



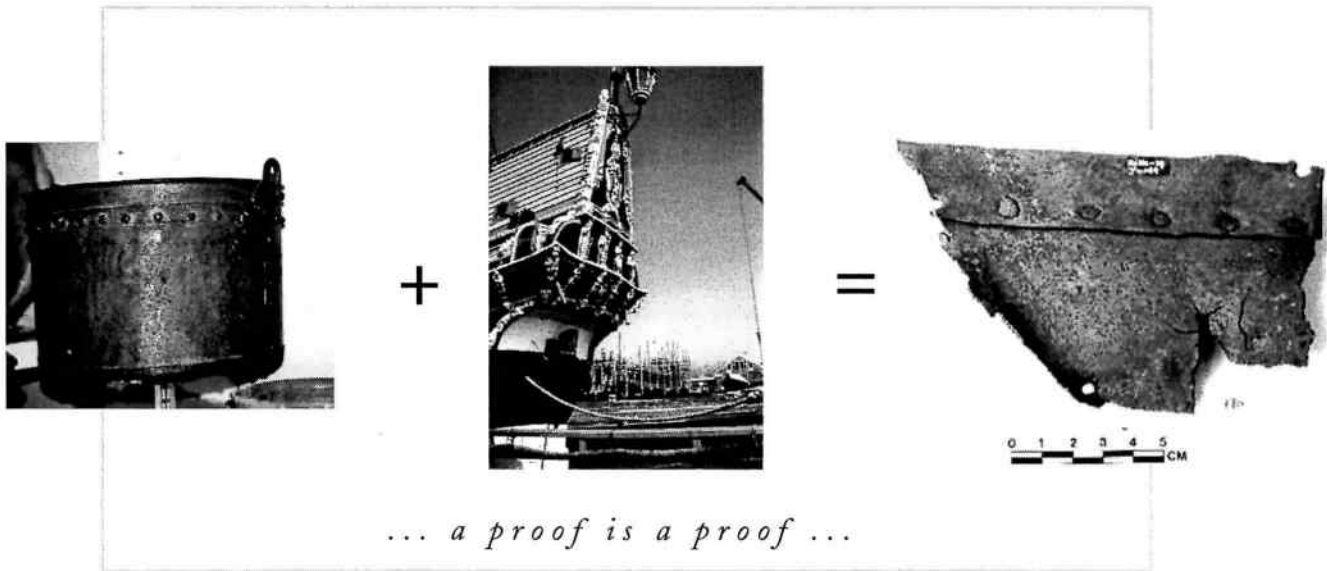
Ontario Archaeological Society

Arch Notes

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Symposium 2003 / Orillia

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... editor's note

*Please note that Arch Notes has a new email address :
archnotes@execulink.com*

You're in for a bit of heritage policy this issue – from the OAS's policy statement on archaeological collections to the Ministry of Culture's changes to the Ontario Heritage Act.

Enjoy the Amsterdam adventures of Caroline Walker in her quest for the brass kettle and Henry van Lieshout's revisit of the Navi di Pisa!

Also, let's hear your thoughts on the 2002 Symposium survey – what would you like to hear about in the next few symposia and are free (or should that be complimentary?) donuts enough incentive to increase attendance at the Annual Business Meeting?

President's notes

HAPPY NEW YEAR to everyone. I am happy to announce that the 2003 election for the Board of Directors of the OAS was a success. One hundred and fifty-seven ballots were received and were counted on Jan. 6. This is a vast improvement over the 82 cast last year. The new Board met on Jan 11, 2003 and voted among themselves for the various Director portfolios available. The new Board of Directors for 2003 is as follows, in alphabetical order:

Christine Caroppo, President
Dena Doroszenko, Publications
Mima Kapches, Chapter Services
Robert Pihl, Membership Services
David Smith, Outreach & Educational Services
Tony Stapells, Advocacy
Henry Van Lieshout, Secretary/Treasurer

Thank you to everyone who stood for election, especially Bud Parker who served on the Board for 2 years. I will miss Bud's calm analysis and sunny disposition. Bud has indicated that he would still be willing to serve on committee work. What a trouper!! Thanks, Bud. It was nice to have you on the Board.

Our sincere thanks to the Hon. David Tsubouchi, Minister of Culture, for approving our 2002 Provincial Heritage Organization Operating Grant. We heard in early December that our application had been accepted and that we would be receiving \$34 000.

You should receive this *Arch Notes* in time to come out to our annual Heritage Day Open House. Curious about our Richmond Hill office? Want to meet me in person? Want to see some of the artifacts gleaned from the McGaw site in our "backyard?" Want to find out about what we have been doing? The Hon. Frank Klees, our MPP, will be dropping by to formally present our 2002 Provincial Heritage Organization Operating Grant cheque. Light refreshments will be available. Come and check

us out: Sunday, February 16, 2003, 11:00 am to 4:00 pm.

As you probably know, Minister Tsubouchi announced at the end of November 2002 that he would be undertaking a review of the Ontario Heritage Act. This review is different from the amendments to the Act passed in the Government Efficiency (omnibus) Bill earlier in November.

Stakeholder meetings were held in early December. Groups consulted included, I am told, provincial heritage organizations, municipalities, land owners, the development community and representatives of the First Nations. The OAS was invited to comment at the Dec 4 meeting of provincial heritage groups. I am happy to say that there was a remarkable consensus among the groups present on Dec 4 on the proposals that were before us in the Discussion Guide circulated to stakeholders in early Dec and posted on OAS-L. Those who attended the discussions commented that they thought this process to be very effective in gathering public comment. Let's hope there will be time to get long needed changes to both built and archaeological heritage through the legislature before an election is called or the Cabinet is shuffled.

The OAS was invited to submit written comments by January 17, 2003. A copy of our submission to the Ministry has been submitted to *Arch Notes* and can be seen elsewhere in these pages. Our comments focus on what we feel is the single largest concern in archaeology in Ontario; that is the provision in the Heritage Act wherein archaeologists must curate, in perpetuity, all collections gathered under their licence. The crisis in collections disposition grows each day. It is estimated that there are tens of millions of artifacts in basements, garages, spare bedrooms and attics across

Ontario. Local museums are often not in a financial or curatorial position to accept archaeological collections as has been suggested in the past as a solution. No provision is made for archaeologists who are retiring, or who die suddenly. Our senior ranks of avocational archaeologists are at a stage in their lives where many are down-sizing their dwellings and have no room for collections they have carefully curated for decades. It is well past time that Ontario had a repository/research facility or series of such facilities where archaeological collections and their attendant documentation could be safely curated and accessible.

Finally, a note to all lapsed members: membership renewals are way down. Please take a moment to renew your membership with the OAS. We count on your membership fees and the fact that you are a part of our organization. There was a time, about a decade ago, when the OAS had over 800 members. When I go to the

Ministry this year and advocate on behalf of archaeological issues I would like to be able to say that we have a lot more than the 450 members we had last year. I would like to think that there are more than 450 people across Ontario who care about learning about the people who came before us. I know for a fact that there are students of archaeology, even grad students, who study our discipline every day, but who are not members. I know that there are people earning a living through archaeology who are not members. I am asking those of you who are members, to advocate on our behalf in our community and encourage your non-member colleagues, employees and students to join. The OAS is stronger and healthier for every member who joins. My sincere thanks to those members who have already renewed or who have had the faith in us to buy a life membership.

Cheers, *Christine*



Ministry of Culture staff visit the OAS office, and our own Jo Holden (far right).

From the OAS office...

A very Happy New Year to one and all! 2003 has certainly come on strong; if the first working week of the New Year was any indication, this is going to be a busy year. Perhaps it's appropriate that we are going into the Chinese Year of the Ram!

