



# *The Ontario Classical Association*

*viresque acquirit eundo*

*novum millennium project - Archaeology*



p. #1

## **Questions to Think About...**

### **1. What is archaeology?**

How and when did the discipline of archaeology develop? What are the goals of archaeology? How does the popular, public perception of archaeology (e.g. Indiana Jones) differ from academic archaeology? What is Classical archaeology?

### **2. How does archaeology work?**

How do archaeologists know where to dig? How do they date a site? What tools do they use and why? What are the proper and accepted procedures of archaeological excavation? How do archaeologists connect the archaeological record with the culture under investigation?

### **3. How do archaeologists explain the past?**

What do excavations reveal about the past; why are continued excavations important for nuancing our understanding of the past? What other disciplines do archaeologists draw upon in reconstructing the past? How do archaeologists reconstruct ancient environments and life-ways?

### **4. What are current issues in archaeology?**

What are the current (political, economic, etc.) problems that archaeologists face today? How do different archaeological organizations, excavation teams, etc. combat these problems? How are archaeological sites maintained and preserved? Why is this important for our continued (and future) understanding of the past?



# *The Ontario Classical Association*

*viresque acquirit eundo*

*novum millennium project - Archaeology*

p. #2

## **Archaeology:**

The discovery, excavation, and analysis of an archaeological site are not simple or straightforward tasks; they constitute a laborious process that requires a significant investment of time and resources. Thankfully, there are many tools and technologies that help archaeologists locate ancient sites and reconstruct their history.

Before setting out to the field, an archaeologist must plan a great deal: the archaeologist's job isn't just digging up a site, but includes pre-excavation and post-excavation archaeology: researching the possible location of a site or sites, obtaining permits from relevant local authorities, securing grants from funding bodies, developing a research plan, scheduling field work and study seasons, organizing an excavation team, and collaborating with specialists to analyze and publish all archaeological findings.

The entire archaeological process, from start to finish, is challenging but rewarding work, leading to new information about the past that can help shape and define our future.

## **PRE-EXCAVATION PROCESSES**

### *How do archaeologists find sites?*

Determining the probable location of a site encompasses meticulous archival work: consulting past excavation reports, old maps, and other historical documents (e.g. Heinrich Schliemann read Homer's *Iliad* as he believed it would help him locate Troy!), as well as speaking to local members of communities to try to determine where ancient sites may have been (and still are) located.

Sometimes archaeologists get lucky and are tipped off about a site. This usually happens when individuals accidentally discover artifacts; for example, farmers have found artifacts when clearing or plowing their lands (e.g. in 2004 a Greek farmer tending his cotton field found a Roman triumphal column marking the victory at Orchomenos in 86 BCE); construction workers have found structures when digging an area for modern development projects (e.g. in 2016 a 2nd CE Roman villa was found beneath the garden of a home in Wiltshire, England); and hikers have stumbled upon exposed artifacts (e.g. in September 1991 two German tourists found Otzi, the Iceman, in the Otztal Alps). These types of discoveries aren't frequent; archaeologists more often have to rely on tried, tested, and true methods of research.

A research method to locate a site or sites is most necessary, either through an archaeological field survey in a region which has good potential to produce relevant sites, or through satellite imagery / air photography. A field survey is the most common method of site testing: surface sampling a given area, collecting (and studying) exposed artifacts, photographing and mapping the area. Archaeologists may also choose to dig small test pits at a site; these test pits are dug at regular intervals, usually every 100 feet, along straight lines called transects. The coordinates of each test pit are recorded along with information about vegetation growth, soil conditions, and, if found, artifact positions and conditions. As a follow up for especially promising sites, an archaeologist may conduct other (more costly) sub-surface testing, using ground penetrating radar, proton magnetometer and electrical resistivity surveys. This is combined, whenever possible, with GIS (Geographic Information Systems) technology to model and predict archaeological sites based on current environmental data.

New technologies in satellite archaeology, using remote sensing and satellite imaging, can also be used to search for sub-surface remains from space using thermal and infrared light. Dr. Sarah Parcak, an American Egyptologist and winner of the prestigious Ted Prize in 2016, has used satellite imaging to identify sites in Egypt, Rome, and elsewhere in the Roman Empire. Her work stands at the forefront of this emerging technology.



# *The Ontario Classical Association*

*viresque adquirit eundo*

*novum millennium project - Archaeology*

p. #3

All of this provides archaeologists with clues as to where a site may be located. Once archaeologists feel confident about a site location, then the real archaeology begins – that is if archaeologists can obtain funding and permissions to excavate. Permits from local authorities must once again be sought and funding applications secured. Excavating a site is costly: one must hire excavators, pay for equipment, purchase land, fund specialists in the field, etc. It can also be dangerous and tied to turbulent political conditions within certain contexts: for example, excavations in the Middle East are particularly problematic because of poor security and intermittent warfare. Archaeologists must exercise caution when excavating in such volatile areas. Archaeologists must also consider the type of excavation that will be conducted (partial excavation or full excavation), the time frame for excavation (usually no more than five years of field work are planned at first), and the resources required to conduct an on-site excavation (a team of specialists, necessary equipment, etc.). After all of this, then the excavation of a site can commence.

