President's Communique  Norma Knowlton 3
Editorial  Suzanne Needs-Howarth 5
MCTR News  Bernice Field & Penny Young 6
Notes on Maps  Robert & Jack MacDonald 7
Tulips Ceremonially Planted  Charles Garrad 12
New Middleport Dates  Lawrence Jackson 13
Peterborough County Jail  Alison Ariss 18
Impressions of OAS Symposium  Gary Warrick 19
Letters to the Editor
Memories of OAS Trip  Charles Garrad 22
From the OAS Office  Charles Garrad 25
OAS Chapters 27
OAS Provincial Officers 28
The major event for the OAS since the last issue of Arch Notes was the 1994 Symposium, with all the attendant activities, held October 21-23. The theme, "Origins of the People of the Longhouse", was followed in a logical and informative series of papers. The speakers ably presented new ideas, thus ensuring that the audience was treated to the latest results of current research. The remarks delivered by the moderator, Gary Warrick, served to connect the various papers in a cohesive way. Our appreciation is extended to him for doing an excellent job.

Also connected with the Symposium were several other events worth mentioning. The Annual Business Meeting was reasonably well attended. The members were given reports by the various Directors, by the Editor of Ontario Archaeology and by the Chair of the Education Committee, about the state of the project funded by the federal "Access to Archaeology Program", the Discover Ontario Archaeology kit for schools and public speakers. A Special Publication of the Ontario Archaeological Society was also launched: Zooarchaeological Analysis on Ontario Sites: An Annotated Bibliography by Janet Cooper and Howard Savage. The Saturday evening banquet featured Chief Jacob Thomas of the Six Nations Reserve in Brantford, who spoke from the perspective of a present-day Iroquoian. The Emerson Medal was awarded to James Pendergast for his many years of research on the St. Lawrence Iroquois. His record is truly impressive, especially considering it was all done by an avocational archaeologist (the first criterion for the Emerson Medal). Five members received Twenty-Five Year Pins, four of those in absentia.

The Thunder Bay Chapter has put forward a proposal to host Symposium 1995. Although they will be looking into ways of making the journey to Northern Ontario as inexpensive and easy as possible, it would be a good idea to start saving your money and planning the mode of transport. It is possible that the meeting may be held a little earlier in October so that dog sled will not have to be one of the options. To anyone who has not been "north of Superior": the journey is well worth the effort!

Quickly following on the Symposium was another public event, on November 2. Through the tremendous organizational efforts of Jane Sacchetti, the OAS had the opportunity to forge an "Italian connection". We became one of the non-financial sponsors of a lecture by Italian archaeologists about Isernia - La Pineta, reputed to be the oldest Homo erectus campsite in Europe. We also hosted a reception (also organized by Jane) where visiting archaeologists from Italy could meet archaeologists, geologists, zooarchaeologists and archaeobotanists in Ontario. This was apparently one of the highlights of their visit to Toronto. Thanks are owing to Howard Savage for offering the faunal lab as the venue.

As of the end of the year we will be losing the services of three members who have served long and diligently for the OAS. If you read the editorial at the end of the last Arch Notes, you will know that Michael...
Kirby has stepped down as editor of the newsletter, after filling this post for twenty years. In this time he has transformed Arch Notes from a few typewritten pages to a professional looking publication.

Christine Kirby has also resigned as chair of the Symposium, Lectures and Open House Committee, a position she has filled "since the Palaeolithic Era" (to quote Tony Stapells). I'm sure both Mike and Chris will be able to find lots of less demanding things to do with their spare time.

Lastly, Tony Stapells has declined to stand for a directorship in 1995; he has served faithfully and with enthusiasm for the last three years, after having led the Toronto Chapter. Best wishes to all of you, and have a well-deserved rest.

And so, who is going to fill these very important positions? Mike has succeeded in finding us an enthusiastic replacement, who has the necessary computer expertise. We are assured the quality will be maintained. Her name is Suzanne Needs-Howarth, and she will be having something to say herself in this issue, which she is editing, with Mike standing by in case of emergency. Chris' position will be filled when committee chairs are appointed in January, 1995.

In the usual course of events, one or more persons would have run for Tony's position on the Board of Directors; however, no nominations were received for this spot before nominations closed at the Annual Business Meeting. Therefore, it is now the responsibility of the Board of Directors to appoint a member to fill the position. After we ascertained that he would be willing to serve, John Steckley was appointed. Geoffrey Sutherland has consented to act as auditor for the Society for 1994.

We have been involved with items of wider interest as well. On November 10, a meeting was held by members of the Cultural Programs Branch of the Ministry of Culture, Tourism and Recreation to pass on information to members of the Ontario Heritage Alliance, which includes the OAS. Draft guidelines concerning impact on heritage, to be applied to the soon-to-be-proclaimed Planning Act, were presented for comment. At least two current situations could be affected by these guidelines.

The ambience of Fort York is threatened because a supermarket has applied to build a huge warehouse which would completely block the view towards the lake, severing all connection with the harbour which it once commanded. Strong local protests, with support from provincial heritage bodies has given the city council some reason to reflect on this one. Less well known are the numbers of small older cemeteries which are not being protected from developers by the Cemeteries Act. The new Planning Act strongly urges municipalities to develop Master Plans which would take into account the protection of significant vistas and archaeological resources, including pioneer cemeteries. Unfortunately, these are only guidelines, not regulations, and have no power to compel.

Finally, by the time you read this, we will be in the dark days of December, that time when we gather together with lots of bright colours, bright lights, fun and fellowship to scare away the shadows and wait for the sun to get over his annual wanness. Merry Christmas and Happy New Year, or any greeting you use instead to wish good things for your fellow human.
Hello, I am the new editor of Arch Notes. I want to use this editorial page to thank the board of directors for appointing me, and to thank Michael Kirby for all his support and help. I look forward to the challenge of maintaining the high standards he achieved.

I also want to tell you about the procedures surrounding submission of contributions. Over the past few months I have learnt that producing Arch Notes is a lot of work, involving not only editing, but also a variety of word processing and desktop publishing tasks. There are several things you can do to help make these tasks easier. The most important, of course, is that you continue to submit lots of short articles, news, comments and announcements.

It would help me a lot if you submit all copy on disk or via modem or e-mail, if you can. You may send very short contributions by fax. If you do not have access to a computer, you may, of course, send your typed contributions by regular mail.

Please send disks, typewritten and photocopied contributions to the OAS office. Send fax or e-mail messages directly to me; my telephone, fax and modem number is (416) 961-0509, my e-mail address is 75304.2724 @CompuServe.COM. If you want to submit your contribution by fax or modem, please call me first.

If you submit material on disk, please do not put formatting codes anywhere in your document. So, no font changes, no centre justification, no tabs, no bold, no italics. Use underline for foreign words and for book and journal titles in the bibliography. Please follow the bibliography format described in the new Ontario Archaeology style guide (OA 57).

