



# ARCH NOTES

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**ARCH NOTES**

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## PRESIDENT'S COMMUNIQUE

*NORMA E. KNOWLTON*

The high point of the year for the Ontario Archaeological Society, as judged by the number of members participating in a single event, has come and gone. We must extend to the London Chapter congratulations and appreciation for a very successful Symposium 1993. The papers were of excellent calibre, there was something for everyone, and the banquet theme was imaginative. Innovations occurred in more than one sphere. The 1994 Symposium will be held in Toronto.

Henry van Lieshout delivered a presentation on the Report of the Strategic Planning Committee, including issues raised by respondents. A lively discussion followed, which finally had to be terminated in order to conduct the Annual Business Meeting (ABM). Please see the article on the workshop elsewhere in this issue.

Many activities were reported and commented on at the ABM. Of note was a vote of thanks extended to Dr. Peter Reid for his capable service as Editor of Ontario Archaeology for the last six years.

Several special presentations were made or announced at the O.A.S. Banquet on the Saturday evening. Twelve 25 year pins were presented to members. There were two recipients of the Heritage Conservation Award: Ontario Hydro and the Devil's Pulpit Golf Club. Presentations will be made at a mutually convenient time. A Life Membership was awarded to Mr. William McConnell of Nottawa for his long-standing support of archaeology, including hosting the O.A.S. Field School in August and Fall Dig in September. On November 17, 1993 I presented a certificate and O.A.S. pin to Mr. McConnell in Collingwood.

By the time you receive this issue of Arch Notes another event will have occurred. The Society is again sponsoring a public lecture as

a fund raising venture. Hopefully this will be as successful as the Symposium.

The question of the new heritage legislation is still with us. The last word we received was that, due to dissatisfaction from several of the organizations on the Minister's advisory committee, it is being looked at with a view to some revisions. Our Legislative Committee, consisting of Lise Ferguson, Christine Caroppo and Andre Bekerman, are keeping a close eye on the proceedings. We ask that you make your M.L.A. aware of your concern, no matter to which party he/she belongs.

Our venture into the field this summer in the form of a field school was welcomed beyond our expectations. New members were forthcoming, not only from the participants of the field school, but also from the resultant publicity. We are already pursuing a more ambitious program for next year. The members will be informed of progress when we have something more concrete to report.

It is nearly "mail in" time again. This year you will not be asked to make the crucial decision as to who to vote for. The slate submitted by the nominating committee was not augmented by any nominations at the Annual Business Meeting, and was thus acclaimed. The Board of Directors for 1994 is as follows: Lise A. Ferguson, Michael W. Kirby, Norma E. Knowlton, Anne LaFontaine, Stewart R. Leslie, Tony Stapells and Henry van Lieshout.

In the remainder of this column, I would like to make some comments about the Report of the Strategic Planning Committee, not on its contents, but concerning the process. We are certainly gratified by the amount of response from the membership on this issue. It is evident that our membership cares about the Society. However, I would like to try and dispel a few misconceptions. (1) Whether from the size of the Strategic Planning

Committee Report, or from badly worded passages, there seems to be an impression by many members that this document is a finished product which is being foisted on the membership. This is exactly what it is not. It is basically the result of a brain-storming session, outlining possibilities and options. What was requested was some feedback as to whether we were on the right track. This we certainly got, but the emotion underlying some of the replies was somewhat breathtaking. At least we know where the sore spots are!

(2) The process of consultation was partly dictated by time constraints, e.g. Arch Notes deadlines, the upcoming summer when people are busy doing other things, and the Symposium in the Fall, the only time in the year when a goodly number of O.A.S. members from different areas congregate to discuss things. The Board of Directors instructed that copies of the report be sent to chapter executives before publication in Arch Notes, but there was not a substantial time lag due to the above considerations. To have delayed publication until replies had been received from the chapters would have added a good deal of time to the procedure, probably without having any real effect. In fact, the hoped for deliberations and replies from chapters, with the exception of one chapter and one president, were not forthcoming by the time of the Annual Meeting. This was anticipated to some degree, since the report was published at the beginning of the summer. Perhaps some lively discussions can be engendered over the coming winter.

(3) The observation by one or two respondents that the report seemed to be a wish list is partly true. What would we like the Society to

be? What do we think we should become actively involved in? The weeding out process, needed to define what we can actually accomplish, has not yet begun.

(4) Again, this is a list devised by only eight OAS members, and since three of the committee members are also OAS Directors, a total of a dozen individuals are responsible for this document. And that is a large responsibility. A generalized list of activities would probably have been met with acceptance if not with apathy, and we would still not have known which issues were important to a significant portion of the membership. In fact, we still don't: 18 letters represents a very small percentage of the Society. A segment which is almost absent in the list of letter writers is the "working archaeologists". Granted, summer is a very busy time for these people, and we may get more attention when the snow flies.

(5) Although every member of this Society has a right to express an opinion, ultimately it is the Board of Directors who must decide and act, because it is the governing body which the members have elected to fulfil this function. I fear that had we issued some statement such as "What do you think we should be doing? and how?" we would have had fewer and more diffuse responses. This exercise has served to focus people's ideas.

I am sure that more facets of this whole question will come to mind once I have submitted this article to the Arch Notes editor. This whole process is going to take months to work out. Keep the lines of communication open and, hopefully, we will construct an organization we will all be happy with.

#### CAA PUBLIC WRITING AWARD ANNOUNCED

Sheryl A Smith, Chair of the Canadian Archaeological Association, has announced that the CAA has chosen *Time Detectives: Clues from our Past* as the winner of the Public Writing Award for 1992, in the Professional/Institutional category.

*Time Detectives*, a book for children on Canadian archaeology, is by Willowdale writer and Ontario Archaeological Society member Donalda Badone. It was published by Annick Press and reviewed by Christine Caroppo in the Jan/Feb 1993 issue of *Arch Notes*. The book was submitted to the CAA committee by OAS secretary Ellen Blaubergs.

## STRATEGIC PLANNING PRESENTATION

by Henry van Lieshout

This report broadly covers the presentation made by me at the 1993 Annual Symposium in Niagara Falls, on the 1993 activities of the Strategic Planning Committee.

By way of introduction and background, reference should be made to the Report of the Strategic Planning Committee, as published in the May/June 1993 issue of Arch Notes (93/3) and it may be useful for the reader of these notes to have a copy of that report at hand.

As expressed in the 93/3 report, the mandate of the Committee was contained in the following statement :-

**"... the 1992 Board of Directors established a Strategic Planning Committee charged with the task of reviewing actual functions, governance, structure, organization, and finances of the Society and recommending the most cost effective way to continue the strategic planning process".**

During 1992 the Board of Directors recognized that although the OAS had much to offer, the governing body consisted of a few Toronto based volunteer board members running day-to-day activities and experiencing "burn-out".

In addition, the relationship with its chapters was strained and there are those who hold the view that the OAS is too dependent on government funding. The Committee was therefore really asked to discuss what the organization was doing, was not doing, should be doing and should do differently.

In addition, the Committee was asked to recommend an approach to continue the Strategic Planning process, with the objective of submitting the plan with the funding request to the Ontario government early in 1994.

The committee discussed the many issues, as its members saw these issues, and as already mentioned, published a report in Arch Notes.

The first topic that was discussed was the mission, which is :-

**"The Ontario Archaeological Society exists to encourage individual and collective efforts to advance the understanding and practice of archaeology and to preserve, protect and appreciate the archaeological heritage of Ontario."**

This mission was the same as the one developed with the assistance of the management consultant in 1992, and it was felt that this was an acceptable mission.

Subsequent to the appearance of the report in Arch Notes, a number of written responses were received and while many respondents to the report expressed an opinion that the report was a poor Strategic Plan it is important to note that the Committee was NOT requested to write a Strategic Plan.

The publication of the report created an energetic response of 18 letters from the membership, of which 15 were from individual members. The responses are summarised as follows, in order of the number of the number of responses received for each topic :-

### 10 On the Office of Treasurer

The report :-

"The responsibility of the OAS Treasurer requires skills beyond those of many members. The requirement that the Treasurer be selected from the Board of Directors forces highly skilled individuals to compete in a general election each year. It is feasible that in an election no one may be elected who has any capability in this area. To avoid such a scenario, it is suggested that the Society Treasurer be an "ex officio" position, elected by the Board of Directors to continue as long as he/she is willing to serve".

On the topic of the Treasurer, all responses were negative to the suggestion. By way of explanation, it should be noted that the committee intended to remind the OAS that in any one, or more, years the Board could consist of members who did not have the required skills for this function, and that in this situation, an "ex officio" person would have to be appointed to the treasury function, and that this condition could extend beyond one year. The wording of the report however did not make this clear enough and it is easy to see why so many members interpreted the report the way they did. The committee therefore withdraws the suggestion and, if circumstances did develop where there was a skills problem, the Board would have to explore alternatives at that time.

9 On tours and trips

"For many years the OAS has sponsored events and tours focused on both Great Lakes archaeology and more exotic locales such as Egypt. While Ontario (Great Lakes) archaeology is clearly within the mandate of the organization, the question has been raised as to the appropriateness of expanding resources on non-local projects, especially when it would appear that only a small percentage of the membership usually participates in these events".

All responses were greatly favourable towards the continuation of tours, except one. While it is true that only a small percentage of the membership usually participate in these events, the level of interest in the 1991 tour of Egypt attracted twice the interest that the Annual Business Meeting (ABM) at Niagara Falls was able to attract.

Furthermore, tours and trips have a fund raising potential that has possibly not been fully exploited. In addition,

the letters pointed out that as a result of tours, Canadian archaeologists abroad greatly appreciate our interest in their efforts, and that it provides a "wider view" of the world making it easier to attract speakers of stature.

Tours are also considered a "hook" for new memberships and finally, to quote one of the writers, "Egypt was singled out as one of the exotic locales visited by the OAS. One should not have to apologize for this, for this is where it all began."

6 On Chapter newsletters

"KEWA is an excellent model of the most desirable sort of Chapter newsletter. Some sort of guidelines need to be established to help Chapters enhance their newsletter. For example, Profile might be expanded to include better quality articles".

This part of the report compared the quality of the London chapter newsletter to the Toronto chapter's and, as a result, some responses expressed deep disappointment that this topic was raised in this forum at all. The respondents felt that rather than use the limited circulation of chapter newsletters for distributing "quality" articles, the Chapters should promote Ontario Archaeology and Arch Notes for these "quality" articles, where they would benefit a wider audience and gain wider exposure for their authors.

Furthermore, the London chapter has a non-OAS "subscriber" readership which pays for the type of articles it gets, while newsletters of the other chapters cater to local membership needs only, as determined by the chapter. Guidelines for chapters are not required, it was expressed. Finally, the opinion was offered that chapter newsletters might exchange reports on their speaker's talks, thereby widening the audience of the speakers,

with obvious benefits to the speakers and the membership.

6 On Ontario Archaeology.

"OA is a good journal which could be a great journal. In its present format OA has limited appeal because of unimaginative structure and contents. It should be enhanced. Propose one large issue per year (thus cutting mail costs) which contains a variety of articles, research notes and reviews. OA articles must remain refereed in order to serve our academic members but could be freer in format. The journal needs a pro-active editor, one aware of the boarder issues. The position of editor should be of specified duration".

Some responses expressed dismay at the suggestion that the distribution be reduced to once per year, apparently in order to reduce mailing costs. It was suggested that such a move would weaken the visibility and credibility of the OAS. The point was also made that the endowment fund was established to promote continuity of OA and the suggestion to reduce the number of publications per year would run counter to the objectives of the fund. On the other hand, by increasing the number of distributions per year to four, OA would qualify for postal reductions, thereby removing one of the reasons for reducing the number of distributions per year. The OAS should also explore divorcing membership from OA, and provide for subscription membership only for the magazine. It was also suggested that small quantities of OA be made available to museum book shops, etc. in order to increase the visibility of the OAS, and potential membership.

4 On Chapter relations

"There appears to be a real lack of communication between the Chapters

and the Board, which tends to create mutual frustration".

