

# CANADIAN ASSOCIATION FOR PHYSICAL ANTHROPOLOGY L'ASSOCIATION CANADIENNE D'ANTHROPOLOGIE PHYSIQUE

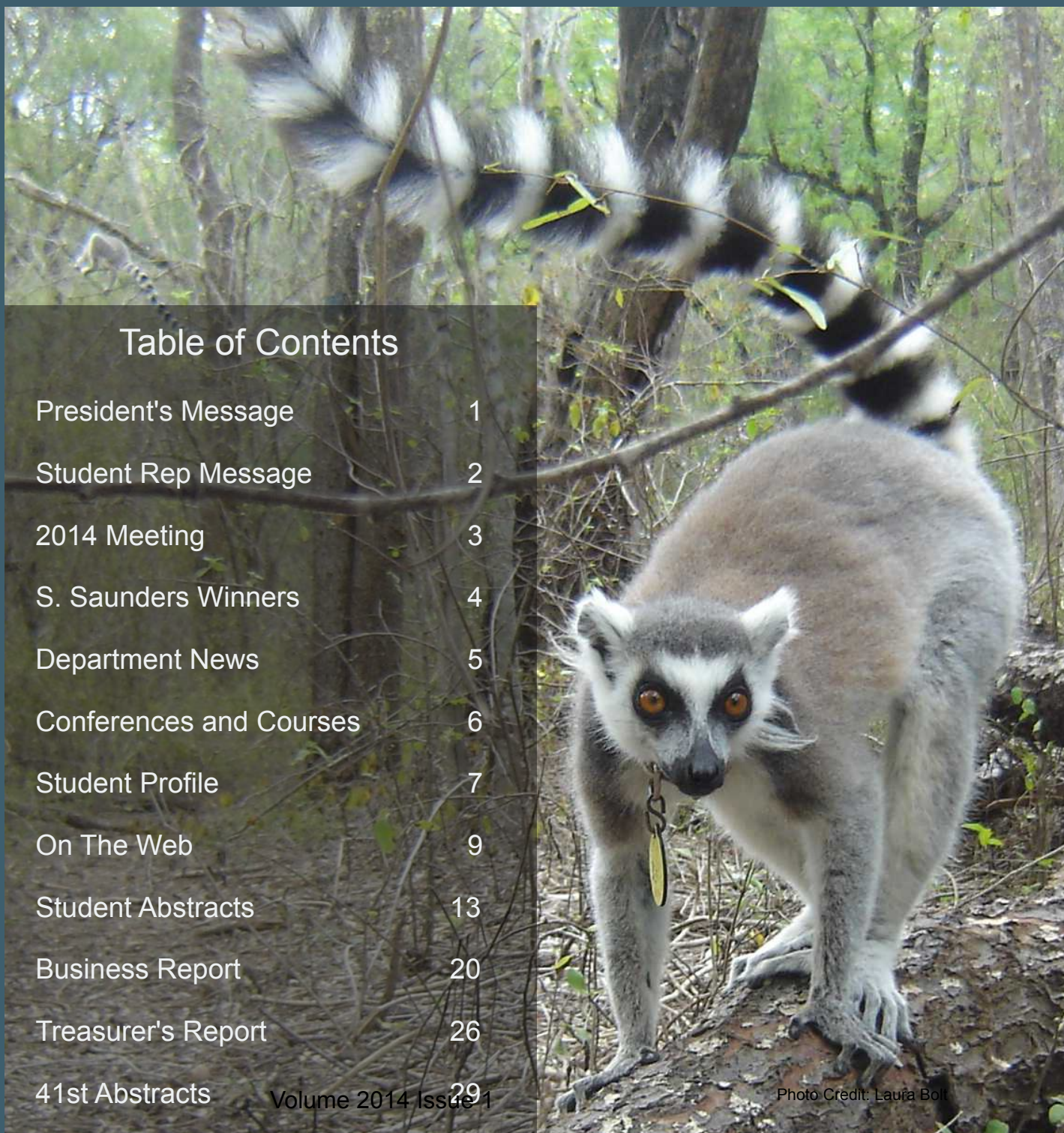


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Volume 2014 Issue 1

Photo Credit: Laura Bolt



# MESSAGE FROM THE PRESIDENT

Tina Moffat, McMaster University



Happy spring everyone! It's been a tough winter across Canada, so I think we're all happy to see some signs of spring and warmer temperatures.

We are now looking forward to the annual **CAPA meeting in Fredericton, New Brunswick, November 6 to 9, 2014**. Our hosts from the Anthropology Department at the University of New Brunswick, **Drs. Koumari Mitra and Victoria Gibbon**, are busy making plans and have a meeting website (<http://www.unb.ca/conferences/capa>) with the location and a few other details.

Please watch for calls for symposia and abstracts in the upcoming months. We are looking forward to seeing everyone come to the meeting, including students. If you are a new CAPA student member, please remember that CAPA does provide some **student travel funding** for those who present a podium or poster paper at the meeting.

We are in the process of creating a new CAPA website, which we hope will be finished by the fall. We have contracted Cheryl Takahashi to design and build it. She has done great work, including making the website for the Canadian Association of Archaeology. I am asking members to **send me their photos for the new website**. So far, I've received some wonderful fieldwork photos. I would also like to include fun photos of members at past meetings or other venues related to physical anthropology. It would be great to have a "blast from the past" page, so please check for old pictures.