Please submit tables either in WordPerfect tables format, or camera ready. Please submit photos as halftones or scanned (embedded in your wordprocessor document). Maximum dimensions for tables and illustrations should be 12 cm x 18.5 cm. Please include all table and figure captions on a separate page, below your document. I can handle 3½ inch diskette (DD or HD), and most PC wordprocessor formats.

Please make sure material for the January/February issue reaches the office or me by Friday, January 13, 1995. If you have any questions, comments or suggestions, please call me (8:30-5:30)
FROM THE LICENCE OFFICE

As of October, the Archaeology and Heritage Planning Unit has a new Data Coordinator: Penny Young. Penny, for the next 4 months, at least, has put aside her trowel and shovel and is working at a desk (smart move for the winter!). The data coordinator's number is still the same: (416) 314-7161.

Before we start dealing with an influx of 1995 licences I would like to remind all licensees, once again, of the following: Questions on the licence applications should not be filled in with only the word 'same'. If the work is the same as a previous year, please include a copy of the licence form with the original data on it.

A list of new licences, prepared by Roshan Jussawalla, follows below. The list consists of the name of licensee, licence number and site location.

Consulting:
Brenda Kennett, 94-118, Province of Ontario
Bruce Stewart; M. M. Dillon Limited, 94-119, new Highway 407 right of way

Underwater:
Matthew Turchi and Darryl Ertel, 95-001, Judge Hart, Lake Superior

FROM THE DATA COORDINATOR’S OFFICE

Input Changes for the Borden Form

In hopes of aiding researchers with their data requests we are suggesting the addition of two new types of information on Borden registration forms. This information will help in searches of the provincial archaeological sites database.

For consultants: If a project has a Municipal Plan Reference No. (a T#), please include it in Box 10 on the front page of the form.

For all licensees: It would be helpful if individuals and consultants would list their own or their company’s project numbers on the form. This could be put in the comments section on the back of the first page. Non-consultants should not be concerned if they do not have such a number. You may have only a research number and this information goes in box 3.

This data is to be used in two new database fields on CHIN.

Further Changes for the Borden Form

As noted in the article by Rob and Jack MacDonald below, new NTS maps (National Topographic Series 1:50,000) will soon be using the 1983 North American Datum (NAD83), which differs slightly from the old 1927 datum (NAD27). To avoid any confusion when recording site information, we are requesting researchers to indicate whether military grid coordinates are tied to NAD27 or NAD83. To identify which system you use, please read the NAD information noted on your map sheets. This can be found at the bottom centre of the map, usually under the contour scale data. Please place this information in box 13 (NTS map) on the borden.
NOTES ON MAPS, PART I: UP-DATING THE NORTH AMERICAN DATUM AND THE UTM GRID

Robert I. MacDonald and Jack D. MacDonald

This is the first of a series of short articles that will examine a variety of issues relating to maps and their use by archaeologists in Ontario. We expect that much of what we will cover will already be common knowledge among many, and we make no claim to originality or profundity. Rather, our aim is to critically scrutinize one of the most complex tools used by archaeologists, to provide a behind-the-scenes view of topographical map production in Canada, to supply a selection of pertinent references, and to promote an improved understanding of the pros and cons of using maps in an archaeological context. Towards this end, the authors encourage input from other researchers who may wish to add their voices to a forum on this topic. We hope you find this series useful.

Introduction

Anyone who has used topographic maps of Ontario, either the large-scale Ontario Base Map (OBM) series published by the Ontario Ministry of Natural Resources, or the smaller-scale maps of the National Topographic Series (NTS) published by Geomatics Canada (formerly Surveys and Mapping Branch, Energy, Mines and Resources Canada), will appreciate that certain elements of any map are out of date virtually the instant they are published. This is particularly evident in urban areas where land development is continually altering the cultural landscape, although landforms change as well, either through natural processes or cultural ones. Map publishers attempt to keep in step with these changes, to ensure that their products remain serviceable, by periodically issuing up-dated editions. What is less evident, however, is that in addition to upgrading the topographical data, improvements are also periodically made to the more fundamental cartographic underpinnings and these are reflected in changes to the coordinate systems which are included on each map sheet.

Map users will be familiar with the two coordinate systems which are featured on both OBM and NTS maps: the geographic (spherical) coordinate system, which consists of reference points for longitude and latitude, and the UTM grid, which is a projection of the Earth onto a flat surface. However, changes to the coordinate system can also affect the map reference, which is usually included in the form of a specific map code. For example: 30M/14 NAD83. This will allow the Ministry to include this information in the archaeological sites database. In the near future, all archaeological site records presently in the database will be updated to show NAD27. Future print-outs issued by this office will then contain the map reference indicating the appropriate datum.

Thanks.
and longitude, and the plane coordinate system, which is known as the Universal Transverse Mercator (UTM) grid. Both of these are based on the Transverse Mercator projection and are tied to the ground through networks of thousands of geodetic control stations. Over the last few years these networks have been readjusted through the implementation of a series of up-grades outlined below. The main purpose of this article is to highlight the major implications of this up-grading, particularly from the perspective of archaeologists working in Ontario. Special attention will be paid to changes in the UTM grid, since this is the principle method of geo-referencing archaeological sites and since, as explained below, shifts in the UTM grid are more substantial in Ontario than shifts in latitude and longitude.

The Universal Transverse Mercator Grid

The implementation of plane coordinate systems on maps was promoted by military requirements for more accurate georeferencing during and after World War I (Robinson et al. 1978:40-41; Sebert 1970:16). This heritage is reflected in the vernacular use of the phrase "military grid" in reference to the UTM grid in general. Technically, a distinction is made between a civilian system and a military system, although this has to do with how points are referenced to the UTM grid, rather than with any difference in the grid itself (Sebert 1970:17-18).

The UTM grid is an internationally used plane coordinate system based on the Transverse Mercator projection. Map projections involve geometric or mathematical processes whereby a representation of the surface of the earth (a sphere, or more accurately the geoid which approximates an oblate spheroid) is transformed to a plane. The Transverse Mercator projection is a conformal projection (i.e. there is no angular deformation at any point) which employs a series of 60 north-south segments, each 6 degrees of longitude wide, called zones (Robinson et al. 1978:49-73).

To understand more fully how the projection works, imagine the Earth as an orange, with all geographic features and the parallels and meridians drawn in. Now, imagine taking a knife and, after slicing off small circles at the 'poles', making a straight north-south cut in the peel of the orange and repeating this north-south cut sixty times, at equal intervals, until sixty strips, or zones, have been detached. Next imagine each strip of orange peel ('zone') detached and placed on a level surface. One could then force the peel to contract or expand by depressing its centre, until all of it touched the smooth surface. This flattening action results in a slight distortion of the geographical features within the zone, but because the strip is relatively narrow, the distortion is small and may be ignored (Sebert 1970:15).

