. The present research suggests that intensification, at least of faunal resources, and aggregation occurred simultaneously due to endemic conditions at the time.

NAGY, Murielle, Department of Anthropology, University of Alberta, Edmonton, AB T6G 2H4

'Long Ago People:' Applying Inuvialuit Oral History

Session [6] Traditional Knowledge and Archaeology

From 1989 to 1993 the Inuvialuit Social Development program directed an oral history project designed to document Inuvialuit knowledge and land use of the Yukon north slope. Three major applications of oral history data to the field of anthropology are presented. The first concerns the link between methodological aspects of the study and archaeological data. A second consequence of the Inuvialuit oral history project is an increase in historical information concerning the Tuyurmiat, a poorly known people who occupied the Yukon north slope. Finally, inland migrations of the Nunatarmut at the end

of the last century, and a previously unrecorded period of co-habitation with the Gwich'in around the Old Crow Flats, were also documented.

De 1989 à 1993 le Inuvialuit Social Development Program dirigea une étude sur la tradition orale des Inuvialuit afin de documenter leur connaissance et utilisation du territoire du nord du Yukon. Trois applications des données de l'histoire orale au domaine de l'anthropologie seront présentées. Dans un premier temps, nous parlerons des problèmes méthodologiques du projet et de leur pertinence au point de vue archéologique. Une seconde conséquence de cette étude fut une augmentation des données historiques concernant les Tuyurmiat qui vivaient le long de la côte nord du Yukon. Finalement, la migration des Nunatarmut à l'intérieur des terres à la fin du siècle dernier et leur cohabitation avec les Gwich'in de la région d'Old Crow furent aussi documentées.

NICHOLAS, George, Simon Fraser University/ Secwepemc Cultural Education Society
CRM Through Education and Research: Archaeology With, For, and By the Shuswap Nation, British Columbia

Session [2] Cultural Resource Management on First Nation Lands

The management of cultural resources is most effective when it occurs before projects are off the drawing board. Education is an important area of CRM that is often overlooked, yet it addresses many of the long-term problems that resource managers face. Since 1989, the Secwepemc Cultural Education Society and Simon Fraser University have been involved in a collaborative university education venture directed at the needs of First Nations peoples, with archaeology an important component of the program. Training in archaeology and CRM is offered through course work and on-going archaeology field school that is not only involved with a long-term research project on prehistoric land use, but also mitigative field investigations conducted on behalf of the Kamloops Indian Band. In collaboration with the Shuswap Nation and the Secwepemc Museum, the SCES/SFU program is working to develop an integrated approach to culture resource management and archaeological research in which Native peoples have an increasing role in the definition, identification, and management of cultural resources.

NICHOLSON, B.A., Department of Native Studies, Brandon University, Brandon, Manitoba, R7A 6A9

Mississippian Influx and Influence in South-western Manitoba During the Late Pre-historic Period

Session [10] Contributed Papers: Plains Archaeology I

Late Prehistoric Period ceramics which have been recovered in south-western Manitoba clearly indicate influence from the Eastern Woodlands; in particular, the Oneota and Sandy Lake cultures. Until very recently most of these seemingly scattered finds could be accounted for by postulating trading interaction or handiwork of non-local brides residing among the indigenous Blackduck/Duck Bay and Selkirk populations of the area. However, the identification of sites which are dominated by these wares or in some cases made up exclusively of these 'exotics' suggests movement of entire family groups or bands circa A.D. 1000 and terminated circa A.D. 1500. The peak of this influx appears to have coincided with the disappearance from the contemporary scene of Blackduck ceramics in south-western Manitoba and the final collapse of the large Mississippian chiefdoms to the south-east.

When LaVerendrye travelled into the eastern fringes of this region circa A.D. 1740, the area was largely under the control of the Assiniboine although the Dakota, Cree, and possibly the Gros Ventre were also present. All of these groups were largely supplanted by the Ojibway in the next few decades.

NICHOLSON, Bev, Brandon University, Brandon, Manitoba

Forum on Guidelines from the Aboriginal Heritage Committee

Session [19] Plenary Session: Relationships between First Nations and Archaeology

NICKERSON, Steve, Designed Buildings Systems, Ottawa

CADD/Database Integration for Field Use (A Poor-man's GIS)

Session [12] Advances in Computer Applications in Archaeology

The lower prices and smaller sizes of the computers available today suggest that we can now consider taking these machines to the field to aid in the organization and cataloguing activities currently being undertaken manually. There are, however, some major differences that will be encountered when preparing for 'computer assisted field work'.

The fundamental organization of the data may have to be examined to assure that it will flow smoothly from field notes to the computer so that the information is forever up to date. As well as simplified database interface needs to be developed to present what is already known about the site, both historically and what was discovered yesterday, in a form that will assist in making the day to day decisions on which will ride the success or disappointment of the season.

We are in the process of preparing such tools for an excavation, in the summer of 1994, at Halai on the Aegean coast of Greece. The intent is to have the Cadd drawing act as a graphic interface to the database of the site. The Cadd software will be Autocad with the new ADE (Anaheim) extension as well as the native 'structured query language' extension (ASE) to talk to a Dbase IV database. Input for Cadd drafting will be expedited by using a simplified layer set and symbol library, detailed instructions on how measurements can be taken to speed input and reduce errors and by use of CCD cameras and, perhaps semi-automatic extraction of features from these images using photogrammetric techniques.

Practical details, such as ways of working around the lack of digitizers and high resolution colour monitors that the Cadd personnel are used to and communications that will allow for off-site backups, image processing and other tasks impractical on site to be undertaken elsewhere will also be discussed.

NOBLE, William C., Department of Anthropology, McMaster University, Hamilton, ON

J. Norman Emerson (1917-1978)

Session [1] History of Canadian Archaeology

As one of the third generation of Canadian archaeologists, Professor J. Norman Emerson (1917-1978), of the University of Toronto, had a substantial and significant impact on the discipline in Canada. He was the first to establish a continuous full-time university programme in archaeology, and did so over a period of 30 years. Many of his former students, both male and female, provide a virtual "Who's Who" of Canadian archaeology. His specific research interests focused upon the late Archaic, Middle Woodland, and late Ontario Iroquois (particularly the Huron) native cultures. This paper draws upon publica-

tions, professional letters and papers, student participation, and oral testimonies to analyze the varied contributions of this truly active, creative, and influential man.

OBERHOLTZER, Cath, Department of Anthropology, McMaster University, Hamilton, ON

Tied to the Past: James Bay Cree Material Culture

Session [13] From Georgian Bay to James Bay: Archaeological, Historical and Material Culture Investigations

Ranging from exquisitely beaded hoods to utilitarian fishing nets and snowshoes, the material culture of the East Cree of the James Bay area provides tangible links between the contemporary indigenous population and their predecessors. These material objects document such historical events as the arrival and subsequent influence of non-Native groups and such social features as the complementary gender roles required to produce items for survival. By drawing from research on contemporary and late historical examples, and by projecting ensuing interpretations backwards onto the archaeological record, the early social history of the area can be enhanced, and cultural continuities confirmed or disproved. This paper will suggest potential insights that can be gained from examination of the materials, iconography (particularly motifs), and forms of specific objects.

PAKKANEN, Jari, University of Helsinki, Finland

From Coordinates into Image: Building a DXF File from Theodolite Data

Session [12] Advances in Computer Applications in Archaeology

The programmes presented in this paper were designed to help handle large amounts of theodolite and coordinate data and to automatically draw from those data an image that could be imported to CAD and other graphics applications. From a coordinate database it is possible to produce a DXF (Drawing Interchange Format) file which has a small circle on each point and next to it the number of the point. The points may be given a colour code. Another programme is used to produce the coordinates from theodolite data.