The first steps in excavating a site involve the accurate recording of the original state of the site: an archaeological excavation unavoidably destroys the original setting, so it is imperative that archaeologists map and photograph the area(s) to be excavated. Only when this is done can digging begin. At every step, archaeologists must ensure safety and accuracy: the safe excavation of trenches and the accurate recording and preservation of finds. Proper tools and equipment (the trowel, shovel, plumb bob, etc.) must be used by trained archaeologists, and careful procedures for removal of artifacts must be followed; all of this ensures minimal error on site and minimal damage to artifacts recovered.

For more information on the excavation process, see the **Novum Millennium Series Archaeology** video.



# *The Ontario Classical Association*

*viresque acquirit eundo*

*novum millennium project - Archaeology*

p. #4

## **POST-EXCAVATION PROCESSES**

Once a site has been dug and recorded properly, with a full set of photographs and drawings, and carefully kept field notebooks, then a series of study seasons is planned in order to bring experts together to study and publish the various artifacts and other discoveries in academic periodicals and monographs. This is the least glamorous aspect of archaeology, but it is by far the most important. For every hour spent excavating at a site, probably 10 to 20 hours or more of work is spent in the conservation labs, study rooms, libraries and offices, preparing the materials for publication and long-term storage.

### *What happens to the material excavated?*

When archaeologists excavate a site, a wide range of artifacts can be found (pottery, sculpture, jewelry, figurines, lamps, bones [both animal and human], botanical remains [esp. pollen and seeds], miscellaneous small finds [especially metal objects of different types, such as weapons, tools, furniture remains], coins, etc. These finds must be carefully handled as they can be very fragile. Once removed from the trench, an artifact must continue to be carefully treated for future preservation.

These steps are followed by archaeologists in the processing of artifacts:

- 1) Recording – all artifacts must be properly labeled and photographed. Important information is recorded, detailing: the Cartesian grid coordinates of where it was found; its depth below surface level; its material type; as well as the date found; the trench number; and site name. Photographs must include a measuring stick to show the dimensions of the artifact.
- 2) Storage – all artifacts must be individually stored and properly packaged according to material type. Non-organic materials can be stored in paper or plastic bags, plastic containers, or glass vials. Metals and organic materials should be stored in archival containers to avoid cross-contamination or corrosion.
- 3) Packaging – all artifacts must be safely packed (using archival quality packing materials) for transport to labs and storerooms for analysis and storage. Packing lists should be included with every container along with instructions on how to handle fragile or sensitive materials.

Study seasons bring specialists in contact with the various types of finds excavated from a site. Specialists spend a great deal of time analyzing these artifacts. Artifacts can be analyzed individually or collectively, to study patterns or trends (e.g. decorative styles on pottery). They are important sources of information about an ancient people (their diet, religion, living conditions, etc.) and the history of a site (duration of usage, environmental damage to a site, etc.). This information is usually published, in order to inform the general public about the progress and results of an excavation.

Analysis of artifacts usually takes place in a museum storeroom or lab, with permits granted and additional funding secured. These steps are followed by specialists in the collection and analysis of artifacts.

- 1) Cleaning – all artifacts must be properly cleaned, according to their material type. Most common artifacts (e.g. ceramics, glass, stones) are washed to remove excess dirt, but some precious materials (metals, organics) should not be washed as this can cause damage. Specialists or conservators should be consulted about the cleaning of certain artifacts. When washing artifacts in the “wet lab,” cleaners use toothbrushes, dental picks, pipe cleaners, and other tools to remove accumulated dirt. Only water is used in the washing process. Once washed, artifacts are placed on a tray covered with mesh to dry; artifacts can be left for a week to ensure they are completely dried.



# *The Ontario Classical Association*

*viresque acquirit eundo*

*novum millennium project - Archaeology*

p. #5

- 2) Cataloguing – all artifacts must be carefully catalogued. Cataloguing involves identifying, counting, measuring, weighing, drawing, and photographing all artifacts. Artifacts are then stored for future analysis or undergo reconstruction or conservation measures to ensure continued survival.
- 3) Reconstruction – mending of ceramic shards is perhaps the most common artifact repair work, and it is very time consuming. Hundreds of fragments of pottery are found on any given site and these must be carefully matched and mended, whenever possible. Adhesives that can be undone (such as animal glue or epoxy resin which are both water soluble) are currently used in the repair of ceramics.
- 4) Conservation – many artifacts excavated from a site require some amount of conservation work. Metal artifacts are particularly delicate because accumulated rust, bronze disease, etc. can affect the analysis of the artifact (e.g. reading the inscription on a silver coin). Organic materials must also be specially treated by bio-archaeologists for study.
- 5) Analysis – the analysis of artifacts is an ongoing process in which many specialists collaborate. Different types of artifacts are analyzed according to different criteria and in association with all objects found at a particular site to uncover the history of the artifact as well as the site. A specialist will examine the type of material, the decorative detail (if any), inscriptions (if any), deliberate damage to the artifact (if any), the date of the artifact, and the maker or manufacturer (if discernable). This requires the cooperation of art historians, historians, epigraphers, translators, numismatists, etc. Working together, the history of the artifact and site can be recovered.