Many archaeologists in Ontario will be familiar with UTM grid zones 15, 16, 17, and 18, since these zones cover the province and are noted on all NTS and OBM maps (see Sebert 1984: Figure 6-5).

The UTM grid zones are subdivided into 100,000 metre squares, each of which is assigned a pair of identifying letters. Under the military grid system, which is the one used for registering archaeological sites under the Borden system, the identifying letters of each 100,000 metre square become an integral part of the
grid reference, since the easting and northing values repeat every 100 kilometres within the grid zone. The 100,000 metre squares are further subdivided at intervals of 10,000, 1,000, or 100 metres, depending on the scale of the map. Generally, 10,000 metre grids are printed on maps with scales smaller than 1:100,000, 1,000 metre grids on maps with scales between 1:5,000 and 1:100,000, and 100 metre grids on maps with scales of 1:5,000 and larger (Sebert 1984:80). Since the UTM grid lines are overlaid onto the Transverse Mercator projection, or in other words, "...they are drawn on our 'orange strips' after the strips have been flattened..." (Sebert 1970:16), they are not distorted. All the vertical lines run parallel to the meridian that defines the centre of each grid zone, and all horizontal lines run parallel to the equator, which happens to be the only line of latitude not distorted by the Transverse Mercator projection. Since the central meridian of each grid zone is not parallel to its neighbours, neither do the grids in adjacent zones line up with each other. In southern Canada this fact is difficult to observe since, by convention, the edges of maps fall along parallels and meridians. In the north, however, where zones are narrow, certain maps may show portions of more than one zone (Sebert 1970:16). The discontinuity from zone to zone can be observed in southern Ontario on maps which abut another zone. For example, on the NTS 1:50,000 sheet Rice Lake 31 D/1, the 1000 metre grid for Zone 18, which is immediately to the east, is indicated by brown ticks and numbers around the margin of the map.

The North American Datum

Geodesy is that area of applied mathematics concerned with such things as calculating the precise size and shape of the earth, in whole or in part, and precisely locating things on its surface. In recent decades, as a result of extraordinary advances in technology in general, and geodetic technology in particular, it has become clear that existing worldwide geodetic networks exhibit gross inaccuracies which render them obsolete. The implications of this, and the need to update these networks, have become particularly evident since the advent of satellite-based global positioning system (GPS) technology, which is revolutionizing every discipline that makes use of georeferenced information. Even archaeologists are receiving advertising brochures from companies marketing pocket-sized GPS units that will bounce a signal off a satellite and provide site location coordinates accurate to a few tens of metres. For such information to be viable, however, one must be able to tie it into a geodetic framework of equivalent accuracy. This has resulted in an international undertaking, to readjust the horizontal geodetic networks in Canada, the United States, Mexico, Central America, the Caribbean, and Greenland, known as the North American Datum 1983 (NAD83) project (Parent and Pinch 1988; Barnes 1990).

Users of both NTS and OBM sheets may have noticed that, until recently, each map has carried the statement "North American Datum 1927" (NAD27). NAD27, which was preceded by North American Datum 1913, the U.S. Standard Datum of 1901, and the New England Datum of 1879, was a marked point at Meades Ranch, Kansas, U.S.A., being the approximate centre of the lower 48 states. When significant errors in NAD13 became evident in the mid 1920s, the U.S. implemented a series of adjustments which resulted in the establishment of NAD27. By then the Canadian geodetic networks had almost linked the southern margins of
the country, and NAD27 coordinates were completed for these networks in 1932. Since then, as the geodetic control networks have expanded and become more dense, both random and systematic errors have accumulated as a result of: (1) geometrical weaknesses in the network, (2) deficiencies in the adopted geoid model, and (3) the application of non-rigorous adjustment methods (Pinch 1990).

In contrast to NAD27, NAD83 has no datum point on the surface of the earth. To understand how this is possible, a basic understanding of geodetic referencing is needed. Michael Pinch (1990:3) outlines the procedure as follows:

Geodetic computations are carried out on the surface of an ellipsoid of revolution, which is chosen to approximate the size and shape of the Earth, or at least that part of the Earth for which a geodetic datum is being defined. In this context the size and shape of the Earth is described by another important surface in geodesy, the geoid, which is the equipotential surface of gravity which closely approximates mean sea level, and a surface that extends underneath the continents.

Almost all types of field survey observations are related in some way to the geoid which is too complicated a surface for geodetic computations because of its many and various undulations. However, an ellipsoid of revolution approximating the geoid is a relatively simple surface on which to carry out precise computations of geodetic distances, azimuths, and latitude and longitude.

Thanks in part to modern satellite positioning technology and more accurate modelling of the geoid, NAD83 adopted the Geodetic Reference System 1980 (GRS80) ellipsoid which represents the size, shape, and gravity field of the whole world. While this more universal ellipsoid does not more accurately approximate the geoid in North America than its predecessor, recent improvements in modelling of the geoid allow for more accurate relation of field survey observations to the reference ellipsoid. "An important feature of the GRS80 ellipsoid is that it is defined as geocentric, that is, the centre of the ellipsoid coincides with the centre of the mass of the Earth, a point that can be located relative to the surface of the Earth through the tracking of satellite orbits" (Pinch 1990:10), thereby eliminating the need for a datum point on the Earth's surface. More to the point, by adopting GRS80, the NAD83 reference system will be consistent with the definition of the World Geodetic System 1984 (WGS84), "which is the terrestrial system used in orbit computation of satellites in the Global Positioning System" (Pinch 1990:10).

Implications and Conclusions

Coordinate differences arising from the move from NAD27 to NAD83 can largely be attributed to existing errors in the NAD27 coordinates together with inherent differences between the two datum points. The shifts in geodetic latitude and longitude are relatively minor in Ontario, with a differential of no more than about 13 metres, although the shift vectors range up to about 150 metres in other parts of Canada. More important, however, is the shift in UTM coordinates, which involves a fairly consistent northward shift of between 219 and 224 metres throughout Ontario evident on all NTS maps compiled after 1990. This differ-
ence between the geodetic and UTM vectors is attributable to the way in which each coordinate system is defined in relation to the reference ellipsoid (Brassard 1990; Pinch 1990:12).

For Ontario archaeologists, the most significant implication of NAD83 and the concomitant shift of the UTM grid pertains to the geo-referencing and registration of archaeological sites. Daniel Brassard (1990:53) notes that, "The shifts involved with the conversion to NAD83 will only impact users requiring very high precision at the limit of the accuracy of the product." Archaeologists clearly fall into this category, since the location of archaeological sites is currently maintained on analog (i.e. paper not digital) NTS 1:50,000 maps. As with many agencies which administer spatial information, the Ministry of Culture, Tourism and Recreation (MCTR), which compiles site registration data, will need to ensure compatibility with the evolving technologies for managing and manipulating georeferenced data, especially geographic information systems (GIS). To assist the MCTR in accurately registering site locations, researchers must now record whether the map used to calculate the UTM Military Grid reference was tied to NAD27 or NAD83 (see MCTR notice elsewhere in this issue of Arch Notes). With this information, MCTR personnel will be able to transpose site location coordinates to the appropriate map edition thereby avoiding the possibility of misplacing the site by over 200 metres.