Platforms and Supporting Applications: The programmes are written in the programming language of the statistical analysis DOS-program SURVO 84C. They function also with its public domain version SURVOS. The reason for not writing independent programmes was the statistical and database management support provided by Survo. The DXF file produced is an ASCII vector file. It is supported by most PC-based CAD applications, many graphics applications, and desktop publishing programmes.

Advantages: The programmes provide an inexpensive way to plot images from coordinate data. The Survo manual, which contains the diskettes of the public domain version SURVOS, costs c. \$60.00US. The current academic price of SURVO is c. \$500.00US. DXF is very widely used as a standard for CAD drawing exchange.

Disadvantages: It takes a long time for the DXF file to be written. On a 486-66 PC it takes up to 18 minutes to write a file of 100 coordinate points. In DXF format the code is extremely long: the file of the previous example is more than 150 KB. Another reason for the slowness is the nature of the Survo programming language: it was originally intended for tutorials and teaching programmes and not for extensive calculation.

PAQUIN, Todd, Department of Anthropology and Archaeology, University of Saskatchewan, Saskatoon, SK

The Kisis Complex of the Selkirk Composite: Classification, Origins, and Possible Influences in the Boreal Forest of Northern Saskatchewan

Session [10] Contributed Papers: Plains Archaeology I

The Selkirk Composite of Central Canada is a geographically extensive, Late Woodland pottery producing technology dating from approximately AD 1300 until the time of contact (circa AD 1700). Within this large taxonomic grouping are several related complexes which vary according to location and possibly time. The Kisis Complex represents the furthest west representative of the composite, extending as far as the Saskatchewan-Alberta border, and potentially the latest expansion.

While the appellation has existed for several years in the literature, the Kisis Complex has not been systematically studied or classified. Instead, the original work on these ceramics and the associated assemblages still remains the only work done on the complex as a whole, beyond that proposed by this author. As part of an M.A. thesis, materials, particularly ceramics, from the northwestern region of Saskatchewan's Mixedwood Boreal forest will be examined in an attempt to further elucidate the character of the Kisis Complex and its relationship to the Selkirk Composite. Of concern here is its relationship with the closest complex representative of the Selkirk Composite, the Pehonan Complex from Saskatchewan River Valley, and the Old Women's Phase of the northern plains of Alberta and Saskatchewan. Comparisons will be drawn between the Kisis Complex, the Pehonan Complex, and the Old Women's Phase to determine potential influences in the development of the Kisis Complex, and relationships which existed between the plains, parkland, and the boreal forest of west central Canada.

PARK, Robert, University of British Columbia, Vancouver, BC

The Ongoing History of Thule Culture Research in Arctic Canada

Session [1] History of Canadian Archaeology

The questions posed by archaeologists interested in the Thule culture of the Canadian Arctic have obviously changed over seven decades of systematic research, due both to the gradual accumulation of excavation data from this vast area and to changes in theory and method within the world archaeological community. What is perhaps less obvious despite what is now an impressive body of data and an arsenal of new theories and methods at our disposal is that the techniques employed and the questions asked in the decades following the 1920s are still actively shaping our understanding of the Thule culture and guiding the development of new research questions. In this paper I'll attempt to show how certain assumptions and analytical techniques that were absolutely necessary in order to begin research have become firmly embedded into most of what we know about the Thule. However, by exploring the history of research we can understand some of the strengths and weaknesses of our present picture of Thule prehistory and better direct future research.

PECK, Trevor, Department of Anthropology, University of Alberta, Edmonton, AB T6G 2H4

A Statistical Evaluation of the Late Prehistoric Projectile Point Typology Used on the

Northwest Plains

Session [10] Contributed Papers: Plains Archaeology I

The current typological classification of the Late Prehistoric projectile points found on the Northwestern Plains predominately uses non-metric attributes, rather than metric attributes, when placing points into one-or-the-other of the two chrono-stratigraphically separated types perceived to exist. These types include the Evangel point type (Kehoe, 1966:829-30) of the Avonlea phase of the Tunaxa Tradition (Reeves, 1978:165; 1983:191-69), and the Prairie/Plains Side-notched point types (Kehoe, 1966:830-34) of the Old Women's phase of the Napikwan Tradition (Reeves, 1978:165-66). A controlled stratigraphic excavation recently conducted at Head-Smashed-In Buffalo Jump (DkPj-1) in southern Alberta produced a relatively large sample of Late Prehistoric Projectile Points which provided a unique opportunity to test this typology. Statistical analyses of the DkPj-1 projectile point sample substantiated part of the typology and indicated that metric, rather than non-metric, discrimination between the Avonlea and Old Women's types can be achieved with a high degree of accuracy.

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Tagamkuk

Session [8] Contributed Papers: Eastern North America

Micmac presence on the island of Newfoundland (Tagamkuk) is inadequately documented. To improve this situation and to support cultural identity and land claims the Miawpukek Band of Conne River has, since 1979, supported archaeological and historic research projects. A 1993 survey of the Codroy Valley (Katalisk) was co-sponsored by Access to Archaeology. The valley, known to Europeans since the mid-1500's, was predominately settled after 1750. Results from this survey, placed in the context of previous research, support wide-ranging and consistent aboriginal use by the Micmac.

PERRY, William, Archaeological Services Unit, Parks Canada, Calgary

Geographical Information Systems (GIS) Technologies in the Archaeological Services Unit, Parks Canada, Calgary

Session [14] Poster Session

Since 1991, the Archaeological Services Unit of Parks Canada, Calgary has focused on Geographical Information System (GIS) and mapping technologies. The capability of GIS to process vast amounts of information over large areas coupled with its ability to store, link and manipulate cultural, environmental and temporal data themes, makes it an ideal tool for cultural resource managers dealing with a large land base. This display is intended to reflect the Archaeological Services Unit's use of a two-prong approach to GIS technology: as a tool to produce archaeological resource potential maps to better utilize limited financial and human resources, and as a decision-support tool for park managers dealing with development conflict with cultural resources.

A pilot GIS project was initiated in both the lower Bow and upper Red Deer valleys in Banff National Park. Indexed archaeological prehistoric campsite suitability maps were produced for the upper Red Deer valley based on observed site/environmental variable values from the lower Bow Valley. Heuristic sub models were produced on derived sub-datasets as well. Field verification and augmented data theme coverage will continue to refine and focus this model. Based on the results from this model, the second prong, i.e.,

decision support archaeological suitability maps for park managers will be constructed. This will result in a geographical representation of cultural resource sensitivity to environmental and development related factors.

Approaches like those outlined above are ideally suited to archaeology and the cultural resource manager.

PETCH, Virginia, Northern Lights Heritage Services, Box 193, La Salle, Manitoba, R0G 1B0

Fitting Indigenous Knowledge into a Predictive Archaeological Model

Session [6] Traditional Knowledge and Archaeology

Indigenous traditional knowledge of the Sayisi-dene has assisted in determining the location of archaeological sites within their traditional land-use areas in northern Manitoba and southern Keewatin, N.W.T. Valuable information recovered during oral history interviews supplemented scientific environmental knowledge and was included in the process of determining the environmental variables used in developing a predictive model with G.I.S. application capability.

POKOTYLO, David, Department of Anthropology and Sociology, University of British Columbia

Lithic Reduction Strategies at Vihtr'itshik (MiTi-1), Lower Mackenzie Valley

Session [11] Contributed Papers: Arctic and Subarctic Archaeology

This paper discusses the general nature and intrasite patterning of flaked stone reduction at MiTi-1. Analysis of the lithic assemblage from the 1992 excavations indicates that general occupation activities in addition to quarrying and artifact manufacture occurred at the site. Although lithic material was distributed over 300 m along the ridge that defines the main site area, reduction activities were most intense at the south margin. General camp maintenance activities were mainly carried out in the middle area of the ridge. The antiquity of the archaeological deposits is undetermined due to a lack of datable materials.