I want to remind everyone about our new executive members, **student representative Madeleine Mant** ([mantml@mcmaster.ca](mailto:mantml@mcmaster.ca)) and **newsletter editor Jennifer Sharman** ([jsharman@dunelm.org.uk](mailto:jsharman@dunelm.org.uk)). Please feel free to contact them if you have any questions or concerns. I also want to thank **Leslie Chan and Jennifer Smith, our outgoing webmasters**, for their dedicated work over many years to the CAPA website. With the renovation of the website this year, we will create the **new position of website editor**. The website editor will be responsible for updating website content only (not technical management of the website), and will work closely with the newsletter editor in keeping CAPA members informed of upcoming events and news. If you or someone you know has any knowledge about website media or have always wanted to learn about it, please consider contacting me to nominate yourself or someone else for that position.

Finally, I want to thank **Drs. Anne Katzenberg and Warren Wilson** of the University of Calgary, for hosting the AAPA (and PPA and HBA) in Calgary, April 8 to 12, 2014. They were the hosts with the most, running a flawless and fun conference!



# MESSAGE FROM THE STUDENT REPRESENTATIVE

Madeleine Mant, McMaster University



Greetings, CAPA/ACAP student members!

Let me begin by thanking our outgoing student representative, Amy Scott, for her excellent work over the past two years. She has set a high standard for student advocacy and conference involvement, in particular with the well-attended graduate student luncheon at CAPA 2013. During my tenure as CAPA/ACAP student representative, I aspire to continue encouraging student involvement and promoting student interests in the CAPA/ACAP community. Echoing the CAPA/ACAP mission statement, I hope to understand and promote the diversity and complexity of the student membership. Students are an integral part of CAPA/ACAP; in fact, approximately 60% of CAPA/ACAP are student members. Let us ensure that our voices are heard!

My name is Madeleine Mant and I am a PhD candidate at McMaster University. My research is concerned with accidental and perimortem trauma in Georgian London; using voluntary hospital archival records and contemporary human remains, I am constructing a framework in which to better understand accidents during this period. Spoiler alert: people in the past were clumsy!

I encourage you to use the Newsletter and Annual Meeting as tools for your professional development. An easy way in which you can be involved is by providing a short abstract concerning your MA or PhD research to the newsletter. The submission of abstracts

encourages networking between those with shared interests and helps to limit the repetition of research topics. If you come across anthropology-related websites or have 'Notes from the Field' please submit them to Jennifer Sharman. The Newsletter is a living document that will only benefit from increased student influence.

The CAPA/ACAP Annual Meeting is another arena in which to demonstrate student presence in the organization. The prospect of presenting at a conference need not be daunting – CAPA/ACAP is a supportive environment in which to showcase your research and gain valuable experience and feedback. The process of academic research often promotes isolation; I encourage you to take advantage of the community-building opportunities inherent in the CAPA/ACAP Annual Meeting.

I am thrilled by the prospect of meeting you all and hearing about your research, both informally and in a conference setting. Please email me at [mantml@mcmaster.ca](mailto:mantml@mcmaster.ca) with your queries, concerns, and especially any amusing anecdotes.

I look forward to seeing you in New Brunswick in November!

Best wishes,  
Madeleine

MESSAGE FROM VICTORIA GIBBON  
**UNIVERSITY OF  
NEW BRUNSWICK**  
CAPA 2014 42nd Annual Meeting

Dear  
CAPA  
Members,

This year marks the 42nd anniversary of the annual meeting of our Association. We welcome you to join colleagues, mentors, friends and students in Fredericton, November 6-9th, 2014. The meeting is hosted by Dr. Koumari Mitra and Dr. Victoria Gibbon from the Anthropology Department, University of New Brunswick. The Fredericton campus was established in 1785 and is among the oldest public universities in North America

and the oldest English-language university in Canada.

Nestled alongside the St. John River, Fredericton is New Brunswick's Riverfront Capital, a city that has a friendly and warm small-town feel but offers visitors the choices and diverse tastes of a cosmopolitan city. With a friendly atmosphere and historical setting, New Brunswick's capital city makes an ideal destination for the upcoming conference. We are currently busy with our preparations for the meeting. We have reserved rooms at a special conference rate with the Delta Fredericton; this newly renovated hotel has spacious rooms with Wi-Fi capability. The conference will be held on campus at the Wu Centre. For the banquet on Saturday night, we have

Fredericton's City Hall, dating to 1876, is the Maritimes' oldest city hall that is still used. A collection of restored clockworks and 27 hand-woven tapestries illustrating Fredericton's history can be viewed inside Council Chambers.

*Photo Credit: Fredericton Tourism*

chosen an exquisite menu with three possible options for a three-course meal (menu is posted on the website) prepared by Executive Chef Leanne English. Friday night, we are exploring the option of a beer tasting on campus by a local brewery, Picaroons. Tickets for this event will be sold separately.