**Acknowledgements** The authors wish to thank Archaeological Services Inc. for logistical support and the following individuals for their assistance in preparing this article: Peter Carruthers, Ontario Ministry of Culture, Tourism and Recreation; Janet Goodell, The Ottawa Citizen; Mike Murray, Activities Books and Maps, Waterloo; Rob Pihl, Archaeological Services Inc., Stratford; Michael Pinch, Geodetic Survey Division, Geomatics Canada Sector, Department of Natural Resources Canada; and, Ron Williamson, Archaeological Services Inc., Toronto.

**REFERENCES CITED**

Brassard, D.

Parent, C. and M. C. Pinch

Pinch, M. C.

Robinson, A., R. Sale, and J. Morrison

Sebert, L. M.
1984 *Map Reading*. Canada Map Company, Toronto.

Rob MacDonald has been on staff at Archaeological Services Inc. since 1982 where he currently holds the position of Senior Archaeologist in the Stratford office. His special areas of expertise include ecological archaeology, archaeological site potential modelling, and geographic information system (GIS) applications in archaeology. This interest in spatial issues is undoubtedly genetically inherited from his father. His doctoral dissertation, which he is currently completing through McGill University, is entitled "Regional Settlement Trends in the Late Woodland of Southcentral Ontario."

Jack MacDonald, who is a Canada Lands Surveyor, recently retired after more than forty years in the federal civil service with the Surveys and Mapping Branch of Energy, Mines and Resources Canada.

---

**TULIPS CEREMONIALLY PLANTED**

*Charles Garrad*

On Remembrance Day a ceremony took place in front of the John McKenzie House in North York, the new home of our sister organization, the Ontario Historical Society (OHS). The House in its heyday was well known for its tulips, of which the McKenzie family were proud, and which their descendants still remember. Plans to restore the landscaping in front of the house therefore required planting tulips. This allowed association with the "Tulip Tribute - Canada Remembers" federal program to commemorate D-Day and the ensuing liberation of the Netherlands by Canadian forces, fifty years ago.

The ceremony, ably hosted by OHS Executive Director Dorothy Duncan and her staff, cleverly brought together these various elements. In attendance were representatives of the Dutch and Canadian governments; Canada Remembers; the Royal Canadian Legion; the 48th Highlanders Regiment and Museum; the North York Historical Society; Black Creek Pioneer Village; Gibson House; the Canadian Women's Historical Society; the York Pioneer and Historical Society; Canada Trust's "Friends of the Environment" program; the OHS; and the OAS.

Two strains of tulips which bloom in red and white colours were chosen, both for historical accuracy, these colours having been the McKenzies' preference, and for national symbolism. Under the careful eye of Dennis Pollock, head gardener for Black Creek Pioneer Village, representatives from each organization in turn planted tulips, those for the OAS being planted by Charles Garrad and Ella Kruse.

During her introductory remarks Dorothy Duncan mentioned the contribution of the Toronto Chapter OAS in its archaeological assessment of the property. Work continues on restoring the outbuildings.
NEW MIDDLEPORT DATES FOR SOUTH-CENTRAL ONTARIO

Lawrence Jackson

Field school testing in 1988 of the Gibbs site (BaGo-29), an Iroquoian village near Rice Lake, produced several new C14 dates, reported here for the first time. Gibbs is a fortified hilltop village overlooking the Ganaraska River lowlands (Figure 1). Ceramics from the site are predominantly late Middleport, with early southern division Huron types also present. A series of three radiocarbon dates on feature and midden charcoal from the site offers a useful perspective on dating the village and the timing of transitional Iroquoian developments in south-central Ontario.

The first date for the site, from a hearth containing abundant charcoal, ceramics and faunal material, was about 1480 ± 50 AD. This Feature 1 date falls quite late in the Ontario Iroquoian sequence. A second date on the same feature, run by a different lab, was about 1555 ± 180 AD. The sigma (Σ) variation for this date is quite high. A third date was run on a 10.5-gram charcoal sample from the N13E0 midden, recovered at a depth of 30-40 cm below ground surface; it is 1350 ± 60 AD, more in line with Middleport dates elsewhere in Ontario.

In keeping with the proviso that C14 dates are statistical estimations, rather than absolute ages, the three dates from Gibbs were evaluated using averaging procedures to compensate for Σ variation. Spaulding (1958) pioneered analysis of variance within and between C14 samples to evaluate the meaning of differences in sets of radiocarbon dates for the same event. Long and Rippeteau (1974) provide a useful formula for weighted averaging of dates and Σ values.

Table 1 shows the three Gibbs site C14 dates with assigned weighting. Weighted averaging of the three dates produced a result of 1432 ± 38 AD. Allowing that the 395 ± 180 BP date might be an outlier, weighted averaging of the two "acceptable" dates produced a very similar result of 1427 ± 39 AD. This suggests that all three dates are acceptable and that the size of variance can be misleading when accepting or rejecting a date. Furthermore, it is readily apparent that variance in late period dates for Iroquoian sites, both between and within radiocarbon estimations (Σ), can dramatically affect how sites are interpreted. Multiple dates on single sites and events appear to significantly increase the statistical probability of accuracy in C14 dating.

The Gibbs site appears to represent a late Middleport village, occupied around 1430 AD, in south-central Ontario. Calendarical calibration of the two Beta lab results (470 ± 50 and 600 ± 60 BP), using tables developed for the northern hemisphere (Beta Analytic after Vogel et al. 1993, Talma and Vogel 1993, and Stuiver et al. 1993), offers further insight into the true age of late Middleport in south-central Ontario (Figure 2).
Figure 1. Location of the Gibbs Site.
Figure 2: Beta Analytic Calibration Procedure.

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables estimated C13/C12 = 25: lab mult. = 1)

Laboratory Number: Beta-07984

Conventional radiocarbon age*: 470 +/- 50 BP

Calibrated result:
(2 sigma, 95% probability) cal AD 1410 to 1500

* C13/C12 ratio estimated

Intercept data:

Intercept of radiocarbon age with calibration curve:
cal AD 1440

1 sigma calibrated result:
(68% probability) cal AD 1420 to 1460

---

Laboratory Number: Beta-26841

Conventional radiocarbon age*: 600 +/- 60 BP

Calibrated result:
(2 sigma, 95% probability) cal AD 1290 to 1430

* C13/C12 ratio estimated

Intercept data:

Intercept of radiocarbon age with calibration curve:
cal AD 1400

1 sigma calibrated result:
(68% probability) cal AD 1300 to 1410
Using the Pretoria Calibration Procedure for dendro-calibrations, Beta Analytic calculates intercepts of radiocarbon age with the calibration curve as AD 1400 for the 600 ± 60 BP date and AD 1440 for the 470 ± 50 BP date. At one $\sum$, there is a 68% probability that the respective dates fall between 1300 and 1410 AD and 1420 and 1460 AD. Allowing for variability in the age of woods burned by the Gibbs site inhabitants and the duration of occupation, it appears quite reasonable that the village site was occupied in the early 1400s, as suggested by weighted averaging of the uncalibrated radiocarbon dates (Table 1).