POLLOCK, John, Settlement Surveys Ltd., New Liskeard

Wahgoshig First Nation Cultural Heritage Project, Lake Abitibi Model Forest

Session [13] From Georgian Bay to James Bay: Archaeological, Historical and Material Culture Investigations

Part of Canada's Green Plan included the establishment of ten large-scale Model Forests across the country. The Lake Abitibi Model Forest is one of these, being a 1,094,690 hectare area in northeastern Ontario bordering on the province of Québec.

The cultural heritage component of the three year Model Forest study (1993-1995) involved an examination of previously known archaeological sites, a field survey to locate new sites in threatened areas (undertaken in the summer of 1993) and documentation of traditional knowledge from Wahgoshig Elders.

The project partnership committee is composed of Wahgoshig First Nation and the Ministry of Natural Resources (Parks) along with the Model Forest sponsoring organization of Abitibi-Price Inc. With the support of the partnership, the researchers prepared an archaeological predictive model which was used in the heritage area of concern identification for timber. As well, a total of 98 traditional native sites were recorded along with

23 predominately European historical sites and 114 prehistoric sites. All of these have been entered into the digitized base map in order to produce a "Cultural Atlas of the Wahgoshig People." This document will be completed in 1994-1995, the final year of the project.

PRESTON, Randall, Department of Archaeology, Simon Fraser University

Small Mammal Taphonomy at Charlie Lake Cave

Session [15] Charlie Lake Cave: Results of Recent Research

At Charlie Lake Cave (HbRf-39), an abundance of small mammals in association with cultural and non-cultural deposits spanning ca. 10,700 years BP provides an opportunity to investigate human-small mammal interactions in a hunter-gather context. A detailed taphonomic analysis of the small mammal component from four 1m x 1m units excavated during the 1990-91 seasons was undertaken for this purpose. The analysis primarily relies on comparison of existing actualistic data to zooarchaeological data associated with various specimen attributes, including *in situ* attributes observed during excavation (pertinent sedimentologic and geomorphological data also are incorporated). Thus, on a more general level, the analysis also offers some insight into the utility of existing actualistic data for taphonomic interpretations of zooarchaeological material.

PYSZCZYK, Heinz W., Archaeological Survey, Provincial Museum of Alberta, Edmonton, AB

From Stone to Metal: a Consideration of Historic Metal Projectile Points and their Implications to Plains Prehistory (Part 2)

Session [10] Contributed Papers: Plains Archaeology I

In a paper presented at the 1991 CAA Conference, an assemblage of metal projectile points from Alberta was examined. According to the historic accounts, the iron or brass trade points were made by the fur traders and by the Indians during the eighteenth and nineteenth centuries. A comparison of metal points recovered from fur trade assemblages and historic Native archaeological sites indicated that there was considerable variation in point form and size. The majority of that variation was a function of regional differences (e.g., the boreal forest versus the northern Plains) while material type of time was less important to explain that variability.

This paper expands on these results. I will examine the relationship between historic metal projectile points and prehistoric projectile points. In particular, three questions about these assemblages are considered: (1) How similar are metal trade points to their prehistoric counterparts, and what do these results imply about their function? (2) Are the regional differences in form and size of the historic trade points evident in Alberta prehistoric assemblages. (3) What factors are responsible for the historic and prehistoric regional variability found in metal and stone projectile points? The answer to these questions are further discussed in terms of their relevance for understanding northern Plains Prehistory.

RAHEMTULLA, Farid, Department of Archaeology, Simon Fraser University

Technological Organization between 10,000-6,000 B.P. at Namu, Central Coast of British Columbia

Session [4] Contributed Papers: Western North America

The focus of study in the early prehistory of the Northwest coast has traditionally been on cultural-historical concerns. Recently, an analysis was initiated on lithic material from an Early Period (10,000-6,000 B.P.) component at Namu, on the central coast of British Columbia. This is part of an on-going research programme, which centers on technological organization and subsistence strategies during the first few thousand years of settlement of the Northwest Coast. In this paper, results of initial analysis of lithic debitage from Namu are presented, and preliminary interpretations on technological organization are discussed.

RAMSAY, Allyson M., 202 Boyd Street, Saskatoon, SK S7N 2C7

Frequency and Seasonality of Bison Kill Events at the Melhagen Site (EgNn-1)

Session [10] Contributed Papers: Plains Archaeology I

The Melhagen site (EgNn-1) is a Besant bison kill site located within the sand hills east of Elbow, Saskatchewan. The analysis of sites in such areas is restricted by a number of post-depositional processes. A number of data sources must be examined in order to interpret important aspects of site utilization. The number of kill events at the Melhagen site is not readily discernible in the stratigraphic profile. Herd age profiles and gender analyses studies indicate that several bison kill events were carried out here, especially from the fall, through the late winter and into the early spring. Information from bison utilization studies, and radiocarbon dates provide supporting evidence, and lead to avenues of possible future research.

RAMSAY, Charles L., Heritage Consultant, 202 Boyd Street, Saskatoon, SK., S7N 2C7

Hanna and McKean on the Northern Plains

Session [10] Contributed Papers: Plains Archaeology I

It has been traditionally proposed that Hanna and McKean have a generalized subsistence economy. A synthesis of data from Saskatchewan provides some evidence to assess this pattern on the Northern Plains. This lifestyle does not significantly differ from Oxbow and many other Plains groups. However, the Northern Plains Hanna and McKean subsistence pattern does differ from McKean and Hanna in the Central and High Plains. The absence of manos, metates, and the specialized plant processing features on the Northern Plains is considered to be enough criteria to warrant taxonomic separation of McKean and Hanna in these regional categories.

RICHARDS, Michael, Department of Archaeology, Simon Fraser University, Burnaby, B.C. V5A 1S6

Luminescence Dating of Quartzite from the Diring Yuriakh Site

Session [9] The Settlement of Northwestern North America: New Approaches to an Old Problem

The Diring Yuriakh archaeological site, located in central Siberia, Russia, is of great interest because the lowest cultural layer contains simple quartzite tools and pebbles that the site director, Yuri Mochanov, believes are most related morphologically to the African Oldowan industry (ca. 2-2.5 Ma). On the basis of magnetic and thermoluminescence (TL) dates, and the geological evidence, Mochanov has suggested the deposits which contain the artifacts are between 3.4 and 1.8 million years old.

The artifacts and pebbles show evidence of sandblasting, and the interpretation is that they are found on a deflation layer where wind had blown away a great deal of sediment leaving the heavy pebbles and artifacts lying on an ancient surface. It therefore seems probable that the artifacts were exposed to sunlight when they were on this surface. So there exists the potential for the use of TL and optical dating to determine the time since the subsequent burial, thus providing a minimum age for the artifact layer.

Samples of this quartzite were collected in 1992, and in this paper we shall present results of preliminary experiments on the quartzite designed to determine its behaviour and suitability for TL and optical dating. A great variability in behaviour was found.

RICHLING, Barnett, Mount Saint Vincent University

Arctic Archaeology at the National Museum of Canada, 1910-1940

Session [1] History of Canadian Archaeology

Until the post-World War II period most of the country's professional archaeologists and ethnologists were attached to the Anthropological Division of the National Museum of Canada, originally founded in 1910 as a branch of the Geological Survey. Since these organizations operated under the authority of the federal Department of Mines, their scientific agenda were largely dependent on, and ultimately limited by, what politicians and senior bureaucrats deemed to be in the public interest. This paper considers some implications of this arrangement for one aspect of Anthropological Division activity between the wars: its involvement in Arctic archaeology. Museum personnel made a number of substantive contributions to what was then a developing field of research and scholarship, Diamond Jenness' studies of Dorset and Old Bering Sea cultures in the twenties the best-known examples. Archival sources suggest, however, that political circumstances internal to the Museum weighed against the Division's continuing participation in northern fieldwork during these years. Instead, its role was effectively limited to encouraging and, on occasion, coordinating the research of American, British and European archaeologists working on problems pertaining to the prehistory of the Canadian Arctic.