The responses dealt with the lack of a positive attitude between the Chapters and the Board. There appear to be various areas of friction which absorbs some of the energy on both sides, to the detriment of the organization as a whole.

From the floor, a member representing a chapter expressed deep disappointment that the Committee did not include any Chapter presence, worse, the chapters were not even approached to participate in this forum in a meaningful way. The opinion was also expressed that although the report ended with a request for chapter review and input, there should have been a far greater level of personal contact with the chapters on this important topic.

While it is important that Chapters have to play an active role in the decision making process of the OAS, it is to be noted that Chapters represent about 35% of OAS members. It would be in the interest of all parties if more members could be encouraged to support and participate in chapter activities.

3 On the Board

"Directors are assigned to, or expected to participate in, too many activities and committees. Since there are far more committees than Directors, it is impossible for committees and Directors to operate effectively. Participation by the general membership should be encouraged to reduce Director work load and initiate committee activity".

We heard at the ABM that the handful of Board members sit on 17 committees.

Three respondents also expressed deep dissatisfaction with the Board's treatment of the previous editor of OA. Issues also addressed were the role of the APA, self regulation and insurance for professional members.

- 2 Two responses were received on the topics of memberships, dependency on government funding, the role of the Executive Director, the level of detail in the report, that the report reads like a critique of current management, and research and development.
- 1 One response was received on each of the following topics, OAS mission, the use of consultants, the need for special interest groups, first nations, OAS brochure, profile of the Toronto chapter lectures, the competence (rather the lack of) of Strategic Planning Committee members to offer critical comments, that the report was too ambitious and that the report was not adequately reviewed prior to publishing.

In total 25 topics were covered, with an average of 4 topics per letter.

After these letters were received, and in the week before the annual Symposium in Niagara Falls, Ontario, seven of the eight members of the Committee met to discuss the presentation of the Committee's conclusions on this matter. After some discussion it was agreed that I would represent the Committee.

Subsequent to this meeting I had developed some thoughts on the issue of the management of the Society, and these thoughts were presented to the ABM as a FRAMEWORK FOR MANAGING THE ORGANIZATION, and two of the overheads that were used in the ABM are reproduced here.

In the CONCEPTUAL MODEL OF THE ORGANIZATION, the conclusion that surfaced was that the organization delivers/should deliver services to four "client" groups, ie, the Public interest (including institutions), the Professionals, the Chapters

and Members. All of these services are supported by a Treasury and Administrative support function.

Each one of these "client" groups should have unique programs and activities that are targeted at their specific "client" needs, and they have to generate (or participate in the generation of) funds for their activities, allocate these funds to the prioritized programs, and find the people resources to deliver the services.

How could this be made to work in practice ??

If we believe that the model represents a fair vision of what we are about, then the organization structure needs to reflect the theme of the conceptual model.

This being the case, and since we have an existing Board of 6 Directors and a President we should require that each Director assume responsibility for one of the "client" functions. One of the most important roles that these Directors would then play is to chair the ONE committee that each of them heads, in support of their "client".

Directors should limit their attendance to one committee only, thereby bringing a sharp focus to their client community and a better definition of the roles and responsibilities of Board members. In order to accommodate the Secretary, the Treasurer's function should be expanded to include Secretarial. In addition to these 4 committees there would be the Publications Committee and the Finance Committee.

The structure of the seven member Board would then be :-

President  
 Treasurer and Secretary  
 Director - Publications  
 Director - Professional Services  
 Director - Chapter Services  
 Director - Member Services  
 Director - Public Services

As mentioned above, not only would this structure facilitate the definition of responsibility for each Director, it would also provide better focus on how the organization is able to respond to the "client" community.



The suggestion that is being made here is to assign specific areas of the conceptual model to the Directors, and they in turn must define the program priorities in accordance with the additional volunteer resources they are able to attract, and the funding that is made available.

In order to do this, a determination must be made as to which activities and programs are important to us, and their relative importance to each other. With this information, resources and funding can be prioritized. With this in mind, there is a questionnaire enclosed in this publication of Arch Notes and you are asked to indicate the relative importance of each of the activities listed, and you are also asked to indicate whether you are able to contribute some of your time to these activities. If you feel that there are things that we should be doing, but can't find them in the list, please add them in the space provided. In addition, if you believe that there are items that are of strategic importance that were not addressed in the 93/3 report, please feel free to contribute your opinions.

One area of friction that has to be resolved soon is the relationship between the Society and its Chapters. The STRUCTURE / ORGANIZATION chart shows the stakeholders in the Society and ways have to be found to build on common strengths. Chapter and Society initiatives have to be harmonized and Chapters have to play an integral part in Policy matters and all decisions that affect them and their members. To the extent that Chapters feel that they have been excluded from the decision making process, this should be corrected immediately.

The role of the Executive Director also needs clarity.

The Committee was not able to deal with the part of the mandate that requested it to look at the financial structure of the Society.

My own view is that, here too, the financial reporting has to fit the organization structure. All expenditures in any of the "client" groups must have the respective Director approval within certain parameters. Also, Income and Expenditure in any dedicated funds must be

reported separately from the general revenue and expenditures of the organization. This concept would include financial accountability by the Directors as part of their report to the ABM.

In addition, the financial statements should be published more frequently in Arch Notes than on an annual basis.

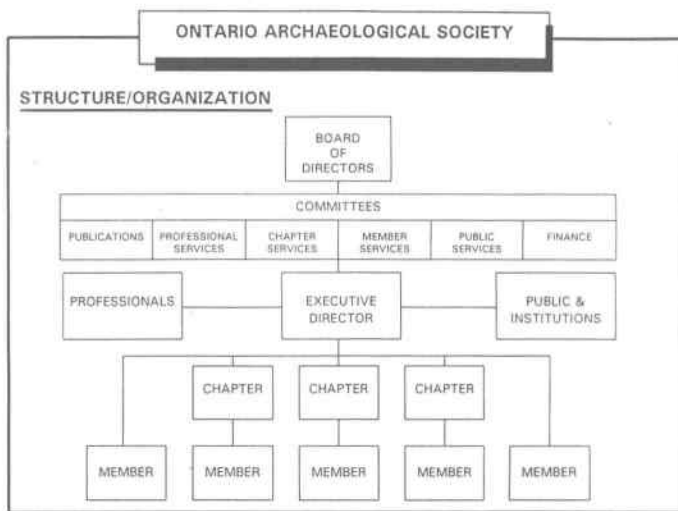
In summary, the Committee took a look at many aspects of OAS operations, produced a report which evoked very vocal responses in some crucial areas, one of which was to include Chapter participation to a greater extent than in the past.

Aspects of structure and organization were covered and specific recommendations have been made. Although the area of financial management was not discussed by the Committee, some specific recommendations are made, these being my own, as the Committee did not have the opportunity to discuss this.

All of these topics were discussed at the ABM and the new Board of Directors should draw on all this material in formulating OAS direction in the coming year.

On the key issue of how to proceed with the Strategic Plan, the Committee is of the opinion that it's mandate is discharged with the recommendation that the Board exercise this role as the governing body of the organization, and together with the Chapters and membership draw up a plan by the first quarter of 1994. In order to do so the Committee recommends that the membership responds to the questionnaire enclosed with this issue of Arch Notes, so that the priorities and views of the membership can be determined. After these responses are received a review of the strategic direction should be held, together with Chapter representatives. Once this has been completed, each of the "client" groups will have Strategic objectives and the respective Directors should assume responsibility for their area of governance.

In concluding I hope that this is a fair representation of what has evolved in the area



of Strategic Planning during 1993. To the extent that the foregoing does not precisely reflect events or recommendations, please hold me accountable, not the Strategic Planning Committee, its members, or the Board of the OAS.

I believe that some good has already come out of this process, and that there is a lot of potential still untouched.

To the members of the Committee, my thanks for a pleasant experience in getting this going, and to the participants at the ABM my thanks for a lively discussion.

Its up to all of us to focus on our core values and channel these to make the OAS a better organization.

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### PRACTICAL AND PROFESSIONAL COURSES IN ARCHAEOLOGY 1994

The University of Oxford's Department for Continuing Education is running the following courses as part of the Postgraduate Diploma in Field Archaeology. They are all open to members of the public and some courses may be accredited. For further details contact the Archaeology Secretary, OUDCE, 1 Wellington Square, Oxford, OX1 2JA, England or telephone (0865) 270360.

#### **Air Photographs and Archaeology**

Tuesday 1 February

This course will provide an introduction to the use and interpretation of air photographs for archaeology.

#### **Computing as a Tool for Archaeologists**

Monday and Tuesday 14-15 March

Other than wordprocessing, databases and statistics are the two applications of computers that archaeologists are most likely to need. This course will give an introduction to these two areas using popular commercial software and typical archaeological data sets.

#### **Human Bones in Archaeology**

Saturday and Sunday 19-20 March

An introduction to the methods used in the examination of human remains from archaeological sites and the interpretation of the results, including practical experience with skeletons from the medieval cemetery at Abingdon.

#### **Building Survey Week**

Monday to Friday 6-10 June

A practical course presented in conjunction with the Royal Commission on Historical Monuments (England) which will cover all aspects of recording historic buildings.

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## Archaeological Technical Guidelines

Last spring, on March 27th, The Archaeology & Branch, Ministry of Culture, Tourism & Recreation, sponsored a one day workshop in London, Ontario for consulting archaeologists, as well as other representatives of the archaeological community. The focus of the workshop was on the development of technical guidelines for the consultant industry, in the area of archaeological assessment and mitigation work associated with development activities. It was also intended as an opportunity for many of the consultants to meet face to face with staff from the MCTR unit which so closely works with this client group.

Discussion centred around revising and formally adopting field assessment (Stage 1-3) and reporting guidelines, which originally had been developed by MCTR staff and the consultant community back in 1988. In the afternoon small group discussions centred on developing a Mitigation (Stage 4) guideline, for those sites which must be fully excavated or preserved in order to avoid development impacts. A synopsis of the workshop minutes is provided here. Anyone interested in the full minutes of the meeting can obtain a copy through either the Toronto or London office of the Archaeology & Heritage Planning Unit.

### Archaeological Consulting Workshop March 27th, 1993 Grosvenor Lodge, London, Ontario

Hosted By: Ministry of Culture, Tourism & Recreation  
Facilitator: Neal Ferris, London Office, Archaeology & Heritage Planning Unit  
Theme: Technical Assessment Guidelines

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#### Introductions

Neal Ferris welcomed the 37 workshop participants, provided an overview of the day's agenda, and introduced staff of the Ministry's Archaeology & Heritage Planning Unit. Each of these staff members provided a description of their function and role related to archaeological and/or plans review concerns.

#### General Question and Answer Session

An open question period focused on funding issues, and communication, promotion and education issues associated with the archaeological community, municipalities and developers.

#### Open Discussion - Draft Stage 1-3 Assessment Guidelines

Workshop participants raised the following concerns in connection with this discussion:

- The Stage 1-3 Guidelines need to be finalized.
- Ministry must evaluate the way it determines low, moderate, or high potential areas for the purpose of attaching conditions to development applications.
- Consultants need to know that the Ministry will enforce the guidelines.
- The Ministry needs to refine the wording of the Guidelines.
- Ministry needs to address the issue of proper qualifications of field staff.

- Consultants would like maps available that depict which lands have been surveyed, by potential.

### Small Group Presentations on a Proposed Stage 4 Mitigation Guideline

Participants were divided into 6 groups and asked to identify some of the critical issues related to the development of a Stage 4 guideline. The common issues raised by the working groups include:

Site significance - Issues need to be defined and clearly understood.

Research Design/Sampling Strategies - We need to define "good archaeology."

Level of Analysis - We need to identify classes of information and develop standards.

Artifact Preservation/Curation - Answers must be found here.

Aboriginal consultation - We need consultation and a statement regarding aboriginal involvement.

Other issues raised included:

Consultants want to be assured that the ministry will enforce guidelines and establish a review process that includes periodic site visits by government inspectors.

Need a flow chart to show stages and interaction between ministry & developers, etc.

Information must be widely accessible.