January/February is always a time of hellos and goodbyes. Let me be the first to welcome the newest members of the Society's Board. Mima Kapches returns after a long absence, and joins us as the Director of Chapter Services. Rob Pihl joins our table as Director of Membership Services and Dave Smith takes up the Directorship of Outreach Services and Education. Also my hearty congratulations to returning Board Members, Chris Caroppo, President, Henry van Lieshout, Treasurer, Tony Stapells, Director of Heritage Advocacy and Dena Doroszenko, who has moved over to the portfolio of Publications.

I am sad to see Bud Parker leave; I didn't know him when he joined the board two years ago, however I grew to enjoy his company immensely. I am hopeful that we will meet up a various OAS functions.

Over the past school semester the OAS has been fortunate to have the talents and exceptional good humor of John Hurn, a co-op student from Aurora Secondary School. John's Co-op Teacher called four days into the Fall Term to discover if we would be interested in taking on a co-op student. I said that I would be interested in a student but I would have to run it by the Field Staff. At first the staff wasn't too sure, however within two weeks John had won them over and they couldn't think what they had done without a co-op student before! John fell into the routine, and discovered that flexibility is the key word at the centre and the site. Rob Pihl and Linda Torbidone not only had him assisting with the students on the site; they also introduced him to the mind-numbing joys of prelim-

inary lab work. John took everything in stride and still says he would like to eventually carve out a career in archaeology.

One special talent John shared with us was his ability to take computers apart and put them back together again. The center had inherited two hand-me-down computers, neither one working to any great level of acceptability. John took them apart and from the joint parts put together a great little work-horse that other students and occasional staff will be quite content with...thanks John!

John's co-op term finished on January 21; I would like to thank Ms. Karin Harding for phoning the centre and recommending John. John has set such a high standard for co-op placements that she will have her work cut out for her when it comes to finding our next student. Adieu and thank you John!

The OAS's first joint workshop with the Ontario Museum Association "Unearthed; Working with Archaeological Material in Study Collections and Museums" took place at the London Museum of Archaeology on January 27 and 28, 2003. This was the first workshop where the two sister societies combined their mutual talents in order to present to the Heritage Community the treatment, preservation, storage and exhibition of archaeological materials in both the field and in museums. With this start, we are hopeful of more collaborations.

Also mark your calendars for Sunday, February 16, 2003. The Society is hosting its annual Open House/Heritage Week activity. From 11:00 am to 4:00 p.m. our doors will be open. Flint knapper Dan Long will be in attendance, so to will be Dean Axelson, showing how reproduction ceramics are crafted. Keep your fingers crossed for snow, as we will be demonstrating and playing the First Nation's winter sport of Snow Snakes! Please come on out and bring the little ones, we'd love to see you

Jo Holden, *Executive Director*

WANTED:

OAS PROGRAM INTERPRETERS

Job Type: fee for service

The Ontario Archaeological Society is in need of four (4) Program Interpreters to deliver archaeological programs for the 2003 spring and fall seasons at the A. J. Clark Interpretive Centre, located in Richmond Hill, Ontario. The program includes excavation at the nearby McGaw site, a 15th century Iroquoian village.

Duties and Responsibilities

Each position involves teaching, mentoring and supervising students in grades 6 through 12. The Interpreter will also be required to assist with on-site clean up and preliminary lab work and maintenance duties within the education center and exhibit area.

Each position offers employment up to four days per week, depending upon registration in the program, from April 21 to June 27 and then again from September 8 to November 21, 2003. The pay rate is \$85.00 per day and the work day is 8:30 a.m. to 4:00p.m. (including lunch).

Qualifications

An archaeological field school course, and/or one year of study in southern Ontario pre-history, and/or practical knowledge of archaeological practices and methods.

Candidates must also be able to: deliver an enjoyable learning experience to students of various ages and abilities; facilitate group discussions and lab work; teach archaeological methods; and transfer curriculum- based knowledge that student's gain in the centre's classroom to the on site experience.

All applicants will receive a written response.

The closing date for a letter of interest and resume is Friday, March 14, 2003, 4:00 pm.

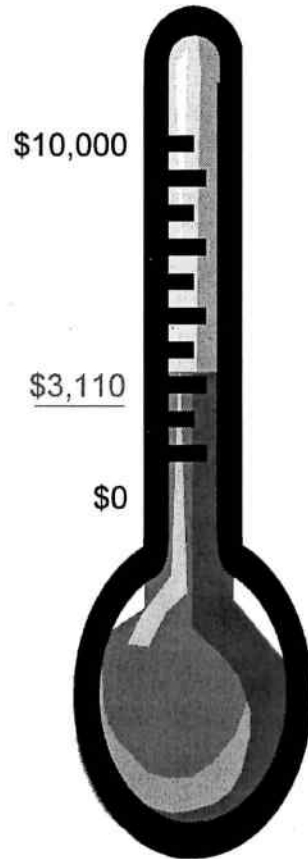
Please send your application to:

Attention: Job Search Committee
The Ontario Archaeological Society
11099 Bathurst Street,
Richmond Hill, Ontario
L4C ON2
(905) 787-9851

The Robert G. Mayer Bequest Future Fund

The objective of this tax-eligible fundraising project is to match Bob's \$10,000 bequest by December 31, 2003.

Actual donations received as at Jan 10, 2003 - \$3,110



Donations received with thanks from:

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 M. Tuck and D. Hunt
 H. and S. van Lieshout
 The Town of Richmond Hill

Passport to the Past Opportunity

*The Ontario Archaeological Society presents an
 in-house Passport to the Past Lab Activity*

Date: Thursdays, Starting on Feb. 20, 2003
 Time: 7:00 to 9:00 pm
 Place: The Ontario Archaeological Society
 11099 Bathurst Street, Richmond Hill, Ontario L4C 0N2
 Fee: FREE!

Space limited to 15, please register early! Current Passport members are encouraged to participate, new members and potential members are more than welcomed! To register, please call 905-787-9851

This volunteer activity is led by Stacey Hodder. Activities over the winter and spring evenings will include: washing, labeling and mending historic artifacts from one site in Richmond Hill, and one site in Burlington, dating to mid 1800's.

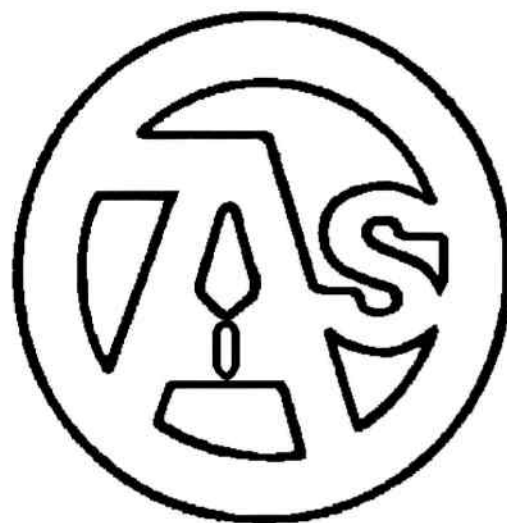
2002 OAS Symposium Survey Results

Dena Doroszenko, 2002 Director of Membership Services

This short article summarizes the results of a survey conducted at the 2002 OAS Symposium in Peterborough and provides direction for future symposium organizers, the Board of Directors, as well as the membership.