RICK, Anne M., Zooarchaeological Analysis Programme, Canadian Museum of Nature, Ottawa, Ontario and McCuaig Balkwill, Darlene

Mammal, Bird and Fish Remains from the Gupuk Midden, Mackenzie Delta, N.W.T.

Session [3] Contributions to Zooarchaeological Research

Nearly 38,000 well-preserved non-cetacean animal bones and teeth were excavated in 1985 from a midden at the Mackenzie Delta site of Gupuk (NiTs-1), thought to have been the main village of the Siglit branch of the Mackenzie Inuit. Analysis has revealed that Gupuk subsistence was based on a wide variety of terrestrial, marine, riverine and lacustrine animals. Caribou, moose, seal, waterfowl, ptarmigan and grouse as well as several small game species such as muskrat, were recovered. Muskrat represented almost 60% of identified mammal remains, and grouse and ptarmigan predominated among the birds. Fish bones were abundant, comprising over 67% of the total assemblage and consisted mainly of burbot, inconnu and whitefish.

ROLLANS, Maureen, Western Heritage Services, 563 - 5th Avenue North, Saskatoon, SK S7K 2R1; FINNIGAN, Jim, Western Heritage Services, 563 - 5th Avenue North, Saskatoon, SK S7K 2R1

Predictive Modelling: A Practical Application for Consultants

Session [5] Perspectives in Cultural Resource Management

More and more often, developers and government departments are asking heritage consultants to screen large development plans in order to target subsets of the total impact area for field inspection. For the last three years, Western Heritage Services has been developing predictive models of pre-contact site location: a map of the study area is digitized; data about previously recorded site locations and a variety of environmental variables is compiled; and the information is processed using specialized software. The result is a map indicating the varied archaeological potential of the study area. Unbiased archaeological survey data is collected and used to test how accurately the working model predicts. With each test, the model is adjusted to more accurately reflect where sites tend to occur. The advantages of predictive modeling over conventional screening approaches are that they are more rigorous, they can be replicated by different users, and there are theoretical linkages between the model statements and our understanding of the past. Developers appreciate the ability to incorporate meaningful heritage data into their own GIS packages. This paper describes our approach as it was recently applied to gas well development in the Hatton field of southwestern Saskatchewan.

RONAGHAN, Brian M., Archaeological Survey, Provincial Museum of Alberta, 12845 - 102 Ave., Edmonton, AB T5N 0M6

Managing Archaeological Mitigation for Oldman River Reservoir Project

Session [17] The Oldman Dam Archaeological Mitigation Project in Review

The proposal to construct and operate a reservoir along the Oldman River in southwestern Alberta resulted in one of the largest and most complex Cultural Resource Management programs ever undertaken in the province. By way of introduction to other papers in this session, the author will review the significant management issues raised by the project, will discuss the structure of the program adopted in response to the construction proposal and will summarize a few of the lessons learned about management of large scale projects of this nature. The paper concludes with a brief description of future historical resource programming associated with the operation of the Oldman River Reservoir.

ROSS, Brian, Parks Canada, Ontario Region; D'ANNIBALE, Cesare, Parks Canada, Ontario Region

Recent Investigations at Camp Kitchikewana: A Multi-Component Site in Georgian Bay Islands National Park

Session [13] From Georgian Bay to James Bay: Archaeological, Historical and Material Culture Investigations

The Camp Kitchikewana Site lies in the transitional zone between the northern boreal forest and the southern hardwood forest. This natural diversity is matched by the rich cultural diversity present in the archaeological record. The 7.5 ha acre site contains material ranging from ca. 5000 B.C. to A.D. 1856, representing almost a dozen Native cultures. Recent excavations have revealed a number of tantalizing, and often perplexing,

discoveries pertaining to settlement patterns and resource exploitation. Other enigmatic discoveries allude to an early Ojibway presence, French/Jesuit contact, evidence of Mid-deport, and an extension of the Saugeen homeland boundaries. The intent of this paper is to share some of these discoveries with other researchers.

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Role of the C.A.A./A.C.A. in the History of Canadian Archaeology

Session [1] History of Canadian Archaeology

Although a relative newcomer on the scene, The Canadian Archaeological Association/ l'Association Canadienne d'Archéologie, has played a major role in the development of archaeology as a discipline of scholarly research and heritage preservation advocate. From its formation in 1968 at its first Annual Conference in Winnipeg, the Association has provided an annual forum for paper presentations and symposia relating to current research in Canadian archaeology. The Association has also provided a venue for the publication of research, through its Journal, Bulletin, Occasional Paper Series and the Newsletter. During the past decade, the C.A.A./A.C.A. has made significant advances in promoting the adoption of Federal archaeological policy and protective legislation and has recently embarked on a major initiative towards the development of cooperative agreements and principles of conduct between archaeologists and First Nations. The paper explores both the developments of the C.A.A./A.C.A. as an Association and how this organization has helped shape the discipline of archaeology in Canada.

SMARDZ, K., Archaeological Resource Centre, Toronto Board of Education, Toronto, Ontario

Title Unavailable

Session [16] The Access to Archaeology Programme: Project Examples

Abstract Unavailable

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Saskatchewan Archaeological Society Access to Archaeology Projects

Session [16] The Access to Archaeology Programme: Project Examples

Grants from the Access to Archaeology program to the Saskatchewan Archaeological Society in 1991 and 1992 permitted the SAS to organize and present a number of archaeology education projects. These included: (1) Archaeological Games and Crafts Festivals, (2) Archaeology Week events, (3) a conference and book dealing with Saskatchewan human and natural history before, during, and after Henry Kelsey's travels inland 300 years ago, (4) archaeological services to assist schools, and (5) archaeological activities involving Native and non-Native young people in a summer camp setting. These projects will be described and assessed, and recommendations will be presented concerning the Access to Archaeology Program.

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6P4

Prehistoric Subsistence Patterns in Prince Rupert Harbour, B.C.

Session [3] Contributions to Zooarchaeological Research

The northern Northwest coast has long been the focus of archaeological investigation, but while the material culture has been well documented, only recently has the time depth of exploitation and seasonality of coastal subsistence resources been investigated. In this study, analysis was conducted of over 20,000 faunal elements from the Boardwalk site, and over 2,000 elements from the Grassy Bay site, both located on or near Prince Rupert Harbour, B.C. Boardwalk was occupied back at least to 4200 BP, and was a large village with year-round occupation. Grassy Bay was occupied from about 1615 to 620 BP, and was a predominately seasonal summer camp. Analysis of faunal remains from the two sites indicated that prehistoric subsistence patterns differ from those recorded for the Coast Tsimshian in historic times. The Boardwalk inhabitants hunted a large variety of birds, and land and sea mammals, the latter being most heavily exploited in later levels. The Grassy Bay inhabitants captured mainly Rhinoceros Auk, and in later levels, sea mammals.

At about 1600 to 1900 BP, the appearance of the Grassy Bay site and at least 2 other Prince Rupert Harbour sites indicate an apparent population increase. These sites had a more seasonal subsistence focus than at Boardwalk. This trend towards more seasonal settlements apparently intensified, resulting in the large seasonal population movements recorded historically.