Need to develop database standards.

### Wrap Up Session

Discussion at the end of the day centred around what the Ministry would commit to do following this workshop:

- prepare a final version of the Stage 1-3 guidelines, and distribute it.
- develop and distribute a questionnaire on Stage 4 mitigation issues for feedback from the archaeological community.
- hold a meeting subsequent to that to review the results of the questionnaire.
- distribute and publish in Arch Notes the minutes of today's meeting.
- The Ministry also committed to holding regular meeting in the future.



Since the workshop staff of the Archaeology & Heritage Planning Unit have been working to revise the Stage 1-3 guidelines, by addressing house-keeping issues (eg. site registration forms, backfilling test-pits, etc.). Also, the format of the document has been modified so as to be consistent with other Ministry guideline documents. Finally, additional text was also added to "flesh-out" the document, and provide an introductory context under which the guidelines operate.

A final version of the document was reviewed internally for corporate approval. On November 1st, the document was signed off by Jane Marlatt, the Assistant Deputy Minister, Culture Division of this Ministry. After being printed up, copies of the final version of the Stage 1-3 guidelines were sent off to all currently licenced consultant archaeologists in the province, as well as other representatives of the archaeological community who had participated in the workshop or had participated in the development of the guidelines. Since then, this final version of the Archaeological Assessment Technical Guidelines is in effect, and supersedes all previous versions.

As guidelines, this document will not remain static. The Ministry recognizes that advances in archaeology in general, and consultant archaeology in particular, occur fairly frequently. Likewise, changes to legislation can lead to changes in the practice of consulting archaeology in Ontario. Consequently, we are committed to a periodic review of these guidelines, with an eye to revising and updating them as required, to reflect current realities. As well, and as was raised during the March 27th workshop, some issues are not currently addressed in these guidelines. In particular, they do not adequately address the unique aspects of archaeological survey in northern Ontario. When the guidelines are next reviewed, this issue will be addressed. In the meanwhile, the next step will be to develop a Stage 4 mitigation guideline. The Ministry is committed facilitating its development, by working with the Ontario archaeological community, as well as with representatives from other interested groups. The first step will be to develop a questionnaire addressing the many issues associated with mitigation archaeology. The intent will be to compile information which reflects both the community's standards and current best practices, similar to the questionnaire which was used to develop the Stage 1-3 guidelines. After responses have been received and processed, another workshop will be held to review the questionnaire results and explore how they can help craft a draft guideline. We hope to be able to have a questionnaire ready for circulation sometime this upcoming winter.

A part of our commitment at the March 27th workshop was to provide Arch Notes with the final version of the Stage 1-3 Archaeological Assessment Guidelines, and that is enclosed below. However, as these guidelines will be reviewed and revised periodically, please ensure you obtain an up to date and official version for reference purposes. Copies can be obtained at any one of the Archaeology and Heritage Planning offices of the Ministry (see below). Should you have any further questions or comments on the development of technical guidelines, or suggested changes to the Stage 1-3 Guidelines, please contact Neal Ferris, who is co-ordinating our efforts to facilitate the development of archaeological technical guidelines, at the London office of the Archaeology & Heritage Planning Unit (519-433-8401).

Finally, we would like to thank all the individual archaeologists and organizations, as well as the Task Force of Self-Regulation, who have assisted in developing this document. Thanks should also go to Rita Tobin and Mary Lou-Hall, administrative staff of the Archaeology and Heritage Planning Unit, who recorded and processed the minutes from the March 27th workshop.



#### ARCHAEOLOGICAL ASSESSMENT TECHNICAL GUIDELINES

These technical guidelines were developed by the Ministry of Culture, Tourism & Recreation and the archaeological consultant community, through a series of workshops and consultations held between 1987 and 1993. In addition, comments were provided by municipal and provincial approval authorities, the development sector, and the archaeological community. This guideline was formally adopted by MCTR in 1993, and will be subject to periodic review by this Ministry and the archaeological community. For information on the plans review process, or to provide comments on the guideline, please contact staff of the Cultural Programs Branch, Archaeology & Heritage Planning Unit:

TORONTO:	LONDON (for Southwestern Ontario):
77 Bloor St. West, 2nd Floor	55 Centre Street
Toronto, Ontario M7A 2R9	London, Ontario N6J 1T4
Phone: (416) 314-7080	Phone: 519) 433-8401
Fax: (416) 314-7091	Fax: 519) 439-1696

(Also For Data Co-ordinator;  
Archaeological Licencing Officer)

The Ministry also maintains archaeological field offices in Kenora (807-468-2854) and Thunder Bay (807-475-1551), as well as a Marine Archaeology office in Ottawa (613-566-3731).

## SECTION 1

### INTRODUCTION

These guidelines define the minimum field and reporting requirements for archaeological assessments conducted in advance of development. To ensure clarity and continuity, the different steps of an archaeological assessment have been identified as "Stages". As applied here:

Stage 1 Refers to the background or pre-survey phase of an assessment.

Stage 2 Refers to the actual field examination, and involves either surface-survey or test-pitting.

Stage 3 Refers to those field activities conducted when archaeological remains are encountered during a Stage 2 survey. The purpose of Stage 3 work is to gather information which will be used to delineate and evaluate the significance of the site in question, in order to determine appropriate mitigation measures.

Stage 4 Refers to mitigating the development impacts to archaeological sites, through site excavation or avoidance. This occurs once the field assessment has been completed, and the assessment report has been reviewed by MCTR.

Stage 2 and 3 investigations normally occur as part of the same field assessment. Stages 1, 2 and when applicable 3, represent those activities conducted prior to the production and submission of an assessment report to MCTR. The mitigation strategy to be followed during Stage 4 will be defined through the recommendations provided in that report, and

through discussions between the archaeological consultant, property owner/developer, MCTR staff, and, where applicable, municipal planning staff. Guidelines for Stage 4 are currently being developed. For further information on the status of Stage 4 Guidelines, please contact the Ministry.

### REGULATORY OBLIGATIONS

In order to undertake archaeological field work in Ontario, archaeological consultants must hold a current archaeological consulting licence issued by the Minister of Culture, Tourism & Recreation. As professionals, consulting archaeologists are expected to abide by the terms and conditions set out in their licences, as well as the relevant sections of the Ontario Heritage Act (RSO 1990) and Ontario Regulations 249/75 and 212/82. For example, consulting archaeologists are required to submit contract information forms for each project they undertake, and provide site registration and/or update forms for each archaeological site they encounter. If Assessment Reports are used to fulfil licence reporting obligations, the consultant must also ensure the report meets the requirements defined in the Ontario Heritage Act and its regulations. Copies of the relevant regulations and forms governing consultant archaeology are available from the Archaeological Licencing Office of the Ministry's Toronto Archaeology & Heritage Planning Unit.

### ARCHAEOLOGY IN THE LAND USE PLANNING PROCESS

Cultural heritage resource conservation within the land use planning process in Ontario arises from legislation such as the Planning Act, Environmental Assessment Act, and Niagara Escarpment Planning & Development Act. In addition, various provincial land use agencies such as Ontario Hydro, the Ministry of Transportation, Management Board Secretariat, the Ministry of Natural Resources and Conservation Authorities also conserve cultural heritage resources associated with particular development projects.

Cultural heritage resource concerns in land use planning are addressed through MCTR's review of provincial and municipal planning policies and development projects. This review is conducted to determine whether cultural heritage resources may be adversely affected as a result of development. When archaeological concerns are identified through this review, the development proponent will be required to address them; usually by hiring an archaeological consultant to assess the lands in question.

Archaeological Assessment reports are reviewed by MCTR to ensure that cultural heritage concerns have been met, that the consulting archaeologist's activities have met the requirements identified in these guidelines and the Ontario Heritage Act, and that the archaeological resources found have been properly conserved. In those instances where sites have been found during the assessment, their Stage 3 evaluations are also reviewed. If the assessment report satisfies this review, the development proposal will be cleared of archaeological concerns, or Stage 4 mitigation recommendations will be commented on. However, if the work and resulting report are incomplete; do not meet the requirements of these guidelines; or indicate that archaeological resources found were not properly conserved, MCTR may require revisions to the report or additional field work be conducted, prior to clearance being issued or Stage 4 recommendations being approved.

## SECTION 2

### ARCHAEOLOGICAL ASSESSMENTS: PROCEDURES & METHODS

MCTR recognizes that many variables will influence an archaeologist's selection of a specific field strategy for each assessment project, based on his or her professional judgement and experience. If, however, a survey strategy does not meet the minimum requirements outlined below, the archaeologist must provide a detailed justification for the strategy selected in the resulting assessment report. Use of an unjustified field strategy can lead to delays in clearing a project.

### STAGE 1 - ARCHAEOLOGICAL OVERVIEW/BACKGROUND STUDY

A Stage 1 background study provides the consulting archaeologist and Ministry report reviewer with information about the known and potential cultural heritage resources within a particular study area, prior to the start of the field assessment. As part of the Stage 1 background study, the consulting archaeologist shall:

- examine the National Site Registration Database to determine the presence of known archaeological sites in and around the project area. This information is available through the MCTR Data Co-ordinator,
- review the land use history and the present condition of the study area,
- talk to individuals with information regarding archaeological remains on the subject property.

The consulting archaeologist may also examine, as deemed appropriate:

- the geomorphological history of the land during the period of possible human occupation, in order to evaluate the potential for buried cultural deposits,
- any other historical, environmental, planning or archaeological data applicable for the subject lands.

The consulting archaeologist may also wish to review the development property with the appropriate MCTR development review officer, to determine if additional information regarding known and/or potential heritage resources is available for the project area.

### STAGE 2 - FIELD ASSESSMENT

Stage 2 field assessments are intended to provide an inventory of all archaeological sites present on the subject property. As such, the following general provisions will govern the nature and extent of field assessments:



- The techniques used during assessment should be appropriate for finding both prehistoric and historic remains, and sites of all sizes. Techniques for finding sealed or otherwise deeply buried sites should be employed where high potential has been determined. In urban cores or other built up areas, this can be accomplished through monitoring of construction activities, subject to MCTR approving the particular monitoring strategy.
- With the exception of lands of low potential or lands subject to previous, extensive disturbance, or where MCTR has agreed in advance to exempt specific portions of the subject lands from assessment, the entire development property must be surveyed.
- Assessments shall not be conducted under weather conditions which can inhibit the identification of sites and/or will result in the loss of data or damage to cultural material. For example, no surface surveys shall be conducted on lands covered by snow and no test pit surveys shall be conducted on ground frozen 3 cm or more below surface.
- Heavy machinery shall not be used in Stage 2 surveys except where the presence of sterile overburden or recent fill has been demonstrated.
- When any unusual or exceptional situations arise in the field, the consulting archaeologist should review the matter with the MCTR development review officer, to determine an appropriate response to the situation.

### Stage 2 Survey Methods

There are two basic survey methods acceptable for conducting a Stage 2 assessment of a development property: pedestrian (surface)

and test pit survey. The use of either method is determined based on the nature and extent of ground cover.

Interval spacing for either method is based on a determination of moderate or high potential for the discovery of archaeological remains. While field judgement by the consulting archaeologist will determine exact areas of moderate and high potential, broad associations of the study area to physical and/or cultural-historical features will help define those areas of high potential in the survey area. Such features can include the following:

- Existing or former sources of water or shorelines;
- Rolling topography, well-drained soils and/or proximity to resource procurement area;
- Known archaeological sites or other heritage resources in the project area;
- Cultural-historical features such as early transportation corridor, initial settlement areas, traditional use areas, etc.;
- Reports from avocational archaeologists or local informants of potential archaeological or historical resources in the vicinity of the subject property.

The rationale for the determination of areas of moderate and high potential must be explicitly documented in the resulting assessment report. A consulting archaeologist unsure of potential determinations for a particular property should review the matter with the MCTR development review officer, prior to conducting the field assessment. Otherwise, and if in doubt, utilize the finer (ie. 5 metre) interval spacing. Improper determinations of potential will result in additional field work being required in order to satisfy the MCTR review of the assessment.