After analysis, most artifacts are stored in storerooms, which should be monitored for climate control. Long-term conservation and storage can be a serious concern, however, since most storerooms in Mediterranean and African countries do not have climate controls, and so artifacts are subject to temperature and humidity variation.

All artifacts remain the property of the country in which they were found and are only removed from that country (for purposes of further study) with permissions and under the supervision of archaeologists. Some artifacts may be displayed in local museums after extensive analysis.

A site, once it has been dug, must be preserved from natural elements, as well as common foot traffic, and looting, since, once it is identified and exposed, it quickly deteriorates. A common solution to this problem is to re-bury the site, but where a site has interesting visible remains, the local authorities may not allow it to be re-buried. In that case, archaeologists working with conservators must consolidate walls and other built features, lift such things as mosaics or frescoes, and remove sensitive objects, such as inscriptions, carved stones, architectural terracottas, etc. Upon careful consideration, a site may be opened to visitors in association with a cultural heritage organization (e.g. UNESCO).



# *The Ontario Classical Association*

*viresque adquirit eundo*

*novum millennium project - Archaeology*

p. #6

## List of Resources:

- Alcock, S. (2002) *Archaeologies of the Greek Past: Landscape, Monuments and Memories*. Cambridge University Press.
- Alcock, S and R Osborne. (2007) *Classical Archaeology*. Blackwell Publishing.
- Ashmore, W and R.J. Sharer. (2003) *Archaeology: Discovering Our Past*. Rev. Third Edition. McGraw Hill.
- Bahn, P. (2000). *Archaeology: A Very Short Introduction*. Oxford University Press.
- Bass, G. F. Delevorrias, A. and P. Valavais, eds. (2007) *Great Moments in Greek Archaeology*. The J. Paul Getty Museum.
- Camp, J. (2001) *The Archaeology of Athens*. Yale University Press.
- Claridge, A. (2010) *Rome: An Oxford Archaeological Guide*. Rev. Second Edition. Oxford University Press.
- Coulston, J. & H. Dodge, eds. (2000) *Ancient Rome: The Archaeology of the Eternal City*. Oxford University Press.
- Drewett, P.L. (2003) *Field Archaeology: An Introduction*. Routledge.
- Forte, M. and A. Siliotti, eds. (1997). *Virtual Archaeology: Re-creating Ancient Worlds*. Harry N. Abrams, Inc., Publishers.
- Hall, J. (2014) *Artifact & Artifice: Classical Archaeology and the Ancient Historian*. University of Chicago Press.
- Knappett, C. (2014) *An Archaeology of Interaction: Network Perspectives on Material Culture & Society*. Oxford University Press.
- Laurence, R. (2012) *Roman Archaeology for Historians*. Routledge.
- MacKendrick, P. (1984) *The Mute Stones Speak: The Story of Archaeology in Italy*. Second Edition. W.W. Norton and Company.
- McIntosh, J. (1999) *The Practical Archaeologist: How We Know What We Know about the Past*. Factson File.
- Medwid, L. (2000) *The Makers of Classical Archaeology: A Reference Work*. Humanity Books.
- Nelson, S. (2006) *Handbook of Gender in Archaeology*. Oxford University Press.
- Pedley, J. G. (2011) *Greek Art and Archaeology*. Pearson Higher Ed.
- Scholfield, J. (2011) *Great Excavations: Shaping the Archaeological Profession*. Oxbow Books.
- Snodgrass, A.M. (1987) *An Archaeology of Greece: The Present State and Future Scope of a Discipline*. Berkeley & Los Angeles: The University of California Press.



# *The Ontario Classical Association*

*viresque adquirit eundo*

*novum millennium project - Archaeology*

p. #7

Whitley, J. (2001) *The Archaeology of Ancient Greece*. Cambridge University Press.

## **Websites:**

The Archaeological Institute of America, Toronto Chapter  
Institute of Archaeology, Oxford  
The Perseus Project: Art and Archaeology  
Archaeology Magazine  
Ontario Archaeology Society, Toronto Chapter

## **Journals:**

Aegean Archaeology  
American Journal of Archaeology  
European Journal of Archaeology  
Journal of Archaeological Method and Theory  
Journal of Greek Archaeology  
Journal of Mediterranean Archaeology  
Journal of Roman Archaeology  
Oxford Journal of Archaeology  
World Archaeology