



ARCH NOTES

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We hear from the U.K. (thanks Janet) that **Professor John Coles**, now retired, is selling off a lot of his books. Anyone who wants to see the list should send an International Reply Coupon to him at: The Mount, Somerton, Somerset, TA11 7PF

ASSOCIATION OF PROFESSIONAL ARCHAEOLOGISTS

FOUNDERS' MEETING

The first public meeting of the newly formed Association of Professional Archaeologists will be held on Sunday April 24, 1988 at the Heritage Room, Ontario Heritage Centre from 1.00 to 5.00p.m. The Heritage Centre is at 10 Adelaide St. East, Toronto. All interested archaeologists are invited to attend. A \$5.00 donation at the door is invited to assist in covering expenses.

The Association is formed to provide professional representation to archaeologists, to encourage high standards of research and to promote awareness of heritage resources. The first business meeting of the Association will be held in conjunction with the 14th Annual Symposium of The Ontario Archaeological Society in Toronto, October 22-23, 1988 with time and place to be announced.

PRESIDENT'S COMMUNIQUE

By Christine Caroppo

By the time you read this I (and lots of other lucky members) will be off on the fabulous OAS trip, Belize & Beyond. The OAS office will be closed for the duration of phase one of the trip (April 9 - 23) while Charlie enjoys a couple of well-earned weeks in the sun with the rest of us in Belize, Guatemala and the Yucatan of Mexico. This is my first OAS trip and I am really looking forward to it and the opportunity to meet members from all over the province. We'll make sure that there is a synopsis in a future Arch Notes for the edification of those who could not go.

In other social news...our Open House held on February 20th went very well. If you didn't manage to attend please feel welcome to drop by any time, have a coffee and check out the facilities. Give us a call first so that we can be sure there will be someone there to show you around. Even if there is no one in the office you can still access current information of interest to members. We have installed a bulletin board outside our door which is accessible during regular office hours. We hope that this board will act as a two-way information centre, especially when the office is closed.

On March 18th the office was the scene of the presentation to yours truly by Mr. Brad Nixon, MPP for York Mills, of a cheque for \$10,000 from the Ministry of Culture & Communications. This money will be used for the support of several ongoing OAS projects. We are grateful to Dr. Lily Oddie Munro for her confidence in us in the shape of this award above and beyond our core funding grant.

About our publishing schedule...well, we are still very much behind in our traditional two issues of Ontario

Archaeology per year. However, we are struggling to catch up and the light at the end of the tunnel is beginning to come into sight. We have appointed a new interim editor for OA 46, Laurie Jackson, as Morgan Tamplin had to resign. Laurie assures me that OA 46 will be out at the end of April! Peter Reid, also assures me that OA 47 will be out at the same time. A bumper crop! However, I would like to remind all you would-be contributors out there that these two issues will only bring us up to, in terms of our traditional publishing schedule, the middle of 1987. We still desperately need articles for the second volume for 1987 as well as the two volumes due for 1988 and beyond. Please, please send in articles for editorial consideration. Our reputation largely rests upon our publications and our SSHRC source of funding remains only so long as we can guarantee a regular series of publications. The onus is on you to provide the articles to keep Ontario Archaeology afloat.

You will have noticed that in the last issue of Arch Notes we tucked in a notice from the Ministry of Consumer & Corporate Relations about amendments to the Cemeteries Act with respect to unmarked burials. I know that you all have been concerned over the last few years about the problem of unmarked burials, both prehistoric and historic, turning up in archaeological sites and in the course of development activities. At present, the issue is not being well-served by current legislation; native burials especially, seem to fall between the cracks of existing legislation and jurisdiction. This amendment process is your opportunity to effect change in the legislation. Although the deadline indicated was March 31st, I still urge you to send in your responses as soon as possible indicating the lack of sufficient advance notice as the reason for the lateness of your submission. By the time you read this the Executive will

have responded to the Inter-Ministry Committee with our views and suggestions.

The OAS was pleased to be recognized in an official way by the selection of the President as chair of a workshop held early in March to develop technical guidelines for subdivision assessment by the consulting archaeology community. As chair, I was hoping that I wouldn't need a whip and a chair in order to run the meeting but my fears were unfounded as the workshop proved to be very amicable and successful.

By the time this is published many of you will be beginning your field seasons. Let me take this opportunity to wish you all fine weather and interesting discoveries. The Passport to the Past program workshop schedule will be suspended over the field season but please remember that many members are seeking volunteer experience this summer. If you have need of a volunteer please contact us at the office. Best of luck! Be talking to you again soon.

* * * * *

THE ONTARIO HERITAGE FOUNDATION

is pleased to announce that

Professor Robert S. Bothwell

has been appointed

Chairman of the Archaeological Committee

TREASURES OF THE HOLY LAND

Art lovers and archaeology buffs will get a unique introduction to this May's Royal Ontario Museum exhibition Treasures of the Holy Land.

The exhibition features ancient objects from the area between the Jordan River and the Mediterranean Sea, the oldest dating back 12,000 years and the most recent being from the 7th century of our era.

On May 8th, the afternoon before the exhibition opens, scholars from the University of Toronto, the Israel Museum, Sir Wilfrid Laurier University, and the ROM will gather on the U of T campus to make several public presentations placing these rare objects in their historic, cultural, and religious contexts.

Offered in co-operation with the ROM by the University of Toronto's School of Continuing Studies, this innovative symposium introduces the public to the cultural significance of the collection as well as providing the opportunity to hear informed discussion of the collection's aesthetic perspectives.

The symposium will be held Sunday, May 8th from 1-6 pm in the Medical Sciences Building, Medical Sciences Auditorium located near the Queen's Park subway station (with wheel chair access off the main entrance at 1 King's College Circle).

Early registration is encouraged, but admission will be possible at the door, space providing. The admission fee is \$40.00. Convenient registration by touch tone phone is possible by calling 978-2400 and providing your VISA or MasterCard number. Use SCS Course Number 7903, Section (I)A. You may register in person at the School's offices at 158 St. George Street (just south of Bloor) between the hours of 9am-5pm.

* * * * *

A HISTORY OF CERAMIC TABLEWARE IN
ONTARIO: QUANTITATIVE TRENDS IN
PLATES

By Ian Kenyon

Previous issues of ARCH NOTES outline a history of ceramic tableware in Ontario (1). Primary data for this history have been archival documents, principally invoices and inventories from Ontario general stores.

This present note offers a series of graphs depicting the frequency of the four most commonly sold table plate types in the 19th century. These graphs are derived from 34 sets of general store records. Where there were consecutive series of records spanning several years for a single store, these were added together and a mid-date average assigned. On the graphs, data sets with over 50 dozen plates (i.e. 600 items) are shown by filled diamond symbols, with open diamonds depicting sample sizes smaller than 50 dozen.

Four basic classes of plates mentioned in 19th century store records are C.C., edged, printed and white granite (2). Each category will be further discussed below.

C.C. (Figure 1). Cream Coloured (C.C.), also called "white" or "plain" in store records, was the dominant plate type in the late 18th century. This type is simply a white earthenware plate without coloured decoration. Until about 1830, C.C. had a glaze with a distinctive yellowish tinge (creamware). Plain white earthenware was always the least expensive variety of plate. About 1800 it constituted about 50% of the plates available for sale. By the 1820s C.C. was declining in popularity to about 30% of sales. During the 1830s through to the 1850s it reached a low point: many stores did not even stock C.C. plates. There was a slight revival of C.C. plates in the 1860s and 1870s.

Edge (Figure 2). Edge plates typically have a blue or green decorated border. Edged plates were priced slightly higher than C.C. About the year 1800 edge plates were sold in equal numbers to C.C. With the decline of C.C. after 1810, edged plates increased in popularity, only to undergo a slow decline after 1830, although they continued in common use until the 1870s.

Printed (Figure 3). As the name indicates, these plates have a design that is "printed" on the ceramic by use of a transfer paper. Printed ware was priced higher than edged. Although printed plates were manufactured in the late 18th century, they do not become "visible" in Ontario store records until the 1820s. Printed plates reach their high point in the 1830s and 1840s, typically forming about 30% to 50% of general store stocks. After 1850 printed plates decline in popularity in face of the rapid increase of white granite. Printing reached a low point in the 1870s but made a revival in the 1880s.

White Granite (Figure 4). White granite, also known as "white stone", "ironstone" or "W.G.", is a thick, hard, durable ceramic. It was priced at about the same level as printed. White granite was introduced about 1847 to Ontario stores. From then until the 1880s its popularity increased exponentially. During the 1880s it far outsold any other type of plate.

End Notes

1. Arch Notes may/june 1985, pp. 41-57; sept/oct 1985, pp. 13-28; nov/dec 1985, pp. 14-21; nov/dec 1987, pp. 22-25. These articles provide examples of general store records, illustrations of ceramic types, date ranges, as well as bibliographic material.

2. Percentages on the graphs do not always total 100% for each record

Figure 1: C.C. PLATES

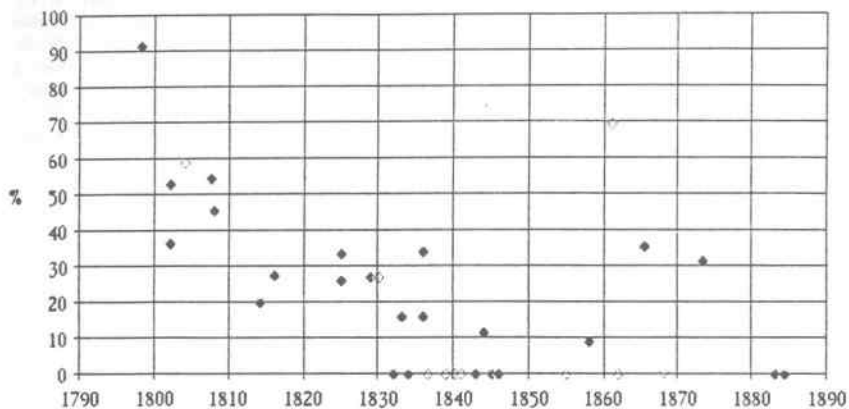


Figure 2: EDGE PLATES

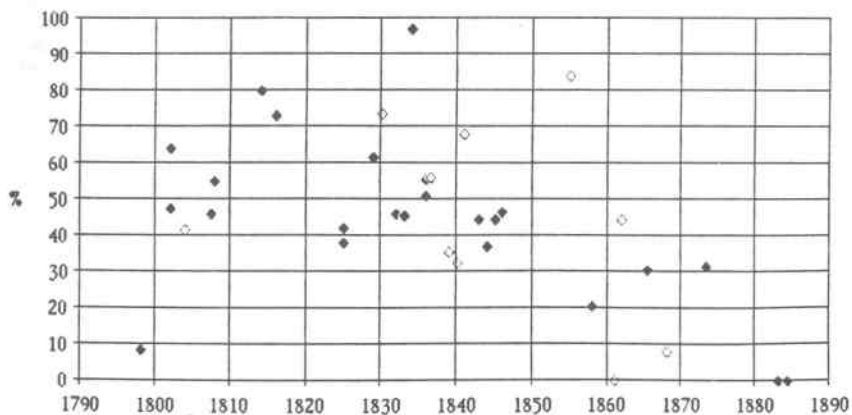


Figure 3: PRINTED PLATES

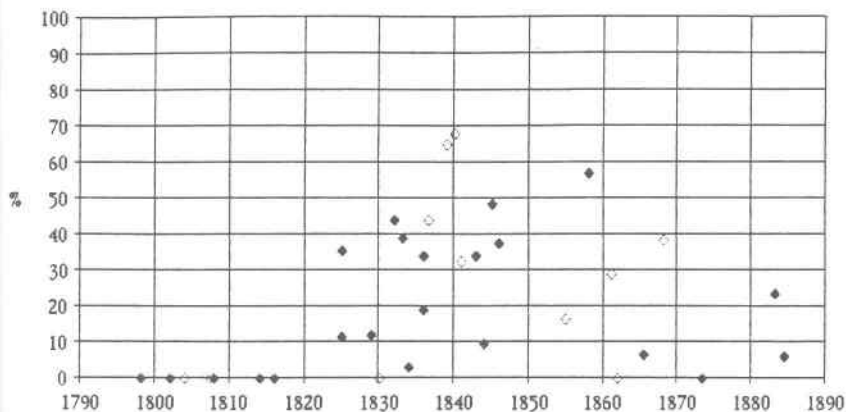
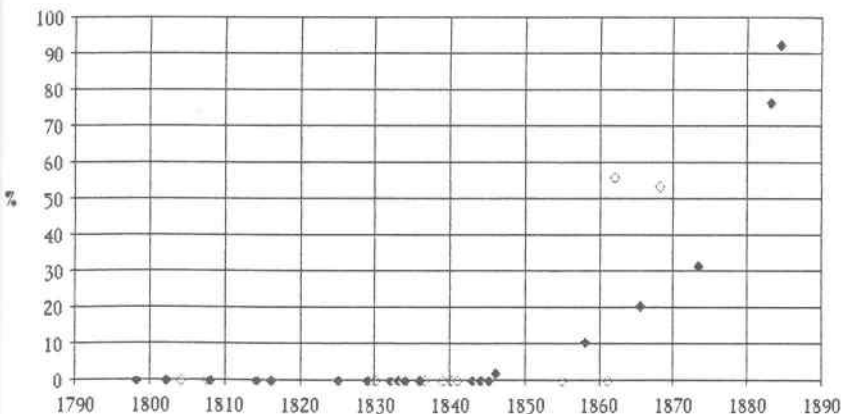


Figure 4: WHITE GRANITE PLATES



set. While together C.C., edge, printed and white granite constitute about 80% or more for all store records in the 1800-1890 period, there are certain minor types. The most frequently mentioned minor type was often termed "fancy". "Fancy" probably refers to a general grouping of plates that have a moulded decorated border (often with painted highlights) and a central design that may be printed. Typically the themes of these plates include moralistic or humorous mottos, alphabets (i.e. children's plates) or commemorative subjects (i.e. Queen Victoria). China or porcelain plates are mentioned only occasionally. Most of these were likely intended as pieces to accompany tea sets.

THE MIDWEST ARCHAEOLOGICAL CONFERENCE

Will hold its annual meeting at the University of Illinois and the Chancellor Inn in Champaign, Illinois on October 14 - 16. The symposium theme will focus on the Late Prehistoric to Historic transition in the Midwest. Deadline for submissions is August 1, 1988 while abstracts for contributed papers will be accepted until September 9, 1988. For further information please contact Program Chair: Kevin McGowan, 109 Davenport Hall, Department of Anthropology, University of Illinois, Urbana, Illinois 61801.

ROMAN RUINS DISCOVERED

A Roman amphitheatre where gladiators fought and soldiers paraded almost 2,000 years ago has been discovered in the heart of London's (U.K.) financial district, archeologists said.

The find ends 300 years of speculation on the location of the amphitheatre that experts were certain existed in Londinium, the Roman conquerors' name for the city.

"It is the most important missing piece in our jigsaw of the Roman city," said John Maloney, urban excavations officer for the Museum of London.

A team of 15 archeologists began digging last July in the City of London, the capital's business district. At a depth of about five metres, they found a complex of Roman walls more than a metre wide that they believe represents the eastern end of an oval amphitheatre.

It is next to the Guildhall, where the lord mayor has his offices, and city architects must decide whether to proceed with plans to build an art gallery on the site.

Such arenas were used for gladiator battles, weapons training, military parades and spectacles such as bear-fighting, experts say.

Maloney said the dig has unearthed evidence of an earlier and more primitive wooden amphitheatre built below the stone structure. The dig will continue for two more weeks.

From The Windsor Star
February 29, 1988

(Some of our members have been puzzled about the nearly-new organization - The Ontario Council of Archaeology - so we asked their president to explain...)

THE ONTARIO COUNCIL OF ARCHAEOLOGY

By 1986, it became apparent that if the full potential of archaeology in Ontario was to be realized it would be necessary for those conducting archaeology in Ontario to make their views known to the Provincial government. With this in mind, several archaeologists deeply involved in Ontario archaeology for a long time met and took the decision to form the Ontario Council of Archaeology for this purpose.

At this time it was agreed that membership in the Council would be open to all archaeologists who have significant research interests in Ontario, who have full-time appointments at universities and/or museums and who have a Ph.D. Other archaeologists are eligible to become members of the Council by nomination from, and majority vote of, the membership.

The aim of the Council is to provide advice regarding the conduct of Ontario archaeology to those government ministries or agencies which administer relevant legislation.

Since its formation, the Council has made representation to the Ministry of Culture and Communications, the Ontario Heritage Foundation, the Ministry of Consumer and Corporate Relations and the Office of the Premier seeking to facilitate the preservation of our archaeological heritage and to promote the further development of Ontario archaeology.

As President, I can also report that the executive of the Council has held a briefing session with the executive of the Ontario Archaeological Society. As a representative of the

Council, I also participated in a recent Ministry of Culture and Communications workshop on guidelines for subdivision assessment along with representatives of the Association of Heritage Consultants and the Ontario Council of Professional Osteologists.