Acknowledgements I would like to acknowledge the support of Trent University in funding the 1988 field school excavations at the Gibbs site and of the Ontario Heritage Foundation for financial assistance with the analysis.

REFERENCES CITED
Long, A. and B. Rippeteau

Spaulding, A.

Stuiver, M. A. Long, R. S. Kra and J. M. Devine
1993 Radiocarbon 35.

Talma, A. S. and J. C. Vogel

Vogel, J. C., A. Fuls, E. Visser, and B. Becker
1993 Radiocarbon 35:73-86.

Northeastern Archaeological Associates, P.O. Box 493, Port Hope, Ontario, L1A 3Z4
ARCHAEOLOGICAL INVESTIGATION REVEALS INTERESTING PAST 
OF JOHN McKENZIE PROPERTY

The Toronto Branch of the Ontario Archaeological Society has been busy this summer conducting an archaeological assessment of the property surrounding the John McKenzie House, the OHS [Ontario Historical Society's] new home. Greg Purmal and Elise Sherman have been heading up the excavations, which have been undertaken most weekends since late June. The Branch has received funding from the Ontario Heritage Foundation to carry out its investigations.

After surveying and gridding out the backyard, the team of archaeologists and volunteers chose several key areas in which to begin the assessment. Some of these test units are hoped to reveal the evidence of a barn that once stood between the present-day house and dairy. Early photographs provided by family members show a plaster-covered building which stood adjacent to the milkhouse. Thus far the precise whereabouts of the structure remain elusive.

Two other units have been excavated to the east of the stable to determine the size of the original building. Evidence in the form of bricks outlining possible walkways, drive areas and walls of an earlier structure, or an extension of the present one, indicate that the stable has gone through many transformations since its construction in 1915. The paving bricks found have maker's marks showing the name of the manufacturer, Ontario P.B. (Paving Brick) Company and 1895, the date that the company, once located in the West Toronto Junction area, was formed.

The archaeologists also decided to excavate the floor of the stable, and discovered some fire red clay and charcoal approximately two feet below the surface. This evidence indicates that a fire probably occurred on the site, and that the present structure may have been preceded by another that burned.

Other units have been dug to the north of the stable to find clues of a piggery which once may have stood in the area. An excavation right next to the north stable wall has revealed the evidence of a midden or garbage dump, which so far has been dated to the 20th century.

from Ontario Historical Society Bulletin 92 (July/August 1994)

ONTARIO HERITAGE BOOK AWARD

Reading Rock Art, Interpreting the Indian Rock Paintings of the Canadian Shield by Grace Rajnovich has been awarded the Ontario Heritage Foundation "Ontario Heritage Book Award". For orders or enquiries contact: Natural Heritage/Natural History Inc., phone (416) 694-7907, fax (416) 690-0819. For information on the publications award program, call the Ontario Heritage Foundation at (416) 325-5000.

from Heritage Matters, October 1994
In June 1994, Northeastern Archaeological Associates was hired by the Management Board Secretariat to carry out an archaeological investigation/monitoring project concurrent with the restorative construction of the Peterborough County Jail exercise yard wall, built in 1842. The investigation team was led by Alison Ariss and Donna Morrison. This project developed out of protocol arrangements between the Ontario Ministry of Culture, Tourism and Recreation and the Management Board Secretariat, with Ministry-level involvement coordinated by Chris Junker-Andersen and Ron Wettlaufer, respectively.

During the excavation of the first pier-footing pit (Pier #14) in the yard, the skeletal remains of four adult males were uncovered. Based on historic newspapers accounts, it is believed that the four individuals were hanging victims whose remains were not claimed by relatives. The four individuals were hung at separate times: one in 1874, two in 1919, and one in 1933. None were Canadian citizens: one was African-American, one Russian, one British, and one Austrian. All were hung for committing murder or having direct involvement in local murder cases (Ariss 1994).

The skeletal remains are currently undergoing detailed analysis by Michael Spence, a physical anthropologist at the University of Western Ontario, with technical assistance provided by Northeastern Archaeological Associates. Archival materials from the Peterborough County Jail and Provincial Archives are being researched by Alison Ariss, to assist Dr. Spence in the positive identification of each individual.

The archaeological investigation at the Peterborough County Jail is continuing this fall, as the excavation of each pier-footing pit is to be monitored not only for burials, but for any archaeologically-significant features uncovered during the excavation. Considering the long history of the jail, it is possible that more burials will be found.

REFERENCES CITED

Ariss, A.

Northeastern Archaeological Associates, P.O. Box 493, Port Hope, Ontario, L1A 3Z4
The 21st Annual OAS symposium was well attended despite a departure from the normal program of dig presentations. The "Origins of the People of the Longhouse" Saturday session was filled with ideas but slim on slides. Actually, the symposium would have been even slimmer on slides had we not discovered five minutes before the first presentation that we had forgotten a slide projector.

The Saturday presentations were enlightening and stimulating, raising fundamental questions about our archaeological assumptions and reminding us that archaeological reports have an audience much larger than just a bunch of archaeologists. First Nations people are becoming increasingly interested in archaeology at all levels, from the trenches to the ivory towers. Labelling a particular postsherd as Iroquoian is not just an academic exercise; entire land claims may hinge on such an identification.

For those who stayed to the end on Saturday, you probably noticed Charlie Garrad, Norma Knowlton, Christine Kirby, and me looking a little worried. Chief Jacob Thomas was scheduled to speak before Bill Fox's discussion at 3:00 pm. At 3:15, there was still no sign of Chief Thomas. Bill went on with his discussion. The session came to an end and I dashed home to phone the Chief. There was no answer, but I breathed a sigh of relief: I knew that he was en route and would appear at the banquet later that evening. He didn't disappoint us. After a tasty meal (not the usual rubber chicken) and the Emerson Award presentation to James Pendergast, Chief Thomas delivered a captivating speech with a message for archaeologists: show Native people the same respect you expect to receive, without interfering, and friendly cooperation between Native people and archaeologists will follow. The next morning, a smaller audience listened to a number of presentations ranging from some bones of contention in David Boyle's closet to bones of the now-extinct sea mink. I don't know about you, but I'm looking forward to the Thunder Bay Symposium next fall - at least I won't be called to organize that one.