#### Pedestrian Survey:

All previously cultivated land shall be ploughed for pedestrian survey, rather than being subject to a shovel test pit survey.

Where vegetation cover (eg. crop stubble, weed growth, etc.) limits visibility over the majority of the ground surface, the survey area will need to be re-cultivated. Depth of ploughing should not exceed the depth of previous ploughing but should be deep enough to ensure total topsoil exposure. Disking also can be employed to improve visibility, as determined by the consulting archaeologist. However, strip-ploughing is not an acceptable alternative to full field ploughing, unless under exceptional circumstances (eg. very rocky terrain). All recently ploughed fields must be weathered by one heavy rain or several light rains prior to final assessment survey.

Surface survey transects on ploughed fields or other open terrain shall be spaced at a maximum of 10 metre intervals. This interval must be reduced to 5 metres or less in areas exhibiting a high potential for containing archaeological remains.

#### Test Pit Survey:

Where surface survey cannot be accomplished (due to ground cover such as woodlots, orchards, heavy brush or long-used pasture, etc.), a shovel test pit survey strategy shall be employed. All test pits shall be excavated to subsoil, and pit fill must be screened through mesh no greater than 6 mm in size. Unless specific circumstances prohibit it, all test pits shall be back filled.

Test pit survey transects and intervals between test pits shall be spaced at a maximum of 10 metres. This transect and interval spacing must be reduced to 5 metres or less in areas exhibiting a high potential for containing archaeological remains. Random sampling of test pits is inadequate for areas of moderate or high potential.

#### **Encountering Archaeological Remains During Stage 2**

When archaeological remains are encountered during the Stage 2 assessment, survey must be intensified around the area of the find to determine if it is isolated or is part of a larger artifact scatter. If artifacts found during Stage 2 are isolated finds or part of a

site that obviously will not require any further investigations, artifact locations shall be mapped and all diagnostics shall be retained.

However, if the artifact is part of a larger surface scatter, or associated with multiple artifact-yielding test pits, then additional (Stage 3) documentation of this location will be required.

#### **STAGE 3 - ARCHAEOLOGICAL SITE DOCUMENTATION**

Stage 3 investigations occur when archaeological sites are located during survey. Normally these investigations will occur immediately following or as a distinct part of the Stage 2 assessment. Stage 3 investigations must obtain information about the spatial dimensions, artifact frequencies and cultural affiliation(s) of the site in question. Ultimately these data will be used to evaluate the site's significance and determine the appropriate impact mitigation strategy. The method of investigation should be appropriate to the type and amount of cultural remains present, and appropriate to the current field conditions at the site. The rationale for Stage 3 investigations must be stated in the assessment report.

Field conditions will determine the nature of Stage 3 documentation. In cultivated fields, mapping the entire extent of surface artifact distributions is required. This mapping must be referenced to a permanent datum which will remain stable through Stage 4 mitigation work, and recorded at a scale sufficient to show the location of individual artifacts.

Sites found during test pitting will require excavating an intensified test pit grid around the artifact yielding pit (2.5 m interval or less). All fill will be screened, and test pits within the intensified grid mapped (both artifact yielding and negative), and tied into a permanent datum.

Additionally:

- For most sites it will be necessary to determine the nature of ploughzone and subsoil artifact deposits and/or the

potential for the presence of cultural features, stratigraphy or buried midden deposits during Stage 3 investigations. This should be accomplished through the excavation of strategically placed test units (minimum 1 metre square) over the site area. Placement of units on plough-disturbed lithic scatters should coincide with both the extent of the artifact scatter, and areas of surface artifact concentration. For sites found through test pitting, units should encompass both the artifact yielding test pits, and the apparent, overall extent of the site area.

- The Stage 3 documentation of an historic site should include a review of information relating to the history of the property (eg. title search, assessment rolls, census, etc.).
- Where Stage 3 documentation and mapping have been conducted on a site in a cultivated field, and the results are deemed to indicate that the site will require mitigation, then diagnostic artifacts shall be retained, while some of the lithic debris, fire-cracked rock, faunal remains, etc. can be left in place to assist in relocating the site at the start of Stage 4 mitigation work.
- Where Stage 3 activities have been conducted, and the results do not warrant further investigations, then all artifacts shall be retained. In the case of nineteenth century Euro-Canadian sites, a representative sample of artifacts may be retained, although all temporally diagnostic artifacts (refined ceramics, pipes, buttons, etc.) should be kept.
- All artifact recoveries shall be bagged in the conventional manner and documented according to provenience (eg. surface locality, or transect line and test pit number). In the lab artifacts should be processed in accordance with standard procedures for cleaning and cataloguing.

Minimally, all artifacts or batches of artifacts must be clearly labelled with the Borden Number assigned to the site.

### SECTION 3

#### ARCHAEOLOGICAL ASSESSMENTS: REPORTING REQUIREMENTS

##### GENERAL REQUIREMENTS

At the conclusion of the assessment (encompassing all Stage 1, 2 and 3 activities), the consulting archaeologist must prepare an Archaeological Assessment Report. Copies of this report shall be submitted to the appropriate Development Plans Review Officer of the Archaeology & Heritage Planning Unit, Cultural Programs Branch, Ministry of Culture, Tourism & Recreation. Letter reports or summary statements of assessment activities are not acceptable. Reports submitted for assessments where archaeological sites of potential significance have been found but have not been subject to Stage 3 documentation are considered incomplete. Whenever possible, MCTR staff must be able to review the results of Stage 3 documentation activities, prior to issuing final clearance or providing comments on Stage 4 mitigation recommendations.

If an assessment report is also intended to meet the consulting archaeologist's licence obligations, separate copies must be sent to the Archaeological Licencing Office of the Ministry. As per licence conditions and the Ontario Heritage Act, all sites examined as a result of assessment activities must be reported to MCTR on site registration or site update forms. These forms should be submitted directly to the Archaeological Sites Data Coordinator, or accompanied with, but separate from, the consulting archaeologist's licence report submission.

##### ASSESSMENT REPORT FORMAT

The critical elements of an assessment report include: 1) the Cover Page, 2) Introduction and Background Research, 3) Assessment Methodology, 4) Archaeological

Findings, 5) Graphics, 6) Evaluation of Site Significance, and 7) Recommendations. Additionally, assessment reports can include an executive summary section, copies of site registrations forms and contract information sheets, a cultural-historical overview of the study area, and any other information as deemed appropriate by the consulting archaeologist.

The following outlines the minimal requirements for each section of the assessment report:

### 1) Cover Page

This section must include the following information:

- The municipal development file number ("T" number of subdivision) and property name (eg. "Pleasant View Estates"), or other reference which identifies the project type (e.g. "Whistle-Bare Phase 2 Quarry Pit Expansion").
- Location of Project (Municipality, lot and concession or street address)
- Name and address of the client.
- Name of the consultant or consulting firm, and the consultant's project number.
- Archaeological licence number.
- Date of report completion.

### 2) Introduction And Background Research

This section must include the following information:

- Names of the field director, survey crew, data analysts and report authors (this can be provided on a separate, project personnel page).
- Purpose of the project.
- Results of Stage 1 investigations and the rationale for determining areas of potential on the subject property.

- Dates and duration of the field activities conducted (distinguishing between Stage 2 and Stage 3 dates if not conducted at the same time).

### 3) Assessment Methodology

This section must provide a written description of:

- The environmental setting and landscape of the property, including ground cover and weather conditions during survey.
- Any prohibitive field conditions limiting area surveyed (disturbances, low, wet areas, etc.).
- The Stage 2 field methods employed during the assessment, including:
  - The total area surveyed, with a breakdown by technique and by interval spacing (pedestrian survey, test pitting, etc. at 10, 5 or less metre intervals);
  - Any intensification to interval spacing when archaeological remains were encountered during survey.
- Any deviation from the minimum standards defined in these guidelines, including explicit identification and justification.
- As well, if no artifacts were encountered during the Stage 2 investigations of the subject property, this should be explicitly stated in this section of the report.

### 4) Archaeological Findings

For all sites encountered, a description must be provided of:

- The environmental setting for each site.
- The extent of intensified (Stage 3) investigations conducted during survey, including:

- methods used to define and map site limits;
- extent of surface artifact collection activities conducted;
- total area and depth of any excavations conducted, and nature of artifact yields.
- The recovered artifact and ecofact assemblage for each site, including catalogues.
- The depositional history of the site, including disturbances, and a reconstruction of the site's occupational chronology to the extent that the recovered data will allow.
- The spatial and temporal relationship of the site to other sites in the region.
- extent of property not subject to field investigations (eg. areas of disturbance).
- The same development project map, or a second equivalent map, depicting the exact location of all archaeological sites and findspots recovered.
- Maps of the archaeological sites subject to detailed Stage 3 investigations, depicting:
  - physical setting (eg. topography, ground cover, etc.);
  - site extent, including mapped artifact locations and/or artifact-yielding test pits;
  - location of all test excavation units in relation to surface finds/positive test pits;
  - location of permanent datum(s).

### 5) Graphics

All Assessment Reports must include the following:

- A map depicting the regional location of the subject property.
- A development project map (e.g. draft plan map of subdivision, pipeline corridor, etc.), or equally scaled and detailed equivalent, depicting:
  - variations in ground cover and topography;
  - zones of archaeological potential;
  - extent of property investigated by pedestrian survey (distinguishing between areas pedestrian surveyed at different survey intervals);
  - extent of property investigated by test pitting (distinguishing between areas test pitted at different survey transects and/or intervals);
- Where conditions allow, this information should be tied into development plan features (eg. lot survey stakes, utility corridor centre-lines, etc.).
- Photographs of any land disturbance or exceptionally difficult field conditions encountered during survey.
- Photographs and/or drawings of representative and diagnostic artifacts.

### 6) Evaluation Of Site Significance

Evaluating the significance of the site(s) found and investigated during Stage 2 and 3 assessment work will determine the need for and nature of Stage 4 mitigation work. As such, a statement of significance for the site(s) found during survey must be included in the assessment report. At a minimum, the criteria used to evaluate significance should address

both information potential and the perceived value for the site(s) in question.

#### Information Potential:

This refers to the potential contribution a site may make to local, regional or provincial cultural history. Determining a site's information potential includes an examination of the following attributes:

- Site Integrity (extent of past disturbances to the site, extent of a multi-component mix to deposits, etc.).
- Rarity or Representativeness (locally, regionally and provincially).
- Cultural-Temporal Affiliations (age, aboriginal/European pioneer associations, etc.).
- Potential Data Productivity (settlement and artifact distribution data, subsistence and ecological data, cultural behaviour, artifacts yields, etc.).
- Site Context (temporal and spatial, inter-site relationships, demonstrated relationship to known historic events, people, etc.).
- Potential for the presence of human remains.

#### Perceived Value Potential:

This refers to the perceived value a site may have to the local community or specific interest groups. A site having a low information potential may still be of significance if it is of interest to the local community, heritage groups, or specific cultural groups; or if the site has the potential to be used as part of an education or economic opportunity.

### **7) Report Recommendations**

A final component of the Assessment Report is the preparation of recommendations arising from the survey findings and, where applicable, site investigations.

- If no sites were found during survey, or if those sites found do not warrant further investigation, a recommendation should be included requesting that the property be cleared of any further archaeological concerns.
- If significant archaeological remains were identified, a detailed impact mitigation strategy should be provided. If site avoidance (preservation) is recommended, possible long and short term avoidance strategies available for the site should be provided. If salvage excavation is proposed, recommendations must include an explicit excavation strategy appropriate to the site's significance. In lieu of Stage 4 guidelines, avoidance and excavation mitigation strategies proposed for significant archaeological sites should be reviewed with MCTR Archaeology & Heritage Planning staff, to insure Ministry support for the recommendations.
- If artifacts have been collected during the assessment, a recommendation regarding the short and long term care and disposition of the collections, consistent with the licence holder's obligations under the Ontario Heritage Act and Ontario Regulation 212/82, should be included.