To date, Council's efforts have been devoted to lobbying government to resolve a series of long-standing problems which face Ontario archaeology. These were outlined in the Council's submission to the Ontario Heritage Policy Review which was published in the December issue of Arch Notes. My thanks to the Society for its cooperation in publishing our concerns.

Some of the issues raised by the Council have been resolved by measures introduced by the Ontario Heritage Foundation, and I believe progress is being made on other issues. Nevertheless, much remains to be done if archaeology in Ontario is to attain its full potential.

I would hope that once the current issues are resolved, Council will undertake a variety of endeavours to promote Ontario archaeology and to disseminate information about archaeology to the media and the public.

The current executive of the Council is:

President, William D. Finlayson 519-473-1360
Vice-President, James F. Pendergast 613-269-4730
Secretary-Treasurer, Peter G. Ramsden 416-525-9140, Ext. 3914
Recorder, William C. Noble 416-525-9140, Ext. 3913

Current members of the Council are:

Professor William D. Finlayson, Ph.D., Toronto
Lawson Professor of Canadian Archaeology,
The University of Western Ontario,

and
Executive Director,
Museum of Indian Archaeology (London)

Professor Susan Jamieson, Ph.D.,
Washington State,
Department of Anthropology
Trent University

Dr. Mima Kapches, Ph.D., Toronto,
Assistant Curator
New World Archaeology
Royal Ontario Museum

Professor Dean Knight, Ph.D.,
Toronto,
Department of Sociology and
Anthropology,
Wilfrid Laurier University

Professor Martha Latta, Ph.D.,
Toronto,
Department of Anthropology
University of Toronto

Professor William C. Noble, Ph.D.,
Calgary,
Department of Anthropology
McMaster University

Dr. Robert J. Pearce, Ph.D., McGill,
Museum of Indian Archaeology (London)

Dr. James F. Pendergast, D.Sc.,
McGill,
Merrickville, Ontario

Professor Peter G. Ramsden, Ph.D.,
Toronto,
Department of Anthropology
McMaster University

Professor Peter Reid, Ph.D., SUNY,
Buffalo,
Department of Sociology and
Anthropology,
University of Windsor

Professor David G. Smith, Ph.D.,
McGill,
Department of Anthropology
The University of Western Ontario
and
Museum of Indian Archaeology (London)

Professor Michael W. Spence, Ph.D.,

Southern Illinois,
Department of Anthropology,
The University of Western Ontario

Dr. James V. Wright, Ph.D., Wisconsin,
Archaeological Survey of Canada
Canadian Museum of Civilization

* * * * *

PUBLICATIONS

From

The Thunder Bay Historical
Museum Society
219 S. May St.
Thunder Bay, Ontario
P7E 1B5

SIMON J. DAWSON by M. Elizabeth
Arthur

Simon Dawson (c.1820-1902) was a
civil engineer, explorer, treaty
negotiator and politician. He was
responsible for constructing the
famous Red River Road which opened up
Western Canada to settlement and
represented Northwestern Ontario as
M.L.A. and M.P. from 1875 to 1891.

Simon J. Dawson C.E. is the first
biography of this important pioneer.
(The support of the Gov't of Ontario,
Ministry of Citizenship & Culture is
acknowledged.) \$5.00, paper + \$1.00
p.p.

PREHISTORY OF NORTHERN ONTARIO by
K.C.A. Dawson

Nine thousand years of Northern
Ontario prehistory from the Palaeo-
Indian period, through the Archaic
and Woodland periods to historic
times. Complete with drawings,
diagrams and bibliography. By one of
Northern Ontario's leading
Archaeologists. \$4.00, paper + \$1.00
p.p.

* * * * *

ENDITENHWAEN

By John Steckley

In the Jesuit Relation of 1636 there is a discussion of the "feasts" or ceremonies of the Huron. According to the writer:

All their feasts may be reduced to four kinds. Athataion is the feast of farewells. Enditeuhwa, of thanksgiving and gratitude. Atouront aochien is a feast for singing, as well as for eating. Awataerohi is the fourth kind, and is made for deliverance from a sickness thus named. (JR10:177-179)

This short paper is about the second named ceremony, "Enditeuhwa", a ceremony whose name may have archaeological significance. In order to have a good sense of the meaning and possible significance of the name, it is useful to look at the names of the other three ceremonies cited above.

1.0 Athataion

"Athataion" is more accurately represented as 'Atsataion'. In a French-Huron-Onondaga dictionary of the 1650s it is presented as follows:

1.1 Atsata,ion festin d'adieu, au depart v.g. allant au guerre en traitte, xxx

/feast of farewell, of departing; for example, going to war, to trade xxx/ (FHO; xxx signifies a badly blurred part of the entry)

The literal meaning of this name is given in Jesuit Father Pierre Potier's 18th century dictionary as 'to have one's meal':

1.2 atsatanion...prendre son repas...

/to have one's meal/
onn'ahatsatanion voila qui prends son repas (fait son dernier repas...)

/Behold, one who has his meal (makes his last meal)/
(Potier 1920:204 #54)

This word contains the noun -atsat-, meaning 'meal' (Potier 1920:445). It is unclear what the verb is that it is incorporated into. One possibility is -on- (-ion- when incorporating a noun) meaning 'to arrive' (Potier 1920:314 #80).

2.0 Atouront Aochien

The first word in the phrase "Atouront aochien" is more accurately represented as 'atonront'. The print error of -u- for -n- was not uncommon, in this as other Relations (we can see this as well in the word "Enditeuhwa"). The meaning of this word is given in the following entry from Potier's dictionary:

2.1 atonront...chanter en guerrier une chanson laquelle l'assemblee repond par des hen, hen, reiterer, et qui l'accordent

/to sing a war song, to which the assembly responds with a 'hen,hen' that is repeated and according to a particular rhythm/
(Potier 1920:200 #21)

The second word, "aochien", means 'one holds a ceremony' (Potier 1920:214 #23), giving a combined meaning to the phrase of 'the ceremony of singing'.

3.0 Awataerohi

The last named ceremony, "Awataerohi", appears elsewhere in the Jesuit Relations as "Aoutaerohi" (JR10:183 and 199; 13:189 and 14:59), "Outaerohi" (JR17:197), and most accurately as "Aoutaenhrohi" (JR21:151). The nature of this curing ceremony is described in the following passage from the Relation of 1637:

This feast was an Aoutaerohi, where we saw a real sabbat. The women sand and danced while the men struck violently against pieces of bark;...They took, to keep time as it were, burning embers and red-hot cinders in their bare hands, then

passed their hands over the stomach of the patient, -who, as part of the ceremony or for some other reason, tossed about like a maniac, incessantly shaking her head. The feast ended, she became very quiet. (JR13:189)

In one of the manuscript French-Huron dictionaries of the 17th century we have the following entry:

3.1 Ata, aenraoch8i f/air/e une danse ou l'un mets des cendres chaud sur le malade

/to have a dance where one puts hot cinders on the sick/ (FH67)

Contained within this word is the noun -enr-, meaning 'ashes, cinders' (Potier 1920:447 "o, enra"). The verb it is incorporated into may be -o-, meaning 'to be wet, in water' (Potier 1920:401-403), possibly giving the combination the metaphorical meaning of 'putting ashes into a soup bowl' (see Potier 1920:403 "a, enroh8indi").

4.0 Enditeuhwa

What is common to the names for all three ceremonies discussed so far is that they all refer to a concrete, physical act: having a meal, singing, and, possibly, putting ashes into a soup bowl. We can reasonably expect that this 'grammar of ceremony names' would also apply to enditeuhwa.

First to be established is an accurate representation of the name for the ceremony. We get that, plus a context for the ceremony, in the following entry from a French-Huron-Onondaga dictionary of the 1650s:

4.1 Enditen ch8aen faire festin de remercier xxx v.g. ho/mm/e nouvellement revenu des Ennemys

/to hold a ceremony of thanks; xxx for example, a man newly returned from the enemy/

henditen ch8aen /he holds a ceremony

of thanks/

honnenditan ch8aen ils fond ce festin /they (masculine) hold this ceremony/

senditen ch8aen tu /you hold a ceremony of thanks/ (FHO; c.f., FH c1697:237)

Contained within this word is the noun -,entenchw-, meaning 'the side of a human or other animal' (Potier 1920:455). This can be seen in the following entry from a 17th century Huron-French manuscript dictionary:

4.2 ,Entench8a le coste /the side/
,itench8a,e en mon coste /on my side/
 Enditench8aen se mettre sur son coste /to put oneself on one's side/
asckati senditench8aentak mets toy sur l'autre coste /put yourself on your other side/ (HF)

The verb involved is -en-, meaning 'to put, place' (Potier 1920:219 #37*). A literal translation of the three examples presented in 4.1 are then:

4.3 henditench8aen - 'he puts himself on his side'
honnenditencheaen - 'they put themselves on their sides'
senditench8aen - 'you put yourself on your side'

It is probably that, as with the other three ceremonies, this is referring to a specific physical act performed by the participants. The main point to be made here is that being placed on one's side had symbolic significance in Huron culture. From an archaeological perspective, this might suggest that the act of burying someone on one side or another, or on one side as opposed to on the front or back, had meaning to the Huron, was possibly something they would do to express a symbolic message. Further research, continued on page 13

...o a s administrator honoured...

O.A.S. ADMINISTRATOR, CHARLES GARRAD,
HONOURED BY THE ONTARIO HERITAGE
FOUNDATION

Inaugural 'Friends of the Escarpment'
Program Recognizes Special
Contributions

A program recognizing significant contributions to the protection and wise use of the heritage resources of the Niagara Escarpment was launched on Heritage Day by Richard Alway, Chairman of the Ontario Heritage Foundation.

Among those honoured as inaugural "Friends of the Escarpment" were Canadian wildlife artists Robert Bateman and George McLean, the City of Hamilton, the founding Chairman of the Natural Heritage League, John White, and the administrator of the Ontario Archaeological Society, Charles Garrad.

The Honourable Lily Munro, Minister of Culture and Communications, The Honourable John Eakins, Minister of Municipal Affairs, and the Honourable Vince Kerrio, Minister of Natural Resources, as well as Terk Bayly, Chairman of the Niagara Escarpment Commission were on hand to assist with presentation of personalized letters of appreciation from Premier David Peterson. The three provincial departments share responsibility for implementation of the Niagara Escarpment Plan.

In outlining the new recognition program, Foundation Chairman Richard Alway noted: "The success of the Niagara Escarpment Program and the long-term wise management of Escarpment resources is largely dependent on the personal commitment and generosity of organizations and individuals in the private sectors. The Foundation's "Friends of the Escarpment" Program is designed to formally recognize these very special partners for outstanding contributions to heritage protection."

The citation to Charles read:

CHARLES GARRAD
(Willowdale)

For more than 25 years of voluntary effort to protect Escarpment archaeological sites, particularly in the Collingwood area between Creemore and Craigeleith. Mr. Garrad was recently acknowledged by the Smithsonian Institute in Washington as an archaeological expert on the Petun people, who were inhabitants of the Collingwood area in the 17th century.

Close to 100 people attended the recognition event representing municipal governments, Escarpment parks and conservation authorities and non-profit heritage organizations. Charles was interviewed after the presentations on the C.B.C. program "Radio Noon".

* * * * *

continued from page 12

both archaeological and linguistic, is necessary before conclusive statements can be made.

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FH
c1697 French-Huron manuscript dictionary
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The Burrows Bros., Cleveland.

* * * * *

STEEP ROCK AND THE FALLS BAY
RANGIFER

By L. J. Jackson

In 1936, the largest commercial dredging operation in North America was initiated near the small town of Atikokan in north-western Ontario. Enormous iron ore deposits discovered two years previously led engineers of Steep Rock Resources, Ltd. to plan the draining and dredging of an entire lake to get at hidden deposits. This operation was ultimately to move a greater volume of earth than was excavated for the Panama Canal, using state-of-the-art equipment, including gigantic cutter dredges and pump stations. The project, in addition to repaying the enormous investments of Steep Rock Resources' investors, provided critical raw material for the Allied war effort at a time when U-Boats were sinking so many ore carriers that reserves were at a record low.

The effort to remove the iron deposits was unbelievably complex-involving major diversions of rivers and lakes with dams and drilled tunnels, building of power plants and highways, and hydraulic dredging of all the silt from the bottom of Steep Rock Lake to get at the ore-bodies. A project of this scale probably will never be seen again in North America. It was only in August of 1944 that the first ore was exposed and on October 3rd, 1944, the first shipment left Steep Rock by rail.

The initial financing of the Steep Rock project was itself a politically complicated process. Part of the solution was to lease ore-body C in the East Arm of Steep Rock Lake to Caland Ore Co. Ltd., a division of Inland Steel (Figure 1).

In a detailed assessment of May 15, 1953 to Mr. A. J. Cayia, Vice-President and General Manager of Caland ore, Mr. J. R. Sensibar, President of Construction Aggregates

Corporation of Chicago described some of the problems faced in removing the ore:

The East Arm of Steep Rock Lake is a huge bowl or crater gouged out of the solid rock. This bowl is approximately 6,500' in diameter and 800' in its greatest depth. A power dam near the north end of this bowl closed off the Seine River which formerly passed through this lake and formed Marmion Lake back of the dam. The southeast arm formerly the route of the river is a continuing extension of the bowl. The top of the iron ore-body forms a segment of the bottom of this crater. This rock bowl is filled to varying elevations with material consisting mostly of varved clay and silt with a substantial but undetermined content of loose rock, boulders, sand and gravel. This is the most treacherous material to handle hydraulically that we have encountered in forty-six years of experience...on both Coasts of the Continent, the Great Lakes and Latin America.

Mr. Sensibar went on to describe how 180 million cubic yards of this silt fill had to be removed and redeposited in various surrounding areas. Some 15 million cubic yards lined the ragged sides of the crater in which the East Arm of Steep Rock Lake was formed, with only a small part of this material accessible to the huge hydraulic cutter-dredges.

It was the solution to this silt removal problem that led to a tremendously exciting and long-overlooked palaeontological discovery. Although exact details are not a matter of record, in the summer of 1956, while "monitoring" silt deposits (actually sluicing with powerful water hoses) from the sides of the rapidly draining East Arm, a large horn of a caribou was found. Since caribou were present in the area as late as the 1920's this was not too surprising - what was unusual was that the antler was reported as



FIGURE 1 STEEP ROCK LAKE, NORTHWESTERN ONTARIO

(1) West Arm (2) Middle Arm (3) East Arm (4) Southeast Arm

beneath about 60 feet of varved silt and clay!

These same deposits were a source of considerable anxiety to those who worked the bottom of the lake. At least one workman had been killed by an enormous land slip during the earlier dredging for the Steep Rock Resources ore body. Geologists were frequently called in to examine the varved silts and clays of the deposits - almost at a loss to explain the land slippage phenomena. Very little attention focused on the possible age and scientific significance of the deposits.

Two surveying engineers discovered the caribou antler and brought it to the attention of General Superintendent Mr. E. W. 'Bud' Whitman. Mr. Whitman recognized the value of this specimen and it was shipped to the Royal Ontario Museum in Toronto where it was examined and subsequently 'conserved' for shipment back to Atikokan. In 1966 it was donated by Mr. Whitman to the Atikokan Centennial Museum.

This remarkable specimen has been on display in the Atikokan museum for the past twenty years, admired by many but seldom, if ever, considered further. Perhaps the fact that it was mounted on a trophy board and coated with a plasticizing agent (giving it a dazzling surface sheen) obscured its importance.

In December of 1987, Mr. Jon Nelson, a former park ranger in Quetico Park and a resident of Atikokan, mentioned to my associate Heather McKillop that I should look into this find. In view of my work on southern Ontario fossil cervids and Palaeo-Indian settlement pattern, he felt the Atikokan antler might be of interest. Subsequent conversations confirmed this. Jon's message also made its way to Dr. Bryan Gordon at the Canadian Museum of Civilization. Bryan thoughtfully called to encourage work on the specimen and

offered his able assistance. I credit Bryan with teaching me the value of understanding prey species during 1977 field work in the Northwest Territories.

Despite the fact that my only northern Ontario experience was five less than memorable days spent trying to hitch-hike through the area in the early 1970's, I made arrangements to fly to Atikokan on February 10th, 1988. Having secured permission to examine the antler, I also contacted a number of people regarding the find and its reported context. It was entirely possible that the antler represented a recent woodland caribou that made a fatal slip on the ice of Steep Rock Lake.

After a rather routine flight to Thunder Bay, I boarded a Twin Otter plane with about ten other travellers (who did not remove their parkas). I soon learned that cabin air temperature peaked only after reaching Atikokan - about an hour into the flight. There was some solace in the still extreme discrepancy with outside air temperature.

On our banked descent to Atikokan airport I had my first look at the empty East Arm of Steep Rock Lake, a magnificent view of a man-altered landscape of staggering proportion (Figure 2). As the only passenger to get off at Atikokan, I was quickly identified and whisked off to the museum by Lorraine Stromberg for my first look at the now legendary (in my mind only) Steep Rock Rangifer antler.