At the end of the 2002 Symposium, Twenty-five percent of the 109 attendees handed in their survey forms. The majority of the respondents attend the symposium regularly while only two identified themselves as first timers. In addition, the majority is quite happy with the time of year, i.e. fall, for the symposium and no change as to the season was strongly indicated. The questions as to subject matter they would be interested in at future symposiums included the following topics:

- Directions in Ontario Archaeology: CRM, academia, public outreach
- Archaeology of 19th century Ontario
- The History of Ontario Archaeology
- Consulting and Research
- Public Archaeology/Education
- Public Policy and Politics of Archaeology
- Archaeology and Community Museums
- Forensic Archaeology
- Regional Prehistory/Lithics or Ceramic Studies
- Environmental Studies
- First Nations focus
- Rock Art
- Industrial Archaeology in Southern Ontario
- Ontario Archaeologists Working Abroad
- Early Man
- Ontario Frontiers: Quebec, Manitoba, USA Borders
- Historic topics: Social evidence
- Use Wear, Taphonomy, and environmental reconstruction
- Involve Aboriginal peoples



Clearly, our membership is interested in a wide range of subject matter and which will greatly assist the planning of futures symposia. Also very clear was the fact that the majority (76%) does not like concurrent sessions.

The attendees were asked about the format of the conference and whether people had preferences as to 1, 2 or 3 days and which days they would attend. The concept of a 3 day symposium was favored, in other words, Friday, Saturday and Sunday by 42% of the respondents. The rest of the group was split between a two-day symposium which took place either Friday and Saturday or, Saturday and Sunday. Only one respondent preferred a one-day symposium (Saturday). This was interesting due to the somewhat smaller number of attendees on the Friday and a larger number of attendees on Saturday with a small number of people that stayed over for the Sunday morning Annual Business Meeting. Perhaps a three-day conference allows for more in-depth discussion and subjects to be presented and that is what the members liked.

Fifty per cent of the respondents stated that they regularly attend the Annual Business Meeting, while 25% said they did not and 14% stated only occasionally or sometimes. So, how do we remedy the low attendance that continues year to year? The respondents had some great comments and suggested solutions:

- Shorter – send out agenda ahead of time
- Free food or one drink for free
- Emphasize good things that are decided (e.g. Ethical guidelines)
- Give out prizes – have draws at ABM and only those in attendance are eligible to win.
- Make it same day as sessions. Have policy/procedural debates to engage members
- Bribery? i.e. Door Prize
- Tell Christine to do a Dominatrix routine
- Keep it short
- Make it short and to the point
- Serve Breakfast, place in *Arch Notes* and/or OAS-L some indication of issues to be discussed beforehand,
- rather than just providing minutes of the previous year's meeting - this would speed things up.
- Serve food
- Put it in the middle of the day – keep it short – only deal with crucial items

What is obvious from the above comments is that the members feel the current format of the ABM is too long. Attracting more members to the ABM appears to have food and/or drink associated (we'll leave Christine to decide about the Dominatrix routine on her own). My own experience with another Board that I sit on had their ABM on the Sunday morning as well and had also experienced low attendance over many years. In October 2002, we served a free breakfast on the Sunday morning, which was paid for by consultants, and 100 people came – yep, that worked, the best ABM attendance we ever had! In other words, the apparent solutions would be to include beverages and breakfast and make it a short agenda.

The Board of Directors would like to thank everyone who took the time to fill out the survey form and who remembered to turn it in at the end of the conference and/or by mail. Your suggestions are valued and will be considered in planning future symposiums. If anyone would like to submit further comments or suggestions, please contact the 2003 Director of Membership Services, Rob Pihl and/or the 2003 Symposium Organizer, Ellen Blaubergs.

ONTARIO ARCHAEOLOGICAL SOCIETY

POLICY STATEMENT

ON ARCHAEOLOGICAL COLLECTIONS OWNERSHIP AND CURATION

Further to meetings with the Ministry of Culture in November 28 and early December 2002, and further to the Minister's announcement on November 28, 2002, that "A revitalized Ontario Heritage Act may provide the impetus to guide us in our efforts to protect local heritage and [that] we look forward to hearing from all stakeholders about their ideas and proposals" - the OAS struck a Professional Committee to gather information and write a policy submission to be forwarded to the Ministry of Culture before its January 17, 2003 deadline.

The President and the Professional Committee of the OAS met and decided that the single most important issue that we could address at this time was the issue of the crisis in artifact disposition in Ontario. Minutes and notes of 2 meetings previously organized by the OAS and chaired by Jo Holden, Executive Director, were folded into the writing process as well as remarks and ideas from all members of the Committee. Below is the document which the Committee drafted and which was adopted by the Board of the OAS on January 11, 2003, and which was submitted to the Ministry of Culture.

Current Ontario Situation

The question of ownership of archaeological artifacts has never been adequately resolved in Ontario. Indeed, the Ontario Heritage Act is silent on the subject of artifact ownership, such that the issues of artifact ownership, curation and ultimate disposition have, in many cases, complicated the conservation of archaeological resources.

The Ontario Heritage Act currently stipulates, under Section 66 (1), that "The Minister may direct that any object taken under the authority of a licence or a permit be deposited in such public institution as he may determine to be held in trust for the people of Ontario" (1974, c.122, s.66 - under 66 (2), the Minister may also seize any object taken from an archaeological site without a licence or a permit). Moreover, under Regulation 881 (6a), pertaining to licensing under the act, "It is a term and condition of a licence that the licensee keep in safekeeping all objects of archaeological significance that are found under the authority of the licence and all field records that are made in the course of the work authorized by the licence, except where the objects and records are donated to Her Majesty the Queen in right of Ontario or are directed to be deposited in a public institution under subsection 66 (1) of the Act." The applicant for an archaeological licence is required to state where and how the artifacts from any archaeological investigation will be stored. The applicant must also show with each application that they have permission to enter the property where the work is to take place and that they have the permission of the landowner to remove the artifacts. This last requirement is a condition developed as a part of the licencing process and is covered in Section 48 (4).

None of the above can be construed as a claim for crown ownership of artifacts. Indeed, artifact ownership in Ontario continues to be based on British Common Law that derives, in part, from conventions dating back centuries and takes the form of a hierarchy of claim. The hierarchy flows from "true owner" to "landowner or tenant" to "finder". Where the true or previous owner cannot be ascertained due to no attempt to recover the item during a reasonable period of time, then the ownership falls to the landowner. If the landowner makes no claim then the tenant may claim ownership. Where no claim is entered by the tenant, the finder may make a claim.

Artifacts created prior to the arrival of recent trans-oceanic settlers circa AD 900, however, are said to

be related to the aboriginal people of the Americas. In Ontario, as elsewhere, the identification of exact cultural affinity for such objects, especially for the long period before contact, may be exceedingly difficult. It has also been controversial among aboriginal people as to who might be the cultural originators and/or stewards of certain objects. Attributing the ownership of the vast majority of archaeological artifacts to the nearest first nations group is not considered by the province to be in the larger public interest. Aboriginal communities are also in need of the facilities and resources to properly identify and curate archaeological collections appropriate to their needs and desires.

Archaeological artifacts removed from sites under licence in Ontario are generally processed, analysed and curated by the excavators. Since 80% plus of the archaeology carried out in the province is done by consultants, they are looking after considerable numbers of objects. It is estimated that approximately 15 to 20 million artifacts are held outside of public institutions.

The application of the above sections of the Act and regulations therefore, typically involve the curation of recovered artifacts by the archaeologist until such time that the analyses are complete and that a place for ultimate disposition can be arranged, presumably within a fully accredited public repository.

It is also generally assumed that archaeologists will consult with the land owner and/or their client to decide upon the location for the ultimate disposition of artifacts. In general, it is desirable that material from a particular archaeological site are ultimately deposited in a public institution located in the same community (either a local museum or a First Nation cultural centre), provided that adequate storage, curatorial facilities for both artifacts and field records are available, that the institution's collections are accessible to researchers, and that the material is not transferred or disposed of without provincial approval.

The most salient problems with the current Ontario situation are:

- There are no minimum standards for the treatment of archaeological site collections on the part of private collectors, or consultant, university or government archaeologists.
- There is no overall Ministry collections database. The requirement to notify the Ministry of when collections are moved is complied with unevenly.