Fredericton Cityscape

*Photo Credit: Fredericton Tourism*

We have put forward the first call for abstracts and will continue to accept them until August 15th, 2014. Information for student prizes can be found on the registration page of the website. If anyone would like to propose a special symposium session, please let us know. More details can be found on the conference website, at

<http://www.unb.ca/conferences/capa>. Also, please feel free to contact us directly at [capa2014@unb.ca](mailto:capa2014@unb.ca). We look forward to seeing you in November.



University of New Brunswick campus, aerial view. Founded by United Empire Loyalists, UNB is North America's oldest public university.

*Photo Credit: Fredericton Tourism*

For more information on where to go and what to see in Fredericton, go to:  
[www.tourismfredericton.ca](http://www.tourismfredericton.ca)

2014

## SHELLEY R. SAUNDERS RESEARCH GRANT RECIPIENTS

This year's deserving recipients of the Shelley Saunders Research Grant are:


**Rebecca Gilmour**, PhD candidate in the Department of Anthropology, McMaster University, for her dissertation research, entitled 'Civilian experiences of trauma, healing, and physical impairment in Roman frontier provinces'.

**Ashley Nagel**, Department of Archaeology, University of Calgary, for her PhD dissertation, 'Childhood health outcomes in relation to parental strategies in Mwanza, Tanzania'.

**Josie Vayro**, PhD candidate from the Department of Anthropology, University of Calgary, for her research project, titled 'Polyandrous mating and female counterstrategies to infanticide in ursine colobus monkeys'.

**Congratulations to the 2014 Shelley R. Saunders Thesis Research Grant winners!**





*Damage Control: The Untold Story of Venereal Disease in Hamilton | 1900-1950*

**McMaster University**  
Inspiring Innovation and Discovery

## DAMAGE CONTROL

The Untold Story of Venereal Disease in Hamilton | 1900-1950

Cover Design: Murray Clayton  
Photographer: James Clark

D. Ann Herring, Editor

## McMaster

Ann Herring is currently editing the latest book written by 4th year honours anthropology students studying ANT 4S03 Anthropology of Infectious Disease. The book is titled: *Damage Control: The Untold Story of Venereal Disease in Hamilton, 1900-1950*.

PhD candidate Myriam Nafte is one of the 25 finalists for the SSHRC Storytellers contest (the top 5 will be announced later). Here is the link to her video: [http://youtu.be/HYSA7kP\\_UQ](http://youtu.be/HYSA7kP_UQ)



Myriam Nafte, SSHRC Storyteller top 25 finalist.

Photo Credit: McMaster University

Lori D'Ortenzio won the Cockburn Student Prize at the 2014 PPA meetings in Calgary for her podium presentation "You Are Not What You Eat During Physiological Stress: Isotopic Evaluation Of Human Hair".

organizations throughout northern Madagascar. One of those community organizations will be the KOFAMA association that we have worked with since 2007 – more ethnoprimateology in Ian's future!

## Western

Andrew Walsh and Ian Colquhoun (as Principal Investigator and Co-Principal Investigator) have received SSHRC funding for a 5-year project entitled "An Ethnographic Study of Small-Scale Transnational NGOs". This funding will allow us to continue collaborating with colleagues and students at the University of Antsirananana, Madagascar, as well as with community



Ian Colquhoun, Co-PI of SSHRC-funded project "An Ethnographic Study of Small-Scale Transnational NGOs".

*Photo Source: Ian Colquhoun*

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# CONFERENCES, COURSES AND OPPORTUNITIES

**Canadian Association of Physical Anthropology:** University of New Brunswick, Fredericton, NB. Nov. 6–9, 2014. Go to: <http://www.unb.ca/conferences/capa>

**British Association for Biological Anthropology and Osteoarchaeology:** Durham University, UK. Sept. 12–14, 2014. Go to: <https://www.dur.ac.uk/archaeology/conferences/current/babao2014>

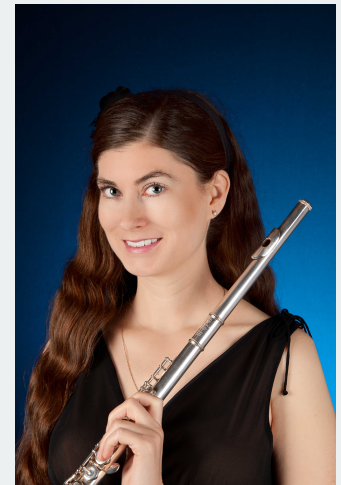
**Paleopathology Association** (European Meeting): Lund University, Sweden. Aug. 26–29, 2014. Go to: <http://www.ark.lu.se/forskning/konferenser/ppa-2014>

**Cadaver Dogs** and **Fingerprints:** two summer courses, offered by Saint Mary's University, Halifax, from May 24–31 and June 1–8, respectively. The courses are science-intensive, with an experiential learning component, and are equal to a one-term university credit. University course prerequisites or relevant background in law enforcement required. For more information, see pages 12 and 19 of this issue.

# GRADUATE STUDENT PROFILE

Laura Bolt, PhD, University of Toronto

I completed undergraduate degrees in flute performance (BMus) and biology (BScH) from Queen's University at Kingston, and a master's degree in musicology from Cambridge University, UK, before becoming fascinated by primate vocalizations. I recently finished my PhD in biological anthropology at the University of Toronto under the supervision of Joyce Parga and Shawn Lehman. Doing a doctoral project about primate communication, specifically vocal communication in the ring-tailed lemur (*Lemur catta*), has allowed me to combine my research interests in biology and music.