I spent the rest of that day and the next going over the antler, taking endless measurements (Figure 3) and rolls of photographs, and being toured around the mind site and general area getting an initial feeling for the geographic circumstances of the find. All of this was done with the generous assistance and hospitality of

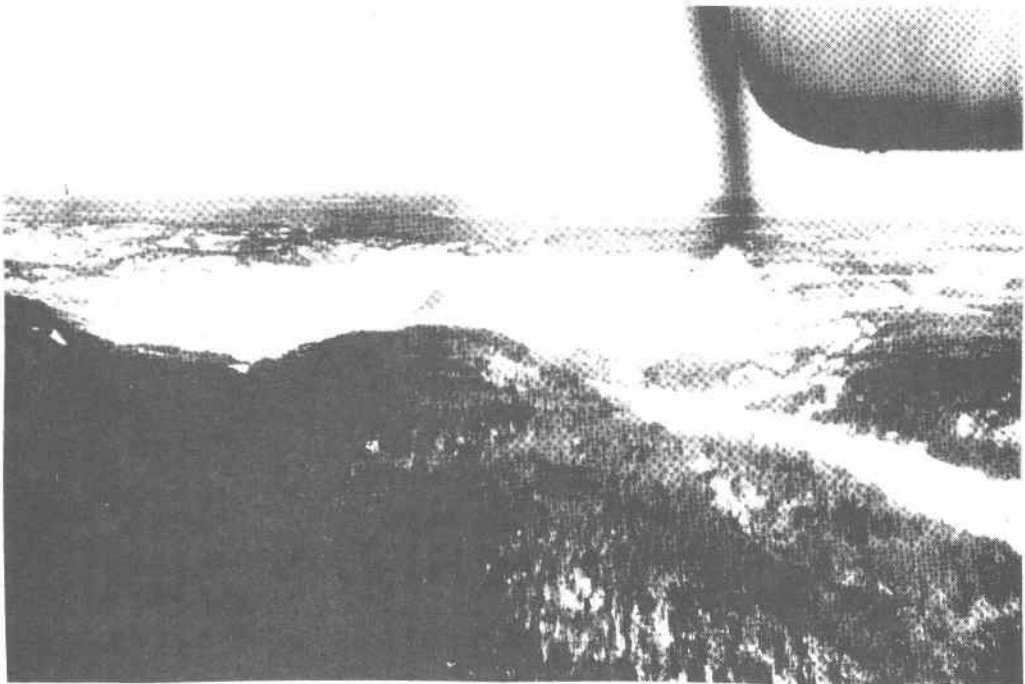


Figure 2. Aerial View of Steep Rock Lake, February 10, 1988 (Southeast arm in lower right; emptied east arm in upper middle of photo).

Lorraine, Charlie, Shirley, Lisa, Dawn, and Andrea who set a site tour speed record.

Probably the most important information obtained during my visit was confirmation of the context of the antler from Charlie Brooks, one of the survey engineers who found it. With his meticulous memory, Charlie pinpointed the find as 600 feet west of the old Seine River channel, 1,000 feet south of the old shoreline of the East Arm of Steep Rock Lake, and roughly 100 feet deep in the silt. He noted that the varves overlying the antler were intact and that it was definitely embedded. A deep lens of coarse gravel also overlay the silt.

The obvious implication of this depositional data is that the antler could not be modern and most likely dates to a period of glacial outwash, perhaps as late as the latest Wisconsinan glaciation but likely even earlier. If, as I surmise from its context, the Falls Bay antler is really Pleistocene in age, what possible implication could this have for archaeology?

The most obvious answer lies in the relative consistency of animal behaviour over time - if herding caribou, especially the barren-ground form, were present in the Atikokan area in the Late Pleistocene, there is a strong possibility of association with early human hunting groups. Certainly, the area has produced scattered evidence of Late Palaeo-Indian occupation which may date as early as 8,000 to 10,000 yr B.P. Exploitation of cervids by Palaeo-Indian peoples in the Northeast is an established fact, with caribou the most frequently encountered association.

If the Falls Bay antler is much earlier in age, dating before human occupation (at least as far as more conventional archaeologists are concerned), then its significance may

lie exclusively in the realm of palaeontology. It may provide valuable new information on the Pleistocene distribution of caribou herds in Canada and the northern mid-continental United States and give us much-needed insight into the nature and composition of biological environments at that time.

Such questions may only be answered over the long term after more groundwork has been done. However, with the permission of the Atikokan museum board, I made the initial step of sampling a section of the antler to see if an AMS date could be run on a less contaminated portion of the specimen. A single tine was removed for coring by an AMS laboratory and will be reattached to the main antler on completion of this work.

I have made only one previous dating attempt on a specimen of this nature, a museum-shellacked elk skeleton (Jackson 1987) from a cave site in Pennsylvania, which was successful. Whether or not dating succeeds with the Falls Bay antler, I will report in the coming months.

As a shed antler from an adult male caribou, probably the barren ground form to judge by the antler cross-section, this specimen could have significant implications for archaeology. Shed antler is one of the best indicators of ranging behaviour since caribou, male and female, young and old, shed antler at particular times of year - male and female six months out of phase. Since adult male caribou tend to shed their antlers between October and December in their rutting season, we can suggest that the Falls Bay example represents a male probably returning from summering range somewhere north of Atikokan and heading for winter range likely several hundred miles to the south. Modern range separation can be as much as 800 miles (Banfield 1974). Bearing in mind that the antler was likely transported by water, either

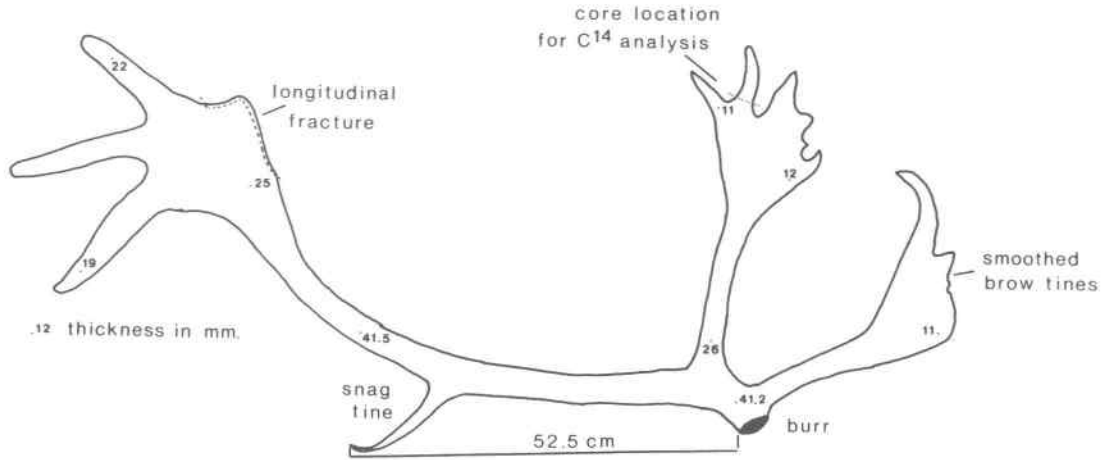


FIGURE 3 SAMPLE MEASUREMENTS ON THE STEEP ROCK LAKE RANGIFER ANTLER.
 (mediolateral diam. of base at burr 65.4 mm.; main beam thickness ranging from 40 to 60 mm.)

via the Seine River, or perhaps even in an earlier event of glacial outwash, we can surmise at least the proximity of herding caribou to Steep Rock Lake.

The actual age of the specimen is critical to understanding its relevance, or perhaps irrelevance, to human prehistory in the New World. If AMS dating is unsuccessful on the first try, I think techniques are sufficiently advanced that I will hazard a second attempt. If nothing else, this undated antler draws attention to the importance of animal fossils, particularly in the Great Lakes area, to our understanding of glacial and late-glacial environments. In addition to holding the promise of telling us something of the patterning of early human settlement, it also reveals a forgotten fragment of Canada's rich history - the legendary mining of Steep Rock and the overlooked antler on the wall (Figure 4).

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Acknowledgements

The most suitable dedication for this first paper on the Falls Bay Rangifer is to the memory of the forgotten workman who still lies buried with his machinery at the bottom of Steep Rock Lake. I am indebted to Lorraine Stromberg for her generosity in assisting my initial investigations, to Charlie Brooks for taking me on a tour of both the mine area and the local Legion, and to Shirley Peruniak for preparing a wonderful lunch and remembering my name. To the many other people I either met or talked

to by telephone I wish to express my appreciation. Heather McKillop kindly checked with the Royal Ontario Museum's Dept. of Mammalogy regarding further details on this specimen.

I wish especially to acknowledge the insight of Jon Nelson, now a graduate student at Trent University, who sparked interest in the Steep Rock story and kept it from prolonged neglect. To Arthur also I am indebted both for friendship and helpful discussions on how to deal with those who tinker.

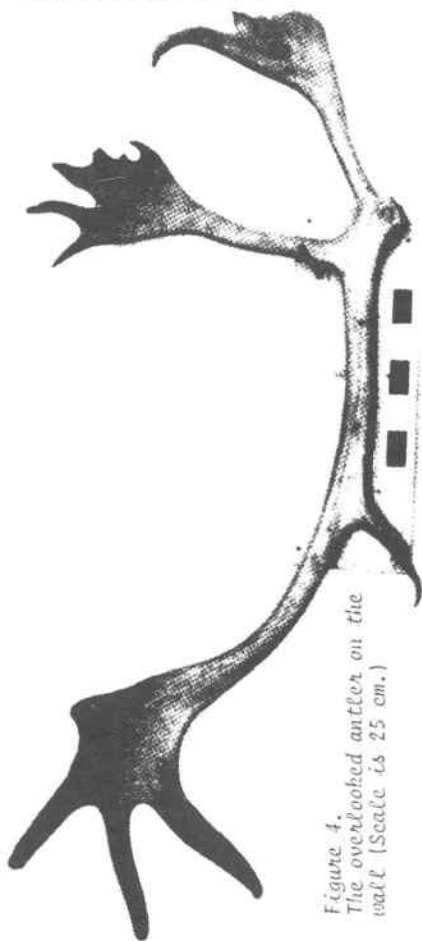


Figure 4.
The overlooked antler on the
wall (Scale is 25 cm.)

...environmental archaeology

ASSOCIATION FOR ENVIRONMENTAL ARCHAEOLOGY (U.K.)

The Association was formed in 1979 to provide a means of communication between those working in environmental archaeology and related subjects. Members' interests range from anthropology and palaeopathology to palaeo-botany and the study of prehistoric economies. The membership numbers over 300 and includes university staff, research students and people employed in rescue archaeology.

The AEA holds two open meetings annually. At Easter there is usually a one-day meeting at which short, informal papers are presented on a wide range of topics. In September a weekend conference is held. The papers given at this conference are more substantial than those given at the Easter meeting and are usually on a related theme. These papers are later published as a collection in the British Archaeological Reports (International) Series. The publications are available to members at a reduced price.

Circaea is the bulletin of the Association and it is published twice a year, and sent to all members. It contains a wide range of material, from short notes on methodology to substantial reports and systematic works. Everyone is encouraged to use Circaea as a vehicle for short articles, discussion, etc. In addition, the Newsletter is published every three months, giving information about forthcoming meetings and activities and acting as a general newsheet facility for the members of the Association (eg, it may be used to advertise jobs and publications, etc.).

Anyone involved or actively interested in environmental archaeology is invited to join the Association. The annual subscription is six pounds sterling for

individuals and nine pounds sterling for institutions. International Money Orders, etc. should be made payable to the Association for Environmental Archaeology and sent to the address below.

Bruce Levitan, Membership Secretary,
Association for Environmental
Archaeology, University Museum, Parks
Road, Oxford OX1 3PW, U.K. (tel.
0865-272983).

*

CONFERENCE NOTICE AEA CONFERENCE AND AGM

Experimentation and reconstruction in
environmental archaeology
23rd-26th September 1988
Roskilde, Denmark

The conference will follow the usual AEA pattern of papers followed by excursions. Contributions have already been offered on a number of subjects including:- reconstructing mesolithic skinning and butchering techniques; neolithic forest management and animal husbandry; grinding, bread-making and cooking experiments with ancient barley and wheat species. Further contributions are invited. The conference language will be, as usual, English.

The provisional programme for the conference includes a combined excursion and mini-symposium at Lejre Archaeological and Historical Research Centre, and visits to Roskilde Viking Ship Museum, the mesolithic sites and exhibition at Vedbaek and the open air museum at Lyngby. If sufficient interest is expressed a further 2-3 days of excursions will be organised in Jutland for the week following the conference.

The cost for period 23rd-26th September will be about 70 to 80 pounds sterling (800-900 Dkr.) including board and lodging, excursions and conference fee.

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BUFFALO SOCIETY OF NATURAL SCIENCES

A Symposium on Lithic Sourcing and
North American Palaeo-Indians

7 May 1988, 9:00 a.m. to 4:00 p.m.

At Best Western Lockport Inn, 515
Transit Road, Lockport, New York
(716-434-6151)

Registration: \$9.00 (U.S.)

The key to understanding the peopling of eastern North America ultimately lies with lithics. Unfortunately, none of us know enough about the various types of raw materials used by Palaeo-Indian knappers or how they may be identified with certainty. In this symposium we hope to address the problem of lithic sourcing and to trade information about raw materials used by Palaeo-Indians.

Please bring flaked stone tools of exotic raw materials and also series of hand-specimens from ancient quarries you may have visited. Also bring publications for sale to your colleagues. We will all be interested!!

Addresses by:

Dr. Peter Storck, Curator, Department of New World Archaeology, Royal Ontario Museum, Toronto, Ontario. "The Implications of Lithic Sourcing Studies for Palaeo-Indian Research".

R. M. Gramly, Curator of Anthropology, Buffalo Museum of Science, Buffalo, New York. "The Puzzling Variability of Lithic Assemblages Among Six Fluted Point Palaeo-Indian Sites in the Magalloway River Valley, Maine".

Kenneth Tankersley, Glenn Black Laboratory of Archaeology, Indiana University, Bloomington. "The Mechanics of Lithic Sourcing and Various Revelations about Palaeo-Indian Lifestyle in the Mid-Continent".

Registration is by mail only.

Attendance is limited to a first-come, first-served basis for 60 people. Any excess registrations and all late mailings will be returned.

There is no charge for exhibit space. Vendors must merchandise their own publications; tables will be provided.

Coffee and pastry will be provided to symposium registrants free-of-charge. Lunch is extra. The motel informs us that their food is good and that they will be pleased to provide a nice hot and cold buffet plus beverage for \$6.00/person --- if they are given sufficient notice!

Address all enquiries and send all registration fees to R. M. Gramly, Curator of Anthropology, Buffalo Museum of Science, Humboldt Parkway, Buffalo, New York 14211 (716-896-5200x216) or 838-3633, home in evenings).

Please make payment in US funds only, as it will lessen the paperwork.

It will be a great symposium, and all of us -- both listeners and lecturers -- stand to benefit greatly. Long Live Archaeological Science!

* * * * *

continued from page 21

If you would like to offer a paper or just receive further information about the conference, please contact:

Dr. David Robinson, The Danish National Museum, 8th Department, Ny Vestergade 11, DK-1471 Copenhagen K, DENMARK.

* * * * *

YES VIRGINIA, THERE REALLY
IS A "SITE"!

By Kathy Dandy, M.C.C.

(*Author's note: This is an excerpt from a presentation given at the November 1987 meeting of Consulting Archaeologists.)

And now onto a hotly debateable subject that we all hold dear to our hearts: "What is a site?" and "What 'sites' should be given Borden numbers?".

Given the natural argumentative disposition of an archaeologist, a black and white answer to this question may never be put down on paper. Despite the perils of the exercise, I would like to brave the elements and offer a working definition.

To begin the discussion, let's review what the Ontario Heritage Act has to say about archaeological sites. Part VI, Section 47(b) of the Act interprets property to mean:

...real property, but does not include buildings or structures other than ruins, burial mounds, petroglyphs and earthworks...

The regulation which provides for the site record form is interpreted from Section 65(2):

...When so required by the Minister, a person, organization or corporation shall prepare and file with the Minister particulars of all property of archaeological or historical significance in Ontario, known to such person, organization or corporation...

End of discussion. "Real property" of archaeological or historical significance is not very helpful to us other than it presents us with the flexibility to create our own

definition. The only thing which it possibly does clear up for us is that we do not consider standing historical buildings in themselves as archaeological sites. Borden numbers are given, however, to built historical properties where archaeology has been conducted.

Turning to the textbook definition, I can offer a more functional interpretation. Charles McGimsey, in his Arlie House Report has this to say:

...Any area or location occupied as a residence or utilized by humans for a sufficient length of time to leave physical remains or traces of occupancy...

This definition would include everything from a large village site to a deer killing spot recognized only from the remains of some flint chips and a broken point.

Going from the general to the specific, we now come to the twilight zone of archaeology in which we must address the occurrence of the flake scatter over a ten acre field, the pair of flakes under a tree or the single diagnostic point dropped by a hunter in travel. They may be insignificant to the heritage resource manager but are none-the-less a piece of the larger puzzle of interest to the research archaeologist. It is imperative that all finds be recorded in the research report, however, the question is, where do we draw the fine fuzzy line between a "Bordenizable" site and "other".