- Many collections are stored in make-shift arrangements (i.e. apartment lockers, homes and garages [Ministry of Culture])
- Some consultants continue to assign artifacts to developers.
- There are no realistic provisions for collection curation after the failure of businesses or the departure of licenced individuals from their places of employment. The absence of corporate licences exacerbates this situation.
- The identification of permanent and appropriate repositories is a persistent problem for all licenced archaeologists. Space management is a constant problem for those archaeologists working in museum and university environments.
- There is virtually no public interpretation of most site assemblages.
- Collections are not always available for research.
- There should be an explicit prohibition on the sale and non-institutional exchange of artifacts.

Since the late 1980s, CRM work has risen dramatically in the Province. Consequently, hundreds of new sites are found annually, many of which are salvage excavated, yielding ten of thousands of artifacts. The crisis worsens with the passing of each year. CRM budgets do not address the existing curation problem let alone the ever-increasing numbers of artifacts. Collections from individual sites are scattered between agencies and institutions.

How Other Jurisdictions Deal With These Issues

The following website lists types of repositories in the U.S: http://www.cr.nps.gov/aad/collections/repos_07.htm. Two agencies are highlighted herein as examples of how other jurisdictions in the United States have dealt with these issues. Canadian comparisons were not provided as few Canadian jurisdictions are dealing with volumes of material similar to Ontario.

United States National Park Service

Studies had found that, due to inadequate care, archaeological collections were deteriorating, inaccessible, and lacked security. Several major factors had contributed to the crisis including the rapid influx of collections from contract archeology and

the increasing number of material classes collected, such as flotation and soil samples, due to new analytical techniques and research questions. There has been no concomitant increase in funds or space for collections management and care. The decline in the life expectancy and durability of the media used to record archeological sites and recovered data, including paper, inks, color photography, and digital records, has also been identified as a serious issue. Perhaps the most serious issue was the lack of clarity regarding ownership of collections. This has now been addressed.

Ownership responsibility for land-managing federal agencies is identified in the uniform regulations for all federal agencies and federally recognized tribes, in 36 CFR 79. Many states have laws that identify state ownership of collections recovered from state lands. University museums and other types of repositories become owners of archeological collections by conducting field research through a process that clearly assigns ownership or through the acquisition of collections upon transfer of title (see Section VII). When archeological research is conducted on private land, the land owner has first rights to the collections unless a signed agreement transfers ownership to a responsible party, preferably a repository that meets the standards of 36 CFR Part 79.

A primary responsibility of ownership, however, defined by the National Park Service, involves handling long-term care, which involves providing and paying for curatorial and archival services. For many years non-federal repositories housed federal collections at little or no cost to the owner. It is likely that similar relationships between state agencies and non-state repositories were set up for collections made on state land. In return, the repository had unhindered access to those collections for research, interpretation, educational programming, and exhibits. The ever-increasing costs of long-term care, stagnant or decreasing budgets of many repositories, and responsibilities related to the Native American Graves Protection and Repatriation Act (NAGPRA) have forced repositories to try to identify the collection owners and urge them to pay for the significant collections management services provided. This persuades private landowners to transfer title to archaeological collections to appropriate repositories.

Certainly, Indian tribes now have rights to some objects from federal collections as defined in the Act. Determining which tribe has rightful ownership due to its cultural affiliation with Native American human remains or other cultural items covered by

NAGPRA has been a challenge for many repositories.

The costs related to the long-term care of archaeological collections are not insignificant. Unfortunately, little money has been budgeted for collections management and care during project planning over decades of archaeological work. Most repositories have now instigated fees for the long-term care of federal, tribal, state, and local collections they do not own. Some repositories charge fees by the cubic foot for material remains and by the linear foot for records, while others charge by a variety of box sizes or by drawer space. A few repositories charge by the number of staff hours involved in processing the collection. Some charge fees for processing and long-term care for "in-perpetuity", while others are beginning to charge annual fees.

It is currently a priority for the National Park Service to develop a standardized set of activities, materials, and professional expertise by which a repository calculates its different fees for initial collection processing, conservation, archiving, rehabilitation, etc. Efforts such as these will help contractors, CRM managers, and professional archaeologists to reasonably predict curation costs for budgetary purposes.

South Dakota

The South Dakota State Historical Society Archaeological Research Center (SARC) stores archaeological collections from numerous federal, state, and private organizations and individuals. For more information about this repository, visit them at http://www.sdsmt.edu/www_sarc/repos_guide.

SARC manages approximately 5,000 accessioned collections, of which 600 were collected between 1890 and 1975. The other 4,400 were collected after 1975. Although most of the collections originated in South Dakota, a small number are from other states and countries. In addition, educational and comparative collections are available for outreach programs and research. Comparative collections include lithic raw materials, faunal remains and ceramic types from South Dakota and surrounding areas. Most collections received at the repository fall under one of two categories: state-owned or federally-owned. If an archaeological collection from private land is submitted to the repository, it must be accompanied by a consent form signed by the landowner (SDCL 1-20-36). The con-

sent form must give clear title to the State of South Dakota in perpetuity.

The repository will only accept complete collections as defined in 36CFR79.4a. Complete collections include all artifacts and other cultural and environmental materials from the collection, the permits and/or contracts issued for the work, all pertinent correspondence and administrative records, all survey and/or excavation records, field logs and/or journals, project-generated maps, and all laboratory analysis records, all specialized analysis reports and data, copies of any archival or historical maps or materials copied or obtained in researching the project, all photographic negatives, prints, contact sheets, slides, transparencies, films, videotapes etc., computer-readable data, final analyses, and inventories that provide supporting documentation for project reports, copies of any manuals of field or laboratory procedures used to prepare the report, and copies of professional papers derived from and generated during a project.

The cost of storing a collection received at the repository is based on staff processing time and storage space measured by box sizes (in inches): \$24 / [8x10x3], \$36 / [12x6x5], \$108 / [12x18x5], and \$180 / [12x15x10]. The first hour of processing time is free; each additional hour after the first hour is \$15.00. The cost can be kept to a minimum by following a prescriptive set of guidelines thereby eliminating staff processing time.

A Solution for Ontario

While a claim of Crown ownership, in all cases, would be consistent with the public interest, there may be significant disputes with true owners over such claims, especially in the case of pre-contact artifacts. We do recommend that the Province exert claim to all artifacts found on provincial land. We further recommend that the province continue to move in the direction of greater crown protection of all objects, regardless of where they were found. While the Minister may already direct that any object taken under the authority of a licence or a permit be deposited in a public institution, directives of this nature are rarely, if ever, issued.

We therefore recommend that the Province prepare regulation(s), under the Ontario Heritage Act, that establishes standards for the proper treatment and curation of archaeological collections. It would be expected that any holder, private or institutional, of

an artifact collected under licence, would adhere to those standards.

In order to meet the demands implied by such regulations and in anticipation of the fact that few artifact holders would be able to meet normal professional standards, a provincial facility with large storage space for artifacts and archives (climate controlled), wet and dry labs, preparation areas, library and office, is required. The facility would have a clear mission statement and policies for research, acquisition, and de-accessioning. The staff would include an administrator, a collections manager and a curator. It would have an annual budget partially offset by income generated through curation charges. It could also be run out of two provincial facilities, one in the north and one in the south, using existing provincial building stock.



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ARCHAEOLOGICAL LICENCE-HOLDERS: IMPORTANT INFORMATION FROM THE MINISTRY OF CULTURE

As you may know, the Ministry has been implementing improvements to its archaeological licensing and reporting systems as part of the Archaeology Customer Service Project.

A major component of the project has been the development of a new licensing framework in consultation with stakeholders, including streamlined licence categories, clear eligibility criteria, a grandparenting process, and extended licence time frames. As promised, we will be consulting further with stakeholders on the final licensing system.