Laura Bolt while not in the field!

The ring-tailed lemur is a gregarious and group-living primate with a large vocal repertoire. Although the ring-tailed lemur can be found in zoos throughout the world, it is native to southern Madagascar. I completed my dissertation fieldwork at Beza Mahafaly Special Reserve in southwestern Madagascar in 2010. This established field site was a fantastic place to study lemur behaviour and vocalizations, and yet the region remains so remote that some of the small children in the nearby village had never seen a white person before, and were terrified of me! I also had the opportunity to undertake pilot research at another fascinating site: St. Catherines Island, USA. This uninhabited barrier island off the coast of Georgia has been made into a nature preserve, and the animals there include a released zoo population of provisioned, free-ranging ring-tailed lemurs.

Ring-tailed lemurs are fascinating study animals for many reasons, including their complex social behaviours. Female ring-tailed lemurs typically spend their entire lives in the same social group, although males disperse after reaching sexual

maturity and may join several different groups throughout their lives. This species has a multi-male, multi-female mating system, meaning that during the annual breeding season in April/May, estrous females will mate with multiple males, while males will mate with as many females as possible. Notably, the ring-tailed lemur is female-dominant, meaning that all adult females take social precedence over males. However, despite this female dominance, males have unique social behaviours, including sex-specific vocalizations. My doctoral project focused on determining the functions and uses of male vocalizations in this species. Of the 22 distinct vocalizations used for communication by adult ring-tailed lemurs, two calls are male-specific (the howl and the squeal), while one has male-specific uses (the purr).

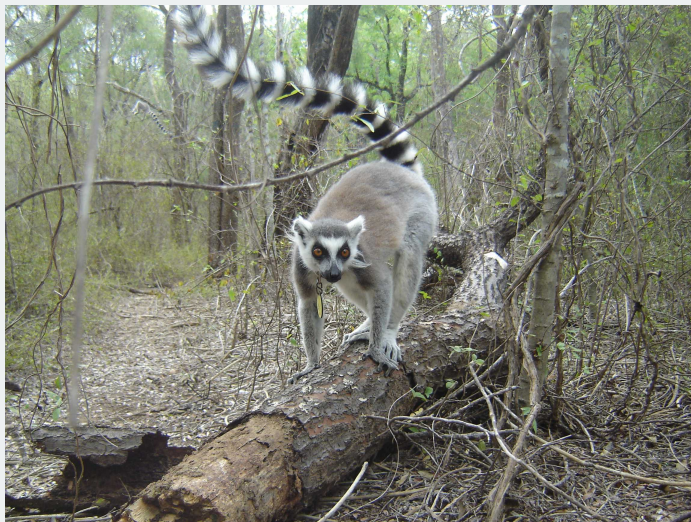
The howl vocalization is a type of long call in the ring-tailed lemur. In primates and other animals, long calls are often made in chorus, and are typically used to attract females and/or to keep away rival males. I found that ring-tailed lemurs howl to advertise their presence and location to males from other groups, but not to male or



female members of their own group (Bolt, 2013a). This may discourage male immigration by advertising the number of sexually mature males already present in a group.

The squeal is a sex-specific sharp call made by ring-tailed lemur males while they wave their ringed tails towards other males and females. I found that the squeal is an agonistic signal when used towards other males, but does not specifically indicate aggression or submission (Bolt, 2013b), meaning that it is used by both winners and losers during fights.

The ring-tailed lemur purr vocalization sounds similar to a domestic cat's purr, and can only be heard when in close proximity to the animal.



A male ring-tailed lemur at Beza Mahafaly Special Reserve, Madagascar (also on cover of this issue).

Photo Credit: Laura Bolt

Mammals generally purr in affiliative contexts, such as while grooming or nursing infants. Both male and female ring-tailed lemurs purr in these affiliative contexts, but I found that males purr primarily in an unexpected context: during male-male agonistic interactions, such as fights (Bolt, 2014). Although dominant males purred at higher rates, purring seems to be linked to intrinsic male qualities rather than dominance rank.

I presented these research findings at the Canadian Association for Physical Anthropology



Laura and a ring-tailed lemur on St. Catherines Island, USA.

Photo Credit: Laura Bolt

conferences in 2012 and 2013, and was very pleased to be awarded CAPA's Davidson Black Prize for my podium presentation in 2012.

While completing this work, I was also grateful to receive a Canada Graduate Scholarship from the Natural Sciences and Engineering Research Council of Canada, Ontario Graduate Scholarships, and grants from the American Museum of Natural History, the Edward J. Noble Foundation, the St. Catherines Island Foundation, and the University of Toronto.

## References

- Bolt, Laura M. 2013a. The Function of Howling in the Ring-Tailed Lemur (*Lemur catta*). *International Journal of Primatology*, 34(1): 157-169.
- Bolt, Laura M. 2013b. Squealing Rate Indicates Dominance Rank in the Male Ring-Tailed Lemur (*Lemur catta*). *American Journal of Primatology*, 75(12): 1174-1184.
- \*Photography credit for cover photo of this issue
- Bolt, Laura M. 2014. Male-Specific Use of the Purr in the Ring-Tailed Lemur (*Lemur catta*). *Folia Primatologica* (in press).