Starting at the general again, the Borden system was designed to record the spatial position of sites within Canada. Because spatial affiliation is central to the concept, it is inappropriate to give a Borden number to a collection of artifacts for which we have no provenience. This

excludes Great Grandpa Jones' collection which Aunt Bessy has had in the basement for years which she swears came from the apple orchard or was it the gully in the back forty...The artifacts are of interest themselves and should be catalogued for future reference but you will have to find a cataloguing scheme other than a Borden number.

If spatial affiliation is a qualifier then why not Bordenize a flake whose exact position can be recorded? This is a fair question until some one says, "But how far away is that flake from the next flake in the field?"

The ACO guide prepared by Bill Fox a few years ago presented this working definition:

...A non-designated (meaning non-Bordenized) locality (isolated find-spot) consists of an identifiable tool or up to 5 chert flakes in a wide scatter, with no fire cracked rock and no soil discolouration. On the other hand, a designated site includes 2 or more tools, or 6 or more flakes or tools or debris associated with fire cracked rock or a soil discolouration. The above definitions are to be considered as a guide, rather than as rules, and the main point to remember is to use your discretion. For instance, 6 flakes scattered over 10 acres would constitute a locality, whereas, 6 flakes scattered over 200-400 square feet could well constitute a designated site, especially if they are associated with fire cracked rock and soil discolouration.

I am sure that there are many of you who are prepared to argue otherwise. I'll present your arguments for you. The Borden System was designed to record the spatial provenience of archaeological remains. As long as an artifact can be recorded as to exact findspot, then it is eligible for a Borden number. The Borden designation does not presuppose any significance to the 'site' but rather

only a method of recording. The artifact has to be catalogued and recorded anyhow so why not give it a Borden number?

Furthermore, Ontario is different from other provinces in that we have both amateur and professional archaeologists involved in recording sites. Many of our amateurs have a surface collection only licence which does not allow them to dig test pits around the area of a findspot to further determine its potential. A more experienced archaeologist may use the "findspot" information later to uncover a site.

Northern Ontario archaeologists will also argue in favour of Bordenizing sites of limited definition. The 10 acre Iroquoian village is a non-entity in northern climates. Traces of human activity are normally recorded on a smaller scale and are more widely dispersed.

Archaeology is a social science in which we must allow some room for professional discretion. Rather than imposing a rigid definition, I suggest that we adopt a minimum guideline for requiring a Borden number. The minimum is based on the definition Bill Fox set out for the ACO's. That is if you have a "site" that has 2 or more tools or 5 or more flakes with fire cracked rock or soil discolouration within a 200-400 square foot radius, you should be asking for a Borden number. I am also prepared to add to that single diagnostic finds since it is a guideline which many have already adopted. If you have material collected from a matrix of less than these dimensions, the decision to obtain a Borden number is up to you.

I know many of you will argue that this approach does not achieve true standardization of data. In my opinion and experience with site recording practices, we do not have equal opportunity to make truly consistent and standard decisions. Borderline results from field

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LAKE TEMAGAMI AND THE
NORTHERN EXPERIENCE*

By Diana L. Gordon

My current research in Ontario archaeology is centred on the analysis and interpretation of the Three Pines Site (Druid's Cove) CgHa-6, a multi-component site on Lake Temagami in northeastern Ontario. Lake Temagami is located 50 miles north of the city of North Bay. This paper title: Lake Temagami and the Northern Experience, which I suggested to the organizers off the top of my head, caused me to reflect on how this current work has been influenced by my previous experiences in prehistoric archaeology and ethnoarchaeology in Boreal Forest regions of Subarctic Ontario and Quebec. In this paper, I would like to give you an impression of what it is like to do archaeology in the northern forest, show you how I have approached research on Lake Temagami, and indicate how this current work has developed out of my own earlier northern experiences.

Now, for some of you, Northern Ontario starts around Barrie, while others consider Arctic Canada to be the true North. My interest falls somewhere in between in the Subarctic Boreal Forest and the northern limits of the Great Lakes - St. Lawrence mixed forest.

In 1977 and 1978, I worked with archaeologist James V. Chism of the Ministère des Affaires culturelles and a crew of 6 in the Baie James area of northwestern Quebec. We conducted archaeological investigations as part of a salvage program for the massive James Bay Hydroelectric Project. We worked for 2 summers at the northern limits of

*A paper given at McMaster Anthropology Society Symposium, February 13, 1988

the proposed La Grande -2 reservoir excavating prehistoric sites along a wide, open parkland sand terrace on Lac Washadimi (Chism 1977, 1978). These sites contained mostly lithic debitage, the occasional tool, small burned fragments of animal bone and a few undecorated ceramic rims. Eight metre hearths were the major structural features on the sites. Digging was easy in very shallow soil where sterile layers were encountered at a depth of 6 cm.

Of great interest to me were the remains of more than 60 conical tents (michuaps) sharing the terrace alongside the prehistoric sites. These were marked by fallen poles, or circular rings of banked-up earth with raised hearths in the centre. We recorded these rings as well as winter camps, one dating to the 1930s, spring goose hunting camps and small travel camps (Chism 1978). When we returned in 1978, a winter camp used the previous year by two families from Fort George was at the western end of the lake (Gordon 1980). Clearly this part of the world was very much the domain of hunter-gatherers, albeit people using some of the amenities of modern technology, but nonetheless gaining a living from the land.

In the final two weeks of our last summer at Lac Washadimi everything changed. Three elder Cree, Sam Pashagumskum, Job and Mary Bearskin, and the younger William Fireman of Fort George joined the archaeologists along with ethnographer Adrian Tanner of Memorial University. Dr. Tanner was conducting ethnographic studies in conjunction with the archaeological work (Tanner 1978a, 1978b; see also Tanner 1979). These Cree men and woman, who had hunted and trapped in the bush all their lives taught us many things. For instance, they showed us how to construct a michuap placing the fire just forward of the smoke hole to ensure a proper ventilation and how to collect spruce boughs for the

flooring. We visited many of the old campsites, where the old men pointed out things my city eyes could not see: scratches on trees made by a porcupine, prints of small animals, and man-made items lying in the moss which I never noticed before. Through their eyes, this was a completely different world which I had not seen before their arrival. For me, even the prehistoric sites seemed to come alive, no longer just collections of stone and animal bone but the homes of hunters from long ago.

For my M.A. research in 1981, I wanted to continue working with local native people doing the archaeology of a remote Boreal Forest lake (Gordon 1982, 1985a, 1985b). Dr. Ed Rogers' extensive ethnographic and ethnohistorical research of the Weagamow Lake Band in remote northwestern Ontario, provided a solid background for archaeological research (Rogers 1962, 1963; Rogers and Black 1976; Rogers and Black Rogers 1980). His interest in fur trade history and archival work influenced me to consider how to bridge the gap, both conceptual and methodological, between what we define as prehistory and history.

For 2 months in 1981, we explored North Caribou Lake just east of Weagamow Lake examining both historic/modern and prehistoric occupations assisted by Job Halfday, his daughter Patty and other family members. Out of this work emerged a number of findings concerning the criteria for campsite selection in the Boreal Forest (Gordon 1982, 1985a), the different attitudes and behaviour towards material items held by hunter-gatherers (Gordon 1985b), and the need to consider the whole range of human occupation on a lake.

Thus from work in James Bay and other areas of Quebec, and at North Caribou Lake and other areas of northwestern Ontario, I had gained some experience in ethnoarchaeology, ethnohistory and

the use of cultural ecological approaches in the Boreal Forest. Now, I wanted to apply what I had learned about hunter-gatherers to prehistoric situations in a new, and preferably more accessible area. In particular, I was hoping to find a large multi-component site but this is not always possible in an unknown area.

I chose to work in northeastern Ontario which was more accessible from Hamilton and thus less costly. Also comparative material would be available from research at Lake Abitibi (Lee 1965; Kritsch-Armstrong 1982), Larder Lake (Noble 1982), Montreal River drainage (Pollock 1976; Knight 1977) and Lake Nipissing (Ridley 1954; Brizinski 1980). Lake Temagami was chosen for a number of reasons. The lake is a relatively large, deep water lake which could conceivably be examined as a unit. Both development and access are controlled. In terms of prehistoric occupations its deep water means good fish resources, it has a diverse shoreline offering a variety of landforms to examine, and excavation of the Witch Point Site CgHa-7 (Conway 1982) had demonstrated the archaeological potential of the lake. Finally, more as a factor relevant for future research than this project in particular, the Land Claims by the Bear Island Band has resulted in a wealth of ethnographic and historical information which I hope to examine in the future.

How does an archaeologist look for sites on an unknown lake? Initial work was done by taking a tour of the perimeter of the lake in a Cessna 180 photographing and recording likely locations. What types of locales have a higher probability of yielding prehistoric sites? From ethnographic studies, we know that hunter-gatherers in the forest regions maintain a seasonal economic round, periodically moving to new camping locations in order to be close to seasonally available subsistence

resources. Other factors, such as the need for fresh sources of firewood, construction material and even the desire for a change of scenery influence the cycle of movement. However, while subsistence strategies govern the range of movement, the actual choice of one location over another follows certain criteria. Three factors of settlement selection appear to be important on northern, forested lakes (Gordon 1982, 1985a):

1. Protection from cold winds and storm tracks
2. Sufficient flat and well-drained ground
3. Convenient access from shore to water and water to shore.

Lake Temagami has much exposed bedrock with both steep cliffs and rounded hills along the lake margin. Flat ground is at a premium. In the central section of the lake, 2 places stood out due to deposits of sand. These were the esker forming Witch Point (the Witch Point Site CgHa-7) and the long sand beach and associated terraces at the entrance to the Northwest Arm (the Three Pines Site CgHa-6).

With a grant from the Ontario Heritage Foundation, I and a crew of 3 began an 8 week field season in 1986 with the intention of examining the Three Pines Site and other sections of the central part of the lake. At first, the Three Pines Site CgHa-6 looked like a major disappointment. Its outward appearance was that of a badly disturbed, badly eroded terrace, with camping and picnicking leaving it denuded. However, on the surface were chert flakes, quartz flakes, a tiny projectile point and a clay pipe stem. A site!

Excavating a northern forest site requires a different approach compared to southern Ontario sites. The podzolic soil development is very shallow and subject to erosion, both

natural and that caused by human usage. Also periodic forest fires can burn right down to bedrock as seen along the Northwest Arm. Thus cultural material tends to be deposited in a highly compressed format.

We excavated using alternate one metre square units. Each unit was trowelled in 3 cm. levels, recording all artifacts and soil features on standard level plans, then screening the material. Once the unit was excavated to a completely sterile level about 15 cm. deep, the walls were profiled providing long cross-sections of the entire excavation.

Unlike the previous sites I have dug, the Three Pines site had actual soil features, many of them remnants of hearths and possibly living floors.

Hearth Features: Fire reddened soil and calcined bone are found in these features. Animal bone when heated is very fragile, hence its fragmentary nature that is not easy to identify to species. Analysis by Rosemary Prevec (1987) shows beaver, wolf or dog, deer and moose, with some loon and ruffed grouse as the major species represented on the site. In my experience beaver bone easy to identify in crunched up pieces, and this may skew the relative importance of the animal in a sample. Fish bone, on the other hand is rarely found in faunal assemblages although it is a major subsistence staple for modern hunter-gatherers.

Grey Ashy Features: These features are comprised of the eluvial (Ae) horizon of a Podzolic soil, to which has been added ash and other matter. Its texture is fine and hard-packed compared to off-site control samples. The occurrences of these grey, ashy features is strongly correlated with the distributions of prehistoric lithics and pottery. These features are interpreted as living floors.

Various disturbances are also evident

for example a built-up modern picnic fire mound, an intrusive pit and a possible tree fall.

Artifacts: A total of 16,000 items were recovered from the Three Pines Site. They include 7,084 lithics (of which 226 are tools); 6,584 faunal bone; 1,377 pottery; 20 historic items and 935 items of modern metal, plastic and glass. A wide variety of lithic raw materials was used in the manufacture of tools. Some is local such as white vein quartz, a poor quality chert and argillite which is abundant on Lake Temagami. Other materials including Hudson Bay Lowland chert and clear quartz were brought into the area. Tracking down the sources of exotic raw materials will add to our understanding of trade patterns in northeastern Ontario.

In terms of the cultural chronology, a number of periods are represented at the Three Pines Site. Shield Archaic is represented by an assemblage including a side-notched projectile point, a clear quartz biface, a large chert scraper and large argillite flake knife. Middle Woodland Laurel is represented by pseudo-scallop shell pottery and colourful, small chert scrapers and points. Laurel material accounts for a large percentage of the total artifact recovery. I see this as an indication of substantial time depth. Unfortunately no organic material suitable for radiocarbon dating was recovered. A few Blackduck pottery sherds of the Late Woodland were found. One vessel is thin walled and very brittle. Historic material includes kaolin pipe fragments and gunspalls. One stem was stamped "Henderson Montreal" and dates to 19th century. Modern material includes mostly picnic and camping refuse, although the need for a New York City transit token at Lake Temagami still puzzles me.

The cultural chronology of the Three Pines Site and comparison with other

sites in Northeastern Ontario is one major question on which I am working.

Another question is how did this site form? Was it always like this or did the lake form an embayment which is now the adjoining peat bog. Also, the Three Pines Site contains older material than that found at Sand Point Site (CgHa-1) investigated by Conway (1986. p.c.). Sand Point juts out into Northwest Arm at the eastern end of the sand beach and appears to have formed later than the Three Pines Site from a build up of successive sand deposits.

One clue to the geochronology of the site is through palynological studies. A pollen core from Three Pines bog was taken by Dr. Jock McAndrews of the Royal Ontario Museum in June of 1987. Coring a bog involves determining the depth of the peat deposits, pushing the piston sampler into the dense peat and extracting 1 metre segments at a time. Microscopic analysis and counting of the fossil pollen grains at intervals along the core, coupled with radiocarbon dating helps to chart the changes in vegetation over time. Also a C14 date of basal organic sediments will date the beginning of the formation of the bog. The 4 metre core suggests that lake levels were once far below present level.

Another question being explored is: Why was this location so popular? The highly productive nature of the site suggests that it was occupied over many seasons, years and centuries. How does it compare to other sites found during our 1986 and 1987 surveys? Other sites identified were not on sandy well-drained soil, but on thinly covered bedrock, where only limited areas were flat. The Argillite Site CfHa-31 is a very small travel camp. The Blueberry Site CfHa-32 is a lithic workshop located 200 m from a vein of fine-grained white quartz. This site gets blasted by southwest winds but it

would have been suitable for a short term stay in order to process the quartz, as seen by the quantity of quartz debitage recovered. At Cross Bay, the location of another major site, where no sand occurs for convenient access from shore to water and vice versa, the problem is solved by smooth rocks along the shore. However, these sites are just not as attractive as Three Pines which has one of the largest expanses of flat, well-drained land, a long sand beach and protection from both cold north winds in winter and from rainstorms brought by southwest winds in summer.

The Three Pines Site was used likely in both warm and cold seasons with repeated use over many years, in fact over centuries to contribute to the high artifact counts. Sand Point, once it was established probably acted as an overflow camp. The Three Pines Site also enjoys a strategic location. It would be a stopping point in any journey up or down the west arms of the lake. Lake Temagami is within the Lake Nipissing drainage and the Ottawa River drainage is accessible to the north via Diamond Lake. It is strategic also in its tremendous view of the lake, possibly allowing for control over groups who would pass up and down the Northwest Arm.

I hope that this paper has given you a brief idea of what it is like to do archaeology in the northern forested regions of this province, an area not particularly overflowing with archaeologists for reasons which escape me. The study of hunter-gatherers, either through contemporary studies such as those done by Adrian Tanner and Ed Rogers, or through prehistoric and historic archaeology is a subject of endless fascination to me. I hope that with this presentation I have shown you why.

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Acknowledgements

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THE SNAKE HILL SITE: A WAR OF
1812 CEMETERY

By Dr. Ron Williamson

On behalf of the Town of Fort Erie, Archaeological Services Inc. of Toronto initiated and is co-ordinating a joint Canadian-American effort to fully document and analyse the first War of 1812 military cemetery to be scientifically investigated. This cemetery, discovered during a routine pre-development archaeological assessment of property in the Town of Fort Erie, has proved to be of considerable historic and scientific significance. Twenty-eight primary interments were discovered, some of which have been tentatively identified as American soldiers. This identification has resulted in the involvement of a recovery unit from the United States Total Army Personnel Agency which is arranging to repatriate the remains of these soldiers with full military honours. The Canadian Department of Veterans Affairs is similarly committed to honouring the remains of any British or Canadian soldiers found at the site.