As the new system will be ready in time for the spring 2003 fieldwork season, we are extending the expiry date on your licence issued in 2002 until March 31, 2003. This will allow you to continue to use your 2002 licence over the transition period to the new system. Please note that this extension applies to the category of licence that you currently hold and any existing conditions on your licence (e.g. geographic restrictions).

Given this special arrangement, you are not required to send an application at the present time. When the new licensing package is ready this winter, we will send it to you with all the information you will need to become familiar with the new system.

It is very important that you be aware that any licence-holder with overdue reports will not be eligible to receive a licence under the new system. Reports for work done under your 2001 licence must be submitted by December 31, 2002 or will be considered overdue.

If you are not currently working under a 2002 licence or have any other unique circumstances or licensing issues you wish to discuss, please contact Neal Ferris, Licensing Officer, at (519) 575-6898. If you have questions about the Archaeology Customer Service Project, please contact Jane Holland, Policy Advisor, at (416) 314-7140.

We are looking forward to implementing the new licensing system and working with you to ensure a smooth transition.

Sincerely,
Rita Scagnetti, Assistant Deputy Minister

C H A N G E S TO THE ONTARIO HERITAGE ACT

The Ontario Heritage Act gives municipalities and the Province powers to preserve and promote Ontario's heritage. The Act is enabling legislation - it empowers, rather than obligates, municipalities to protect their local heritage. Municipal powers include establishing heritage committees (LACACs), designating individual properties and heritage conservation districts, responding to requests to alter or demolish heritage properties, and entering into easements or agreements with owners to maintain their heritage properties. Under the Act, the Minister "may determine policies, priorities and programs for the conservation, protection and preservation of the heritage of Ontario." The Act also gives the Province the power to license archaeologists and protect archaeological sites.

Since the Act took effect in 1975, a number of reviews of the Act have been undertaken. Some of these involved extensive consultations with municipalities, heritage organizations, the development industry, property owners, and other stakeholders interested in heritage legislation.

Over the years, amendments have been made to streamline and strengthen various provisions in the Act. This year, the Ministry of Culture put forward a number of important changes to the Ontario Heritage Act as part of the Government Efficiency Act - a general Act amending legislation across government to ensure consistency, streamline processes, improve clarity and update language.

The Government Efficiency Act changes to the Ontario Heritage Act focus on its archaeological and municipal heritage protection provisions (see Appendix A). Key changes include:

- Clarifying that altering an archaeological site and removing artifacts from a site are not permitted without a licence
- Clarifying that archaeological sites include marine sites
- Allowing the Ministry to define by regulation key terms used in the Act to ensure transparency (e.g. "archaeological fieldwork", "archaeological site", "cultural heritage")
- Allowing municipalities to broaden the mandate of their municipal heritage committees (LACACs)
- Making demolition controls consistent across Ontario; and increasing the maximum fine from \$250,000 to \$1 million for illegally demolishing designated properties
- Removing the requirement that the Ontario Municipal Board approve municipal by-laws establishing heritage conservation districts where there are no objections

The Ministry is now consulting on further changes to the Act to build on the Government Efficiency Act amendments and to obtain input on specific legislative proposals. Based on earlier reviews of the Act and submissions from stakeholders, four key areas have been identified which require improvement:

- Municipal powers to identify and protect built and archaeological heritage
- Improvements to heritage conservation districts
- Provincial powers to identify and protect heritage property of provincial interest
- Specific protections for marine archaeological heritage

This Discussion Guide proposes a range of changes to address issues under each of these areas. Using the results of the consultations, the Ministry intends to move quickly to develop detailed proposals for amendments to the Act for consideration by the government next year.

PART 1: MUNICIPAL POWERS TO IDENTIFY & PROTECT BUILT AND ARCHAEOLOGICAL HERITAGE

Listing Heritage Property

Many municipalities have inventories or lists of heritage property, but the status of such lists is often unclear. The Act does not provide for the formal identification or listing of heritage resources by municipalities, other than through the designation process. Placing heritage property on a list or register allows "flagging" of property for consideration in land use planning decisions and for potential future protection (e.g. by designation). The up-front identification of heritage property also makes owners and potential owners aware that property is of heritage interest and may be subject to designation (and accompanying controls).

Municipal controls on demolition of designated heritage property

Under the current Act, municipalities can delay demolition of a heritage building for 180 days, but cannot prevent it. The 180-day period does not always give communities the time they need to find alternatives to demolition.

The Government Efficiency Act adds requirements that:

- the owner cannot demolish a building until the owner has obtained a building permit for a replacement building
- the replacement building must be built within two years

These new requirements are modelled on the provisions already in force in 14 Ontario municipalities.

PART 2: IMPROVEMENTS TO HERITAGE CONSERVATION DISTRICTS

In Ontario's 25-year experience with heritage conservation districts, a number of issues have arisen about provisions in the Act related to districts. The Government Efficiency Act includes a few changes to district provisions:

- Approval of district designations by the Ontario Municipal Board will only be required where there are objections to the designation (currently all designations must have OMB approval)
- Individually designated properties will be permitted within districts

Heritage conservation district plans

In practice, most designated districts have heritage conservation district plans and accompanying guidelines for the application of district controls and managing changes in the district. However, the Act does not refer to plans or guidelines, or their relation to the municipality's Official Plan.

Scope and application of district controls

Alteration controls on individually designated properties can cover any heritage features of the property, as described in the designation by-law. Alteration controls in districts apply to changes to the exteriors of buildings or structures; they do not extend to landscape features and other elements that contribute to a district's interest and character. Also, controls apply to all (exterior) alterations, no matter how minor. Any such changes must be approved by municipal council and there is no explicit authority to delegate approval of changes to staff.

Interim protection of proposed districts

Properties proposed for individual designation enjoy interim protection pending the completion of the designation, i.e. the designation controls "kick in" once the municipality gives notice of intention to designate. There is no similar interim protection for districts.

PART 3: PROVINCIAL POWERS TO IDENTIFY & PROTECT HERITAGE PROPERTY OF PROVINCIAL INTEREST

Under the Ontario Heritage Act, the Province has the power to designate archaeological sites, but does not have the same power to protect built heritage. In addition, the Act does not give the Province specific power to identify archaeological sites or built heritage property of provincial interest. Most other provinces have such legislative tools and the federal government, through its National Historic Sites program, is able to identify properties of national heritage importance.

PART 4: SPECIFIC PROTECTIONS FOR MARINE ARCHAEOLOGICAL HERITAGE

The Government Efficiency Act makes a number of important changes to archaeological protection provisions in the Ontario Heritage Act, including:

- Clarifying that altering an archaeological site and removing artifacts from a site are not permitted without a licence
- Clarifying that archaeological sites include marine archaeological sites
- Allowing the Ministry to define by regulation key terms used in the Act to ensure transparency (e.g. "archaeological fieldwork", "archaeological site")
- Stipulating that archaeology licences will only be issued if the proposed activities of the applicant are consistent with heritage conservation Part 3 of the Discussion Guide includes a proposal to give the Province the power to identify archaeological sites, including marine sites, of provincial interest.

However, a small number (less than 10%) of fragile marine heritage sites (e.g. those containing human remains) may merit additional protection.

Appendix A

Good News for Heritage – Improvements to the Ontario Heritage Act

The Ministry of Culture has made changes to the Ontario Heritage Act as part of the Government Efficiency Act, which received Royal Assent on November 26, 2002. The Government Efficiency Act amends legislation across government to clarify, update, streamline and improve provisions. The amendments to the Ontario Heritage Act focus on archaeology and built heritage. The key changes are outlined below.