# PHYSICAL ANTHROPOLOGY

## ON THE WEB



This new feature in our newsletter will showcase the presence of physical anthropology on the internet - in terms of websites with interesting, relevant content; websites as anthropology learning or teaching resources; as a method of public outreach; to connect to other physical anthropologists; anything else. There's even a physical anthropology app, profiled on page 10!

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I find social media to be an excellent way to find out about current research and to make connections with other scholars, both within bioanthropology and related fields, and in areas I would not have immediately thought of as being related to my work. It is not just useful for scholarly purposes; it is also a means by which we can influence bioanthropology in the media. Social media played a significant role recently in the successful campaign to get National Geographic Channel to indefinitely postpone airing its controversial “Nazi War Diggers” show: <http://www.heritagedaily.com/2014/04/national-geographic-buries-nazi-war-diggers/102664>. If you are new to bioanthropology on social media, here are a couple of places to get started.

## BIOANTHROPOLOGY ON SOCIAL MEDIA

By Heather Battles

Facebook, many tied to specific professional organizations. The most popular group, not affiliated with any particular organization, is the BioAnthropology News group, with a current membership of over 8,000: <http://www.facebook.com/groups/BioAnthNews>. It describes itself as a “meeting place” for those interested in biological anthropology. Members post current bioanth-related news and material, and moderators maintain an archive of content, which makes a valuable teaching resource, especially the weekly Monday Movie Clips.



### Facebook

There are a number of bioanthropology-related groups on



### Twitter

There are quite a few bioanthropologists on Twitter, not to



mention scholars in related fields, as well as accounts for academic journals and organizations. I have compiled a list, which is by no means exhaustive

(<http://twitter.com/anthroetc/lists/phys-anthro>) and others maintain similar lists as well. The 'lists' function is especially helpful if you use Twitter for multiple purposes and follow a large number of accounts.

Twitter also has something called #FollowFriday, where (on Fridays) people share a list of people on Twitter that they recommend others follow. #ScholarSunday is the same thing, but

specifically for academics. It is a great way to find fellow bioanthropologists and other academics on Twitter.

**If you would like to write a submission about physical anthropology on the web, or know of a great website, please email Newsletter Editor, Jennifer Sharman: [jsharman@dunelm.org.uk](mailto:jsharman@dunelm.org.uk)**



If you don't know what some of these additional social media sites are, it's time to find out! Left to right: Google Plus, Instagram, LinkedIn, Pinterest and YouTube.



## TALUS

An app for physical anthropologists to use in the field, in the lab, anywhere.

Forensic anthropologists use a lot of sources when analyzing human remains, but methods are spread out across decades' worth of journals and books! Talus compiles the relevant equations, figures, and charts from the most popular studies for ease of use in the lab, field, and classroom. References are logically sorted by age, sex,

ancestry, and stature, then broken down into metric and nonmetric methods or by skeletal element, as needed.

Talus was envisioned as a quick reference tool as well as an educational reference. Perfect for the undergraduate osteology class who need to look at the images from Phenice

1969 or the professional who doesn't want to dust off Trotter and Gleser 1958 to find a stature regression equation.

Under development since 2011 and recently released by Emily Niespodziewanski through Michigan State University's MATRIX program, Talus is available for Droid through Google Play (free) and as a web app at [talus.matrix.msu.edu](http://talus.matrix.msu.edu) (free). An iOS version is forthcoming – in the meantime, iPhone users can still access the full app directly through their browser!

Please check it out and feel free to send feedback to Emily Niespodziewanski at [niespod1@msu.edu](mailto:niespod1@msu.edu) or @SenseOfHumerus.

**Thanks to Derek Congram for sending this information!**



Male or female? If you're not sure, try Talus. (Skull from Spitalfields Named Sample, Natural History Museum, UK.)

*Photo Credit: Jennifer Sharman*

Would you like to review TALUS for the next issue of the newsletter? Email Newsletter Editor, Jennifer, at [jsharman@dunelm.org.uk](mailto:jsharman@dunelm.org.uk).



Apparently in black-and-white days, kids excavated sites. Henley, UK, c. 1960.

*Photo Credit: Morguefile.com by Jusben*

## DAY OF ARCHAEOLOGY

A website that aims to inform the public about what archaeologists do, by describing a typical day in the life of archaeologists.

The Day of Archaeology 2014 is set for Friday, July 11. Archaeologists can participate by submitting a description of a day in their work life, in writing, photos, film or audio recording.

This will be the fourth Day of Archaeology. Previous years have drawn participants from all

over the world, from professional archaeologists to excavation volunteers.

Find out more at:  
<http://www.dayofarchaeology.com>





# FRSC 3804 Cadaver Dogs

## May 24-31, 2014

Registration begins February 14, 2014



This course is an introduction to the use of dogs in locating human remains. The goals are to give students an understanding of a cadaver dogs capabilities, to train students in interpreting basic dog behaviours, and to provide field search experience working with canines. The course will give an overview of the types of dogs used in search work and the fundamental principles for training such dogs. The bulk of the course will focus on human remains detection using cadaver dogs and forensic-remains dogs. Topics included are basic scent theory, dog olfactory systems, 'reading' dogs in the field, how to work with dog handlers and other search professionals, and types of certification for dogs and handlers. There will be both theoretical classroom work and field experience with dogs and their handlers.