Prior to releasing the remains to either Canadian or U.S. governmental agencies, however, several months of analysis and investigation are required in order to identify the historical context of the site and the nationality of any of the remains to the satisfaction of both the governmental and scientific communities. In this regard, we have assembled an international team of specialists in the fields of archaeology, history (military and medical) and physical anthropology in order to ensure that this site is adequately investigated from all perspectives. The project personnel includes scientists from:

Archaeological Services Inc.
Parks Canada
Canadian Museum of Civilization
Royal Ontario Museum

Canadian Conservation Institute
Toronto Historical Board
Niagara Parks Commission (Old Fort Erie)
McMaster University
University of Guelph
Ontario Ministry of Tourism and Recreation
Smithsonian Institution
Armed Forces Institute of Pathology (Washington)
History Section - United States Secretary of the Army
Sackets Harbour Battlefield State Historic Site (New York).

The principal aim of the project is to integrate historical information with data generated by archaeological analysis of the site and physical anthropological analysis of the skeletal remains, in order to identify the nationality of the soldiers buried at Snake Hill. This apparently simple objective holds major implications for the advancement of knowledge in all of the disciplines involved. With respect to military history, this project will correlate both Canadian and American historical data which will enhance our understanding of events before, during and after the 1814 siege of Fort Erie. It will also provide information concerning military clothing, personal gear and other details of the day-to-day life of a soldier during the War of 1812. Medical history will also be investigated, especially data with respect to battle trauma, medical treatment including amputations, and mortuary practices under conditions of war. Archaeology will serve to link historic records with the physical remains found on the site. Physical anthropology will contribute information concerning the age, stature and details of pathological conditions and trauma observed on the interred individuals.

In summary, the Snake Hill Site Project has focussed the attention of an international group of scholars on one small aspect of the War of 1812.

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**ENVIRONMENTALISTS AND COMMUNITY
WIN HISTORIC FIRST ROUND IN BATTLE
TO SAVE THE ROUGE**

In a historic decision, Scarborough council voted 16-1 in favour of preserving the Rouge Valley System in northeast Scarborough for recreational uses!

This is a major victory for environmentalists and community groups who have fought since 1975 for the preservation of this incredibly rich environmental area. Environmentalists across Ontario can rejoice that this publicly owned, nationally important environmental area is one major step closer to being protected for future generations to enjoy.

The determining factor that swayed Council's decision was the fact that over 1,200 people attended the November 2nd Council meeting to support the preservation of the valley system. The meeting was a continuation of a September 21st meeting where over 700 people urged Councillors to preserve the valley system.

Council was considering seven options for the valley system, including proposals to rezone 5000 acres of river valley forest and prime agricultural land into residential housing that would hold between 10,000 and 35,000 people.

SRVS favoured developing the area for recreational, environmental, educational and cultural purposes that would benefit all residents in the Metro Toronto area.

Scarborough's endorsement of this recreational option means that the city has, once and for all, decided that the valley system should be protected. The battle, however, is not over! Just twenty-eight days after the Council vote, two of the three pro-environment councillors were ousted from the Planning

Committee for being "anti-development". Alderman John Mackie and Doug Mahood were accused of scaring away developers and manipulating community associations, and were removed from all standing committees of Scarborough Council.

The province, however, owns 88.9 percent of the land, and is now indicating that it wants to sell the land to private developers. Thus environmentalists must continue to encourage the province to preserve this unique area. You are encouraged to write and telephone David Peterson, Premier of Ontario, Rm. 281, Legislative Building, Queen's Park, Toronto, Ontario, M7A 1A1, (416)965-1941; and Vince Kerrio, Minister of Natural Resources, Rm. 6323, Whitney Block, 99 Wellesley St. W., Toronto, Ontario, M7A 1W3, (416)965-1301.

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Publication

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In so doing, however, it has stimulated a broader research initiative which will have far-reaching results. These benefits will be shared by all who take an interest in the history of our two nations.

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ARCH NOTES DEADLINES - 1988

ISSUE	DEADLINE	MAIL OUT
88-1	Jan 13	Feb 1
88-2	Mar 16	Apr 4
88-3	May 11	May 30
88-4	Jul 13	Aug 1
88-5	Sep 14	Oct 3
88-6	Nov 9	Nov 28

McMASTER ANTHROPOLOGY SOCIETY'S
14TH ANNUAL SYMPOSIUM

"CURRENT ARCHAEOLOGICAL RESEARCH IN
THE PROVINCE OF ONTARIO"

The Symposium, held at McMaster University on February 13, 1988, had as its focus the province of Ontario and, as such, was a platform for papers on Archaeological Research undertaken in this area of the country. Abstracts of the papers that were presented are as follows.

-Mima Kapches, Royal Ontario Museum

"Flint arrowheads...are the best means of finding a way to my heart"
(Daniel Wilson, 1853).

Dr. Kapches' paper briefly outlined the careers of antiquarians in 19th century Toronto, some of whom became professional archaeologists, others who did not. The importance of the Canadian Institute for the Development of Archaeology and the fostering of careers of certain individuals was emphasized. Some personages who were dealt with in detail were David Boyle and C. A. Hirschfelder.

-Diana Lynne Gordon, McMaster University

"Lake Temagami and the Northern Experience".

(published elsewhere in this issue of Arch Notes)

-June D. Morton, Geology Department, McMaster University

"Stable Isotope analysis of Food Residues from Ontario Ceramics".

Stable carbon and nitrogen isotopes can be used to differentiate plants into groups. Most native plants are Co and nonlegumes but corn is a C4 plant and beans are legumes. Therefore these cultigens can be identified isotopically. Based on

this, diets of animals and of man can be determined by isotope analysis of bone collagen.

As bone is not always recovered from archaeological sites, an alternative material to analyze is desirable. Isotopic analyses of residues encrusted on ceramics have provided information about vessel function, and the foods prepared in them. The analyses of such residues from a wide temporal and geographic range consisting of 48 sites dating from 940 BC to 1650 AD in Ontario's prehistory has provided an interesting comparison to the collagen results, as well as to our previous conceptions of prehistoric life. The residue analyses, which do not clearly show a strong reliance on either corn or beans after 550 and 1000 AD respectively, pose interesting questions as to the significance of native C3 plants, meat and fish in the diet and the meals cooked in the past.

-William D. Finlayson and David G. Smith, Museum of Indian Archaeology (London)

"The Christian Island Indian Reserve Archaeological Master Plan Study: Preliminary Results".

In 1987, the Beausoleil Band Council of the Christian Island Indian Reserve obtained a Community Facilities Improvement Program grant to undertake an archaeological masterplan study of the Reserve. The study was initiated by the Museum of Indian Archaeology in June 1987. Drs. Finlayson's and Smith's paper reviewed the results of the 1987 archaeological investigations including the excavations at Ste. Marie II, the Jesuit Fort built in 1649, and at the Charity site which may be the Huron village built in 1648 and abandoned in 1650.

-Robert J. Pearce, Peter A. Timmins, and Tom Arnold, Museum of Indian Archaeology (London)

"Prehistoric Settlement Patterns in the City of London".

This paper presented an overview of prehistoric settlement patterns in the City of London, based on data for 237 sites, and there was a discussion of these site types ending with a definition of a camp as any location yielding 5 chert flakes, or fewer than 5 flakes and 1 or more tools and/or fire-cracked rock. The paper then reviewed the cultural affiliation of known sites, it being noted that all time periods from Late Palaeo-Indian to prehistoric Neutral were represented. In a discussion of geographical distribution, it was noted that a majority of sites, regardless of cultural affiliation, were situated on the Ingersoll Moraine, which is a distinctive ridge running across the south end of the city. Three areas of London were reviewed in detail, with an overview of all known sites in these areas.

The paper concluded with a discussion of the importance of findspots and small camps in understanding the prehistory of London. It was noted that such sites often flag the presence of a major camp or Iroquoian village in the immediate vicinity, and that findspots and small camps are useful for documenting the entire range and variation of prehistoric settlement patterns. A plea was made for all archaeologists to register isolated findspots and camps yielding fewer than 10 artifacts, since such sites provide a valuable record of the prehistoric utilization of an area.

-William R. Fitzgerald, McGill University, and Shelley R. Saunders, McMaster University

"Life and Death in Sixteenth Century Ontario: Archaeology and Osteology of the McPherson Indian Village".

Archaeology - William Fitzgerald

The near complete excavation of the

circa 1530 - 1570 AD, 3.25 acre Neutral McPherson (AhHa-21) village, is providing some new insights into Neutral culture and of this era in the lower Great Lakes. Twenty structures, thirty burials, and portions of substantial refuse deposits were excavated from this settlement that began as a one acre hamlet that tripled in size through two expansions.

A pan-Iroquoian horizon of settlement morphology and ceramics is apparent, and many cultural developments should now be considered in light of mid-16th century climatic deterioration.

Osteology - Shelley R. Saunders

The burials excavated at McPherson comprise 31 individuals in 30 graves; 29 of these 30 contain single, articulated skeletons. Twenty-two burials were found within ten of the 20 houses; of the eight burials outside houses, five were clustered at the western end just outside the core village. They were probably interred before the first of the two village expansions. The mortuary patterns at McPherson are similar to other prehistoric and protohistoric Ontario Iroquoian sites. Burial pits are small and shallow, there is no special compass orientation of the bodies, preserved grave goods are rare and the preferred burial position for children and adults is tightly flexed on one side. Infants are often buried extended prone or supine, which may reflect normal sleeping position during life and/or burial in the cradleboard moss bag.

There were fifteen adults and fifteen subadults recovered from the site. The adult provides the first confirmed case in this region for acquired syphilis based on cranial and postcranial evidence. There are two other possible cases of syphilis in the adults. The adult age estimates range widely though 50% were 18-20 years of age at death. Cortical bone quality is extremely

poor in several of the adults even though they are not of advanced age. Two weanling age children display circular caries, tooth decay which forms in the deciduous teeth because of poorly developed enamel structure. Observations such as these as well as planned chemical, microscopic and metric analyses will provide insights into Neutral region population biology.

-James F. Pendergast, Merrickville, Ontario

"The McKeown Site: A St. Lawrence Iroquoian Village site in Eastern Ontario circa AD 1500 - Some Preliminary Estimates".

The McKeown site at Maynard, Grenville County, Ontario, is a St. Lawrence Iroquoian Village site dating circa AD 1500. Some preliminary estimates regarding Village Expansion, House Pits and Ritualism were presented.

Gross settlement pattern data indicate that the core village at Maynard, which initially occupied approximately .8 hectares, was expanded spatially once to accommodate at least two incoming groups of people. House Pit clusterings, some of which have been assessed as seed-corn storage pits, not only yield information as to when the site ceased to be inhabited, but also suggest a social organization within longhouses with possibly the longhouse matron frequently occupying one end of the longhouse and being responsible for the seed cache. Ritualism, in the form of features with deliberate burial of intact ceramic vessels, provide a glimpse into an otherwise unreported St. Lawrence Iroquoian practice. The symbolism expressed may be indicative of the archaeological evidence regarding warfare between the Huron and the St. Lawrence Iroquois circa AD 1500.

The Symposium was followed by a

reception for both presenters and attendees.

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research should be approached in the same way as negative research results. Printed material should be consulted to determine field conditions, methodology and experience of the archaeologist involved, etc., before completing a literature assessment of an area's potential. The sites database is the best beginning point for research but to consider it to be the be-all and end-all of research is to deny knowledge of other information sources.

This article was concerned primarily with the definition of prehistoric sites. A discussion of historical and contemporary period sites is reserved for a future issue of Arch Notes.

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ARCH NOTES

The views expressed in this publication do not necessarily represent the views of the

Editor or of the
ONTARIO ARCHAEOLOGICAL SOCIETY

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THE STRAW THAT BROKE THE DOWEL'S
BACK: A RECENT ADVANCE IN
ARCHAEOLOGICAL FIELD TECHNOLOGY

By Neal Ferris & Malcolm Horne

Introduction

In the spring of 1985 the authors discovered a method for marking post moulds in the field which was vastly superior to previous techniques. Over the course of that field season the principal author had the opportunity to "spread the word" of this revelation on sites and to archaeologists throughout southwestern, southcentral and northeastern Ontario. Everywhere this technique was introduced, skeptical observers were overwhelmed and soon became ardent believers. The task of continuing to inform the archaeological public about this discovery has continued throughout the 1986 and 1987 field seasons. So impressive were initial results, so supportive were those who had seen the light, that it is now with complete conviction that we say this technique has been perfected, and is truly a breakthrough in archaeological technology. Consequently, the principal author, with the moral support of the co-discoverer, felt it necessary to document this process, first in the form of an OAS London Chapter presentation, and now in published format. Thus news of this sensation can reach a much larger audience (and the authors can claim the credit while it is still there to claim!). The following, then, is our story.

The Problem

During the course of an excavation one must usually at some point demarcate and record settlement data. In this part of the world, dominated by historic and prehistoric Iroquoian and Algonkian camps and villages, that tends to mean spotting post moulds and marking them after they have been exposed by excavation

(which can occur by means of anything from a trowel to a bulldozer). This is done so that when the time comes to record post moulds, they can be re-located on an otherwise usually obliterated site. It is simply amazing the variety, shape and sizes of implements archaeologists have used to stick in the ground to mark such features. These include wooden dowels, meat skewers, popsicle or stir sticks, nails, chaining pins, sticks, twigs and even, on at least one occasion I can recall, rusted pieces of barbed wire "pilfered" from an old, nearby property fence. I myself, before *The Great Discovery*, preferred the popular wooden dowel/meat skewer combination, and my comments will focus primarily on these prevalent devices.

We are all aware of the problems wooden dowels cause. To begin, one must first buy the three foot pieces of dowelling at a lumber store, then get it cut into the appropriate size (approximately six inches) and then, if one can afford it, the preference is to get each individual dowel sharpened and pointed (this always thrills the lumber store employee no-end). Once purchased, further time and expense is wasted by having to paint these incredibly expensive pointed sticks, because wooden dowels, when they are "in the buff", are never clearly visible against a subsoil background. So, not only do you spend good money getting dowels, but you've also had to waste one or two cans of spray paint colouring them. On top of all this the crew slave who is forced to paint the dowels (assuming you can afford such slaves) spends the rest of the day walking around with a florescent orange or red hand. After the paint has dried (and it never dries until after you've forgotten and tried to pick the dowels up), you gather these markers together and go to work.

The function of dowels is to skewer post moulds through their center, making that spot visible even if the

ground dries or gets messed up, and to offer a convenient centerpoint at which to aim at when recording the post mould's location. That, at least, is the ideal. Most sites, however, don't come close to the ideal. They are generally characterized by a lack of everything, such as artifacts, settlement patterns, intelligent co-workers or directors, proper camp conditions, proximity to an outhouse...or even a bush, access to neighbourhood watering holes...or even a neighbourhood. These same sites do, it seems, have an abundance of clay soils or some other cruel physical characteristic. The point here is this; have you ever tried to push a wooden dowel into a post mould on a clay site after it has been baking in the sun for a couple of weeks? Ever tried to take a dowel out of the same post mould (assuming it is still there) after it has rained for a few days? I thought so.

So far, I'm sure you'll agree, this discussion has been rather trivial (which is probably the way it will stay). Big deal if dowels are sometimes hard to put in the ground. Right? Wrong. Because the worst part of using dowels, wooden or otherwise, arises not from cost or lack of convenience, but from what these dowels do to post moulds, feet and fragile egos after they have been placed in the ground. The formula works like this: Rule 1 - dowels must be put into the ground, in order to mark a post mould. Rule 2 - to complicate matters, people also tend to step on the ground (something to do with gravity). Add Rule 1 and 2 and you get Rule 3 - it is inevitable that people will also walk on dowels. Add to this the fact that dowels, being made of wood, are rather inflexible, and you come up with the result of Rule 3: stepping on dowels leads to breakage (see Figure 1a). Moreover, the post moulds themselves have a tendency to yield to sideways pressure (such as a dowel snapping), which causes the moulds to be ripped

up as a dowel is in the process of being destroyed.

Given the above, one tends to see a high death rate for dowels on sites, as well as a great deal of post mould damage, causing such features to be reduced in diameter and even shifted in location after a normal day of excavations and crew stomping. Can any of you recall a time when you had just finished cleaning up a square and dowelling all the post moulds, only to watch in horror as someone (eg. a tourist, fellow crew-member, supervisor's mother, your thesis advisor, etc.) walks through the unit, leaving a path of mutilated post moulds and snapped dowels in his or her wake? Or even worse, who can recall giving another someone a tour through a site (just create your own list of potentially embarrassing candidates), only to find yourself doing the dreaded "Dance of the Dying Post Mould" as your feet - which have suddenly grown another 18 inches - swing every which way, smashing dowels and pulling up large chunks of post moulds? My favourite story is of a crew supervisor who worked on a site where wooden meat skewers were left upside down in post moulds to indicate those that had already been recorded. The site was very sandy, and the supervisor insisted on working barefoot, all the while lecturing his crew about the potential dangers of these pointed dowels...to continue would be redundant.

In sum, the disadvantages of traditional methods employed in marking post moulds are well known to all. Briefly, these problems include the following;

1. The lack of a standardized implement.
2. The relatively expensive outlay for a supply of the most popular implement, the wooded dowel.
3. Wooden dowels tend to be invisible against a subsoil background, necessitating the expense

and time of spraying them with paint.

4. Wooden dowels break easily, either from hard ground or big feet, creating further expense and a need to "stock up" regularly.