Archaeology Changes

- Clarify that a licence is required to alter or remove artifacts from an archaeological site (a licence is not required for normal agricultural work or routine maintenance of property)
- Clarify that archaeological sites include marine sites
- Simplify the Act by replacing the various terms used for archaeology with the single term "archaeological field-work"
- Allow Ministry to define in regulation key terms that are not currently defined in the Act (e.g. "archaeological site")
- Give the Ministry the ability to put in regulation licence categories, eligibility criteria and requirements
- Clarify that the Ministry licenses individuals, not companies or institutions
- Specify that the activities proposed by licence applicants must be consistent with the conservation, protection and preservation of Ontario's heritage
- Provide the Ministry with the option to issue lifetime licences in the future
- Take licensing forms out of regulation so they can be updated more easily

Built Heritage Changes

- Change Local Architectural Conservation Advisory Committee (LACAC) to "municipal heritage committee" to update name
- Allow municipal heritage committees to advise council on all cultural heritage matters, not just buildings and districts (e.g. archaeological sites, cultural landscapes)
- Allow municipalities to designate property and acquire heritage easements on property of "cultural heritage value or interest" (replacing "historic or architectural value or interest") to reflect the broader meaning of heritage
- Require that the "reason for designation" statement include a description of the specific "heritage attributes" of the property so it is clear what aspects need to be conserved
- Strengthen demolition controls across Ontario by: allowing municipalities to prohibit demolition of designated properties until the owner has obtained a permit for a replacement building providing that the replacement building must be built within two years (council can waive or extend this time limit)
- Increasing the maximum fine from \$250,000 to \$1 million for illegally demolishing designated properties (fourteen municipalities have already adopted these provisions through special statutes)
- Allow individually-designated properties to be included in heritage conservation district designations (individual designation controls continue to apply to these properties)
- Remove the requirement that the Ontario Municipal Board (OMB) approve by-laws designating heritage conservation districts where there are no objections (OMB continues to approve by-laws where objections exist)
- Allow municipalities to recover the costs of restoring illegally altered properties in heritage conservation districts (municipalities already have this power for individually designated properties)
- Require municipalities to include heritage conservation districts in their register of designated properties to provide a single source of information to property owners and the public
- Allow municipalities to set their own fees for extracts from the municipal register of designated properties by removing the requirement that these fees be regulated under the Act
- Remove the requirement for a municipality to obtain Minister's consent to prosecute for an offence under the Act

AMSTERDAM ADVENTURES

Looking for Dutch Kettles

Caroline Walker
York University

I attended the 33rd International Symposium on Archaeometry in Amsterdam in April 2002. I was able to meet many of the experts who have done research on copper alloys, my area of study. The sessions ran from nine to five each day, but I took advantage of the opportunity to look for examples of the copper and brass housewares that I have been studying in the city which was the centre of world commerce in 1600 AD. As yet it is not possible to determine the provenience or even identify many of the artifacts that have been found on North American Contact-period archaeological sites. As 2002 marked the 400th anniversary of the founding of the Dutch East India Company (VOC) special exhibits promised access to new information.

On a Wednesday afternoon, we took a break from the 33rd International Symposium on Archaeometry in Amsterdam for a field-trip to the *Nationaal Scheepshistorisch Centrum*, at Lelystad, north of Amsterdam. Opened in 1995, it amalgamated underwater archaeology conservation and analysis in the Netherlands. As well, almost every city has its ship museum, a tribute to the Netherlands' seafaring past -- and present. I had read a little about Dutch maritime archaeology and some of the artifacts moved to the museum there in *Artefacts from Wrecks* (1997), edited by Mark Redknap.

In 1932 the Zuiderzee was renamed the IJsselmeer and a large-scale drainage project began with the building of a 32-kilometre-long dike between the provinces of Noord-Holland and Friesland, creating 166,000 hectares of new land. The former seabed has yielded hundreds of ships wrecked in its shallow waters since Roman times but especially the 16th and 17th centuries. A few have been completely excavated but most have had to be left in situ after

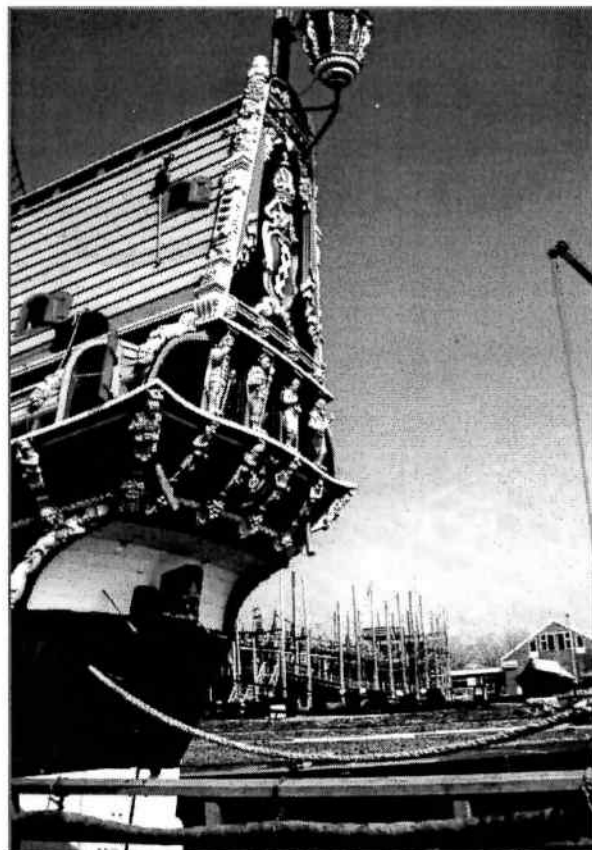


Figure 1. Batavia replica, Batavia Warf, Nationaal Scheepshistorisch Centrum, Lelystad, The Netherlands.

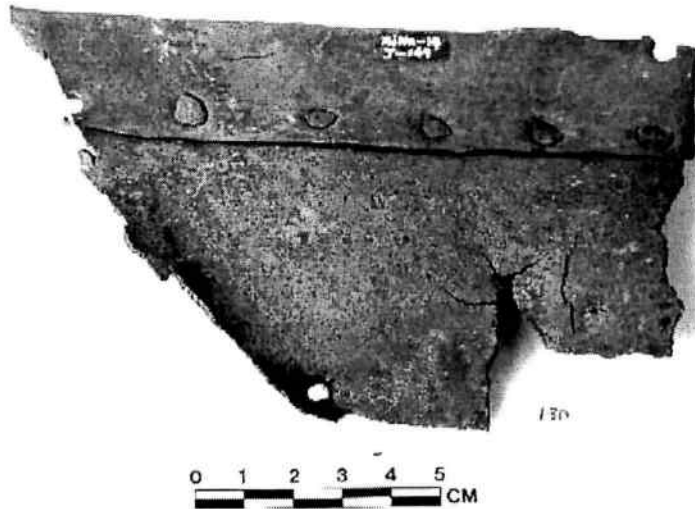


Figure 2. Kettle side, Freulton Site, Ontario.

protective measures were taken. These wrecks provide a “source book for late and post-medieval shipbuilding techniques, and of utensils and equipment” (Vlierman 1997a:15).

At the wharf in the centre’s Batavia Yard, there is a replica, built by students and volunteers in



Figure 3. *Batavia*, cookhouse with grate, Lelystad, Batavia Warf.

1995, of the VOC ship *Batavia* (scale 1:1) which was wrecked in 1629 off the western coast of Australia (Figure 1). Lelystad is on water so shallow that when the *Batavia* was launched it had to be carried to the open sea on a barge.

Bradley (1987:198-99) and others had written about the “Dutch” cylindrical kettles with flat bottoms, which had been used aboard ships because they did not easily tip, but I had not yet seen any even partially complete examples from North American sites. However, there are a few tantalising scraps of what I have been identifying as “riveted rims” found on Ontario sites, including

Hamilton-Lougheed, Kelly-Camp-bell, Ball, Warminster, Auger, Freulton, Hood, and McCarthy (Figure 2). As well, at Ferryland, Newfoundland, some brass scraps seemed to be parts of these flat kettle bottoms and there were many corroded rectangular pieces with neat rows of rivets where sheet was joined.