SULLIVAN, Gregg, US National Park Service, North Cascades National Park

Results of Sediment Sample Analysis from Charlie Lake Cave (Hbrf-39), British Columbia

Session [15] Charlie Lake Cave: Results of Recent Research

The sediments at Charlie Lake cave represent approximately 11,000 years of continual deposition, and provide important insights into the changes in the local site environment. They also hold important information about changes in the depositional history of the site that may have affected survival and distribution of artifactual content in the site. Sampling and analytical procedures are briefly described. The data from analysis of grain size distribution, pH and organic matter indicate important spatial variation in the chemical environment (pH) affecting potential survivability of bone in some site deposits. Textural parameters show variation whose timing and direction coincide with changes in Holocene paleoclimate inferred for the upper Peace River area.

SUTHERLAND, Patricia, Archaeological Survey of Canada, Canadian Museum of Civilization

New Evidence for Prehistoric Occupation in the Mackenzie Delta: A Choris Culture Site on Richards Island

Session [11] Contributed Papers: Arctic and Subarctic Archaeology

An archaeological survey of Richards Island was undertaken in 1993, during the final season of the Northern Oil and Gas Action Plan (NOGAP) Archaeology Project in the Mackenzie Delta. The most important outcome of the survey was the discovery of a site

on the coast of Kittigazuit Bay, that relates to the Choris culture of the Bering Strait area (ca. 3600-2500 years ago). This paper presents results of the preliminary investigation of the site, and discusses its potential significance for increasing our understanding of pre-historic relationships between Alaska and the Canadian Arctic.

SYMS, E. Leigh, Manitoba Museum of Man and Nature

Building Awareness and Involvement

Session [2] Cultural Resource Management on First Nation Lands

As First Nations move towards various aspects of self-government, they will have to address the issue of CRM. In order to prepare for this stage, which is approaching rapidly, there is a need to fast track their awareness of their archaeological resources and to generate opportunities for training and learning to recover, analyze, look after, and interpret this ancient heritage. This is a relatively easy and very exciting process once archaeologists have made this commitment. The Manitoba Museum of Man and Nature is involved with a number of projects to reach this goal.

SYMS, Leigh, Manitoba Museum Man and Nature, Winnipeg, Manitoba R3B 0N2

MMMNA Archaeological Native Internships: Developing Awareness and Building Links with the Native Communities

Session [16] The Access to Archaeology Programme: Project Examples

The Archaeology Department of the Manitoba Museum of Man and Nature established two 6-month internships for native students interested in archaeology. The interns learned much about their archaeological heritage and how to present it to various groups through displays and educational programming. The Archaeology Laboratory became a focus for several hundred Native People learning about their exciting and important ancient archaeological heritage as friends and relatives of the interns, band chiefs and counsellors and 15 groups ranging from elementary school classes to adult educational classes visited the lab or received a formalized gallery and lab tour.

SZATHMARY, Eموke J.E., Dean, Faculty of Social Science, The University of Western Ontario, London, ON N6A 5C2

The Peopling of North America: Insights from mtDNA and Classic Genetic Markers

Session [9] The Settlement of Northwestern North America: New Approaches to an Old Problem

In the aggregate, Native Americans are characterized by the presence of four mtDNA varieties, although a few others also occur, and all exhibit varying frequencies across the American continents. The time depths calculated for the appearance of these varieties differ, dependent on the evolutionary rate employed for mtDNA. Some dates suggest that gene diversification began more than 20,000 years ago, while other push it only to the Clovis horizon. Neither set of dates, however, can provide the time of colonization, since there is no way to demonstrate that entry was coincident with the appearance of mtDNA mutations. The best evidence suggests that there is greater mtDNA diversity among speakers of Greenberg's "Amerind" languages, than among NA-Dene, Eskimoan and Paleo-asiatic speakers. Accordingly varieties of mtDNA in the latter groups originated more recently than those among "Amerinds." By inference, the populations that gave rise to the northerners would be of more recent origin than the groups that gave rise to

"Amerinds." Multilocus evidence derived from "classic" genetic markers has long indicated such a basic division of Native American populations.

TREMAYNE, Alan G., Gabriel Dumont Institute, Saskatoon SK; GIBSON, Terry H., Western Heritage, Saskatoon, SK

Cultural Resource Management: Metis Loss of a Land Base

Session [16] The Access to Archaeology Programme: Project Examples

The Metis Nation of Canada has expressed its concern over the issue of the Loss of a Land Base. There have been numerous resources that have been published identifying the Metis as Canada's Forgotten People. Research has confirmed the fact that 1.4 million acres was awarded to the Metis in the 1870s. Because of land speculation and land fraud, the Metis land was taken away from them.

Through the Archaeology Access project, the Metis people of Saskatchewan have been able to start a massive research project that has allowed access to Archival information banks of the Riverlots that were registered along the Saskatchewan River Basin. This paper will outline the project and the process that was developed in a program to enter data on the Metis Homeland.

UNFREED, Wendy J., Bison Historical Services, Ltd., Calgary, AB

Late Prehistoric Bison Killing in Southern Alberta: An Example from DkPi-2, near Fort Macleod

Session [10] Contributed Papers: Plains Archaeology I

During 1991 and 1992, Bison Historical Services, Ltd., on behalf of Alberta Transportation and Utilities, conducted archaeological excavations at site DkPi-2 (the Highway 2/3 Junction site), located two kilometres west of Fort Macleod, Alberta. The site, which is situated on a low terrace of the Oldman River, consists of stratified bison kill deposits from impoundment traps, and their associated butchering and processing areas. Through the excavation of 557 square metres, four late Old Women's Phase occupations (dating between 380±70 B.P. and 910±70 B.P.) and an historic surface scatter (A.D. 1874-1925) were identified at the site. The activity locales associated with these prehistoric occupations were classified as one of three types: "bison killing/primary processing" locales, "secondary /tertiary processing" locales or "transitional activity" locales. Each was associated with a varied assemblage on bone, shell, lithic and ceramic artifacts, as well as a variety of features. The activities represented by these deposits, which were accumulated during the late winter and early spring, will be discussed in this paper.

URION, Carl, Department of Anthropology, University of Alberta, Edmonton, AB

Formal Requirements for Interpretation of Indigenous Oral Narrative Concerning the Remote Past

Session [6] Traditional Knowledge and Archaeology

A new approach to the study of oral tradition may provide more precisely-specified reference to accounts of specific events and particular conditions in the remote past. That new approach, evident in scholarly literature since the early 1980s, is based on the premise that the principles for interpretation of narrative are articulated and accessible in the indigenous knowledge system itself. In the work of the very few analysts who now work in this area, the focus is not primarily on the text but on the relationships amongst narra-

tive text, performance phenomena, reference to specific physically-described places, and participant attributes. There are tantalizing claims that local, indigenous, traditional knowledge includes description of local conditions in the very remote past. The question raised in this paper is thus "what are the formal requirements for access to indigenous knowledge about specific local conditions in the remote past." The discussion refers to the work of Denis Tedlock on performance phenomena, the work of Julie Cruickshank and Keith Basso on spatial reference and localization, and the work of Walter Lightning on principles for interpretation of Cree narrative. These aspects of narrative are addressed: imbrication of multiple narratives in systems of metaphor and implicature; authority and protocol in access to knowledge; localization of reference to place; and traditional requirements for empirical validity.

VAN DYKE, Stanley G., #3, 227 - 14th Street N.W., Calgary, AB T2N 1Z6

The Austech Station: A McKean Processing Site in Cochrane, Alberta

Session [10] Contributed Papers: Plains Archaeology I

In the spring of 1993, Bison Historical Services carried out sample excavations at the Austech Station (EhPo-55) on the south bank of the Bow River west of Cochrane, Alberta. The site is situated at the base of a slope approximately 350 m south of the Bow River and 250 m east of Jumpingpound Creek. Austech Station is a single component site interpreted as being a McKean bone processing area. Evidence for the occupation was obtained from three levels of excavation between 30 cm and 60 cm below surface. Excavations yielded 4,650 bone specimens, 302 pieces of debitage, 1,079 pieces of fire-cracked rock and 103 tools. The affiliation of the site is based on the recovery of two diagnostic projectile points including one lanceolate specimen and one Corner Notched specimen (Hanna). The age of the site is based on two radiocarbon dates, one of $3,540 \pm 60$ (AECV 1854C; Bone Collagen; = -18.9) and one of $3,400 \pm 60$ (AECV 1855C; Bone Collagen; = -18.8). This paper discusses the results of excavations in the context of previous McKean Complex research in Alberta.