5. Since people walk on sites, dowels get broken, and in so doing tend to pull up post moulds, creating a real problem in terms of maintaining a "neat looking" site, not to mention preserving moulds until one can record them (Figure 1a).

6. They can be dangerous to feet and egos.

The Discovery

We have been guilty of accepting this inadequacy in field archaeology for too long. However, there is a means of salvation from this chaos, and it comes in the form of a common straw. You know, the one you suck pop or a milkshake through. Don't scoff, read on.

In the spring of 1985 I found myself in Kent County, excavating a late historic Ojibwa habitation site. In typical fashion, my entire crew (including myself) consisted of volunteers (bless their souls!), working with a mish-mash of equipment supplied by a local Ministry of Citizenship and Culture office. This site, known as Bellamy, comprised a 1790's Ojibwa encampment, an 1830's outhouse, a Springwell's Phase occupation, and a possible Meadowwood component. Needless to say, there were plenty of post moulds for us to deal with, and for the first few days of the project I relied on a traditional favourite - the wooden dowel of course - to mark all post moulds. This supply was augmented by a few metal pins, an occasional nail, and even coffee stir-sticks (the supply of which increased substantially each morning). However, this was not enough to keep up with the furious pace of my volunteer crew. The inevitable slow-up of work due to a lack of dowels came on bright Sunday afternoon.

There was no alternative but to seek out a supply of anything that could function as a dowel. Being a Sunday in rural Kent County, there were few establishments one could visit to get such devices. As it turned out, the only place open nearby was the Wabash Can n' Bulk general store. I asked volunteer Malcolm Horne to go there and buy anything long and thin to use as a dowel, be it a bag of stir sticks or a box of straws. Malcolm returned shortly with a box of two hundred plastic straws, at a cost of two dollars. We agreed that these straws were the best we could have come up with under such conditions, and I went about recording, leaving Malcolm to figure out a way to use the straws. An accident of science was about to happen and I didn't even notice!

By using a wooden dowel to create a hole in a post mould about to be marked, and then placing a straw in that hole, Malcolm revolutionized field archaeology in southern Ontario. You see, once placed in its hole, Malcolm discovered that a straw would stand up straight. And, after repeatedly marching back and forth over several such straws, he found that they would immediately spring back into place. Even when I walked through a "forest" of these plastic straw dowels in a "Charlie Chaplin" manner, they still managed to remain upright (see Figure 1b). The trick was to make a hole in the post mould deep enough to support the straw - this appears to be approximately half the length of the straw. What a wondrous discovery! In no time at all my entire collection of wooden dowels (except for one used to make straw-holes) had been put aside in favour of plastic straws. For two dollars I had gained two hundred of these dowels and they proved so versatile that even a child, or unbalanced archaeologist, could walk through the site without having to worry about potential destruction to dowel or post mould.

In addition, we discovered that when a straw was pulled out of a post mould it contained a small "tube" of soil in the section that had been inserted in the ground. This provided a weighted end which allowed us to toss the straw with sufficient distance and accuracy, thus facilitating an easy removal of the straws during the process of recording, and enabling us to leave them in a neat pile for easy collection at a later time. Finally, since the plastic straws Malcolm bought were white, they stood out clearly against a subsoil background, making settlement patterns easily visible, both to the naked eye and in site photographs.

The Bellamy excavations were concluded by the 10th of May, and the volunteers and I left to pursue our various interests - the earning of money. Malcolm spent the remainder of the field season doing survey and test-excavating on an undisturbed site, so had little chance to further promote the use of straws. I, however, left Bellamy to be employed for a three week period at the mega-mitigation of the Keffer site, just north of Toronto. Special thanks to the Museum of Indian Archaeology for employing me during those three desperate weeks.

The site was a late prehistoric Huron village, characterized by a glut of - you guessed it - post moulds. During my three weeks there I constantly emphasized to the other archaeologists the great use straw dowels could be at Keffer. I was initially greeted, as I had anticipated, with some degree of laughter and chuckles, and perhaps some mild interest. However, thanks mostly to Wayne Hagerty who had seen the usefulness of plastic straws while on the Bellamy site as a volunteer, I remained true to my convictions and went out one evening after work and invested another couple of dollars on straws and then proceeded to use them in my work area

the next day. In no time I had changed smirks to slack jaws of astonishment, particularly after I demonstrated the resilience of straws by "stomping" through a house wall marked by them. My three week duration on the site ended not long afterwards, and I left the excavations just as straws were quickly replacing the Museum's supply of wooden dowels.

After I left, the archaeologists and crew of Keffer made further advances in the science of straw dowelling; advances which essentially perfected the initial discovery. Special thanks for those pioneering endeavours go to Wayne Hagerty, Dave Smith, Pete Timmins, Arnie Feast and everyone else who had a hand on the straws.

The first and foremost of their advances was with the hole-making aspect of the process. On Keffer large areas of the site were opened up and left for some time before there was an opportunity to record or even mark post moulds. As well, clay patches were encountered on the site. This meant having to work with hard, sun-baked soils, and the age old problem of trying to push a wooden dowel (this time to make a hole for the straw) into a clay post mould. This hindered the effective use of plastic straws until it occurred to someone that, instead of using a wooden dowel to make the straw-hole, why not use a modern awl? Not only was such a device made from metal as opposed to wood, but it also came with a handle, which allowed the excavator greater strength to push the tool into a post mould creating the all-important hole for the straw. However, while the Keffer crew were still buzzing with the news of this improvement, further refinements made the awl obsolete...such is the speed of scientific advancement! The awl was quickly replaced by, first, a Phillip's and then a Robertson's screwdriver. This tool proved to be sturdier, and the diameter and length

of the metal rod section seemed ideally suited for straws.

One further "keffer" development in straw technology, which can be attributed to Dave Smith, was the use of plastic bread bag tags. These small, white plastic objects were used to number post moulds in the field. The method worked like this: a designation number was written in indelible ink on a bread tag, and then this tag was slipped around the straw sitting in the designated post mould. These tags remained intact through all kinds of weather, and provided a method of labelling post moulds that lasted over a long period of time.

After these refinements, plastic straw technology was promoted and advanced on several other sites during the 1985 field season. These included the Providence Bay site on Manitoulin Island, and the Molson site just south of Barrie. At the Molson site one of the directors scoffed at the idea of using straws, saying that he tried it, and it "plain didn't work". However, once it was explained to him that the idea wasn't to push the straw itself into a post mould, but rather to make a hole for the straw first, he became an ardent, if slightly red-faced, supporter. The Molson site use of straws is noteworthy for another reason - the use of different coloured straws. When purchasing them, staff from the Molson site decided to get quantities of white, red, and striped varieties. Each straw colour variety was then used on site to denote a particular feature context (eg. house wall, house feature, palisade, etc.). This provided an instant visual interpretation of the site which was useful both to the project archaeologists and to the visiting public.

During the two subsequent field seasons, plastic straw technology has been further tested and used on a

number of sites by an ever increasing number of archaeologists. For example, in 1986 Mayer, Pihl, Poulton and Associates Inc. conducted a salvage mitigation of a pipeline right-of-way on the Pengelley site in south Brampton. Dana Poulton, who supervised the excavations of portions of three houses, used white, plastic straws to designate post moulds, and separate, red coloured straws to designate features (Figure 2). It so happened that during the course of this excavation Dana had to call in a GradeAll to strip a portion of the site. In order to access the area to be stripped, the GradeAll had to drive over an area already excavated and recorded, with straws still sitting in post moulds. I am happy to report that even after churning the ground with its tread, and running over the same straws several times, the GradeAll managed to pull up or mangle only 10 to 15% of the straws. On that hot summer's day, plastic straw marking devices passed their ultimate test in excavation-generated abuse!

It is probably safe to say that, as we move into the 1988 field season, the use of plastic straws as post mould marking devices has been taken through an initial testing stage, passing with flying colours. It is inevitable that, as time marches on, the acceptance and use of straws will become universal. Oh sure, somewhere, somehow, there will be a few ultra-conservative archaeologists who remain closed to progress, but even now their days are numbered. Presently, straws are being used by a host of archaeologists, archaeological institutions, and archaeological consulting firms across Ontario. Both Malcolm and myself have had the pleasure on several occasions of seeing slide presentations on site excavations, or of reading newspaper accounts of projects, where reference to plastic straws marking settlement patterns have been made. Plastic straws have been used across southern Ontario,

and have been making some small inroads north and west into the United States.

The Method

It is perhaps of some value to review the proper method to be employed when using straws. First, it is crucial to ensure that you have suitable supplies. Paper straws, for instance, should not be used under any circumstances. Also, straw lengths and diameters are quite variable, so the diameter of the straw used should be comparable to the diameter of the tool used. Our personal preference is for the larger sized milkshake straw (sometimes referred to as "Jumbo" straws), which measure 25 cm in length and .65 cm in diameter. We have found that the thinner, pop bottle straw, which measures 30 cm in length and .40 cm in diameter, can sit loose in a hole and be kicked out occasionally. Relying on Jumbo straws, however, means relying on a fairly fat-diameter screwdriver. Whatever your preference in straw and tool shaft diameter, be sure that your screwdriver is fairly long. Shaft length should be at least that of a standard, good quality screwdriver (10.5 cm). A good quality and size of Robertson's screwdriver, with a diameter close to the diameter of Jumbo straws, seems the most effective at this task.

Once ready for post mould marking, the process is as follows: first, identify the approximate center of the post by eye, then insert the screwdriver with conviction. Ensure the screwdriver is inserted vertically, because the straw will stand at an angle if the hole is angled. When removing the screwdriver, do not pull it out too fast, as some of the soil matrix may stick to the shaft. Once the hole is made, insert the straw, gently pushing down to the bottom. If the hole is too tight a fit, then reinsert the screwdriver once: this

should sufficiently widen the hole. Once the straw is in the hole, you can relax and stomp on the straw, without worry. You can continue shovel-shining or walking over the area you just marked without fear, or even the need to look where you're stepping.

One final note concerning straw limitations: some archaeologists have used straws to mark features, to mark edges of excavations, or to mark surface-finds during survey. It is our feeling that straws are not best-suited for this, and indeed, there are other devices that are more effective for these activities (eg. flagging tape and nails, etc.). So if you have problems with straws from non post mould marking uses, it's your problem, not ours! We have heard that straws freeze up in temperatures below about 5 degrees celsius, and can crack or snap easily. That is unfortunate, but then anyone excavating a site in weather conditions like that can expect only a modicum of sympathy in the first place!

To summarize, while we are willing to admit that these discussions have been written ever so slightly irreverently, it should be stressed that through all this there is still a basic point to be made. Namely, plastic straws work well as post mould marking devices, and the difference in costs between plastic straws and wooden dowels cannot be over-emphasized.

Acknowledgements

The authors wish to thank everyone. This includes all of you who helped promote the use of plastic straws across this province, as well as all of you who will be using straw technology in the future. Special thanks to both the archaeological consulting firm of Mayer, Pihl, Poulton and Associates Inc., and the Museum of Indian Archaeology, both of whom quickly adopted this technology

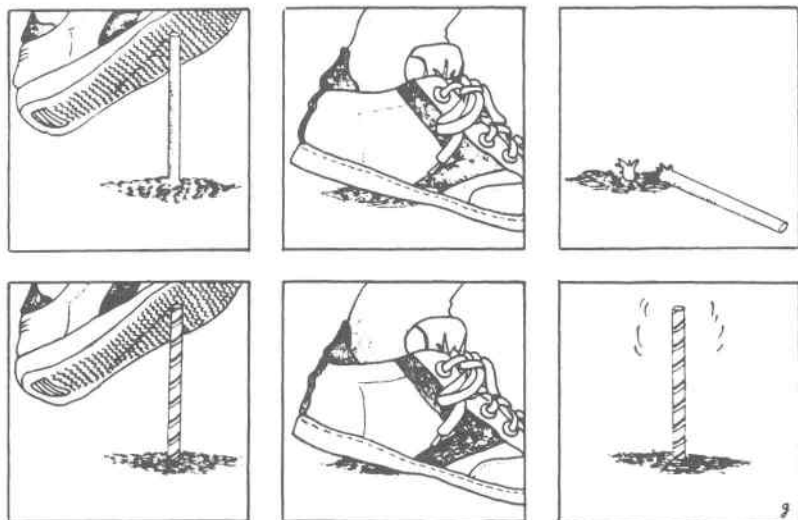


Figure 1: A- The Disasterous effects which normally occur when stepping on a wooden dowel
 B- Fortunately, the same process only leaves a straw quivering in delight!



Figure 2:

as their own and have been instrumental in spreading the good word about The Great Discovery. Thanks to Mike Gibbs for the photograph from the Pengelley site. Finally, a sincere thanks to Little "G", whose careful study of the running shoe and patterns of walking were so perfectly recreated in the illustration provided for this article.

ONTARIO HERITAGE POLICY REVIEW UPDATE

Background:

On February 16, 1987, the Hon. Lily Oddie Munro then Minister of Citizenship and Culture launched the Ontario Heritage Policy Review from the Ontario Heritage Centre in Toronto. In making the announcement, the Minister indicated the review would take a broad view, seeking to establish an overall policy framework within which the Government as a whole could plan, implement and evaluate future programs and initiatives in the field of heritage conservation. The Minister also spoke about the need to shape a common vision to guide heritage conservation into the next century.

Phase I - Public Consultation

In April the review process began with the release of the discussion paper Heritage: Giving Our Past a Future. From early May until late June a series of 26 public meetings were held in representative locations across the province. Total attendance at the meetings was slightly over 1000 - from a high of 200 in Toronto to 5 in Hearst - representing a broad range of heritage interests and organizations. After the meetings individuals and organizations were encouraged to submit written letters or briefs. To date some 250 submissions have been received. We wish to thank all those individuals and organizations who attended public meetings and/or submitted briefs and to assure you that your comments and suggestions are receiving careful study.

Phase II - Research and Analysis

Since September staff at the Ministry of Culture and Communications have been analyzing this input and undertaking additional research regarding other jurisdictions and their approaches to various heritage

questions. Owing to the complexity and range of issues raised through public input additional staff from the Heritage Branch have been seconded to the process to aid in the analysis.

A comprehensive report summarizing public input has been prepared and will be distributed in March. Anyone who attended a public meeting or submitted a brief will automatically receive a copy. Additional copies of the report will be available through the regional offices of the Ministry of Culture and Communications. It should be emphasized that this report does not reflect future policy or program proposals or directions but rather is a summary of the major themes and recommendations heard during the public consultation.

Copies of all submissions to the Ontario Heritage Policy Review will also be on file at the regional offices of the Ministry beginning in early March. Should you wish to review these materials we would ask as a courtesy that you phone ahead to your nearest regional office to arrange an appointment.

Phase III - Consultation with Provincial Associations and Other Ministries

Beginning in March meetings with representative provincial heritage associations and other Ministries will be held to continue the examination of a range of options for new or revised legislation and programs in the heritage conservation field. In an effort to ensure that all parts of the province and views are represented, consideration is also being given to broadening this second round of consultation through the use of a number of focus groups. Based on the response to these discussions a plan for the introduction of new or revised legislation and support programs for the Ministry of Culture and Communications and other Ministries

whose mandates touch on the heritage field will be developed.

* *

In Arch Notes 87-6 we published the briefs presented to the above review by the O.A.S., the London Chapter of the O.A.S. and the Ontario Council of Archaeology. Following is the brief presented to the review last June by the Thunder Bay Chapter of the O.A.S. - Ed.

* *

BRIEF TO THE ONTARIO HERITAGE REVIEW
COMMITTEE BY THE THUNDER BAY
CHAPTER OF THE ONTARIO ARCHAEOLOGICAL
SOCIETY

The Thunder Bay Chapter of the Ontario Archaeological Society wishes to thank the provincial government for taking this initiative on heritage review. Such a review was desperately needed.

We are the only organization representing archaeology north of Toronto and Ottawa and through to the Manitoba border. We have approximately 45 members, about one-third of whom live outside Thunder Bay in small communities in Northwestern Ontario, in western Canada and in the United States.

Since we are a small group in a vast area, it is urgent that our concerns be brought to the attention of those responsible for heritage review before more of Ontario's historic and prehistoric archaeological resources are destroyed by urban and commercial development, resource extraction, industry and agricultural practices. Our concerns relate to:

- provincial heritage
- Northern Ontario heritage
- the Discussion Paper "Heritage"

Provincial Concerns

1. The Heritage Act

The Heritage Act, which governs archaeology in Ontario, specifically section 48(1), states:

"...no person shall carry out archaeological exploration, an archaeological survey or fieldwork without a licence therefore issued by the Minister under this act."

We believe this legislation does not adequately protect our archaeological resources. It only serves to regulate the work of professional and amateur archaeologists. The section should be reworded in such a way that it protects archaeological resources, and the legislation should be enforceable by regional archaeologists.

2. Ontario Heritage Foundation

There is not enough information about this foundation nor publicity regarding its mandate - what it actually does, its criteria for funding projects, its accountability to the public.

We believe the O.H.F. should take a more aggressive stance in archaeological conservation, formation of standards, etc.

We believe the O.H.F. should take a more active role in acquiring archaeological sites, not just architectural heritage sites.