Beginning with the *Batavia*, I was able to see three examples of ships’ cooking arrangements, wood fires on wooden ships, before the development of stoves. The cook on the *Batavia* had a small room lined with brick (Figure 3). Panels of hammered copper sheet had been nailed onto the door, its handle was an iron ring attached to a heart-shaped plate (Figure 4). Inside, iron bars provided a grate to hold cooking dishes above the fire. In museum, the fragmentary hull of a much smaller ship, the marketboat B71, built in the late 16th century and wrecked around 1620, had been conserved. The tiny cubicle that been used for cooking had been

protected with a well-preserved iron fireback, common in 17th century houses. The cook room of the replica Dutch East Indiaman *Amsterdam*, 1749, seen later at the *Scheepvaart Museum* in Amsterdam, was also lined with bricks. A more elaborate iron grate was built inside it and, again, the wood fire was on the brick floor below.

A further look around the *Batavia* for copper alloy objects and fittings gave a few hints of the origin of some of the scraps found on North American sites that may have come from ships. There was a ship's bell about 25 centimetres high (Figure 5). A double pulley, called a fiddle block, and single pulleys, had copper bands nailed onto them. A wrecked ship would have yielded thousands of copper nails, some very large.

We had time for a too-brief visit to the museum at the Centrum where the "sourcebook" of artifacts are stored. Although they were not labelled (so as I might identify them), some have been reproduced in Vlierman (1997a).

There were two riveted kettles. Both had flat bottoms, turned up around their outside edge, over the body and riveted to it underneath (Figure 6). They are similar to the kettle F9024 in the *Museum Boijmans van Beunigen*, in Rotterdam (van Dongen 1996:114). The larger part of the side is a single sheet rolled into a cylinder and riveted. A narrow strip riveted above it extends the kettle body and provides a rolled-out rim. Loop lugs are fastened on the outside only. One



Figure 5. *Batavia*, bell.



Figure 4. *Batavia*, cookhouse door and pull.

kettle has an iron handle suspended through the lugs.

A riveted kettle from the "Polish Cannon wreck," (No. B2N2) whose artifacts are undergoing conservation in the Centrum's laboratory, has been reduced by corrosion to the edge of its flat bottom, and three perpendicular "rims" or riveted strips where the sheets that formed the sides were joined. One of these had a projection, now broken off, about half way up, which may have served as an extra support. A small part of the top rim, which appears to have been rein-

forced by being rolled over an iron ring, remains. The two lugs are large (AM050, 051), made of rolled (i.e. hollow) copper, flattened at the ends and attached to the rim with two rivets on each side, one below the other. Although the twelve Polish canons found on the wreck are dated 1554-1560, they were probably being recycled, as other evidence suggests a date in the 1660s for the wreck.



Figure 6. Riveted kettle, Storeroom, Nationaal Scheepshistorisch Centrum.

The most spectacular artefacts, for me, were five very corroded tightly rolled sheets of copper from the "Polish Cannon wreck" in the museum lab. This is the first and only sheet copper from the period that I have seen (or heard about). One roll had been restored and could be unrolled (Figure 7). It was about 30 cm wide and over a metre long. As yet it has not been analyzed and it is assumed that it is copper and that it was hammered into sheet, as rolling mills are a late 17th century invention.

In 1602, Thomas Harriot recommended that Samuel Mace, sent to further reconnoitre the Outer Banks and look for the Lost Colony of 1587, take with him to trade: "Copper not brasse 20 or 30 pounds in plates. Some as thin as paper & small & great." The "plate" was to be fashioned into: 10 seven-inch squares and 5 seven-inch circles, 20 six-inch squares and 10 six-inch circles, 40 four-inch squares and 20 four-inch circles, 100 three-inch squares, and 71 pieces "of a smaller size and oblonge and different bignesses" to conform with the sumptuary rules of the Powhatan chiefdom (Quinn 1977:432-4).

From the large number and shapes of the offcuts found at James Fort, and later at Ste-Marie 1, it seems most likely that the inhabitants were cutting up copper sheet and making trade goods, including beads and pendants.

Other important finds from this wreck are coils of very fine copper wire, a bronze tripod cauldron, a brass bell, pins, ceramic pipes, buttons, and lead cloth seals. The storage room had similar brass including candlesticks,

spigots, lanterns, tobacco boxes, clacker bells, a skimmer and spoons. There were also many pewter and iron housewares and small finds. Many of these artifacts are from the mid 17th century merchantman *E 81 Noordoostpolder* which had many old and broken kettles and cauldrons which had not been judged worth salvaging (Vlierman 1997:16, 30).

I also took a train to Rotterdam to see the *Museum Boijmans van Beuningen* collection of

housewares which is catalogued in *Pre-Industrial Utensils, 1150-1800*, by Alexandra van Dongen. Unfortunately Alexandra was ill that week and could not meet me. However, each piece illustrated in the catalogue is beautifully displayed in the lower level of the museum -- except for the only kettle, F9024!

My search for kettles in the merchants' houses of Amsterdam, said to be restored to their 17th century states, yielded little. A kitchen in the *Museum Willet-Holthuysen* had a tall copper cylindrical kettle, with a wide brass riveted band covering the whole of the outside below the rim. It was probably tinned inside. As I later saw a similar kettle in a fireplace store, either the style persisted or the kettle was much later. The *Bijbels Museum* and the *Rembrandthuis*' kitchens had no kettles.

A visit to the *Amsterdam Historisch Museum* was also disappointing. Like many museums today, the displays were high on "interpretation" and low on actual artifacts. On the lower level there were small displays, chronologically arranged, of cooking vessels, keys and locks, shoemaker's tools and cutlery. I had no means of access, just dropping by, to their storage rooms.

Shopping was fun. By this time, I was becoming an "expert." A few hours spent in Amsterdam's antiques row, *Spiegelwartier*, were rewarding. One shop had dozens of ceramic pipes and a box of very tarnished brass and pewter spoons from the 16th and early 17th century, 93 euros each. A complete set of Apostle spoons (twelve pewter spoons, each with a representation of an apostle on the end of its handle) was way out of my league. None of the stores had really old copper riveted kettles.

On April 30, "Queen's Day," Amsterdam turns out for a street party and garage sale. From one sidewalk vendor I bought, for a few Euros, a



Figure 7. Upper- Copper rolls.
Lower - Rolled copper sheet, Polish Cannon Wreck, Conservation Laboratory, Nationaal Scheepshistorisch Centrum.

very heavy copper kettle with a rolled out edge, which he said his father had bought in France a half century ago. Earlier, in the flea market, I had bought some broken tiny white ceramic pipes and two small, recent pewter sugar bowls. Ceramic pipes turn up almost anywhere anyone digs in Amsterdam.

Soon the city will build a new subway (and in the process, restore the foundations of some of the historic houses that are sinking into the mud). It is unlikely that CRM work will discover any brass foundries or coppersmith's shops, as they were outside the old city, but I am sure that there will be a wealth of post-medieval materials. In the meantime, Ron Hancock and his



Figure 8. Volunteer holding unrolled copper sheet, Polish Cannon Wreck, Conservation Laboratory.

group have been analyzing glass beads found in 17th century contexts.

Complete copper and brass kettles are rare finds because there was so much recycling. Two or three visits are required to understand any collection. Advance preparation, by web and literature search, is essential. It is good, although often difficult to get a reply, to email ahead to a museum to meet with curators, to see what is in the storerooms. Someday, I'll be back.