Pre-requisites: One or more of the following: 60 credit hours including ANTH 2282, a relevant law enforcement background, or more than two years experience in search and rescue work.



For additional information contact Dr. Tanya Peckmann  
Department of Anthropology  Saint Mary's University  
tanya.peckmann@smu.ca 902-496-8719

# STUDENT RESEARCH ABSTRACTS

## MASTER'S STUDENTS

Master's and PhD students are encouraged to send their research abstracts for publication in the newsletter. Abstracts should be approximately 250 to 500 words. Please include student name, affiliation, research title, and bibliography for in-text citations (if any). If figures or photographs are included, please also provide source details and figure captions. Email abstracts to [jsharman@dunelm.org.uk](mailto:jsharman@dunelm.org.uk).

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### Dental Non-Metric Analysis of the Pre-Columbian Archaeological Site of Canimar Abajo, Cuba

**Kaitlynn Alarie**

Department of Anthropology, University of Manitoba

My research aim is to determine the relationship between two chronologically separate cemetery populations at the pre-contact archaeological site of Canimar Abajo, Matanzas Cuba. Canimar Abajo represents one of the oldest and richest archaeological sites in Cuba. As such, the skeletal remains recovered from Canimar Abajo have the potential to answer many questions regarding the earliest inhabitants of Cuba and their prehistoric population movements. Canimar Abajo is characterized as a multi-component shell midden necropolis with an abundance of well-preserved skeletal material (Morales Valdes, 2009). The burial populations of Canimar Abajo are found in two distinct cemeteries, which are separated by a roughly 1500 year burial hiatus (Roksandic et al., in prep; Morales Valdes, 2009). My research is focused on determining the affiliation of these two burial populations through the use of biological distance statistics based on dental morphology. I will also compare the two Canimar Abajo populations to a smaller sub-sample of contemporary Cuban burials to better situate the Canimar Abajo populations within a broader pattern of early Cuban populations.

Identifying these potential relationships through the use of trait frequencies and biological distance statistics can help establish a history of early human migrations in Cuba supported by strong empirical evidence. The origin of early Cuban migrants, their cultural identity and subsistence patterns, and the timing of early occupations of Cuba have not received adequate attention by the



research community. Determining the relationships between the two Canimar Abajo cemeteries and contemporary Cuban burials will help develop a framework of early human occupation in Cuba. The outcomes of this research will both answer and pose important questions regarding the identity of the earliest Cuban populations and the complexity of prehistoric population interactions between early island colonizing groups. This project will contribute to the currently limited empirical evidence concerning pre-historic human migrations in Cuba.

Morales, D. 2009. Caracterizacion osteologica de aborigenes adultos exhumados en Canimar Abajo, durante la campana de excavacion del 2006. Tesis en opcion al titulo de master en antropologia. Universidad Habana, Cuba.

Roksandic, M., Rodriguez, S., Arrendondo, C., Buhay, B., Smith, D., Matheson, C., Chinique de Armas, Y., Armstrong, S. & Martinez, A. In prep. Dating the Early Occupation of Cuba: Current Issues.

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## An Exploration of the Utility of Dental Calculus in the Study of Diet in the Middle Holocene Cis-Baikal

**Megan R. Clarke<sup>a</sup>**, Angela R. Lieverse<sup>a</sup>, Elizabeth C. Robertson<sup>a</sup>, Vladimir I. Bazaliiskii<sup>b</sup>, Olga I. Goriunova<sup>b</sup>, Andrzej W. Weber<sup>c</sup>

<sup>a</sup> Department of Archaeology and Anthropology, University of Saskatchewan, Canada

<sup>b</sup> Ethnography and Archaeology, Irkutsk State University, Russian Federation

<sup>c</sup> Department of Anthropology, University of Alberta, Canada

The utility of dental calculus as a proxy for diet is explored for the middle Holocene Cis-Baikal region of Central Siberia. The study area was inhabited by two culturally and biologically distinct cultures, the early Neolithic (EN) Kitoi culture (8000 to 7000/6800 cal. BP) and the Late Neolithic-Early Bronze Age (LN-EBA) Isakovo-Serovo-Glaskovo (ISG) cultural complex (6000/5800 to 4000 cal. BP), separated by a period of cultural transition marked by a cessation in formal cemetery use. Data were collected from four cemetery sites, two dating to the EN and two dating to the LN-EBA. Individuals were scored for calculus on four separate tooth surfaces, using a standardized ranking system, in order to create severity indices for individuals. Kruskal-Wallis tests show that, for adults, the EN cemetery of Shamanka II exhibits considerably higher rates of calculus formation compared to the other cemeteries, most notably in the anterior quadrants of the mouth. Khuzhir-Nuge XIV (LN-EBA) is consistently ranked second highest making it more comparable to the Shamanka II (EN) population than Lokomotiv (EN), but this is not always statistically significant. Previous research has shown that the diets did not differ considerably between the EN and LN-EBA groups. This suggests diet is only one of many



Large calculus deposit on tooth 46 of Shamanka II, Individual 30-1.