We also believe there should be more internships and/or scholarships offered by the O.H.F. to encourage research in archaeology. Better promotion of existing scholarships would be very helpful. It seems to be almost impossible to find information on the Boyle Scholarship. There should also be more publicity on the availability of these awards and when they are awarded.

3. Resource Extraction in Ontario

The Thunder Bay Chapter is concerned

...heritage policy...

that there seems to be little or no control over, or regulations concerning, extraction industries such as mining and forestry. These industries are causing ground-disturbance over a large area of the province and there are insufficient policies and archaeological personnel to oversee or control it. In the United States, on federal land, an archaeological survey is a necessity before any destruction of the habitat is allowed.

Northern Ontario Concerns

1. Northern Ontario is critically understaffed by professional archaeologists. In Northwestern Ontario, in an area of nearly 750,000 square kilometers, there are approximately nine professional, resident archaeologists, four of whom are employees of the Ministry of Citizenship and Culture - four persons to protect the archaeological heritage of our generation and the future citizens of our land. This is ludicrous.

2. There is virtually no public acknowledgement by the Ontario government of concern over or support for the preservation or conservation of archaeological resources. There are not enough display centres to inform the public about archaeology. The Thunder Bay Museum has a component on archaeology but there is insufficient space to put on an adequate display.

There are not enough interpretative centres to educate the public, there are not enough archaeological surveys done, and there are not enough staff to adequately train the few volunteers there are available to assist in conservation.

We believe the provincial government has to reaffirm its responsibility and accountability for our cultural resources. This is not a task that can be ignored, lightly shouldered, nor shrugged off when it seems

expedient. It involves a commitment.

Discussion Paper

1. Heritage Conservation

According to the discussion paper, heritage conservation means:

"the retention and responsible use of both our tangible and intangible heritage, that is, not only its preservation but its integration into the total life of the province."

In archaeology, "retention" and "responsible use" do not mean the same things as they may for other heritage disciplines. Archaeological sites are usually only excavated when they are threatened by destruction, either by humans or by nature. Since there is a finite number of sites, archaeologists wish to leave as many as possible intact so that future generations will also have a heritage to explore and interpret, perhaps with a more sophisticated technology capable of extrapolating new information.

Also, may archaeological sites are not potential tourist attractions, not economically exploitable, not possible "Epcot Centres" of the North. They are of scientific interest - an issue which the discussion paper ignores. Can you put a "value on heritage resources" when those resources mainly enrich a body of scientific knowledge?

Not everyone can recognize an archaeological site. It takes, usually, an extensive educational background and/or many years of study, research and application to identify, assess, excavate, interpret and adequately care for an archaeological site.

2. Decentralized Partnerships

As your review paper quoted from the Federal Cultural Policy Review Committee "These legacies, living or

dead, must be valued, judiciously preserved in good and usable order, to be interpreted and reinterpreted even as we add to them daily."

Judiciously preserving our archaeological resources will not be possible if, as is suggested in your paper, it were left to the vagaries of municipal policies and politics - to the whims of a town clerk in a small community - to the highly mobile, small populations of single resource-based communities often faced with shut-downs, lay-offs, hard economic times. They are incapable of taking on long term heritage projects.

We must realize that most of this province is not populated. The small, scattered population there is, is not capable of protecting the heritage resources either located close to or within them. Heritage resources belong to all Canadians, present and future, not just those presently residing in northern Ontario.

We believe it is the mandate of the provincial government to protect and conserve these resources and not abdicate the responsibility to small towns or private interests in whose best interest this may not presently lie. If the provincial government really feels a commitment to heritage conservation, it has to be seen as a leader in the implementation and formation of such conservation - our heritage must be seen to be valuable.

Our chapter of the O.A.S. would welcome government commitment - a public expression of the value of our archaeological heritage; the value of sites, tough legislation to back up these expressions; more government archaeologists to survey; explore, and police the vast area of our province which it has been more economical to ignore; and interpretive centres located in strategic areas, staffed with knowledgeable, trained employees who

can not only interpret the collections, but care for them properly.

Conclusions

We wish to thank the provincial government for this opportunity to make our views heard. We welcome the heritage review and laud the government for its recognition that there is a need for more heritage conservation and for its attempts to find a solution.

The Thunder Bay Chapter of the Ontario Archaeological Society recommends the following:

1. That the Ontario Government, through media sources and through amendments to the Heritage Act, forcefully commit itself to the conservation and preservation of our province's archaeological resources.
2. That more professional, qualified archaeologists be hired to adequately survey and police these resources. This will also ensure there are personnel to educate and assist local volunteer organizations in the same task.
3. We believe that, on no account, should the conservation and preservation of archaeological sites be delegated to any other body but the provincial government. We believe that communities do not have the resources either economic or professional to undertake such a profound and complicated task.
4. That archaeological interpretive centres be professionally built, maintained, and staffed to educate the population of Ontario and tourists as to the value of these resources.

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press cuttings...

FOSSILS GIVE MODERN MAN A NEW AGE

Fossils from an Israeli cave show that anatomically modern humans were living about 92,000 years ago, more than twice the age that scientists had been able to establish reliably before, researchers say.

The finding supports the hypothesis that anatomically modern humans evolved in Africa rather than independently in several places, and it weighs against the idea that they descended from Neanderthals, scientists said.

The study by scientists from France and Israel appears in the latest issue of the British journal Nature.

Researchers reported that 20 burnt flints found with ancient human remains in the Qafzeh cave in lower Galilee were 92,000 years old, give or take 5,000 years, so the humans were in the cave that long ago, too.

That means some anatomically modern humans occupied southwest Asia before Neanderthals arrived, a sharp challenge to the view that they evolved from Neanderthals.

from The Globe and Mail
February 18, 1988

STONE CIRCLES WERE CREATED BY SOIL MOTION, GEOLOGIST SAYS

The "sorted circles of Spitsbergen," mysterious rings of stone found in a cold landscape, have long stood as evidence that nature does not always need human architects to pick up rocks and arrange them in harmonious patterns.

Large rocks and gravel are sorted by size and placed in rough circles two metres across. Just what forces combined to create these structures, since found in a number of similar regions around the world, has been an enigma.

Now, Bernard Hallet, a University of Washington geologist, believes he has solved the puzzle. At a test site at Spitsbergen, a Norwegian island well north of the Arctic Circle, he has been able to observe a process of soil motion that seems strong enough to create the sorted circles.

He found that an unusual motion of soil, fast enough for his instruments to detect, comes from a repeated freezing and thawing cycle. When a top layer of soil freezes, it expands, pulling large rocks upward. When it thaws, the rocks do not settle all the way back. He contends that the sorted circles result from a form of convection, driven by differences in moisture, rather than temperature. The soil churns just as fluids do, he theorizes, but over centuries rather than seconds.

From The Globe and Mail
January 23, 1988

REWRITING THE BIBLE: Archeologists believe the Exodus was a myth

An unexpected and contentious chapter has been added to the scientific study of the Bible.

The Old Testament accounts of the exodus of Jews from Egypt and the settlement of ancient Israel have been challenged by evidence emerging from large-scale archeological excavations, chiefly conducted in the territory conquered or occupied in 1967 by Israel.

Archeologists now generally agree that their discoveries - based on work that includes the excavation of between 600 and 700 settlements not mentioned in the Bible - have produced a new consensus about the formation of ancient Israel that contradicts significant parts of the biblical version. These scholars have found:

-The lightning war of conquest supposedly conducted by Joshua, in

which his army destroyed peoples and brought the walls of Jericho tumbling down, never happened. Excavations have shown there was no city there at the time, nor was there one at Ai, which the Bible says was levelled by Joshua's army. "Jericho is a theological statement about the power of God," concluded Joseph Seger, an archeologist at Mississippi State University.

-While a population expansion did occur in the hills of Samaria (now in the occupied West Bank) at the end of the thirteenth century B.C., there is little to suggest that these people had spent any time in Egypt, nor were they different from the people already in the area. "They came out of Transjordan and they had lived there for centuries," University of Arizona archeologist William Dever said emphatically.

-There is no evidence that large numbers of people moved across the Sinai desert in the period generally assigned to the Exodus; and, although the Bible records that Jews gathered at Kadesh before going into Israel, "the site at Kadesh was excavated extensively and to our great surprise there was nothing there ... earlier than the tenth century," Ben-Gurion University archeologist Eliezer Oren said.

-There is no evidence of the Jews being in Egypt before the Exodus, and cities the Bible says were built by the Jews for the Egyptians were found not to have existed during the period 1275 to 1300 B.C., generally seen as coinciding with the Jews' departure. University of Toronto archeologist John Holladay, who has excavated Pithom, one of these sites, said: "There was nothing there during the period of the Exodus."

The implications of these findings—many of which have been published in English only in the past year — may be divided into three parts.

First, there is an almost uniform rejection of the theory associated with U.S. archeologist William

Albright, which was widely accepted in the sixties, that the early books of the Bible, and in particular Joshua, would provide a guide to the region's early history that archeology would confirm.

"In the old days things looked simple. You went to Israel with Bible in hand, went to Jericho and set to work looking for buried trumpets and fallen stones. Well, things didn't work like that," said Johns Hopkins University Egyptologist Hans Goedicke.

Indeed, in their revisionist approach some skeptical archeologists have taken the tack that the Bible has proved so unreliable they should pay scant attention to the portions before its accounts of the early kings of Israel. Starting at that point the Old Testament is externally verified by other sources.

"There has been a felt need for archeology to support its rationale for existence and not be the stepchild of people trying to find out something about the Bible," said Prof. Seger. Among others, Prof. Dever has suggested that the term biblical archeology be discarded and be replaced by the more generic Syro-Palestinian archeology.

Second, the "evidence of the stones," as the archeologists call it, has lent empirical support to a number of biblically heretical theories of the formation of the ancient Jewish state. The massiveness of the recent excavations in hitherto unexamined areas has given researchers a confidence that the general pattern of development they see will not easily be overthrown by future findings.

The appearance of the Israelite settlements in Samaria is interpreted in several ways. Some support the view, first proposed in the twenties by German scholar Albrecht Alt, that there was a kind of peaceful

press cuttings...

infiltration by people from outside the area. Others, notably Israel Finkelstein of Bar-Ilan University whose recent book summarizing the archeology of the early settlements created a stir in Israel, say it was a case of nomadic people already in Canaan settling down.

The lack of any object that is specifically Jewish in the villages generally accepted as early Israelite leads some archeologists to believe that Judaism may have arisen in Canaan itself sometime during the twelfth century B.C.

"It's rather like Islamic conquests in Arabia, a kind of takeover from the inside," Prof. Dever said.

A variant of this theory, which was put forward by George Mendenhall in 1962, suggests that Judaism arose out of a kind of peasant revolt against city dwellers. In this model the peasants drifted away from the existing city states of Canaan and came together as Israelite communities in the highlands - "although there is no more archeological evidence for this than for the Exodus," Prof. Finkelstein remarked.

Finally, those trying to salvage something of Exodus suggest that what the Bible describes - depending on the reading of a key word - as the flight of about 3 million or 3,000 people from Egypt might have amounted to what Harvard archeologist Lawrence Stager calls "a statistically insignificant number" of people. (Prof. Goedicke suggests 100 individuals.) Such people, this theory holds, were "missionaries" who converted the people of Samaria to Judaism. Although their ancestors had not been in Egypt, the new converts would graft the history of the missionaries to their own. Thus, the tiny Exodus would be "made the norm for all Israel," in the words of Prof. Joseph Callaway, an archeologist recently retired from

the Southern Baptist Theological Seminary.

The significance of this new archeological consensus for both the modern state of Israel and for believers in the Bible is both greater and less than it may seem, in the view of the archeologists.

Prof. Finkelstein says that part of the controversy over his book, *The Archeology of the Israelite Settlements*, has had to do with a sense that it was somehow undermining the legitimacy of the modern state.

However, the archeologists also recognize the frailty and the limitations of their new understanding. It may not be possible that the artifacts being examined would necessarily reveal the ideology of their makers. "If it is a question of finding the origins of Yahweh (Jehovah), it is not very likely I am going to find that in potsherds," Prof. Stager said.

Indeed, one of the lessons for scientists emerging from the excavations is that they have to look beyond the stones to document the growth of Judaism. As an example, Prof. Stager says there is work going on that is linking the relative paucity of pig bones in ancient garbage heaps to the growth of the Jewish pork-eating taboo and identification of Jewish communities.

Even as they generally accede to a new vision of how the Bible relates to the actual history of Israel, the archeologists offer some hope for those trying to salvage the literal biblical account. First, if Joshua didn't fight the battle of Jericho as described in the biblical book bearing his name, the book of Judges offers a view of a generally more peaceful occupation. "Archeology is heavily on the side of Judges," Prof. Dever said.

Then, say the archeologists, what

does it matter for those who truly believe in the Bible whether the archeological evidence and the text contradict each other? "It's the same thing as Christians who don't take the Resurrection seriously but still celebrate Easter," Prof. Dever said. He conceded, however, that when he presents the new consensus to lay audiences he often is greeted "by outrage and dismissed as a heretic."

Some biblical scholars have already responded to these new findings. John Bimson and David Livingston, for example, recently proposed a highly controversial redating of the settlement of Canaan. They suggest a scenario that would create a conquest at about 1420 B.C. This would tie in with some destruction found to have occurred at that time in Israel.

(The first, generally accepted non-biblical reference to Israelites in Canaan is an Egyptian engraving dated 1207 B.C. Working back in time using biblical references produces the conventional 1275-1300 B.C. date for leaving Egypt.)

York University professor Baruch Halpern characterized this revised theory as an "archeologically improbable hypothesis (that) hides its warts behind a veneer of benevolent piety."

Prof. Goedicke has proposed redating the Exodus instead to 1483 B.C., the time of the giant volcanic eruption on the not-too-distant Aegean island of Santorini, which would explain the Bible's account both of the parting of the waters and of the tower of fire supposedly seen during the wandering in the wilderness.

However, he admits that part of his motivation is to avoid the suggestion put forward by a number of archeologists - that the Exodus story is, in Prof. Dever's words, "only an historical myth."

"After all, you wouldn't want to

celebrate Passover to celebrate somebody's historical fiction, would you?" Prof. Goedicke asked.

From The Globe and Mail
February 27, 1988

NEW INTERPRETATION DISPUTES THEORY THAT HORSES WERE DRIVEN OVER CLIFF

For more than a century, anthropologists have painted a vivid picture of the prehistoric events that occurred at the killing ground of Solutre in east central France.

From 37,000 years ago until 12,000 years ago, scientists said, groups of cave-dwellers regularly drove herds of wild horses up a long slope and over a cliff, where they plunged to their death. The humans then ate the meat of the horses and collected their skins for clothing and other uses.

The site is marked by a 2.5-acre burial ground containing the bones of tens or even hundreds of thousands of horses, the largest such collection in Europe.

That picture is indeed dramatic, but it is also almost certainly wrong, anthropologist Sandra L. Olsen of Johns Hopkins University in Baltimore said recently at a meeting of the American Association for the Advancement of Science.

New interpretation of the evidence at the site, she said, is giving a much better picture of how early man behaved.

A growing body of evidence indicates that the horses were, in fact, rounded up in a corral-like cul-de-sac at the base of the slope about 900 feet from the cliff face, Olsen said in her report.

The hunters may have joined together to place rocks and debris around the cul-de-sac to lessen the likelihood

press cuttings...

that the horses might escape. Then the hunters dispatched the horses with spears, butchered them, and ate their kill. The bones were then case aside and buried by soil washing down from the slope.

And the cave-dwellers must have been fairly good at their task, Olsen said. She could find very few butchering marks on the bones when she examined them under an electron microscope. This suggests that the hunters opted for only the choicest cuts of meat, she said, and did not have to scrape the last remnants of flesh from the bones.

The earlier theory that horses were driven off the cliff probably stemmed from studies of North American Indians, who did use that strategy to hunt buffalo. But Olsen's review of studies of wild horses and zebras indicate that the strategy would not be likely to work with horses.

Horses normally travel only in small groups, she said, they are more agile than buffalo and they are very aggressive when cornered or threatened.

But the most convincing evidence, she said, is that "absolutely no remains have been found at the base of the sheer cliff." It is exceptionally unlikely, she argued, that the cave-dwellers would have moved entire horses the 900 feet to the bone site before butchering them.

Studies of modern hunter-gatherers in Africa indicate, she said, that the horses would have been butchered at the site where they were killed, and only the best portions of the carcasses taken to a camp or cave for further processing.

Olsen noted that the bones' burial site is only a short distance from a natural passageway by which the horses would have migrated between the floodplain of the Saone River and the eastern foothills of the Massif

Central every spring and fall.

The cave-dwellers would have had to divert the horses only about 900 feet to the cul-de-sac. That could have been accomplished with as few as 25 people, she said. In contrast, driving them over the cliff would have required a diversion of well over a mile and a much larger number of people.

Studies of the horses' teeth, she noted, indicate that they died during the spring, summer and fall, in agreement with the theory that they were killed while migrating.