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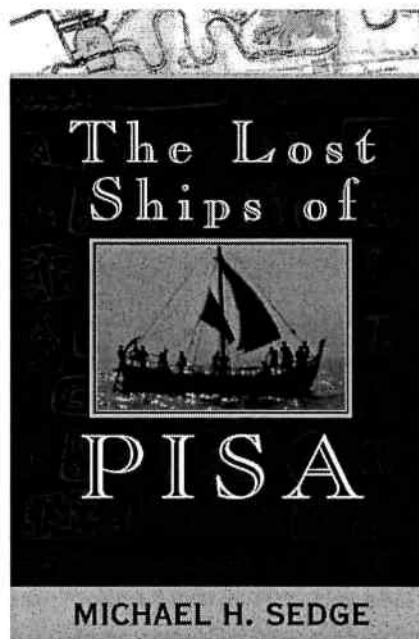
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Amsterdam Historisch Museum
www.ahm.nl

Museum Willet-Holthuysen
www.willetholthuysen.nl



Revisiting The Lost Ships Of Pisa

Reflections by Henry Van Lieshout

IN THE Jan/Feb 2000 issue of *Arch Notes* I provided a report of my August 1999 visit to a site in Pisa, Italy, where a number of Roman ships had been located at a site where the railway authority was about to construct a new building. During my visit there we were told that the archaeological evidence pointed to a fast silting of the site, which caused the harbour to become useless, but that this was an early assessment that could change as the excavation progressed, and as new evidence came to light.

During a recent visit to a local bookstore I was pleasantly surprised to discover a book on this subject, titled *The Lost Ships of Pisa – The discovery of the undersea Pompeii*. Being keen to learn of the latest developments at the site I purchased the book.

The silting theory proposed by the writer's sources at the site has changed somewhat, but I was surprised that the possibility of military aggression at the site was not included in the possibilities for its demise. The theories now proposed are that the area about 1500 years ago was much like a flood plain with various channels to the sea, and that there was an additional river, the Auser, that joined

the Arno at Pisa, and that the harbour was located in a naturally suited area where these two rivers met. The destruction of the 1,200 year-old harbour is ascribed to silting and the effects of storms, and/or tidal waves in the Mediterranean Sea that affected the harbour which was located 5km inland at that time.

The first impression from my visit was that the harbour had been destroyed as a result of military aggression during the mid 5th century, at a time when the Roman Empire was in decline and subject to incursions. After all, in the early 5th century the Visigoth Alaric twice attempted to take Rome, and he came down through the Italian peninsula from the north. He was not just some inexperienced barbaric adventurer, having been both an ally and enemy of Rome in Greece, where he was familiar with naval strategy and the importance of harbour locations, having operated in the waters around Corinth at one time. As a result of being an ally of Rome he was appointed to a high military status by Rome at one time, and was promised a hefty reward, something that the Roman Senate reneged on. He then sought to claim his reward through force early in the 5th century, and

although he reached Rome, he was forced to beat a retreat.

Some ten years later, in 410 AD, Alaric tried a second time, and this time he exercised more care, evidenced by the fact that he isolated, and prevented, the port of Ostia, about 50 kilometres from Rome, from being used to support Roman forces. He also laid siege to Florence, which is only about 75 kilometres from Pisa. So he was definitely in the area, took care of Ostia, and the significance of the nearby Pisan port on which Florence was dependant would probably not have escaped his attention.

Alaric prepared for, and laid a long siege on Rome in 410 AD, which resulted in rampant starvation and death in the city, and this time he demanded, and received much more than his original award. Then in the mid 5th century the Vandals from North Africa took a run at sacking a much more vulnerable Rome, which they did, and they succeeded in moving quite some distance north of Rome.

I based my original observation of military aggression on the following five factors, one, there was definitely at least one imperial warship amongst the ships found; two, there were about 150 unopened amphoras abandoned at the harbour, suggesting a hasty and permanent abandonment; three, there were extremely well preserved skeletons of a man and his dog at the bottom of the harbour, and the stated reason for the preservation was that they were covered by a layer of mud very rapidly, suggesting that the wharfs were demolished and the resulting flow of mud covered them rapidly; four, the warship was turned upside down suggesting severe violence; five, evidence of massive destruction of pottery containers.

Therefore, given the historical fact that there was evidence of a fair amount of military invasion and aggression in the area in the early to mid 5th century, I was sceptical when the archaeologists at the site only offered their "very fast" silting theory. I knew of course that these were early days in the

excavation and investigation, and that some other thoughts would probably emerge.

The current, and now published theory of storms and tidal waves also doesn't seem right, for two reasons. First, the author raises the question as to whether "the rush of seawater from the sea could have been so violent as to overturn and smash these vessels", and that "the answer from scientists and archaeologists is yes". The author's sources assert that "there is no question that at various times in the history of the area, dramatic flooding and other natural event that changed the geological profile of the region would have been sufficiently aggressive to have created havoc with even the strongest ship of the Classical and Roman era".

However, a few pages further into the book, we are told of a recently completed 5-year study at the University of Naples that concluded that, "the Mediterranean is an inland sea, landlocked between continents. The sea is small and its water relatively calm. You can sail from coast to coast, and when passing through wide open sea with threatening waves, there is always an island to offer refuge until better weather comes". So, how do we reconcile a proposal that a relatively calm inland sea produces a storm and tidal wave that destroys a 1,200 year old harbour, located some 5km inland, at the same time in history when there was a significant amount of military turmoil in the area.

The second reason is that the author's sources propose that storm and tidal wave anywhere in the Mediterranean Sea could have dealt this devastating blow to this inland harbour. However, the west coast of Italy where Pisa, Ostia and Rome are located is somewhat protected by the islands of Corsica, Sardinia and Sicily, which tend to form a large bay. The theory of the author's sources would therefore be constrained by the fact that for a tidal wave to have been the source of destruction, this wave must have originated in this "bay", and not just anywhere in the Mediterranean, for if it originated elsewhere, its force would have been obstructed and dissipated by these large islands.

The area of this "bay" seems to be only about 15% of the total area of the Mediterranean Sea, thereby reducing the odds that the tidal wave and military aggression would have occurred at the same time.

So, for me, while the book is very readable and contains a lot of excellent information on the findings at the site, the basic question of how it was destroyed is unanswered.

There are also some wonderful anecdotal stories in the book, such as the one on prosciutto. This delicacy derives from the pig's shoulder, and there were a total of 502 scapulas - the triangular shoulder bone from which prosciutto is produced - at the site. The problem is that 88% of the scapulas are from the right shoulder and only 12% from the left. Why would the numbers be so unevenly distributed?

Well, it turns out that pigs lie on their left shoulder, and the current speculation is that the ham from that shoulder would be considered tough and dry, whereas that from the right shoulder would be soft and tender, and better suited for the discerning palate.

The excavation at the site has revealed 16 boats so far, and more are expected to be uncovered. Some of the boats and artifacts are already housed in a museum in Pisa, in the old Medici shipbuilding facilities on the Arno, and next to the medieval Citadel region of the city. The expectation is that work on the site, interpretation and restoration of the ships and artifacts will take decades to complete.

So for those of us that intend to visit Pisa to see its leaning tower (yes - it has been reopened for visitors to ascent to the top), there's a further reason for the visit because the museum is within easy walking distance from the tower.

*Le Navi
di Pisa*



CAA 2003 Conference

Current and Future Directions in Canadian Archaeology

McMaster University, Hamilton, Ontario, May 7-10

The 2003 Annual Conference of the Canadian Archaeological Association will be held in Hamilton from May 7 through 10, 2003 at McMaster University.

Information regarding deadlines, sessions, registration, etc. can be found on the CAA website: www.canadianarchaeology.com
and the conference website: www.socsci.mcmaster.ca/caa2003



The Ontario Archaeological Society Inc.

The Ontario Archaeological Society Inc.
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