In addition, all reports must contain the following recommendations:

- Should deeply buried archaeological remains be found on the property during construction activities, MCTR should be notified immediately.
- In the event that human remains are encountered during construction, the proponent should immediately contact both MCTR, and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Consumer and Commercial Relations, (416) 326-8392. ■

## GUNS AND ANGELICA

by John Steckley

It is one of those pictures we have long held of first contact, the stuff of C W Jeffries' paintings. The Native stands in dumb awe of the White Man with the gun, the 'thunder stick' creating fear and child-like respect, almost worship, for its spirit-like qualities. It is a picture that needs to be re-examined, as the paint brush has been held by only one of the subjects, the man with the gun.

One way to attempt to put Native strokes on this canvas is to look at how the Huron used their language when speaking of guns. To begin with we must see what they called guns. The term was "ohonra8enta", noun root -honra8ent- (Sagard 1866 "*Armes*", FH67, FH1693:161, FH1697:15, 82 and 242, HF59:77, HF62:38, HF65:91 and Potier 1920:447). We can see that this term was developed relatively early in contact history, a 'first impression', as it appeared in Sagard's phrasebook, as "Horahointa", which drew upon his 1623-4 experience (plus other, earlier sources).

In a previous article (Steckley 1989), I wrote of how -8hist-, a noun root referring traditionally to fish scales and to the hard shell of corn kernels, was extended to refer to metal and to articles made out of metal. To what similar object or characteristic of several objects within Huron pre-contact experience did -honra8ent- refer? One translation other than gun that occurs several times in the dictionaries is "*tuyau*" (HF59:77, HF62:38 and HF65:91). This means 'tube' or 'pipe' in modern French. Was there some naturally occurring hollow tubing that the Huron applied this to? There is one that I know of, what can be called the sibling term for 'gun'. Derived from -honra8ent- is the term for a "*plante nommée Angelique*" (HF65:91, i.e., likely *Angelica atropurpurea* or masterwort), a tall plant with hollow, tube-like stalks. The term

itself was "etsohonra8ent8annen" (HF59:77, HF62:39 and HF65:91). The initial -ets- adds the sense of 'very' to the word (see Steckley 1993:29 and 30 fn 8) and the -8annen- gives to it the meaning 'large' or 'great' (Potier 1920:254). The combined meaning would be 'very large tubing'.

Apparently cognate with -honra8ent- is the shorter -honr-, the two sharing similarities of sound and meaning (the defining characteristics of being 'cognate'). There seems to be a like pairing of cognates with the related terms in Mohawk, with -huro?t- (-? being a glottal stop) and -hur- (Michelson 1973:57), the major difference being that the shorter term signified 'gun' in Mohawk (see Bruyas 1970:55 for a 17th century example). The Jesuits believed that -honra8ent- was derived from -honr-, as can be seen in the following two entries. In these we also learn the object to which -honr- typically referred, all sharing the notion of hollow tube:

"*Fusil à tirer/gun for shooting/ohonra8enta...ab/from!, ahonraplume/feather!*" (FH62)

"*ahonra plume, gosier, artère/feather, throat or gullet, artery! Hinc/from this source/ohonra8-enta, tuyau, fusil.*" (HF59:77 c.f., HF65:91).

The exact process of derivation here is unknown to me, -8ent- not having a particular meaning or grammatical function that I can identify. The fact that both Huron and Mohawk have similar pairings suggests that the derivation is ancient, prior to the separation of speakers of the two languages, the meaning of the 'suffix' cognate -8ent-/o?t- lost in time.

What do we make of their using cognate terms to refer to 'gun'? The logical connection between 'gun' and 'tube' may first have occurred to one Iroquoian people, perhaps

even the St Lawrence Iroquoians, and then was passed on through borrowing to the others.

When the Huron sought a term that would refer to the discharge of the weapon, they likewise did not cloak it in mystery or wonder. They employed a strategy not unique in world language history, one that both French and English speakers used when they first experienced the weapon and what it did. They extended the term used for bows and arrows: in French *tirer*, 'to pull' and in English 'to shoot'. we see this in the following entry from Potier's Huron-French dictionary:

"*aia,i...tirer de l'arc, du fusil, du canon & sur du gibier, des hommes & to shoot the bow, the gun, the cannon, etc at a game animal, humans, etc/...darder...ih8enta hatias ils dardent du poisson/to shoot at, 'spear' (?) fish...they shoot fish/...\* eo hatias ils tirent sur des tourtes/they shoot passenger pigeons/...hoia, i/ ehoia,i de hinnon/he shoots, thunder/le tonnerre est tombé (quasi dicis) deus & ejaculatis eit tonitur/thunder has fallen, as if to say God, heaven shoots the earth as thunder/." (Potier 1920:264; c.f., FH1697:209 and FHO)*

So, thunder in Huron shoots like a gun, like a bow. A bow, then, is just as much a 'thunder stick' in the way that a gun is.

### Bibliography

Bruyas, Jacques

1970 Radices Verborum Iroq-  
uaeorum (Radical Words of the

Mohawk Language) J G Shea ed, (orig. 1860-4), New York, AMS Press.

- FH67 n.d. French-Huron dictionary ms.  
 FH1693 c1693 French-Huron dictionary ms.  
 FH1697 c1697 French-Huron dictionary ms.  
 FHO c1655 French-Huron-Onondaga dictionary ms.  
 HF59 n.d. Huron-French dictionary ms.  
 HF62 c1655 Huron-French dictionary ms. (FH62 is the French-Huron introduction)  
 HF65 n.d. Huron-French dictionary ms.

Michelson, Gunther

1973 A Thousand Words of Mohawk Ottawa, National Museum of Man.

Potier, Pierre

1920 Fifteenth Report of the Bureau of Archives for the Province of Ontario Toronto, C W James.

Sagard, Gabriel

1866 Histoire du Canata...avec un dictionnaire de la langue huronne Paris, Edwin Tross.

Steckley, John L

1989 "Owhista" in *Arch Notes* 4:31-4.

1993 "Scanonaenrat" in *Arch Notes* 5:28-30.

### CALL FOR PAPERS

McMaster Anthropology Society - Annual Symposium  
 Saturday, January 29, 1994 - McMaster University, Hamilton, Ontario

You are cordially invited to present a paper at the annual McMaster Anthropology Symposium on the subject STAGES OF LIFE: AGING FROM AN ANTHROPOLOGICAL PERSPECTIVE. Suggested topics include, but are not limited to, the following:

Cultural Perceptions of Aging, Aging and Medicine, Phases of Life in the Archaeological Record, Osteological Age Determination, Aging and Nutrition, Language Through the Generations, Demographics, Gender and Aging.

Deadline for submission of title and abstract is **December 15, 1993**. For more information, contact Yvette Ulrich, President, McMaster Anthropology Society, Department of Anthropology, Chester New Hall 524, McMaster University, 1280 Main Street West, Hamilton, Ontario L8S 4L9. Telephone (905) 525-9140 ext 4423; Telefax (905) 527-0100.





## LETTERS TO THE EDITOR

Dear Sir:

In reference to Lise Ferguson's letter (AN 93-5) describing her concern that simulated archaeological programmes help breed tomorrow's "pot hunter", I wish to make comment. Having been involved with a simulated programme in Ontario over several years, I am of the opinion that they help the discipline far more than harm it, as well as provide students with an educational experience that most would otherwise not have.

A well-developed programme does not focus on objects or fieldwork alone, as this would certainly be misleading, but would introduce the participants to basic field and laboratory techniques along with analytical and interpretive skills. For instance, the programme that I had experience with (Sainte-Marie among the Hurons) was designed with maximum controls and sense of reality in mind so that a participant (grade 6-O.A.C.) would not make a move without recording a note in his/her own fieldbook. It is not necessary to outline the details of the programme, but suffice it to say that many participants spend their morning shovel-shining and trowelling without finding a single artifact. At the end of the day-long programme, most leave stating that they learned a lot, had fun but came to the conclusion (much to my chagrin) that archaeology was not their element and was really quite dull. Others, very few in number, have gone on to graduate from Archaeology and Anthropology at university.

Although I don't know of any participants ever becoming "pot hunters", the possibility

certainly exists. I do recall one young fellow saying with a glint in his eyes, "We've got this type of pottery on our farm" (Simcoe County). Hopefully, if he ever strayed from the usual games of adolescence and spent time with a shovel in his "back 40", he will at least remember to make a note and sketch map to toss in the kitchen drawer along with the "relics".

Essentially, all archaeological programmes for school children, whether simulated or real, offer a broadening educational experience that, if taught properly, can promote interest and awareness of both the fascinating and mind-numbing aspects as well as the ethics, concerns and associated laws of the discipline. Also, such programmes teach all participants that involvement in professional archaeology is accessible to the public through university field schools, Passport-to-the-Past or other such programmes.

In conclusion, I would invite anyone with concerns regarding simulated programmes to try participating on a programme and to offer any advice on how they could be improved for the betterment of the discipline. Finally, I remember going to university with an individual who would occasionally take objects from the university's collections for his/her private research collection! I guess "pot hunters" can be bred at all levels, but we all know well that the world is not perfect.

Sincerely,  
W Barry Gray  
Nissan-lez-Enserune, France

## FIFTY YEARS OF UNIVERSITY OF TORONTO ARCHAEOLOGICAL FIELD SCHOOLS

by John Reid

Laboratory Technician

Dept of Anthropology, University of Toronto

*The following paper was written for the Handbook for the 1993 field school. I thought that, because the OAS was very instrumental in the early development of fields schools at the University of Toronto with Norman Emerson, it would be good to submit this to ARCH NOTES. If you spot any mistakes or see that I have missed some information, I will appreciate hearing from you. I hope it will bring back some good memories for those who took part.*

The Department of Anthropology at the University of Toronto has a long history of field training in archaeology. The program was created by Professor J Norman Emerson who directed it for 20 years, assisted by hundreds of first-year students from Anthropology, Pre-Medicine, Pharmacy, Dentistry, Nursing and Engineering programs.

In 1946, the University of Toronto existed only at what is now the St George campus. Archaeology was taught as an adjunct to the Department of New World Archaeology at the Royal Ontario Museum. T F McIlwraith, the chair of both programs, hired a bright and enthusiastic young graduate student to take charge of local archaeological operations.

Norm Emerson, finishing his PhD at the University of Chicago, had learned his field methods the hard way. Under Fay Cooper-Cole, he had worked at huge Civilian Conservation Corps projects designed to provide relief for urban unemployed at the end of the Great Depression. R S MacNeish called Emerson "the best field technician I know". As soon as the armistice put an end to World War II, Emerson began his program of archaeological investigation of the Ontario Iroquois, the subject of his PhD dissertation in 1954.

His method involved "Blitz Digs": brief, intensive operations at sites which were being developed or disturbed. Students in Emerson's classes were assigned projects which involved locating archaeological sites in the Toronto area which fit these criteria; their discoveries, backed up by timely Blitz Digs, helped to save information from many sites which would otherwise have been lost without a trace. There were no sources of grant or other money to pay for these operations. Staff volunteered their time and equipment, and students paid their own way. Generally speaking, summer field schools lasted for two to three weeks. Fall field schools took place on weekends, often running very late in the year. It was customary to find oneself digging in the snow before the "season" was completed.

The first Blitz Dig was held in the spring of 1947 at the Aurora site. A receipt found in the notes shows that Emerson borrowed 80 round-mouthed shovels from the City of Toronto, Department of Works. They were valued at \$60.00 total (75 cents each). The same shovels today sell for \$11.95 apiece.

For the first 15 years, field schools moved around, rarely spending more than two seasons at the same location. All of these sites (except Shebishekong) were late Iroquoian village sites. Excavation was concentrated on middens which provided typable rim sherds for seriation within a master list which Emerson was compiling for Ontario. Despite some unsuccessful attempts at dendrochronology, ceramic seriation was then the only type of dating available. Because of the pressure of excavation, analysis was often quite limited; many of these sites remain virtually unanalyzed today. The artifacts and notes from these field schools are held in the Department

of Anthropology, University of Toronto, where they are accessible to any interested researcher. They would make excellent MSc projects.