VAN DYKE, Stanley G., #3, 227 - 14th Street N.W., Calgary, AB T2N 1Z6

Precontact Native Campsites of the Oldman River Dam Archaeological Mitigation Project: A Postscript

Session [17] The Oldman Dam Archaeological Mitigation Project in Review

Archaeological investigations at the site of the Oldman River Reservoir were initiated in the mid 1960s with a reconnaissance of the Oldman, Crowsnest and Castle rivers. A survey and assessment were carried out between 1986 and 1987. Mitigation was carried out between 1988 and 1990. The campsites project involved assessment and archaeological excavations at 23 precontact Native sites. A total of 1591.5 square metres were excavated in the course of the program. Excavations resulted in the recovery of 343,349 artifacts. Artifacts included 2,529 tools, 31,227 pieces of debitage, 27,365 faunal specimens, 7,935 unmodified cobbles, and 27,963 pieces of fire-cracked rock. Cultural affiliations are assigned on the basis on in excess of 145 nearly complete projectile point specimens. Chronology is based on 89 radiocarbon samples. Investigations yielded evidence for more than 9,000 years of occupation. Occupations include Alberta Cody (8,580 or 9,600 B.P.), Plains/Mountain (7,450 - 8,390 B.P.), Mummy Cave (5,920 B.P.), McKean (3,520 - 3,670 B.P.), Pelican Lake (2,160 - 3,160 B.P.), Besant (1,380 - 2,120 B.P.), Avonlea

(1,290 - 800 B.P.), and Old Women's Phase (470 - 940 B.P.). This paper reviews the substantive findings of the campsites project.

VON GERNET, Alexander, Erindale College, University of Toronto

Highland Lake: Archaeology, Ethnohistory and the Linguistic Affiliation of a Proto-historic Site on the Canadian Shield

Session [13] From Georgian Bay to James Bay: Archaeological, Historical and Material Culture Investigations

Excavations at a remote, seasonal hunting camp in the Madawaska Highlands of Eastern Ontario have yielded and unusually well-preserved inventory of ceramic, stone and bone artifacts, faunal elements and botanical remains. A brief description of the site and recovered material is followed by a discussion of whether the inhabitants were Iroquoians or Algonquians. While the material culture suggests a Huron presence, the spatial and temporal contexts, cartographic evidence and ethnohistoric documentation all point to an Algonquian affiliation. This has generated serious questions about the common propensity to equate material culture with ethnicity. It is suggested that there were fewer cultural differences between Late Woodland Amerindian groups in Ontario than archaeologists have hitherto acknowledged.

WALDE, K., Heritage North Consulting Limited, Fort St. John, B.C.

1993 Activities in Southwest Yukon and Northeastern British Columbia

Session [11] Contributed Papers: Arctic and Subarctic Archaeology

Field work was carried out at two significant archaeological sites during the 1993 summer field season, KaVn-2 in Southwest Yukon and HkRo-2 in northeastern B.C. KaVn-2 is located adjacent to the Alaska Highway, ca. 8 km northwest of White River, while HkRo-2 is located 9 km west of the Sikanni Chief River. KaVn-2 is characterized by two cultural bearing sediments situated below a deposit of White River tephra. A date of $7,810 \pm 80$ years BP was obtained from the base of the upper cultural bearing unit, indicating that the lower cultural unit is likely of greater antiquity. The significance of this lower unit is the presence of leaf-shaped bipoints and the absence of Little Arm phase microblade technology. KaVn-2 therefore, likely represents an earlier group of residents within S.W. Yukon, e.g., Northern Cordilleran.

HkRo-2 is characterized by an artifact assemblage containing a number of lanceolate projectile points, including basal fragments with expanding laterals, which have been ground, an unfinished stemmed point and a large tip fragment. Points are similar in style to Hell Gap and Alberta points. HkRo-2, although undated, provides additional evidence for Paleoindian occupation in northern British Columbia.

WALKER, Bethany J., Department of Middle East and Islamic Studies, University of Toronto

Computer Cartography for the Archaeologist: The Archival Potential of GRASS

Session [12] Advances in Computer Applications in Archaeology

The manipulation and analysis of old site plans and maps can be frustrating tasks for the archaeologist working with archival materials. The practical problems of locating old concessions, determining locations for new trenches, and editing earlier maps to achieve

greater accuracy or esthetic quality for republication can only be overcome if the appropriate technical resources are investigated.

A series of maps representing eighty years of fieldwork in Islamic Fustat have been edited using the resources of GIS technology. By applying state-of-the-art satellite imaging software (Geographic Resources Support System - GRASS) to the colourizing, rescaling and correction of these Fustat maps, new site maps have been generated. The end product synthesizes the survey work of earlier projects and accurately illustrates the potential for future fieldwork in the area.

WAYMAN, Michael L., Department of Mining, Metallurgical and Petroleum Engineering, University of Alberta, Edmonton, AB and ANDREWS, Tom, Prince of Wales Northern Heritage Centre, Yellowknife, NT

Analyses of Native Copper Artifacts from a Dene Copper Workshop at Snare Lake, District of Mackenzie, Northwest Territories

Session [11] Contributed Papers: Arctic and Subarctic Archaeology

Recent salvage excavation of a series of hearth features near Snare Lake, NWT, has produced a large collection of copper artifacts in association with a single fragment of wrought iron. Metallographic and neutron activation analyses have indicated that the copper artifacts are native in origin and exhibit evidence of both annealing and cold-working production techniques. This paper presents the results of these analyses and discusses the implications for contact period archaeology in the eastern Athapaskan region.

WHITEBEAR, Joe, Parks Canada

Bridging the Gap

Session [2] Cultural Resource Management on First Nation Lands

It appears that the First nation cultures and the Euro-Canadian/American cultures are embroiled in a time of heated debate. Whether it is through confrontation or consultation, these debates are played out in the political or social arenas where the final message is controlled by another outside opinion - the media. There have been few successes. But why does confrontation occur more than negotiation? This paper discusses why there is a lack of understanding between these two cultures and how Archaeology can be used as a tool to ease the tension by examining two very basic traditional values of both cultures. One is a spiritual destiny to the environment, and the other is the inherent right to control one's destiny. Because archaeology interacts between both of these cultures, and therefore operates between these values, it can be used as a vehicle to control change and lessen the gap.

WHITRIDGE, Peter, Department of Anthropology, Arizona State University, Tempe, AZ 85287-2402

Spatial Patterning in the Surface Whale Bone Assemblage from a Thule Winter Village

Session [11] Contributed Papers: Arctic and Subarctic Archaeology

Savelle and McCartney have recently demonstrated that Thule whale bone assemblages preserve valuable information relating to prey selection, and regional variability in bowhead procurement. Results of the analysis of point provenience data collected during 1992 at Qariaraqyuk (PaJs-2), a large Classic Thule winter village on southeast Somerset

Island, NWT, indicate that meaningful spatial patterning can also be discerned at the intrasite level. The multivariate analysis of local density neighbourhood counts revealed patterned associations of bowhead elements and fragments suggestive of discrete bone processing areas at this relatively undisturbed site, while significant clustering of ethnographically-prized carcass portions in the vicinity of the site's largest karigi and house groups is interpreted as evidence for status-based differences in access to whale products, and perhaps ritual feasting. In light of recent advances in intrasite spatial analysis, the mapping of surface whale bone thus emerges as a highly productive strategy for investigating Thule site structure and socio-economic organization.