*Photo Credit: Megan Clarke*

factors affecting calculus formation and, therefore, that other factors such as environment mask the direct relationship between calculus and diet. Samples were also taken from ten individuals from each site to conduct a microscopic analysis of inclusions within calculus, focusing on starch grain and phytolith identification. To date, only a few plant micro-particles have been found, supporting past research that plants played a minimal role in the diet.



Starch grain from Khuzhir-Nuge XIV,  
Individual 52. Size: 14.8  $\mu\text{m}$ , 600X  
magnification

Source: Megan Clarke

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## Investigation of Heat Treated Bones and Teeth and Effect on Stable Isotope Ratios

**Poiyun Marr**

Department of Life Sciences: Archaeological Sciences, University of Bradford

The intention of this Master's research project is to examine the viability of using the organic component of bone, specifically collagen, for stable isotopic studies (specifically,  $\delta^{13}\text{C}$ ,  $\delta^{15}\text{N}$ , and  $\delta^{18}\text{O}$ ) after bone has been subjected to temperatures in the range of 350-600°C. This project consists of a thorough literature review of previous taphonomic experiments with emphasis on the methods and analysis sections; performing heating experiments on fresh, defleshed *Sus scrofa domestica* samples; comparing methods for the optimal extraction of sufficient intact collagen molecules for further analysis; and finally, the stable isotope analyses. This study will focus on the compact bone, but trabecular bone and dentine may also be examined for comparison, depending on the time constraints of the project.

The results of this project will inform researchers as to which, if any, stable isotope analyses will be reliable when applied to defleshed, thermally-altered bone and will establish the best method to extract heat-altered collagen molecules. This research will be of relevance to forensic investigators recovering and identifying human remains due to fire-related incidents and to archaeologists studying cultural inferences involving intentional heating rituals, such as cremations or cannibalistic studies.

# Bearing Identity: A Biocultural Analysis Of Human Remains From Old Mission Point (C1Dq-1), New Brunswick

**Kelly-Anne Pike**

Department of Archaeology, Memorial University

This thesis focuses on the biocultural analysis of human remains recovered from the site of Old Mission Point (C1Dq-1), located in northern New Brunswick. For centuries, the site of Old Mission Point was home to prehistoric northern Mi'gmaq peoples of the Maritimes region, and later, became an important seventeenth-century Récollect and Jesuit missionary settlement. The first research objective of this thesis was to explore the concept of identity, in both its biological and social forms, through the assessment of the skeletal assemblage. The second thesis research objective was, upon identifying the ancestry of the remains, to investigate those factors attributed to the maintenance and transformation of identity throughout the life course. This goal extended into understanding possible changes in identity for the dead, and whether burial environment, funerary rites, and afterlife beliefs affected or reflected the social standing of the deceased. Ethnohistorical accounts and oral traditions, archaeological data, and morphological and stable isotope analyses of the remains were all used to gather the information needed to fulfill these research objectives.

The human remains were identified as Native American in ancestry, and date to the Early Woodland period (BC 500 – AD 300), as well as the Late Woodland (AD 1000 – 1534) and Early Historic (AD 1534 – AD 1755) periods. The skeletal assemblage consisted of both male and female adults, and several young juvenile individuals. The social and biological statuses of these individuals, as conveyed by the ethnohistorical accounts, influenced the interpretation of the morphological assessment and carbon and nitrogen stable isotope analysis results. However, it was found that discrepancies existed between the osteological, archaeological and ethnohistorical evidence, promoting the use of multiple lines-of-evidence and the tenets of the biocultural approach. The biological versus social identity trade-offs experienced by these individuals over the life course is interpreted as affecting Mi'gmaq social status, health, diet, and juvenile weaning practices. Moreover, it was found that the living identity of the deceased ultimately affected the manner and space in which the dead were buried. This evidence supports the idea that the living identity of the dead remained intact even after crossing-over into the afterlife, with social roles and responsibilities continuing on in accordance with Mi'gmaq cosmological beliefs. It is concluded that the formation, maintenance, and metamorphosis of identity over the course of life was integral to the lifeways and deathways of the precontact and postcontact Mi'gmaq.



# Infectious Disease and Physiological Stress in the Middle Holocene Cis-Baikal

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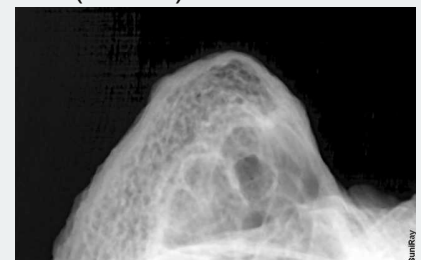
To the north and west of Lake Baikal in Siberia, Russian Federation, is the Cis-Baikal, a region that is home to hunter-gatherer burials from the middle Holocene. Of particular interest to the Baikal-Hokkaido Archaeological Project (BHAP) is a period of substantial cultural change, specifically the investigation of the populations lying on either side of a fifth millennium (BP) archaeological hiatus. These cemeteries represent a sample of the middle Holocene population and, as such, provide a unique opportunity to examine hunter-gatherer adaptations across periods of transition (Weber and Bettinger, 2010a, 2010b). This research provides insight into the nature of culture change by examining infection-induced bone changes as markers of physiological stress amongst both the Early Neolithic (EN) Kitoi (8,000-7,000/6,800 cal. BP) and the Late Neolithic-Early Bronze Age (LN-EBA) Isakovo-Serovo-Glaskovo (ISG; 6,000/5,800-4,000 cal. BP) cultures of the Cis-Baikal region (n = 258).