"Although this new hypothesis may appear less dramatic than the image of horses leaping off a precipice to their death, it nonetheless demonstrates a considerable understanding (by the cave-dwellers) of animal behavior and a level of social organization capable of conducting a communal hunt," Olsen said.

"It also implies a certain amount of scheduling on the part of the hunters in order to arrive at the valley at the appropriate time of year to intercept the migrating bands of horses."

From The Toronto Star
February 27, 1988

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ARCH NOTES

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FROM THE O.A.S. OFFICE

Update Report on the New Office

In January the Society secured at a reasonable rent an office suite of two rooms at 126 Willowdale Avenue, Willowdale, in North Toronto. One room contains the library, some storage, two tables, a varying number of chairs, a chalkboard, space for a projector and screen, and goes under the name The Board Room. The other room contains the desks, computer, typewriter, telephone and recorder and more storage and is the Office Room. Everything - more-or-less - was moved in and operations began at the new site early in February.

Office hours are usually noon to 4:30 p.m. Monday, 8:30 to 4:30 Tuesday to Friday, during which members and the public are welcome to drop in without an appointment, and at other times by appointment. Despite this, it is wise to phone ahead to make sure the staff will not be absent at some downtown meeting or other off-premises obligation, such as being in Belize, Guatemala and Mexico in April.

The Board Room can accommodate twelve people for meetings and workshops.

New Office Launched with Open House

The culmination of the move to new premises was the Open House - or should we say Open Office - held on Saturday afternoon, February 20. Enough members and visitors attended that the two rooms, and sometimes even the corridor, were comfortably crowded. Marjorie Tuck and Christine Kirby provided the refreshments and were gracious hostesses.

Windsor member Dorothy Hunt gets a special mention for not only sending the Society a Congratulations and Good Luck card on the occasion of the Open House, but for also telephoning during the proceedings to express regret at not being there. Thanks,

Dorothy!

The original plan of having a wine and cheese party was abandoned because of the extent of the formalities required to get the necessary permit. We were able to get the \$17 deposit back that this would have cost.

The Notice Board

A feature of the new office facility is that there is a members' notice board posted outside the door to our suite which members can access at any time the building is open whether the office is open or not. Commencing with this issue, ARCH NOTES will include an item The Notice Board so that members will know what is currently featured on it. For more information on any item contact the office. Copies can be provided.

The following notices are on the OAS notice-board at the time of writing arranged by subject:

- [publications]
- AARO Index and lapel pin flyer
- Andersen 1987 "Zooarchaeological Reports"
- Order Form for back issues of OA, MOA, AN
- [services]
- Membership Application Forms
- Passport-to-the-Past Information
- [events]
- Chapter Meetings
- Ottawa Chapter - Annual Ottawa Valley Symposium March 19
- MIA London - SKYWALKERS A History of Indian Ironworkers, to May 1
- MCC Kenora - Archaeology of the Lake Superior Basin Workshop Mar 25-26
- [jobs]
- Mayer, Pihl, Poulton & Associates, London - archaeological resource assessment and excavation, summer 1988
- Ste. Marie, Midland - Assistant Curator, April 1988>January 1989
- [trips]
- "Belize and Beyond" to Mayan sites in Belize, Guatemala and Mexico

from the o a s office...

Office Will Be Closed in April

Having just got the new office open we must now announce that it will be closed April 8 to 16 with a "Gone to Guatemala" sign posted on the door. The telephone will respond but will not accept messages. Mail will be cleared from our two boxes but held until the Administrator's return.

Returned Mail

The Post Office returned ARCH NOTES 88-1 sent to the following members who all moved without advising their new addresses:

ALDER, Elizabeth; Waterloo
BYARD, Roger; Ottawa
CLARKE, Belinda; Peterborough
HARAN, Christine S.; Montreal
ROCKEL, Philip; Fergus

If anyone can put the Society and these good folk in touch with each other, it would be appreciated.

Passport Workshop Held at New Office

To Gary Warrick goes the credit for initiating the new office Board Room for a lecture and presentation on March 12. The occasion was a workshop held for members of the Passport-to-the-Past program, and Gary's subject was Huron Pottery. This is the second workshop held this year in Toronto as part of the Passport program, the first being on lithics provided by Bill Fox in Marti Latta's lab at Scarborough College on January 23 last. Janie Fox closed the series with the third and last workshop this winter. Her subject was Illustrating Artifacts, and her masterful presentation was also held at the OAS office.

The Passport-to-the-Past program is finding continuing acceptance, and members have been sent two newsletters this year to date.

Area MPP to Visit OAS Office

At the time of writing the Society expects to entertain Brad Nixon, MPP for York Mills, in whose riding our office is located, sometime later in March.

Publications Update

A number of future publications are in various stages of production.

The AARO Research Guide for which many members have submitted requests is proceeding, albeit slowly. It has been at the press for some time, and the latest delivery estimate from the printer is "April".

ONTARIO ARCHAEOLOGY 46 and 47 are both progressing in tandem and are awaiting the completion of reviews and revisions.

Computer-produced Mailing Labels

The accompanying edition of ARCH NOTES is the second mailed to you using address labels produced by our dBASE III+ computer program. To prepare the program the membership records previously on cards and master label sheets were typed into the computer. Some glitches and errors inherent to such a transfer were anticipated and it was decided to rely on the goodwill of the members to point out any typos and other errors. Some of the record cards for long-time members contain a wealth of information additional to the current address and membership details, and there was concern that our typist would be overwhelmed and intimidated. Not so! There was only one complaint and this is considered a remarkable accomplishment by our typist who, despite these kudos, would probably prefer to remain anonymous.

* * * * *

RESEARCH REPORTS IN O.A.S. NEWSLETTERS 1987

AN ARCH NOTES (Ontario Archaeological Society)	123456
BI BIRDSTONE (Grand River Waterloo Chapter)	(2)1
KE KEWA (London Chapter)	123456789
NA NIAGARA ARCHAEOLOGICAL REPORT (Niagara Chapter)	(1)1
OT OTTAWA ARCHAEOLOGIST (Ottawa Chapter)	(14)12345678
PR PROFILE (Toronto Chapter)	(6)123
SC SQUIRREL COUNTY GAZETTE (Windsor Chapter)	12345
WA WANIKAN (Thunder Bay Chapter)	12345

Numbers in parentheses () are volume numbers, used in BI, NA, OT, & PR. The other publications, AN, KE, SC & WA incorporate the abbreviated year date.

Arthurs, D. Hixton Silicified Sandstone Artifacts in Quetico	WA87-1
Bull, S. Notes on an Investigation of the Relation between Iroquoian Whole Vessels and Their Rim Sherds	AN87-5
Clark, C. P. A Ground Slate Point from Superior's North Shore	WA87-3
Cory, R. A Nineteenth Century Wyandot Site on the Detroit River	KE87-1
Dawson, K. C. A. Malolo Island, Fiji; An Initial Coast Archaeology Survey 1986-1987	WA87-5
Ellis, C. J. Thedford II: An Early Paleo-Indian Site in Ontario Stanly/Neville Points	NA(1)1 WA87-9
Ferris, N. Preliminary Findings from Enniskillen; a Mid-Nineteenth Century Ojibwa Reserve	KE87-1
Ferris, N. (ed.), C. Ellis, N. Ferris & I. Kenyon, W. A. Fox, I. Kenyon, P. Lennox Point Types in KEWA, 1979-1987	KE87-5
Fisher, J. A. Brodie and Parkhill: An Analysis of Two Late Archaic Broadpoint Samples from Southwestern Ontario	KE87-8
Fox, W. W. Dunk's Bay Archaeology	KE87-9
Garrad, C. The Sidey-Mackey Site A Decade After the 1977 Excavations O.A.S. Researchers Identify "Ekarenniondi"	AN87-3 AN87-5
Gibbs, L. Dunk's Bay Burial Report	KE87-7
Glen, A. The Billings Estate, Ottawa, Canada	OT(14)-7
Haywood, N. A. A Late Palaeo-Indian Find Near Stratton, Ontario	WA87-2
Hinshelwood, A. New Lakehead Complex Occupation in Thunder Bay	WA87-4
Horne, M. A Preliminary Examination of Site Selection Criteria for	

research reports...

- Middleport-Neutral Sites in Waterloo Region KE87-2
Jackson, L. J.
A Newly Dated Middle Woodland Point, Rice Lake, Ontario AN87-4
Jackson, L. J. & H. McKillop
Patterns in Ontario Prehistory: The Sheguiandah Site,
1952-1956 AN87-1
Janusas, S. E.
An Archaeological Master Plan for the Regional Municipality
of Waterloo BI(2)1
Johnston, S. M.
Epidemic Diseases and "The Wars of the Iroquois" OT(14)-8
Junker-Andersen, C.
The Case of the Tethered Turtle: A Pet Stinkpot Turtle
from Petunia? AN87-3
Kapches, M. & M. McClelland
Archaeological Policy Implementation For the City of
Toronto AN87-1
Keenlyside, D. L.
Clyde C. Kennedy 1917-1987 OT(14)-4
Kenyon, I.
Levi Turkey and the Tuscarora Settlement on the Grand River KE87-1
An Archaeological Study of 19th Century European Settlement
in the Gore of Camden, Kent County KE87-4
Nineteenth Century Notes - Ceramic Cups KE87-7
A History of Ceramic Tableware in Ontario, 1795-1890:
Historical Date Ranges AN87-6
Kenyon, I. & T. Kenyon
The Iron Trade Axe in Ontario, ca.A.D. 1580-1650:
Exploratory Data Analysis KE87-4
Kenyon, T.
The Making of a Seventeenth Century Iron Axe KE87-7
Nineteenth Century Notes - Royalty and Coat of Arms Pipes KE87-9
Kraemer, E.
Willow Sherds AN87-5
Laforet, A., J. MacDonald, I. Wainwright, S. Fryden
The Examination of a Tsimshian Stone Mask: Its Cultural
Content, History, Examination and Reproduction OT(14)-4
Lennox, P. A.
An Historic Neutral Encampment In Brant County, Ontario KE87-3
MacDonald, R.
Notes on Longhouse Storage Cubicles AN87-3
Mayer, R. G.
Under the Dome - Part II: Bottles, Beams and a Boat PR(6)1
Miller, J.
Pigments Used by Native Cultures OT(14)-1
Murphy, C.
The Springwells Component of the Bellamy Site (AdHm-7) KE87-4
Parker, L. R., F. Moerschfelder, J. W. Pengelly & S. D.
Pengelly
Modern Quarries and Their Impact on Archaeological Resources
in Southwestern Ontario AN87-1

Pendergast, J. F.
The Significance of Some Marine Shell Excavated On

Iroquoian Archeological Sites	OT(14)-3
Pengelly, J. & S. The Bonisteel Site: An Ontario Iroquoian Settlement on Lake Erie	KE87-6
Prevec, R. A Dog from Dunk's Bay	KE87-9
Ramsden, P. G. A Late Archaic Dog Coprolite from Inverhuron, Ontario	AN87-3
Ross, W. The Pic River Gaff Revisited	WA87-5
Sherberger, D. Petroglyph Pursuit on Gabriola Island	PR(6)2
Smardz, K. E. Archaeology in the Toronto School System: The Archaeological Resource Centre	AN87-2
Steckley, J. Toanche: Not Where Champlain Landed?	AN87-2
Linguistic Identification of French-Influenced Huron Village Construction	AN87-3
Huron Bead Ethnolinguistics	AN87-4
Huron Armour	AN87-5
Velo, J. Ochre As Medicine: A Suggestion for the Interpretation of the Archaeological Record	OT(14)-2
Woodley, P. The Thistle Hill Site (AhHf-5)	AN87-6

* * * * *

HAMILTON-WENTWORTH ARCHAEOLOGICAL FOUNDATION

The Hamilton-Wentworth Archaeological Foundation is offering a six-week (1ab) program in historical archaeology beginning April 20 at 7.00 to 9.30p.m., and a six-weekend field program (Redware pottery) beginning April 23, 9.00a.m. to 4.00p.m., Saturday and Sunday.

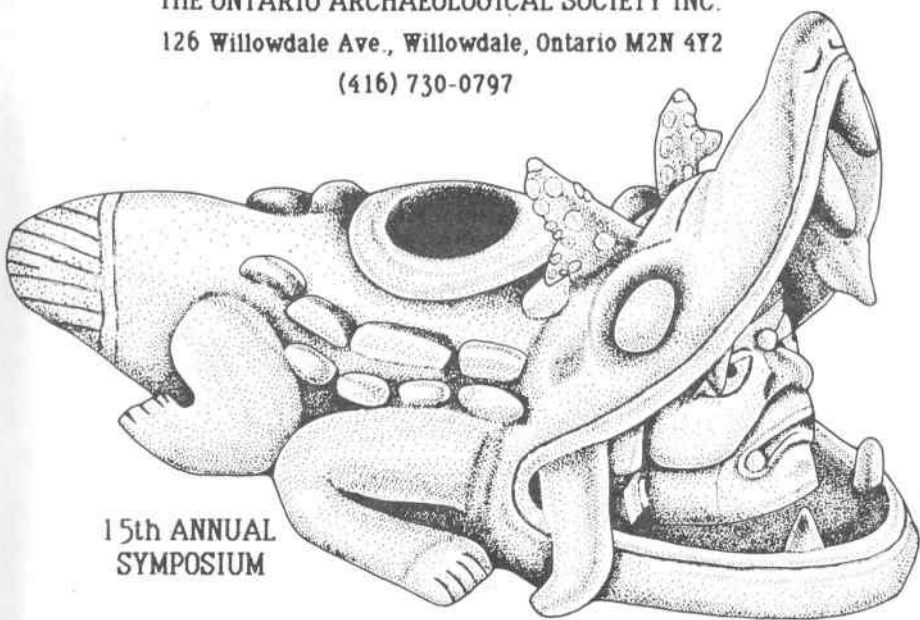
For information regarding registration call 524-1384 or write to The Hamilton-Wentworth Archaeological Foundation, Box 84, McMaster University, Hamilton, Ontario, L8S 1C0, Attention: Rita Michael, Executive Director.

"ONTARIO ARCHAEOLOGISTS ABROAD"

THE ONTARIO ARCHAEOLOGICAL SOCIETY INC.

126 Willowdale Ave., Willowdale, Ontario M2N 4Y2

(416) 730-0797



15th ANNUAL
SYMPOSIUM

October 22 & 23, 1988 at 20 Grosvenor St., Toronto
(Yonge north of College)

SYMPOSIUM '88 - ONTARIO ARCHAEOLOGISTS ABROAD

Hotel Booking

The Saturday evening festivities of the Symposium will take place at the Westbury Hotel located a few steps from the Metro YMCA, the venue for the day's papers and business meeting. The hotel is holding a block of rooms for Symposium participants at a special rate of \$83/night and room reservation brings a special parking rate of \$7/day. Please make your booking early as the rooms will not be held after thirty days prior to the event.

Items for Registration Kit

All members are invited to submit to the Executive any brochure, pamphlet or informational items which they think may be of interest to participants. As the appeal of this Symposium is to a wider general audience, it is appropriate to offer as much information on both the Society and on archaeology in Ontario by this and other means. It is hoped that more than 200 people will attend, so this is a good way of promoting all our activities. Initially, please send material together with your name, address and phone number to the O.A.S. Office, 126 Willowdale Avenue, Willowdale, Ontario M2N 4Y2. If accepted, please be prepared to supply 250 - 300 copies.

Display Reservation

Please use the form below to reserve your display space for the Symposium. Tables will be provided, or simply space for your exhibit stand if you are fully equipped. Space will be allocated on a first-come, first-served basis.

REQUEST FOR DISPLAY SPACE - SYMPOSIUM 88

Name: _____

Organization: _____

Address: _____

Postcode: _____ Phone (day) _____

(evening) _____

Please reserve ___ tables (max. 2, space permitting) for my display materials /or
please reserve ___ square feet of floor space for my exhibit.

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the month, except June - August, at Windsor Public Library, 850 Ouellette
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The Ontario Archaeological Society Inc.

126 Willowdale Avenue, Willowdale, Ontario, M2N 4Y2

(416) 730-0797

EXECUTIVE 1988

President

Ms Christine Caroppo
142 Glebeholme Blvd.
Toronto, Ontario
M4J 1S6
(416) 466-0460

Treasurer

Mr. Michael W. Kirby
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(416) 484-9358

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Islington, Ontario
M9B 4P7
(416) 622-9706

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Mr. Robert Burgar
55 Faywood Blvd. Apt.#107
North York, Ontario
M3H 2X1
(416) 636-5229

Director

Mr. Lawrence Jackson
P.O. Box 493
Port Hope, Ontario
L1A 3Z4
(416) 342-3250

APPOINTED MEMBERS 1988

Editor: Arch Notes

Mr. Michael W. Kirby
1225 Avenue Road
Toronto, Ontario
M5N 2G5
(416) 484-9358

Editor: Ontario Archaeology

Dr. Peter Reid
Department of Sociology &
Anthropology
University of Windsor
Windsor, Ontario, N9B 3P4
(519) 253-4232

ADMINISTRATOR & LIBRARIAN

Mr. Charles Garrad
103 Anndale Drive
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