<u>Year</u>	<u>Season</u>	<u>Site</u>	<u>Director</u>	<u>Institution</u>
1947	Spring	Aurora	Emerson	University of Toronto
1947	Fall	McKenzie/Woodbridge	Emerson	University of Toronto
1948	Fall	Black Creek	Emerson	University of Toronto
1949		McKenzie/Woodbridge	Emerson	University of Toronto
1950		Downsview	Emerson	University of Toronto
1951	Fall	Barker/Seed	Emerson	University of Toronto
1951		Benson	Emerson	University of Toronto
1952		Parsons	Emerson	University of Toronto
1953		Parsons	Emerson	University of Toronto
1954	Fall	Milroy	Emerson	University of Toronto
1954	Fall	Reesor	Emerson	University of Toronto
1955	Spring	Shebishekong	Emerson	University of Toronto
1955	Fall	Benson	Emerson	University of Toronto
1956	Fall	Thompson	Emerson	University of Toronto
1957		Aurora	Emerson	University of Toronto
1958	Fall	Bosomworth	Emerson	University of Toronto
1959	Fall	Bosomworth	Emerson	University of Toronto
1960	Fall	Miller	W Kenyon	University of Toronto
1961	Fall	Bennett	Emerson	University of Toronto
1961		Warminster	Emerson	University of Toronto
1962	Summer	Warminster	Emerson	University of Toronto
1962	Fall	Warminster	Emerson	University of Toronto
1963	Summer	Warminster	Emerson	University of Toronto
1963	Fall	Warminster	Emerson	University of Toronto
1964	Summer	Warminster	Emerson	University of Toronto
1964	Fall	Warminster	Emerson	University of Toronto
1965	Summer	Warminster	Emerson	University of Toronto
1965	Fall	Warminster	Emerson	University of Toronto
1966	Summer	Warminster	Emerson	University of Toronto
1966	Fall	Warminster	Emerson	University of Toronto
1967	Summer	Warminster	Emerson	University of Toronto
1967	Fall	Warminster	Emerson	University of Toronto
1968	Summer	Warminster	Emerson	University of Toronto
1968	Fall	Warminster	Emerson	University of Toronto

Throughout this period, Emerson's research strategy was to test the hypothesis that the Warminster site was Champlain's Cahiague. It was in the right geographical location, and the presence of European trade goods indicated that it was occupied at the right time, during the period of European contact, but many sites might fit this description. The only specific information about Cahiague was Champlain's statement that the village contained "200 longhouses". So, for the first time in Ontario archaeology, excavations focussed on discovery of settlement patterns rather than on artifacts. Earlier excavators had traced palisades at several sites, but no one had previously recognized that house structural remains were also preserved.

By 1968, Emerson had gathered a lot of information about settlement patterns at the Warminster site. Unfortunately, these patterns defined a settlement organization which differed in one critical

way from the village which Champlain described: the Warminster site consists of two palisaded villages separated by a space of about 150 meters. Artifacts strongly suggest that the occupations were roughly contemporary. Both villages, combined, probably contain no more than 100 houses. If Champlain saw only one village, then either half of the Warminster site is too small to fit his description. A more recent argument that the Ball site is Cahigue (Fitzgerald 1986) seems to have similar problems.

In 1967, the University of Toronto expanded with the opening of the suburban Scarborough campus; Erindale was finished two years later. New archaeology faculty were hired to staff these new programs, and they began to contribute to the archaeological field school.

William Hurley directed a field school in the fall of 1969 at the DeWaele site near London. It was a daily commute in rental vehicles with the Teaching Assistant doing the driving. In October 1971, Emerson took a third year anthropology class and a large group of students from Introductory Anthropology to the DeWaele site for a series of weekend digs. The students and staff stayed at the Innisfree Farm, a property with splendid facilities near the site.

Bruce Drewitt, from what was to become known as the St George campus, and Bruce Schroeder, from the new Scarborough department, jointly taught a field school in the fall of 1970 at the McLeod site in Ajax. Marti Latta, a Teaching Assistant who had worked with Emerson at the Warminster site in 1968 and with Drewitt and Schroeder in 1970, was hired at Scarborough College in 1971 with a mandate to establish a field program.

1969	Summer	DeWaele	Hurley	St George
1970	Fall	DeWaele	Emerson	St George
1970	Fall	McLeod	Drewitt/Schroeder	St George/Scarborough
1971	Fall	McLeod	Latta	Scarborough
1972	Summer	McLeod	Emerson	St George
1972	Fall	McLeod	Latta	Scarborough
1972	Fall	Parsons	Emerson	St George

In 1972 and 1973, two events changed the direction of field training at the University of Toronto. A field crew, directed by Marti Latta, began excavation of the Draper site which soon proved to be located under a planned runway in the projected new Toronto Airport in Pickering. The influx of federal money which continued this project in later years provided the beginnings of the modern archaeological consulting industry.

At the same time, concern about the ways in which such funding might lead to abuse of the archaeological heritage prompted the development and speedy passage of the *Ontario Heritage Act of 1974*. For the first time, archaeologists in Ontario had to publicly account for their excavations. The first Archaeology Committee of the Ontario Heritage Foundation contained three graduates of University of Toronto field schools: Ken Dawson, Helen Devereux and Bill Noble. There was considerable pressure from some quarters to ban field schools; it was suggested that they served only to teach bad habits to impressionable youngsters. The Committee pressed for an interpretation of the law which left room for learning opportunities. Noble, in several "reports" to the Ontario Archaeological Society, stressed the importance of responsible university field schools to teach proper appreciation of heritage resources and of the native peoples whose remains constituted these resources. With the need for a licence and the demand for an annual report, the amount of field excavation decreased after 1974.

Professor Emerson's declining health led to his gradual withdrawal from active field work. Up to his death in 1978, he remained concerned about field training and was always glad to give

guidance to younger colleagues and students. At that time, responsibility for the field school passed to younger members of the department:

1973	Summer	Draper	Emerson	St George
1973	Summer	Draper	Latta	Scarborough
1973	Summer	Scarborough campus	Latta	Scarborough
1973	Fall	Draper	Latta	Scarborough
1973	Fall	Parsons	Emerson	St George
1974	Summer	McKenzie/Woodbridge	Emerson	St George
1975	Summer	McKenzie//Woodbridge	Emerson	St George
1976	Summer	Beeton	Latta	Scarborough
1976	Fall	Beeton	Latta	Scarborough
1977	Summer	McKenzie//Woodbridge	Johnson	St George
1978	Summer	Warminster	Sykes	St George
1979	Summer	Fort Malden	Latta/Snow	Scarborough/Parks Canada
1980	Summer	Fort Malden	Latta/Snow	Scarborough/Parks Canada
1981	Summer	Log Tavern	Latta	Tri-campus

Beginning in the late 1970s, Erindale College offered a two-week field school. Albert Mohr took a small number of students to work with him in the American Southwest. Later, it was taught by Bill Finlayson at the Crawford Lake and Lawson sites. Most recently, it has been taught by David Smith.

Maxine Kleindienst, Chair of the Anthropology Department, established the first tri-campus field school program in 1981. It was designed to provide an opportunity for undergraduate students from all three campuses to live together for an extended period and to develop within their discipline friendships which went beyond their own campuses. It was hoped that a companion field program might develop from Physical or Social/Cultural Anthropology.

In 1981, the family of Dr Wilfrid Auger of Toronto invited the University of Toronto to establish an annual field school on property which they owned in Simcoe County. Once again, it was possible to engage in long-term planning about excavation and teaching methods. Drawing upon training programs at Simon Fraser University and at Parks Canada, as well as our own field program, we have built a modular system which provides a wide range of hands-on opportunities. In the period 1982 to 1985, an advanced field school in environmental analysis was taught by Gary Crawford of Erindale College

1982	Summer	Auger	Latta/Crawford	Tri-campus
1983	Summer	Auger	Latta/Crawford	Tri-campus
1984	Summer	Wallace	Crawford	Tri-campus
1985	Summer	Auger	Latta	Tri-campus
1985	Summer	Wallace	Crawford	Tri-campus
1986	Summer	Auger	Latta	Tri-campus
1987	Summer	Auger	Latta	Tri-campus
1989	Summer	Auger	Latta	Tri-campus
1990	Summer	Auger	Latta	Tri-campus
1992	Summer	Auger	Latta	Tri-campus

During the past 50 years, there have been more than 50 field schools at the Department of Anthropology, University of Toronto. Many of today's professional archaeologists got their knees dirty and got their first field experience there.

And so this year we started another 50 years of field schools at a new site, Thomson-Walker, to continue a great tradition. And, who knows, maybe your name will be added to the list of great Canadian archaeologists or you'll at least become a field technician who will get a job.

P Aucoin	C Martijn
G Coupland	R McGee
K Dawson	D McLeod
H Devereux	S Monckton
D Doroszenko	W Noble
B Drewitt	R O'Brien
B Field	R Pearson
W Fox	J-L Pilon
D Gordon	Z Pohorecky
R Harper	P Pratt
P Harrison	P Ramsden
C J-Andersen	P Reed
M Kapches	P Reid
I Kenyon	D Roberts
W Kenyon	C Stimmell
D Knight	R Stromberg
E Kraemer	W E Taylor
M Latta	M Tamplin
E MacDonald	J Triggs
G MacDonald	A Tyyska
M Magne	R Vastokas
V Marchant	J V Wright

Although I have talked here about what I think of as "field schools", I know that Professor Emerson felt that field trips that went out from the U of T and Royal Ontario Museum were learning experiences not unlike field schools. In more recent years, involvement with government projects and archaeological heritage consultants has provided similar opportunities for undergraduate students at the University of Toronto.

Emerson summed up the goal of the field training program at the University of Toronto: "...field training of new students has always been an integral, if sometimes secondary, objective of our summer field work.... We strive to make it clear that we are not producing archaeologists but competent and capable field workers who can take their place within a field party wherever they go."

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#### ARCHAEOLOGY LAND

The 1994 Society for American Archaeology (SAA) annual meeting will feature a hands-on archaeology fair, Archaeology Land, for children and families both attending the meeting and from the surrounding Orange County area. The one-day fair, hosted by the SAA Public Education Committee, will be open on Saturday, April 23, 1994 at the Disneyland Hotel in Anaheim, California.

Archaeology Land will feature activity centres, hands-on displays and manipulative exhibits. The fair will be a showcase of alternatives to the classroom lecture and the free-standing display, and will highlight activities focussing on preservation, cultural awareness, stewardship, and steps in the archaeological process. The key to the activities is interactive learning. Annual meeting participants will be encouraged to circulate and participate. Activity sheets detailing replication of the activities will be produced and available. Submissions are currently being solicited from federal agency archaeologists, professional and avocational societies, museums, educators, and other interested individuals for participation in the fair. To receive an application or more information, contact Amy Douglas at (602) 350-5105. Application deadline is December 10, 1993.

## PRESS CUTTINGS

**Frobisher's ill-starred gold mine**

An archaeological dig in the Canadian Arctic is uncovering new evidence about a little-known gold mining escapade near Baffin Island in the 1570s by English explorer Martin Frobisher.

Some historians say Frobisher was party to an elaborate hoax to pass off glittering black rock as gold ore, although it is also possible he was an innocent dupe of assayers who used gold-carrying metal in the assaying process. The weight of opinion is that Frobisher knew the rock was worthless, since he had five assayers at the mine sites. Queen Elizabeth I, who financially backed the expeditions, inexplicably let the explorer off with a reprimand when he sailed back to England with 12 shiploads of junk rock.

"Some think Frobisher was gullible," says Susan Rowley, an archaeologist specializing in Inuit oral history who works as a consultant for Canadian and US museums. "But I think he was in on the whole scam."

Clues to this bizarre episode lie on Kodlunarn Island, a barren six-hectare island at the southeastern tip of Baffin Island where 400-year-old chisel marks bear evidence of Frobisher's mining activities and where archeologists this summer uncovered a fresh layer of artifacts.

Kodlunarn was the base camp for Frobisher's two mining expeditions in 1577 and 1578. From there he branched out to several nearby islands, although the largest mine was a deep trench cut into the shore of Kodlunarn. Ultimately the mines produced 150 tonnes of rock destined for special smelters in England.