WILLOUGHBY, Pamela R., Department of Anthropology, University of Alberta, Edmonton, AB T6G 2H4

Middle Stone Age Technology in Southwestern Tanzania

Session [7] Canadian Archaeology Abroad

The Middle Stone Age (MSA), extending from 200,000 to 300,000 years ago, is the period associated with the emergence of anatomically modern humans in sub-Saharan Africa. MSA assemblages are traditionally assumed to be identical to European Middle Paleolithic ones which were produced by Neanderthals. As a result, it seems that modern human anatomy developed well before modern human cultural (stylistic, symbolically based) behaviour appears. This paper reviews aspects of MSA assemblage variability and technology in the light of these general questions. The specific focus is on data collected during a 1990 survey for prehistoric sites in the Lake Rukwa basin of southwestern Tanzania. Information about technology and assemblage variability in this region may help address questions concerning the emergence of modern human behaviour.

WOODLEY, Philip J., Environmental Section, Central Region, Ontario Ministry of Transportation, 1201 Wilson Ave., Downsview, ON M3M 1J8

A Middle Woodland View from the West End of Lake Ontario

Session [8] Contributed Papers: Eastern North America

The Middle Woodland of southern Ontario is a little-understood time period with few sites excavated and, in the past, most research focused on the more prominent burial mounds. This report will concentrate on the large-scale excavation of the HH site (AhGw-81), located in Hamilton and excavated by the Ontario Ministry of Transportation. HH represents a series of Middle Woodland occupations oriented towards the lake/shore environment. Numerous AMS dates were run on feature material and thereby indirectly dating the artifacts with them. This provides a firm temporal basis for our understanding of the Middle Woodland period in southern Ontario.

WOOLLETT, Jim, Department of Anthropology, Hunter College, CUNY

The Palaeoeconomy of Eskimo Island: A Preliminary Zooarchaeological Report

Session [3] Contributions to Zooarchaeological Research

This paper summarizes current analyses of faunal remains from the historic period Labrador Inuit site of Eskimo Island in Hamilton Inlet, dated to approximately 1600-1760 AD. Faunal analysis has apparent and considerable potential to expand the scope of current discussions of Labrador Inuit palaeoeconomy, which have typically hinged upon architecture, site location and ethnohistoric references. The purpose of this paper is to discuss zooarchaeological patterning pertaining to seasonality, hunting practice, activity

areas and organization of production. The incorporation of these data permits the reexamination of problems such as the origin of communal residence patterns and the extent of trade-based economic change in the early historic period, supplementing existing chronohistorical data sources.

YANSA, Catherine H. Department of Geological Sciences, University of Saskatchewan, Saskatoon, SK and HJERMSTAD, Ben, Department of Anthropology, University of Saskatchewan, Saskatoon, SK

The Paleoenvironmental Record and Archaeology: Can there be a Correlation

Session [10] Contributed Papers: Plains Archaeology I

While it is well recognized that an intimate relationship exists between humans and their environment, the corresponding disciplines of archaeology and paleoecology have not been as closely correlated. The fact that paleoenvironmental and archaeological investigations are often published in separate journals may be partly attributed to the limited range of paleoenvironmental remains found within archaeological contexts. Plant macrofossils, pollen, snails, insects, and other "proxy indicators" of past environmental conditions are generally preserved in former wetland sites unlike most prehistoric cultural materials.

While pollen analysis may provide a regional backdrop, a detailed snap-shot of both site specific and local environmental change may be attained by the study of wood, leaves, seeds, and other plant macrofossils, an example being the project currently under investigation in southwestern Saskatchewan. Therefore, presented here will be an interpolation of paleoecological information into the archaeological record of the northern Great Plains of Canada, based upon radiocarbon dating correlation. This endeavour should provide a baseline paleoenvironmental framework useful interpreting the prehistoric cultural history of this prairie region.

YELLOWHORN, Eldon, Independent Archaeologist, Vancouver, BC

Archaeology and the Sechelt Indian Self-Government Act

Session [2] Cultural Resource Management on First Nation Lands

Since 1986, the Sechelt Indians of British Columbia have been the only recognized self-governing aboriginal group in Canada. They achieved this state by excluding themselves from the constraints of the Indian Act. The Sechelt Indian Self-Government Act (1986) transferred to the Sechelt the powers to make by-laws at the local level without having to defer issues to the federal government. Although archaeology is not explicitly included as a subject for local control, nevertheless the means exist for the Sechelt government to begin the process of managing the cultural legacy of Sechelt lands. In the absence of any overriding federal legislation that specifically addresses heritage management, it is within the power of the Sechelt council to begin the task of creating by-laws that address heritage protection. The purpose of this paper is to examine sections of this act to interpret its meaning for heritage management and to discuss the implications of the statute for archaeology.

YESNER, David R., Department of Anthropology, University of Alaska, 3211 Providence Drive, Anchorage, AK 99508

Late Pleistocene/Early Holocene Subsistence and Settlement In Interior Alaska

Session [9] The Settlement of Northwestern North America: New Approaches to an Old Problem

Recent discoveries of late Pleistocene archaeological sites in the Tanana Valley of east-central Alaska has led to revisions in understanding of the initial occupation of eastern Beringia. There are now sufficient data to suggest that an "American Paleoarctic" tradition broadly applied throughout the region of interior Alaska (north of the Alaska Range) during the Late Pleistocene/early Holocene period. Well-dated sequences from the Nenana and Tanana Valleys suggest that initial occupation of interior Alaska took place around 11,800 years ago. The combined "push" effect of the disappearance of the Bering Land Bridge, and the "pull" effect of ameliorated environmental conditions of the "Birch Period," may have attracted initial occupants to the Alaskan interior.

Technological inventories of the earliest occupants of interior Alaska show some affiliation with Paleoindian sites, but are much more closely linked with assemblages of Siberia and the Russian Far East which contain a wide array of bifacial and unifacial tools as well as blade tool industries. At some sites, bifacial industries predominate, while at others, microblade assemblages are also found. These patterns may represent the existence of discrete ethnic groups, or some kind of activity specialization. Mammoth ivory tools from the Broken Mammoth site in the Tanana Valley show strong similarities to composite atlatl and spear industries known from the Upper Palaeolithic of northern Eurasia, and some linkage with those known from Paleoindian sites.

Most of the early sites in interior Alaska are bluff-top hunting locales, allowing scanning for seasonally migratory game. However, the presence of large hearths and associated toss zones, possible ten rings, and (at the Broken Mammoth site) hide-sewing artifacts including bone toggles and eyed needles, suggest that these sites had more than ephemeral use. Faunal assemblages from the Broken Mammoth site also show the use of a wide diversity of animal species, but with a focus on bison and wapiti, which utilize mosaic savanna parkland environments. A variety of small game, particularly hare and ground squirrel, were also exploited, as was a wide variety of bird species (especially waterfowl), particularly by the earliest inhabitants of the Broken Mammoth site. Fish were utilized by at least 10,000 years ago, and are represented by salmonid vertebrae and scales. Mammoth are represented solely by tusks, scavenged from the tundra for use in tool manufacture; one has recently been dated to 15,800 B.P.

