

December 2012 - January 2013



Happy holidays and a happy New Year from all the staff of Sustainable Archaeology!

Inside this issue:

WLU Geophysical Investigation of Fort Erie 1 & 2
Sustainable Archaeology Database 2
Student Research Grant Opportunities 3
Upcoming Events, Conferences and Workshops 4

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Wilfrid Laurier University Geophysical Investigation of Fort Erie

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From May 14 through June 22, 2012, faculty, staff and students from the Department of Archaeology and Classical Studies at Wilfrid Laurier University conducted an excavation on the grounds of Old Fort Erie, in Fort Erie Ontario. This investigation, coinciding with the 200th anniversary of the War of 1812, is the first archaeological excavation at the fort and is one of an ongoing series of field schools required as part of the historical archaeology program at WLU.

In August and September of 1814, and after changing hands a number of times, Fort Erie was subjected to a sustained attack by British regular forces, militia, and native allies in an attempt to dislodge a large and well entrenched American force. The 2012 excavation season focused on the defensive positions of the American garrison in 1814 and

Notes From The SA
The Sustainable Archaeology Newsletter

was intended to document visible earthworks to the west of the fort as well as locate and investigate a series of structures identified on historical maps produced at the time of the engagement. The purpose of the geophysical component of the investigation was to explore the potential of resistivity and magnetometry for delineating and broadening archaeological understandings of earthworks at the site and for linking known features and potential hidden structures to historically-available maps. The ultimate goal of geophysical work is to guide the focus for further work at the site.

Survey of the study area was conducted over a two-day period, June 13-14. A GRAD601 dual-array magnetic gradiometer provided by Sustainable Archaeology was used to investigate a number of transects across the major east/west earthwork west of the fort. A larger area was also surveyed encompassing a sample of the battlefield as well as the American defensive ditch and bank,

and a perpendicular traverse. Investigators from Sustainable Archaeology deployed a Geoscan RM15-D resistivity apparatus to survey two of the same transects.

The resistivity survey intersected the ditch and bank system at a point where the earthwork was poorly preserved on the surface. The survey identified linear disturbances of the subsurface environment that correspond with slight changes in surface elevation as identified by a topographical survey of the site. These patterns of resistivity also align with the anticipated trajectory of the earthwork established through excavation at points along its length. Detailed analysis of the resistivity results were hampered however by uniformly high levels of subsurface moisture. This feature of the site is apparently not a new one. Historical reports from members of various forces garrisoned at the fort frequently feature comment on the poor drainage and muddy conditions of their post.



Top: Jean-Francois Millaire of Western University uses the resistivity meter at Fort Erie.
Bottom: Jonathan Haxell of Wilfrid Laurier University uses the magnetic gradiometer.



WLU Geophysical Investigation of Fort Erie

Continued from page 1

Magnetic gradiometry yielded a strongly-patterned distribution of targets associated with the site's defensive network. Relatively low frequencies of magnetic targets in front of the earthwork were mirrored by correspondingly high concentrations of anomalies within and beyond the defensive embankment. Excavation at the site has yet to identify these targets, with the exception of a very strong signature revealed to be the anchor for a modern utility pole. At the same time, excavated units elsewhere along the earthwork encountered quantities of complete and fragmental projectiles. Further work will demonstrate what proportion

of these magnetic targets represents buried ordnance, and the degree to which projectiles remain in situ. Preliminary observation of patterns of parallel polarities in these magnetic anomalies leaves room for optimism that target density may be related to the intensity of the bombardment. If this is so, the survey provides an evocative and sobering picture of the experience of the fort's defenders.

The WLU excavation is very pleased to have had the opportunity to deploy a geophysical approach at Fort Erie. Subsequent field schools will seek to build on the survey completed to date. The equipment and expertise made available by Sustainable Archaeology has

the potential to substantially augment understandings of the very large-scale features associated with the reconstructed area of the fort in a way that excavation could not. Geophysical applications are valuable from a pedagogical point of view as well and provide an opportunity to illustrate to students how surveys are designed and integrated into the investigative process. The WLU Archaeology program is particularly grateful for the excellent training, assistance and support provided by Ed Eastaugh and others at Sustainable Archaeology, and for the work of Ed and Jean-Francois Millaire during their visit to the site.

Sustainable Archaeology Database

The Sustainable Archaeology database and informational platform is currently under development by a team of database developers: Namir Ahmed, Graham Berry, Colin Creamer and Josh Summers. Each member of the team offers a unique and complementary skill set, including experience with database design and implementa-

tion, SQL code, interface and graphic design, and archaeological practice. The team is currently working with the Sustainable Archaeology staff to complete development of the inventory management aspects of the database. Incorporation of inventory management, including RFID tracking technology will allow collections to be managed

and monitored from the point of intake onward.

Other aspects of the database currently under development include the integration of geo-spatial data and mapping capabilities, and the creation of a text-based database structure for the purpose of performing attribute based queries of artifact data.