The open pits are still visible on the rocky and frigid outpost. Here, too, are the remains of the first English house in the New World—a 3.6 by 4.2 metre stone dwelling designed to test construction methods in Arctic conditions. Because the permafrost and slow soil development in the Arctic can preserve features for thousands of years, Kodlunarn is

an Elizabethan time capsule. "In the mines you can see fresh scars of chisels and you can imagine a miner having just been there," marvels Robert McGhee, a member of the Archaeological Survey of Canada who excavated there in 1991.

Frobisher originally sailed to the region in 1576 while seeking a northwest passage to Orient. England wanted its own trade route to the Orient since the Spanish and Portuguese controlled the southern routes. When assayers declared that there was high gold content in the black rocks that Frobisher brought back from his first expedition, his mission changed. Elizabeth directed him to delay exploration and concentrate on mining and establishing a settlement in the land she call "Meta Incognita". This was seven years before Sir Walter Raleigh set up his colony in Virginia.

Frobisher's settlement was not to be. The 1578 mining team of 400 men intended to leave 100 men on Kodlunarn as a wintering party. The loss at sea of building materials and food supplies convinced the entire crew to return to England that fall. Before the return voyage, they built the house on Kodlunarn and sowed a garden of peas and corn to test the soil's fertility. As a peace offering to the Inuit, they left bells, knives, freshly baked bread and lead engravings of men and women. They buried timber and other supplies in hopes of returning the following year to build a settlement.

Archaeologists first confirmed the site as Frobisher's in 1974, after Royal Ontario Museum historical archaeologist Walter Kenyon collected rock samples and 16th-century roof tiles on the island. In 1981, the US Smithsonian Institution sent a team to survey the site further. Over the past three years, researchers from both the Smithsonian and the Canadian Museum of Civilization in Hull, Que., have worked intensively there and have published their findings in two new books, *The Archeology of the Frobisher Voyages* and *The Meta Incognita Project*.



Last summer, Laval University archaeologist Reginald Auger led the most recent foray. From permafrost that was too deep for Inuit scavengers to plunder, he made three major finds: the remains of a wicker basket that was probably used to carry ore; thousands of glazed ceramic stove tile shards that included one representing the shape of a woman in a seductive pose (Frobisher was after all a sailor, the archaeologists note wryly); loaf-sized chunks of meal and hard tack and vast quantities of dried peas. The wicker basket was too fragile for Professor Auger to remove, but he has brought other specimens back for further analysis.

The finds have convinced him that many substantial Frobisher artifacts are still buried in the trench, which cuts a deep V-shaped gash. Until now, experts assumed that few large objects remain because of scavenging over the years. Certainly the Inuit dismantled the stone house, leaving only parts of the lime-mortared foundations intact, and dug up much of the would-be colonists' cache. "But this summer we turned up an in situ fragile layer that has never been disturbed," Professor Auger says. "And we have barely touched the area--only 10 square metres of a trench that is 66 square metres."

University of Ottawa geologist Donald Hogarth hopes the trench will yield explanations about Frobisher's dalliance with the worthless ore. Archaeologists have pinpointed the locations of at least two of the five Frobisher mines and found stockpiles of ore. They have also identified two concentrations of boulders as the remains of an assay shop and a blacksmith's shop--both integral to the English mining enterprise. Excavations have unearthed parts of assay furnaces, crucibles, cupels and partly fused rock. From the condition of the open-pit mines, it is clear that to dislodge the ore, the miners use only brute force. Their tools were pickaxes, wedges, iron crowbars and tempered hammers, which required constant refitting by the blacksmith. "I think excavations will find discarded pick heads next," says Professor Hogarth.

He has sampled the ore in all the known mines and found the grades of gold and silver to be only slightly higher than those the Earth's crust. The original tests in London by one assayer/chemist in 1576 found grades 10,000 to 100,000 times richer than those in Professor Hogarth's samples. Even at the time of the expeditions, the London assayers came up with wildly differing readings. Michael Lok, who raised the funds for Frobisher's expedition, took a souvenir black rock from the first voyage to two different assayers before finding one who pronounced it to contain gold. And when assay results were finally conducted under the supervision of a delegation of commissioners, readings dropped from 13.5 to 2.5 ounces per ton.

Professor Hogarth and others say that one possibility for the exaggerated readings is that assayers may have used a lead additive that was contaminated with precious metals. He is hopeful that excavations will turn up some of the lead or other ingredients in the assaying process. Even so, he says Elizabethan metallurgists had the technology to test for contamination.

"The inescapable conclusion is that either the analysts were incompetent or that the assayers, and perhaps others, added gold-bearing material to the crucible deliberately," he says. "However, what sustaining advantage the assayers hoped to gain in fraud is difficult to imagine."

Frobisher's Book of Register, which recorded all the assay results of the final trip, mysteriously disappeared on the voyage home in 1578.

Archaeologists have been able to draw fairly accurate maps of the Frobisher base camp, which also included a charcoal store, a possible dam and a promontory where the Englishmen built a fort with sod and rock walls. The fort served to defend Kodlunarn from Inuit incursions.

It is already clear that Frobisher's encounters with the Inuit were often hostile. In one attempt to snatch a hostage, Frobisher fled with an arrow lodged in his buttocks. He later



plucked an Inuit man from the water, kayak and all, and hauled him into his ship. All the Inuit he brought back to England died within month of "incurable ulcer of the lung" and other such maladies.

Future archaeological work on Kodlunarn will depend on the outcome of disputes over who should be allowed to conduct research there and whether the island should be preserved in its current state. The cliffs are eroding so rapidly that archaeologists can pick up bagfuls of artifact fragments each year without digging. Between August 1992 and August 1993, the banks have receded 15 centimetres, according to measurements by pedologist Michel Blackburn. But Professor McGhee maintains that archaeological tampering will destroy the fragile historical environment on the surface.

While the Frobisher site is now a protected area and is difficult to reach, the "black ore" can easily be seen in the English town of Dartford, where masons have used it to patch the wall around the grounds of the ruined Dartford Manor House. Dartford was once the location of a smelter for Frobisher's ore.

Geologists now know that Frobisher's early specimens were merely shiny, hornblende-rich silicate rocks that would have looked golden when heated because they contained traces of biotite mica or hypersthene.

Kodlunarn was never a true gold mine for Martin Frobisher. But it remains a gold mine for archaeologists.

by Ann Walmsley

from *The Globe & Mail*, 13 November 1993

### Workers discover pioneer village

The discovery of an abandoned settlement on the banks of Nanticoke Creek has surprised local historians and a provincial archaeologist.

It seems no one knew it was there until officials from the Ontario Ministry of Transportation stumbled on it while preparing the site for the widening of Highway 6 between Jarvis and Port Dover. A name has

not yet been determined, even though the settlement counted a tavern, sawmill and a few pioneer homes.

"It's been a complete surprise to me," says Merle Knight, curator of the Haldimand County Museum in Cayuga. "I had no idea, and I was really skeptical when they called me and told me they had found something. If there's a creek, there's going to be people. But this town doesn't ring a bell."

Archaeologists from the transportation ministry office in London spent five weeks this past summer digging around the ruins of the long-lost community. The highway is scheduled for improvements next summer.

Apart from the pioneer community, the archaeologists also came upon evidence of native settlement, some evidence dating back 10,000 years. Peter Timmins, assistant archaeologist for Ontario's southwestern region, said they uncovered five sites which produced artifacts from between the 1840s and 1850s.

"A lot of it is debris, but they're artifacts to us," said Timmins. "At the time the site was abandoned, it would all have just been regarded as garbage. But archaeology is the garbage of the past."

Timmins figures the community rose up along the creek in the late 1840s. He said he's determined through land records the tavern property was once owned by a man named Cotter, and that the tavern used to be known as Smith's Hotel.

from the *London Free Press*, 9 September 1993

### Byzantine church in Petra

Archaeologists clearing away 14 centuries of dust and destruction have raised an ornate Byzantine church from the ruins of the ancient city of Petra in Jordan. The church, gleaming with whimsical stone and glass mosaics, is the first Byzantine structure unearthed in the fabled Nabatean city that was carved from solid rock centuries before Christ was born.

The 5th century church, severely damaged in an earthquake in AD 551, is emerging on a windy ridge above Petra's colonnaded Roman street. Archaeologists raised restored marble screens in the once-opulent cathedral and used toothbrushes to clean the marble, glass and stone mosaic floor which is the church's most archaeologically-important feature.

Far from Constantinople, the Nabatean kingdom was annexed by the Romans in AD 106 but was slow to embrace Christianity even after an official decree in 395 closing all pagan temples.

"Only in the 6th century was everyone around here Christian," said co-director of the project, Robert Schick.

Workers in the US-funded project will build a permanent roof to replace the original wooden ceiling, now turned to dust, before opening the church to the public.

from *The Windsor Star*, 2 October 1993

#### **Excavators dig in city of sacred cats**

Archaeologists are racing against urban sprawl to uncover the many lives of Bubastis, the city of the sacred cats that is one of ancient Egypt's most important legacies.

For more than a century, excavators have made remarkable finds as they unearth the city named for the cat goddess, Bastet: the ruins of the grand temple, sleek cat statues and cemeteries holding thousands of mummified cats.

Three thousand years of history are told in the ruins, which are threatened by the rapid development of Zagazig, a city 50 miles north of Cairo. A series of amazing finds over the past 18 months--including a cache of 150 gold items--points to the urgency of the archaeologists' task.

"It's rare to find a whole city. That's why what we're doing is so important," said Ibrahim Bakr, former chairman of the Egyptian Antiquities Organization and head of the dig.

Bastet was among the earliest and most important of Egypt's deities. At first a war

goddess, she mellowed with the ages and eventually became more of a friendly protector. Bastet was pictured with either a cat's or a lion's head. As the worship of animals--particularly cats--came to dominate religious beliefs, Bubastis became the site of ancient Egypt's largest religious festival. Ancient chroniclers wrote that up to 700,000 pilgrims spent days in Bubastis, drinking wine and engaging in sex orgies to honour Bastet. The city became important at the end of the New Kingdom in 1070 BC and for a while it was Egypt's capital.

The search has uncovered so many items that Bakr plans to display them in a new museum at the university. It will be Egypt's only museum devoted to a single archaeological site.

Bubastis is best known for its cat cemeteries, where for religious reasons thousands of mummified cats were wrapped tenderly and placed in underground vaults. The cemeteries were largely destroyed before Bakr's team started its work, although they occasionally find statues of Bastet that were buried with the cat mummies. Similar bronze figures of majestic cats can be found in museums around the world.

from *The Detroit Free Press*, 5 October 1993

#### **MD reopens explorer's mysterious death**

A food scientist has reopened the whole mystery surrounding the deaths of Victorian explorer Sir John Franklin and his team of 128 men who set sail in 1845 to discover the Northwest Passage.

Ten years ago, after discovering two frozen crewmen perfectly preserved in the permafrost, a postmortem exam showed extremely high levels of lead. This finding supported the argument that Franklin and his men were victims of lead poisoning caused from the soldering on their cans of food. The Franklin expedition was among the first to rely heavily on canned food.

However, Dr Keith Farrer has challenged this explanation and reopened the mystery of the

deaths in the Canadian Arctic. Writing in *The Journal of Archaeological Science*, the food scientist has published his analyses of 19th century canned foods and lead levels in ancient and modern food remains.

Dr Farrer has demonstrated that virtually all Victorians were exposed to very high levels of lead in their environment--from the lead sugar in wines to plumbing pipes. He has also shown that the expedition had probably consumed relatively small amounts of canned food, since logbooks show they relied largely on fresh food during the first year of the mission.

"The canned foods formed a very low proportion of the total provisions and their contribution to any ill health in Franklin's crewmen was trivial," said Dr Farrer.

Therefore, there's little evidence to support the belief that lead poisoning caused the demise of the crew or that the failure of the expedition to find the Northwest Passage was in any way connected to lead in the food.