SAA SYMPOSIUM ANNOUNCEMENT

A symposium on "Lithic procurement sites of the mid-continent" is planned for the 60th meeting of the Society for American Archaeology, Minneapolis, Minnesota, May 3-7, 1995. Contact David Mather or Stacy Allan, Fort Snelling History Center, Minnesota Historical Society, St. Paul, MN 55111 (tel. (612) 726-1171, fax (612) 725-2429) for information.
Dear Editor,

In re-reading my letter which was published in Arch Notes 94-5, I noticed an error in transcription which I would like to correct. Page 18, Line 13 should have read:

"Ask a Pentecostal or a Catholic about Christianity - you would be hard pressed to accept that they were talking about the same religion, although they share the physical symbols and the mythological characters."

It was not my intention to single out or cause offense to any particular group. Those named were merely chosen to illustrate the wide range of interpretations within a single religion.

Yours sincerely
Nick Adams

Dear Editor:

We recently attended the talks given at the Columbus Centre ("The Samnite Culture") and the Royal Ontario Museum ("The 700,000 Years Old Campsite"), and found them very interesting and worthwhile lectures.

At both events, the O.A.S. was heartily thanked for its valuable participation ensuring the success of these lectures. In the case of the R.O.M. event, our President, Norma Knowlton, had the chance to speak on the virtues of the O.A.S.

Yours sincerely,
Jim Shropshire & Marjorie Clarkson

Dear Sir,

The two recent articles in Arch Notes on Peter Dorni pipes (94-3 and 94-5), by Robert Mayer and Andrew Hinshelwood, have raised a number of questions regarding the origins and sources of these pipes. I would like to offer the following observations, and perhaps put forward some information that may answer a few of the questions raised in the two articles.

Of the Scottish pipe makers, McDougall and Davidson are the only ones known to have produced Peter Dorni pipes. The 1900 Associated Tobacco Pipe Makers' Society of Scotland and Ireland Price List, provides listings for McDougall, White's, Davidson's, Christie's and Waldie's of Glasgow, as well it includes prices for
both Edinburgh and Aberdeen. The 1900 Price List was the result of a labour dispute between Scottish makers and their employees, and is dated September 1900. The "PETER DORNI 383" pipe recovered on the Front Street Site (AJGu-15) is a product of the McDougall factory of Glasgow, Scotland. At the time the article in Ontario Archaeology was written I did not have access to the 1900 list. The PETER DORNI 383 is listed as a Peter Dornie selling for 9 pence per gross. The pipe was probably introduced sometime around 1898. The date was arrived at by examining the pipe styles listed in the price list. Pipe number 379 is a '98 Crown Prince. McDougall also produced a second Dorni pipe which is listed in the 1900 price list as number 139. The 139 is the same pipe that is listed in the McDougall Irish price list of 1875. By 1900 the 139 Dorni was selling for 8½ pence per gross. The difference in price between the two pipes more than likely reflected the complexity of design and difficulty of trimming. The 383 probably being a slightly fancier pipe. As Byron Sudbury has indicated the Dorni 139 was more than likely introduced in 1870. The 138 pipe is a Jenny Lind, who retired from a singing career in 1870. The Davidson Dorni is listed as number 29 and sold for 9 pence per gross in 1900. Davidson began operations in 1863, taking over from William Murray who retired in 1862. Murray was by 1858 supplying the Hudson's Bay Company. The dating of the Davidson Dorni is more difficult as Davidson more than likely was using pipe moulds used by Murray when he folded operations. Fortunately both an 1864 description of the factory exists, as well as a Davidson catalogue. The 1864 description indicates that 43 moulds were in use at the time. The Davidson Dorni must therefore predate 1864. If Murray was producing a Dorni, and it is highly likely, then Dorni pipe styles would undoubtedly be found on Hudson Bay Company sites, dated from 1858 to 1863.

Readers who are interested can consult the article by Dennis Gallagher and Roger Price on Davidson in Volume X, Scotland, The Archaeology of the Clay Tobacco Pipe, B.A.R., 1987. On page 127, Davidson's Peter Dorni catalogue entry is illustrated. The 1900 price list is also duplicated in the volume.

Amongst the Montreal makers there is, to date, no evidence of Peter Dorni styled pipes being produced. Of the Montreal makers it is my belief that if any were in fact making Dorni styles it would have been Robert Bannerman. In 1887 when Robert Bannerman passed away the Montreal factory produced 60 pipe styles. Unfortunately no description of those styles has yet been discovered.

I strongly support the kind of debate that Mayer and Hinshelwood have initiated, it is high-time we looked beyond maker's marks and began cataloguing morphology. A T.D. mark on a bowl can be as distinctive of a maker as the name that was mould imparted on the stem. Like wise the heel lettering and numbering can tell us something about makers. Unfortunately very few factory site collections have been described in print, and until they are correlations will be difficult to make.

I thank you for the opportunity to take part in this debate.

Sincerely,
Robin H. Smith
HOLD THAT BORDEN FORM!
Before you register that site, please take a moment to check the map used to calculate the Military grid reference coordinates to see whether it uses the 1927 or 1983 North American Datum (bottom centre of National Topographic Series 1:50,000 maps) and note this information along with the grid zone, 100,000 metre square, easting, and northing on the form. For more details, see MTCR news and the article by Rob and Jack MacDonald.

SEVEN MEMORIES OF OAS 1994 TRIP TO GREECE & TURKEY

Charles Garrad

Into the Heat
After Toronto temperatures in the 20s and twelve air-conditioned hours we stepped out of Athens airport into the parking lot and a temperature of 35 degrees, with the full blazing heat of the sun on us. Oh yes, replied the locals to our query, we are having a late summer. A few days later, back in the airport en route to Turkey and still not adjusted to the heat, we consoled ourselves that somehow it must be cooler there. How wrong we were: some days in Turkey the thermometer climbed to 40 degrees. For three weeks we had blazing sun and no daytime rain.

Into the Smoke
The road we were following through Arachova led to the edge of the great gorge through which the Pleistos river flows to the sea. Somewhere below, reached by a series of horrendous S-bends down the mountainside, lay our destination, Delphi. But our bus and all other traffic stopped. The mountainside was on fire at the S-bends. Our intended road, which wound back and forth in and out of the flames and smoke, was closed except to emergency vehicles. These were helpless against such a blaze, but as we stood watching a shadow loomed, and then another. Three big water-bombing aircraft dropped down into the gorge below us to unload water onto the burning slope, with considerable effect. The fires were not entirely out when we set off, winding down the S-bends in and out of the smoke and still unextinguished flames at the roadside. We emerged safely and soon reached Delphi.

Into the Air
In Turkey one of our members had the misfortune to slip in the bathtub and put her back out. We were staying at a luxurious hotel, but beyond its confines the medical facilities were very limited. Fortunately, our insurance policies required us to contact Mutual of Omaha in the USA before any treatment was undertaken. When we did this the results were magical. Our member was air-lifted by helicopter to Istanbul to meet a nurse who was flown out from USA to take charge of the treatment and escort her back to Canada. The helicopter was provided by the Turkish Army but our member, languishing on a stretcher, probably did not enjoy the unique experience any more than flying back to Canada first class, her stretcher across three seats. It is true that OAS trips are intended to provide unique experiences, and flying across Turkey in a military helicopter is not an experience...
available to many people. Perhaps this is just as well. For one thing, according to what we hear, the helicopter ran out of fuel and had to land en route. It will be understandable if our member, now recovered, is not in a hurry to get back into the air.