Student Research Grant Opportunities

The Shelley R. Saunders Thesis Research Grant

Grants support the costs associated with Ph.D. dissertation research. Maximum of (3) grants per annum for up to \$800. Grants support lab research, fieldwork, museum or archive work, but not travel to conferences. Student members of CAPA in good standing, currently registered in a Ph.D. programme in physical anthropology, may apply.

Application Deadline: February 1st.

For more information, visit the CAPA website, www.capa.fenali.net/

Wenner-Gren Foundation

The Wenner-Gren Foundation for Anthropological Research, Inc. is a private operating foundation dedicated to the advancement of anthropology throughout the world. The Foundation has a variety of grant programs for anthropological research and scholarship that are open to applicants irrespective of nationality or country of residence, including doctoral and post doctoral scholars.

Application Deadlines:

Vary depending on specific grant, beginning February 1.

For more information on specific grants and application deadlines, visit www.wennergren.org/programs/ or contact the Foundation: inquiries@wennergren.org

The Leakey Foundation Research Grants

The Foundation funds research related specifically to human origins, including paleoanthropology, primate behavior, & studies of modern hunter-gatherer groups.

Research Grants to doctoral student are in the \$3,000-\$13,500 range; larger grants, especially to senior scientists and post-doctoral students, may be funded up to \$22,000.

Application Deadlines: January 5, July 15.

For more information on deadlines and the application process, visit www.leakeyfoundation.org/grants/

Western Graduate Research Scholarships (WGRS)

Western Graduate Research Scholarships support full time graduate students at Western who are enrolled in Category I programs. The value of the WGRS varies by program and/or by student.

For more information and application deadlines, visit the Western Graduate and Post Doctoral Studies [Funding Opportunities](#) web page.

Mackenzie King Scholarship Trust

Open and Travelling Scholarships for graduates of any Canadian university who engage in postgraduate study, in any field, in Canada or elsewhere.

Application Deadline: February 1st.

For more information, visit www.mkingscholarships.ca/



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Sustainable Archaeology is dedicated to advancing a transformative practice of archaeology that integrates the many forms of the discipline – commercial, academic, avocational – by consolidating the extensively recovered archaeological record from a region of the world and converting that material and contextual data into broadly accessible and integrated digital information. This compiled and converted record will allow for ongoing and innovative research advancing the knowledge, conception, appreciation, and engagement of this compiled and rich archaeological heritage left by the countless previous generations of those who loved, lived, and died in this place, by all those today who draw awareness, meaning, value, and identity from this human heritage.

Upcoming Events, Lectures, Conferences, and Workshops

Events

Canadian Museum of Civilization
Cross-Canada Consultation Tour for
the Canadian Museum of History
December 11 & 12, Toronto, ON.
Dec. 11 panel and roundtable will be
held in the [Toronto Reference Li-
brary](#), Epic Hall and Prologue, from 7
-9pm. Dec. 12 activity kiosk location
TBA. RSVP at [www.civilization.ca/
myhistorymuseum/](#)

Western University Department of
Anthropology: Graduate Research
Seminar Series

Friday, Jan. 11th, 2:30 pm, Western
Social Science Centre, Rm. 2257.
Speakers are Brian Venne and Josh
Smith. Topics TBA.

Friday, Jan. 25th, 2:30 pm, Western
Social Science Centre, Rm. 2257.
Speakers are Claire Venet-Rogers and
Jeffrey Muir. Topics TBA.

Conferences

Society for Historical Archaeology
46th Annual Conference on Historical
and Underwater Archaeology:
January 9-12, 2013, Leicester, Great
Britain. [www.sha.org/meetings/
annual meetings.cfm](#)

World Archaeological Congress -
WAC7, January 13-18, 2013, The
Dead Sea, Jordan.
[wac7.worldarchaeologicalcongress.org](#)

Session of interest: [Archaeology and
the Digital Age](#)

Digital Past 2013: New technologies
in heritage, interpretation and out-
reach, February 20-21, The Shire
Hall, Monmouth, Wales.
[www.digitalpast2013.blogspot.co.uk/](#)

Computer Applications & Quantita-
tive Methods in Archaeology Annual
Conference, March 25-28, 2013, Uni-
versity Club of Western Australia,

Perth (Western Australia).

[www.caa2013.org/](#)

Society for American Archaeology
Annual Meeting, April 3-7, 2013,
Honolulu, Hawaii. [www.saa.org](#)

American Association of Physical
Anthropologists 82nd Annual Meet-
ing, April 9-13, 2013, Knoxville, Ten-
nessee. [http://meeting.physanth.org/
local-arrangements/2013/](#)

Workshops

National Park Service Archaeologi-
cal Prospection Workshop: *Current
Archaeological Prospection Advances for
Non-Destructive Investigations in the 21st
Century*, May 13-17, 2013, Cedar
Point Biological Station, Nebraska.

For more information or to register,
contact Steven L. DeVore, NPS Ar-
cheologist, [steve_de_vore@nps.gov](#) or
visit [www.nps.gov/mwac/](#)