YOUNG, Allison, UBC Museum of Anthropology, 6393 N.W. Marine Dr., Vancouver, BC V6T 1Z2; BERNICK, Kathryn, UBC Museum of Anthropology, 6393 N.W. Marine Dr., Vancouver, BC V6T 1Z2

Hidden Dimensions: A Conference on the Cultural Significance of Wetland Archaeology

Session [14] Poster Session

The University of British Columbia Museum of Anthropology will host an international conference on wetland archaeology, in April 1995. The conference will discuss current issues in wetland archaeology; promote wetland management, site preservation, and object conservation; and advance the development of partnerships between indigenous

peoples, archaeologists, and management agencies. The program will feature public sessions, scholarly symposia, and workshops, as well as social events and tours. For further information come see the poster display and pick up a conference brochure.

YOUNG, Robert R., Department of Geography, University of Calgary, Calgary, AB T2N 1N4; BURNS, James A., Provincial Museum of Alberta, Edmonton, AB T5N 0M6

Late Wisconsinan Glaciation in Alberta: its Relationship to a Theoretical "Ice-free Corridor"

Session [10] Contributed Papers: Plains Archaeology I

Investigations of 20 Middle Wisconsinan vertebrate paleontology sites in Alberta allow reconstruction of late Pleistocene environments and events. Sites provide information concerning timing and dispersal of ice sheets, and therefore relate to a theoretical "ice-free corridor."

Over one thousand specimens of bones from megafaunal and wood have been recovered from Saskatchewan Sands and Gravels (SGS) in the Edmonton area. The SGS are regarded as the Quaternary basal unit in Alberta based on the lack of clasts from the Canadian Shield. Radiocarbon dates indicate the gravel was actually deposited between 40,000 and 22,000 yr B.P. and that these deposits are actually Middle Wisconsinan in age, implying that the last glaciation was the most extensive in Alberta. Fossil prairie dog sites in south-central Alberta have yielded dates between 33,000 to 22,200 yr B.P. and associated large-scale landform streamlining that reflect ice-sheet coalescence.

The Late Wisconsinan was therefore the most extensive glaciation in southwestern Canada when there was a period of ice-sheet coalescence. These data are inconsistent with reconstructions that would have allowed an "ice-free corridor" to have persisted during much of the late Wisconsinan. Instead, we will propose another possibility for early human entrance into North America.

ZACHARIAS, Sandra K., Deva Heritage Consulting, #35-2137 West First Ave., Vancouver, B.C. V6K 1E7

CRM and the Concept of Wilderness in British Columbia

Session [2] Cultural Resource Management on First Nation Lands

This paper addresses issues and problems inherent in protecting and managing First Nations heritage resources and values within "super natural" British Columbia, a province viewed by many of its residents and visitors as untouched pristine wilderness. Definitions of "wilderness" and recreational values in use by government parks and recreation branches are discussed. Recommendations are made about how to bridge the gap between a world view that measures land by its virginity or wilderness, and one that perceives all of British Columbia as a cultural landscape.

ZOE, John B., Rae-Edzo Friendship Centre, Rae-Edzo, N.T.; ANDREWS, Tom, Prince of Wales Northern Heritage Centre, Yellowknife, NT

Ida (Up This Way) - The Camsell-Marion Heritage Resource Inventory

Session [14] Poster Session

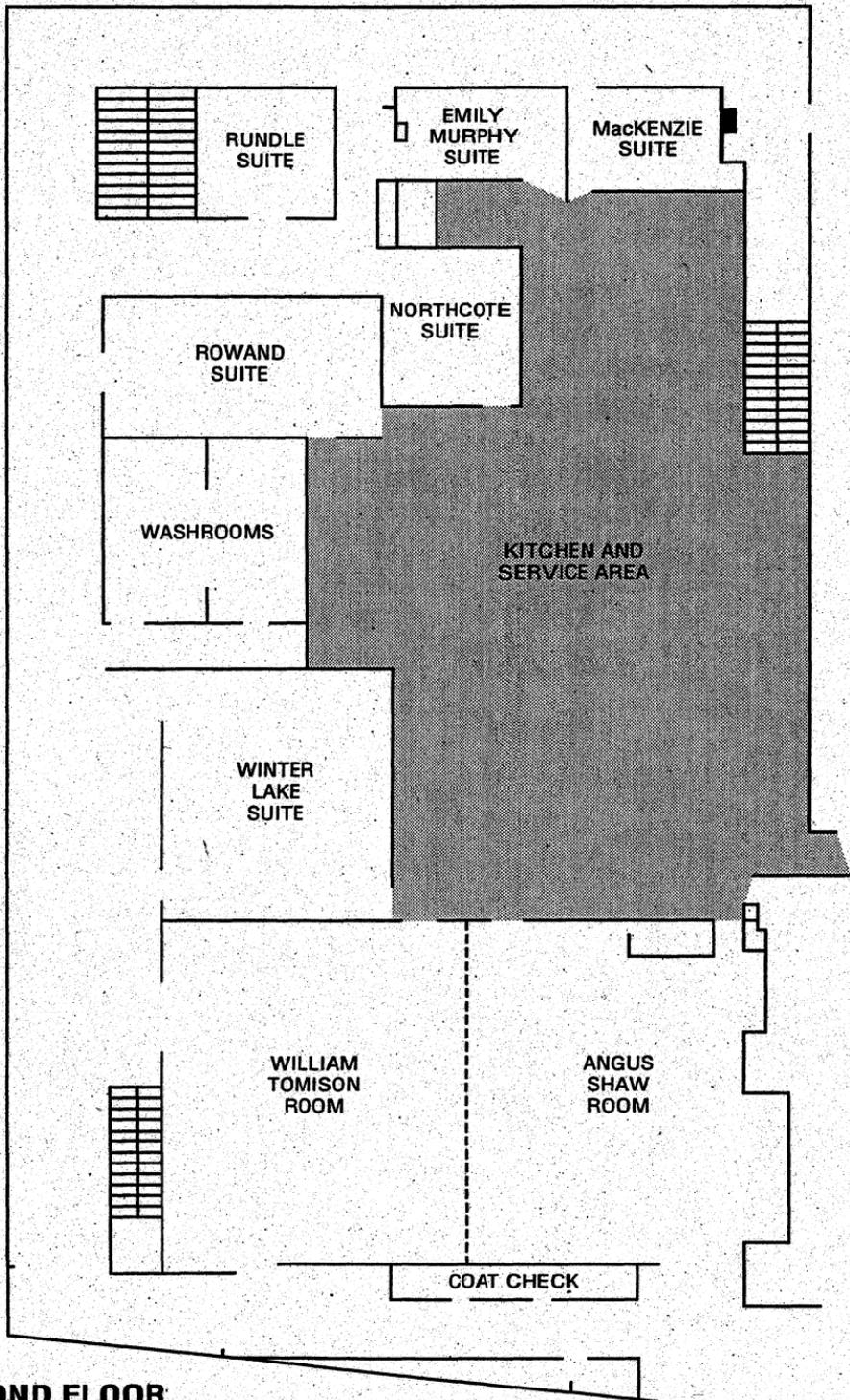
A travelling exhibit produced by the Prince of Wales Northern Heritage Centre which presents the results of a three year heritage resources inventory conducted in collaboration with Dogrib Elders in the Northwest Territories.

ZUTTER, Cynthia M., Department of Anthropology, University of Alberta, Edmonton, AB T6G 2H4

The Cultural Landscape of Iceland; Preliminary Analyses

Session [7] Canadian Archaeology Abroad

Anthropogenic impacts on the environment and cultural landscape development on Iceland are the primary research goals of this paper. The concept of the Icelandic Cultural Landscape as an artifact of the Norse culture will be discussed. Iceland is a natural laboratory for cultural landscape research as it has been thoroughly altered by human impact since Norse settlement in the 9th century A.D. and has an environment that is highly sensitive to climatic fluctuations. Preliminary results of palaeoecological and archaeobotanical research in two different Icelandic regions will be presented. In turn, these results supply critical palaeoecological information for examining the interplay between past cultures, their environment and the establishment of a cultural landscape.



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