Into Matrimony
For centuries the ancient Turks and their predecessors carved homes and temples, even cities, out of rocks. We were impressed to be taken to a modern restaurant carved from rock to enjoy traditional food and to see beautifully costumed performers replicate traditional ceremonies and dances. In one of these a veiled maiden sat on a stool while three suitors appear, dancing marriage proposals. The first was dismissed for offering only cheap jewellery, the second for insufficient muscle, while the third had all the necessary attributes to be accepted. The energetic performance was accompanied by some half-dozen musicians with such effect that when the girl finally made her choice and the now-engaged couple left the floor dancing together, we cheered and applauded as if it was the real thing. To our surprise the cast immediately returned to the stool left on the vacant floor as if to repeat the event. This they did, but with a difference. One of our female members found herself propelled from her table onto the stool by some of the cast, and encased in a veil. Two of our men found themselves dancing before her under the tutelage of others of the cast, both in turn to be rejected in accordance with the script. Then all eyes followed the cast as they seized upon another of our group to play the role of the yearning suitor and future husband. This he did with zest and flair. The couple danced off, presumably to complete their matrimonial arrangements, accompanied by our cheers. In an instant most of us were on the floor dancing with the cast. The happy couple (who made it clear they were acting!) returned, the bride danced with her groom, with both rejected suitors, and just about everyone danced with everyone. Pat, Stewart, Gordon and Graham, we were never more proud of you than the night when you all flirted with make-believe matrimony, Turkish style.

Into the Toilets
The bathroom facilities in the modern hotels we stayed at in Turkey were excellent and matched anything we have seen anywhere. This comment even applies after the city water supply was turned off to our hotel in Istanbul. Out on the road, however, the best facilities were poor and frequently appalling to those of us in urgent need. We had heard of the hole-in-the-floor version but little expected to be confronted with one while our body systems demanded urgent relief. Therefore our interest was intense when at Ephesus we encountered a sign stating "The Restoration of the Antiquated Public Toilets sponsored by the Association of Ephesus Museum". Anxious not only to learn about "antiquated" toilets but also to make odious comparisons with the worst of the modern variety, we clustered into what had once been a spacious room with a central fountain. Along the walls were the elevated stone seats of the toilets, with useful holes at convenient intervals. Public they indeed were, but highly user-friendly. Kodak's solvency was assured in this room as everyone took pictures of everyone enjoying the simplicity of sitting instead of squatting, often with Kleenex-improvised toilet paper. Unfortunately, these toilets were no longer in actual use, and our actions were, like the wedding mentioned above, necessarily make-believe.
Into Mysticism
Who taught the Whirling Dervishes to whirl? At Konya we were introduced to Mevlana, thirteenth century teacher, philosopher, social reformer, mystic, dervish (holy man), writer and poet. Among other attainments he also taught *sentence not clear* as a means of individual enlightenment and a personal approach to God a mystic dance (Sema) in which the participants repeatedly rotate their bodies in patterns on the dance floor. These followers of Mevlana (Mevlevi), who practise the Sema, are little understood in the West, where they are known as Whirling Dervishes. The sect was founded at the time of the spread of Islam and reflects Islamic philosophy and courtesy, and the Mevlevi recognise Mevlana as following God and Mohammed. Yet surely the Mevlevi, who practise the Sema, are little understood in the West, where they are known as Whirling Dervishes. Yet surely the concept of repetitive motion as a means of inducing a transcendent altered state of consciousness and attain personal enlightenment is shamanistic, and links to the sustained repetitive rhythmic drumming, singing and dancing used by so many other cultures, including those of early Ontario. When the modern Turkish state rejected an official state religion, the Mevlevi seminary and institution at Konya was reclassified as a museum and the performances of the Sema at Konya curtailed to once a year. As a result the movement went abroad and we were told that today the largest group of Mevlevi regularly conducting the Sema is in what seemed an unlikely country – Sweden. Curiously, although we did not see a live performance of the Sema in Turkey, a number of us were able to see *do you mean the sema or native dancing?* the ceremony in Toronto in November.

Into Conclusion
All OAS trips result in bonding among the participants, and this one was no exception. Members and guests from the Hamilton, Ottawa, Thunder Bay, Toronto and Windsor Chapters got to know each other and got along well. We all supported each other as we shared an incredible range of experiences, including a guide in Turkey who wanted us to see everything and drove us hard, on one day from 7.30 a.m. to 10.30 p.m. non-stop. I will personally retain an individual memory of everyone on the trip, and I am particularly indebted to Evelyn Wozniak of the Windsor Chapter for her admirable summary of the trip and insightful explanation of our resulting fatigue: "Being a tourist is a tough job". Thanks Evelyn, and everyone, you were all great.

TWENTY-FIVE YEAR MEMBERSHIP AWARDS
Five members were awarded the Society’s twenty-five year membership pin and certificate during the annual symposium on October 22, 1994. These members are William Fox, James Hunter, Susan Jamieson, Edward Lenik and Ronald Mason. Congratulations!
Returned Mail

Please help the office locate these three members whose mail has been returned. If you know where these good people have gone to, please tell them to contact the OAS office, or do this for them:

David CORSON, was at Hamilton
Shaun MURPHY, was at Mississauga
William PARKINS, was at Thorold

Season's Greetings!

Is someone hinting about your Christmas wish list? Suggest that an OAS Life Membership is a gift that continues year after year. Other ideas will be found in the enclosed flyer. Meanwhile, to all OAS Members everywhere, may you all enjoy a very Merry Christmas and a Happy New Year.

Update on Education Kits from Christine Caroppo

Some of you may have seen the finished Discovering Ontario Archaeology Kit at the recent Symposium. Four of the southern focus kits are currently in use at the Region of Peel Museum in their outreach program. One is being tested in the Toronto Board of Education system at the high school level. The two northern focus kits are still without borrowers.

Inquiries have been received from a number of local museums, including Ste. Marie Among the Hurons, the Loyalist Cultural Centre and the Fieldcote Museum. A firm booking has been made by La Maison Francois Baby House in Windsor.

The Community Speaker Kit program is close to being finished. The note and slide sets are ready, and a donation of carousel trays is being sought from Kodak Canada. The kits should be placed by the beginning of 1995. For more information about the kit programs, call me at (416) 0460.

Request for Field Work News from Bernice Field

I have been asked to act as the Southern Ontario Field Work News Coordinator for the Canadian Archaeological Association's Newsletter. As such, I am inviting contributions for the newsletter section detailing work done in Southern Ontario in 1994.