Meanwhile, Dr Peter Wadhams of the Scott Polar Research Institute at Cambridge University has also added to the controversy by revealing that his team of multinational explorers discovered fragments of a longboat on Prince of Wales Island, which raises an entirely different scenario concerning the fate of part of the expedition.

They also found the remains of a small European-style encampment on the island. Dr Wadhams believes the longboat may have been attempting to retrace the route Franklin had taken before becoming locked in the ice near Beechey Island. When the ice had broken up sufficiently to launch the longboat in 1848, the longboat crew retraced their route by sailing back up Peel Sound.

In 1851, a search expedition sent out by Lady Franklin had dismissed any thought that the expedition could have gone through Peel Sound because the ice was too thick and impassable. The most recent evidence suggests that one of the sledge search parties may have come as close as three miles from

finding evidence of Franklin survivors at Back Bay on Prince of Wales Island.

A recent logbook has also solved the mystery as to when Sir Joh Franklin died: his death is recorded as having occurred on June 11, 1847.

Dr Wadhams, the leader of the Lady Franklin Memorial Expedition, plans to return to Back Bay on Prince of Wales Island next year with a team of Canadians. They hope the campsite can be properly analyzed and excavated and find clues about the final resting place of Sir John Franklin.

from The Medical Post, 5 October 1993

### Earliest woven cloth dated to 7000 BC

Archaeologists studying early village life in southeastern Turkey have uncovered something a little special: a 9000-year-old piece of cloth that places the development of woven textiles 500 to 1000 years earlier than previously believed.

The 3 x 1.5 inch semi-fossilized fragment, most likely linen, appeared on a section of antler used as some type of tool, said William Harms, spokesman for the Oriental Institute of the University of Chicago. A team from the institute made the discovery at Cayonu, a site near the upper Tigris River, with archaeologists from Istanbul University.

Radiocarbon dating placed the fragment at 7000 BC. No cloth made earlier than 6500 BC had been discovered up to then.

"This gives a peek beyond the horizon to what was going on in the development of an ancient hunting society to a culture we would know," said Harms. "Cloth was one of the distinguishing features."

Such characteristics of urbanization are more often associated with Mesopotamia, in present-day Iraq, around 4000 BC, he said.

The universities of Chicago and Istanbul have been jointly exploring Cayonu for 30 years.

Some of the earliest examples of formal architecture have also been uncovered there.

from The Windsor Star, 28 September 1993

### Baby mastodon found

The bones of a young mastodon have been recovered from a Nova Scotia gypsum mine in what a geologist described Thursday as the greatest find of its type in Canada and one of the most significant ever in the world.

"It's a spectacular find--one of the best finds ever," said Bob Grantham of the Nova Scotia Museum.

Dubbed Baby Stanley for the mine worker who found it, the remains were recovered during a two-week-long dig that ended last week in Milford, between Halifax and Truro.

Grantham said the bones, which were found about 100 metres from the skeleton of an adult male discovered two years ago, belong to a six-year-old animal.

Only about five per cent of the ancient mammal was recovered, but scientists are still enthused. Grantham described it as only the sixth discovery of such complete mastodon remains in the world. A few baby mastodons bone fragments have been uncovered in southern Ontario and the western provinces.

Researchers found the animal's left lower jaw, an upper foreleg, an ulna, a shoulder bone, several ribs, some vertebrae, and a number of foot bones.

Along with the bones, they found prehistoric turtles, snails, clams and freshwater mussels, as well as a lot of mastodon dung. There was no soft tissue left on the bones, but some vegetable matter was found between the creature's teeth.

Mastodons were ancient elephant-like creatures with thick, shaggy fur.

from the St Thomas Times Journal, 20 August 1993

### Festival blends history, fun

The value of Isobel Beasley's Sandwich Towne house has fallen below ground level since she left it in 1984.

In recent years, archaeologists have dug up a host of historic treasures around the almost-200-year-old building. Their efforts will eventually make full restoration of the structure--officially called Duff-Baby House--more historically accurate.

Hundreds of visitors watched the archaeologists at work and toured the building's interior this weekend as part of the 4th annual Olde Sandwich Towne Festival.

"I can't wait to see what they do with it," Beasley said, looking a little apprehensively at the trenches ringing her girlhood home. Her father, Dr William Beasley, bought the place in 1905. Built in 1797, it's considered Sandwich Towne's oldest building, said senior archaeologist Dena Doroszenko.

A \$750,000 grant from the Ontario Ministry of Culture and Communications will help the building's current owner--the Ontario Heritage Foundation--complete the restoration by 1995, she said.

"Right now, six archaeologists are trying to uncover foundations so we'll know what the original verandah looked like. So far we've discovered an old cellar entranceway and a stone drain that likely dates back to the early 1800s."

A grand, trellised porch spanned the front of the house, once one of the town's most prestigious. Alexander Duff, a Scottish trader from Detroit, built the home and James Baby, a highly influential politician, bought it in 1807. The house stayed in the Baby family until 1871.

from The Windsor Star, 20 September 1993



## FROM THE O.A.S. OFFICE ....

*Charles Garrad*

### **MANY AWARDS MADE AT SYMPOSIUM**

Fourteen awards were announced at the Annual Business Meeting, October 23, and presented later in the day at the Banquet. A life membership was awarded to William J. McConnell, Nottawa, for his long support of the Society and providing recent field school and excavation opportunities. Two Heritage Conservation Awards were announced for Devil's Pulpit Golf Association, Caledon, nominated by the Town of Caledon, and Ontario Hydro, Toronto, nominated by Archaeological Services Inc. Ceremonies for the presentation of the award Certificates will take place in 1994. An unprecedented eleven 25-year membership pins and certificates were awarded to Edward Wilson Austin, Port Hope; George Henry Gee, Dundas; Ian Kenyon, Hamilton; Thomas Kenyon, Hamilton; Kenneth E. Kidd, Peterborough; Charles O. Nixon, Ayr; Roberta O'Brien, Toronto; John Reid, Toronto; Dr. Howard Savage, Toronto; James W. Shropshire, Collingwood; Dr. Morgan J. Tamplin, Peterborough.

Thirty-three Twenty-Five Year Members are now recognized by the Society.

### **REPORT OF THE NOMINATING COMMITTEE**

At the Annual Business Meeting the Nominating Committee for 1993 presented a slate of seven candidates for the seven-position 1994 Board of Directors. No further candidates were proposed from the floor and none withdrew. All seven are therefore returned by acclamation and there will not be an election.

Of the seven 1993 Directors, Ellen Blaubergs and André Bekerman are standing down at the end of the year. Their places are taken by Anne LaFontaine and Henry van Lieshout. The positions of President, Secretary and Treasurer for 1994 will be determined by the Directors at the first business meeting of the New Year.

### **PASSPORT TO THE PAST PROGRAM UPDATE**

The previous ARCH NOTES included a letter from Paula Kennedy about one of the Passport-to-the-Past opportunities in northern Ontario. Member Jennifer J. White has sent a letter to record her memory:

"I would like to thank the Passport-to-the-Past coordinators for the two weeks adventure I had this August. When I decided to volunteer to work on the Pukaskwa project I wasn't sure what to expect as this was my first experience with practical archaeology. Now that I have returned from the wilds of Lake Superior, I have lots to tell - about camping with the porcupines, battling the waves to get to and from work, and about measuring more lichen that I care to remember. It was a great experience, and I am looking forward to more opportunities with the Passport-to-the-Past program. I'm hoping that there will be more projects taking place in northern Ontario in the future."

Jennifer, ready for university, seeks advice concerning the quality of the various university archaeology programs. Any comments to the office in confidence will be forwarded to her.

Returned Mail

HELP ! Please, does anyone know the current addresses of:

Amy Carr, North York  
Barbara H. Long, Burlington  
Karyn Thompson, Richmond Hill

Please share the secret with the OAS office. We have returned mail for these good people.

Renewal Time

Calendar-year memberships lapse December 31. Seventy-four Institutional Class members and three hundred and fifty-four other class members will need to renew. If you are one of these you will find enclosed with this ARCH NOTES a reminder to renew your membership effective January 1, 1994. Please note that once again (as last year) we are able to announce that due to the superb business management, financial restraint and administrative skills for which the Society is rightly famous, there will be no fee increase for 1994.

Open House and Heritage Week 1994

Its not too early to note on your calendars that the Society's 1994 annual Open House will be held in its office at 126 Willowdale Avenue on the first Sunday of Heritage Week, February 20, from 1 to 5. An artifact identification service will be featured, so bring with you any strange objects you have unearthed. If you have any of the OAS Research Indexes (Special Publications 7, 8, 10, 11) on diskettes you may also bring these to update from the OAS' master database. Refreshments will be served.

Heritage Week always begins the third Monday of February.

IT HAS BEEN ANOTHER GREAT YEAR !

As the Society's forty-third year draws to a close, with the Society stronger and busier than ever, the staff wishes all members everywhere a MERRY CHRISTMAS and a Happy New year !

THANK YOU  
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**Secretary:** Lois McCulloch, 23 Caledonia St.; Guelph, Ontario, N1G 2C4  
**Newsletter:** THE BIRDSTONE - **Editor:** John D. A. MacDonald  
**Fees:** Individual \$7      **Meetings:** Usually at 8.00pm on the 3rd Wednesday of the month, except June - August, at the Adult Recreation Centre, 185 King Street W., Waterloo or the John F. Ross Collegiate, Guelph.

**LONDON****President:** Pat Weatherhead (519) 438-4817

**Vice-President:** Chris Ellis      **Treasurer:** Harri Matilla  
**Secretary:** Lorelyn Giese, Grosvenor Lodge, 1017 Western Rd., London, N6G 1G5  
**Newsletter:** KEWA - **Editor:** Neal Ferris      **Fax (519) 645-0981**  
**Fees:** Individual \$15      **Meetings:** Usually at 8.00pm on the 2nd Thursday of the month, except June - August, at Grosvenor Lodge, 1017 Western Rd.

**OTTAWA****President:** Ishtar Luesby (613) 789-5393

**Vice-President:** Jim Montgomery      **Treasurer:** Jack Earnshaw  
**Secretary:** Lois King, Box 4939 Station E, Ottawa, ON K1S 5J1  
**Newsletter:** THE OTTAWA ARCHAEOLOGIST - **Editor:** Rachel Perkins  
**Fees:** Individual \$15      **Meetings:** Usually at 7.30pm on the 2nd 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:** Scott Hamilton      **Secretary/Treasurer:** Andrew Hinshelwood  
331 Hallam St., Thunder Bay, Ontario, P7A 1L9  
**Newsletter:** WANIKAN - **Editor:** A. Hinshelwood  
**Fees:** Individual \$5      **Meetings:** Usually at 8.00pm on the last Wednesday of the month, except June - August, in the Board Room, M.C.T.R., 1825 East Arthur Street, Thunder Bay.

**TORONTO****President:** Duncan Scherberger (416) 463-1677

**Vice-President:** Greg Purmal      **Treasurer:** Eva MacDonald  
**Secretary:** Annie Gould, Box 241, Station "P", Toronto, Ontario, M5S 2S8  
**Newsletter:** PROFILE - **Editor:** Valerie Sonstene  
**Fees:** Individual \$10      **Meetings:** Usually at 8.00pm on the 3rd Wednesday of the month, except June - August, at Room 561A, Sidney Smith Hall, St. George Street, Toronto.

**WINDSOR****President:** Suzanne Gero (313) 393-9309

**Vice-President:**      **Treasurer:** Ilinka Temerinski  
**Secretary:** Sandra Lesperance, 3461 Peter St. #507, Windsor, On. N9C 3Z6  
**Newsletter:** SQUIRREL COUNTY GAZETTE - **Editor:** Peter Reid  
**Fees:** Individual \$12      **Meetings:** Usually at 7.30pm on the 2nd Tuesday of the month, except June - August, at the Third World Resource Centre, 125 Tecumseh W.

## O.A.S. CHAPTERS

## The Ontario Archaeological Society Inc.

126 Willowdale Ave., North York, Ontario M2N 4Y2

Phone, Fax or Modem - (416) 730-0797

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#### FEES

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