Radius with periostitis from Shamanka II Burial 10, Individual 1.

*Photo Credit: Samantha Purchase*

Following a visual, non-destructive analysis and documentation of all infection-induced lesions observed in the populations, linear regression analysis of the family of generalized linear models shows that LN-EBA individuals, females, breastfeeding infants, and 20-50 year olds account for the most variance in the data. Exceptions do occur when observing periostitis, cribra orbitalia and porotic hyperostosis, and upper respiratory infections. In such cases, EN individuals are also sometimes listed as significant contributors to the variance in the data. EN populations suffered from frequent episodes of physiological stress, which appear to have left them susceptible to acute infections, whereas LN-EBA populations survived periods of infection long enough for said infections to leave osseous lesions. Women and their breastfeeding children were, in general, also robust enough to survive acute infections and, rather, suffered from chronic conditions that left behind osseous lesions. Periostitis (81.4%), periodontitis (55.8%), and otitis (65.5%) are the infectious indicators that occur the most frequently in the Cis-Baikal populations, followed by cribra orbitalia and porotic hyperostosis (37.6%) and upper respiratory infections (36.0%). 26% of the total population present with infection-induced lesions, with a similar frequency in both the EN and LN-EBA (33% in the EN and 28% in the LN-EBA). With women, breastfeeding infants, and LN-EBA populations as strong indicators of certain infection-induced lesions, it is apparent that there is a relationship between infection and physiological stress. EN populations were more physiologically stressed than their LN-EBA counterparts and, as such, died of acute infections faster. Food shortages and chronic infections stressed EN mothers to the point



Right mastoid with mastoiditis from Shamanka II Burial 63, Individual 1.

*Source: Samantha Purchase*

where breastfeeding children occasionally died and infants and children's growth was stunted (Lieverse et al., 2007; Temple et al., 2014; Waters-Rist et al., 2011).

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Weber, A.W. & Bettinger, R. 2010b. Middle Holocene Hunter-Gatherers of Cis-Baikal, Siberia: An Overview for the New Century. *Journal of Anthropological Archaeology*, 29: 491-506.

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FRSC 3805

# Fingerprints

June 1 - 8, 2014



This course is an introduction to fingerprints and their uses in forensic science to identify individuals. It will provide an overview of the fundamentals of fingerprint identification as well as practical experience developing and comparing fingerprints. Topics which will be covered on the course include: the history of fingerprint identification, the formation and development of friction ridge skin, fingerprint patterns, digit determination, the fingerprint analysis and comparison process, crime scenes and collecting fingerprints, chemical development, taking a set of fingerprints from an individual, fingerprint evidence in court, case studies, and current issues in fingerprints (including bias, probability and uncertainty).

Pre-requisites: One or more of the following: 60 credit hours including at least one 2000-level Biology and/or Chemistry and/or Physics course, or a relevant law enforcement or legal background.

Registration begins February 14, 2014



For additional information contact Dr. Tanya Peckmann  
Department of Anthropology  Saint Mary's University  
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There has been a slight decline in membership versus 2012. However, a membership of 139 for 2013 is only just below the mean membership of CAPA-ACAP going back to 2004 (mean = 145). New memberships account for 39% of paid memberships in 2013, with 78% of those being new student memberships. Still, new student memberships were down by about 20%, while new full memberships nearly tripled. Renewals in both the “Student” and “Full” membership categories were again down this year versus 2012 (minus about 22% for student renewals, and minus about 15% for full renewals); but, these declines were not as strong as the drops in renewed memberships in 2012 versus 2011, when there was about one-third decline in both categories. I expect that there will be a fair number of “on-site” memberships that have been taken out that did not factor into this interim reckoning of CAPA-ACAP’s 2013 membership numbers.

#### Comparative Membership totals, 1997-2013:

Total membership for 2013: 139  
Total membership for 2012: 161  
Total membership for 2011: 216\*  
Total membership for 2010: 95  
Total membership for 2009: 132  
Total membership for 2008: 168  
Total membership for 2007: 162  
Total membership for 2006: 155  
Total membership for 2005: 130

Total membership for 2004: 91  
Total membership for 2003: 96  
Total membership for 2002: 110  
Total membership for 2001: 149  
Total membership for 2000: 133  
Total membership for 1999: 117  
Total membership for 1998: 62  
Total membership for 1997: 58

\* historic high in CAPA-ACAP membership

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Do you want to review any of the websites mentioned in this issue?

If you want to write something, submit photographs to share with other CAPA members, tell me what you think of the newsletter or suggest how it can be improved, email me at [jsharman@dunelm.org.uk](mailto:jsharman@dunelm.org.uk).