All that is required is a paragraph about your work, with perhaps a brief statement highlighting a site or sites of particular interest and why they were interesting. The deadline for receipt of these contributions is December 30, 1994. Anyone with material for the Newsletter can contact me at the numbers or address below. I will also be happy to answer any queries concerning contributions.

MCTR Cultural Programs Branch/Archaeological and Heritage Planning Unit
77 Bloor Street West, 2nd Floor
Toronto, Ont., M7A 2R9
Tel: (416) 314-7175/7158
Last issue we discussed the benefits of Life Insurance as a way to leave a bequest to worthwhile charitable organizations like The Ontario Archaeological Society. A second method of ensuring the OAS will still exist for future generations is through a gift to the Society when you no longer need to rely on the funds for living expenses, a bequest in your will.

We all enjoy archaeology in one form or another - as a professional, an avocational or even as an armchair archaeologist. And we know what the OAS does for archaeology and what it does for us personally - but the OAS cannot do this without cost.

When you are revising your Last Will and Testament, remember the pleasures and achievements you have enjoyed and do your part to ensure succeeding generations also will have something to remember. Ask your lawyer to include a bequest to:

THE ONTARIO ARCHAEOLOGICAL SOCIETY INC.

The amount of your bequest will vary but all donations are an important part of preserving the Society. Whether a simple legacy, an endowment or a charitable trust, your contribution is important. In addition your bequest is:

1. Tax deductible in the year of death to the extent that it does not exceed 1/5 of total income and any unused deductions can be carried back to the previous year.

2. Able to provide you with the wonderful feeling that "I made a difference", you really will feel good about yourself.

If you would like to help by leaving a bequest to The Ontario Archaeological Society through your last will and testament please consult your trust officer, lawyer or other advisor or the OAS for further details.

CHARITABLE NO. - 0409292-21

YOU CAN MAKE A DIFFERENCE

The OAS Endowment Fund guarantees your immortality! Invest now in Archaeology's future.

Cut Here

I am interested in obtaining more information about establishing a Personal Planned Giving Program.

Name: ____________________________
Address: ____________________________

Province: ____________________________ Postal Code: ____________________________

Phone: ( ) ____________________________ Best time to call: ____________________________

I understand that this request for information does not place me under any obligation to establish a plan.

MAIL TO: THE ONTARIO ARCHAEOLOGICAL SOCIETY INC, 126 WILLOWDALE AVE., NORTH YORK, ONT. M2N 4Y2
OAS CHAPTERS

GRAND RIVER/WATERLOO
President: Marcia Redmond (519) 894-5807
Vice-President: Ken Oldridge
Secretary: Lois McCulloch, 23 Caledonia St., Guelph, Ont. N1G 2C4
Newsletter: THE BIRDSTONE
Fees: $7
Wednesday of the month, except June-August, at the Adult Recreation Centre, 185 King St. W.,
Waterloo, or at the John F. Ross Collegiate.

HAMILTON
President: Joseph Muller (905) 525-1240
Vice-President: Jacqueline Fisher, Box 57165 Jackson Station, Hamilton, Ont. L8P 4X1
Secretary/Treasurer: Harri Mattila
Newsletter: Editor: John Triggs
Fees: $15

LONDON
President: Pat Weatherhead (519) 438-4817
Vice-President: Chris Ellis
Newsletter: KEWA
Fees: $15
Thursday of the month, except June-August, at the Victoria Memorial Building, Metcalfe &
McLeod Streets, Ottawa.

OTTAWA
President: Jim Montgomery (613) 730-2377
Vice-President: Lois King, Box 4939 Station E, Ottawa, Ont. K1S 5J1
Newsletter: THE OTTAWA ARCHAEOLOGIST
Fees: $15
Wednesday of the month, except June-August, at the Victoria Memorial Building, Metcalfe &
McLeod Streets, Ottawa.

THUNDER BAY
President: Frances Duke (807) 683-5375
Vice-President: Andrew Hinshelwood
Secretary/Treasurer: Andrew Hinshelwood, 331 Hallam St., Thunder Bay, Ont. P7A 1L9
Newsletter: WANIKAN
Fees: $5
of the month, except June-August, in the Anthropology Teaching Lab., room 2004, Bra unfolds,
Lakehead University, Thunder Bay.

TORONTO
President: Greg Purmal (905) 880-4481
Vice-President: Wayne McDonald
Secretary: Annie Gould, Toronto's First Post Office, 260 Adelaide St. E., Box 48, Toronto, Ont.
M5A 1N1
Newsletter: PROFILE
Fees: $10
Wednesday of the month, except June-August, in Room 561A, Sidney Smith Hall, 100 St.
George St., Toronto.

WINDSOR
President: Suzanne Gero (313) 393-9309
Vice-President: Sandra Lesperance, 3461 Peter St., #507, Windsor, Ont. N9C 3Z6
Secretary: Peter Reid
Newsletter: SQUIRREL COUNTY GAZETTE
Fees: $12
Tuesday of the month, except June-August, at St. Andrew's Presbyterian Church, 405 Victoria St., Windsor.
The Ontario Archaeological Society Inc.
126 Willowdale Ave., North York, Ontario M2N 4Y2
Phone, fax or modem (416) 730-0797

BOARD OF DIRECTORS 1994

Treasurer/Secretary
Mr. Henry H. van Lieshout
81 Overbank Crescent
Don Mills, Ontario
M3A 1W1
(416) 446-7673

PRESIDENT
Ms Norma E. Knowlton
418 Bouchier St.
P.O. Box 13
Roches Point, Ontario
LOE 1P0
(905) 476-4747

Director of Professional Services
Ms Lise A. Ferguson
536 Glengrove Ave. W.
Toronto, Ontario
M6B 2H4

Director of Public Services
Mr. Tony Stapells
39 McKenzie Ave.
Toronto, Ontario
M4W 1K1
(416) 962-1136

Director of Member Services
Ms Anne La Fontaine
100 Quebec Ave. #1502
Toronto, Ontario
M6P 4B8

EXECUTIVE DIRECTOR
Mr. Charles Garrad
103 Anndale Drive
North York, Ontario
M2N 2X3
(416) 223-2752

PUBLICATIONS
Scientific Journal: ONTARIO ARCHAEOLOGY
Newsletter: ARCH NOTES
Special Publications (As advertised)

FEES
Individual: $28
Family: $34
Institutional: $55
Life: $400
Chapter Fees Extra

Director of Publications
Mr. Michael W. Kirby
P.O. Box 579
Markdale, Ontario
N0C 1H0
(519) 986-4026

Director of Chapter Services
Mr. Stewart R. Leslie
187 Delmar Drive
Hamilton, Ontario
L9C 1J8
(905) 389-2394

Director of Chapter Services
Mr. Michael W. Kirby
P.O. Box 579
Markdale, Ontario
N0C 1H0
(519) 986-4026

Director of Chapter Services
Mr. Stewart R. Leslie
187 Delmar Drive
Hamilton, Ontario
L9C 1J8
(905) 389-2394