

Issue 2 ■ July – December ■ 2015

# Forensic Anthropology & Archaeology Student

# Newsletter

Communications in Australia & New Zealand

## Events & Findings

### A Reflection on the 2015 Australasian Society of Human Biology Annual Conference

By Mikaela Reynolds

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The 29<sup>th</sup> annual Australasian Society of Human Biology (ASHB) conference was successfully held 1<sup>st</sup> – 4<sup>th</sup> December 2015 at the Royal on the Park Hotel in Brisbane, Australia. The conference welcomed 58 attendees from around Australia and New Zealand, with 46 presentations (oral and poster) from a wide range of disciplines (including forensic anthropology and archaeology) within the field of human biology. The theme of the conference was “Human biology: the integration of many complexities” and was spread over 3 days. The presentations were diverse and included

topics such as: research on chimpanzees, gorillas and the pet trade, an insight into stable isotope re-

*“The conference welcomed 58 attendees from around Australia and New Zealand”*

search in Australia, various bioarchaeological case studies from Southeast Asia, and the utilisation of three-dimensional (3D) modelling of skeletal elements in anthropology, just to name a few.

Events & Findings



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#### Editors

Ms Samantha Rowbotham  
PhD Candidate, Monash University



Dr Soren Blau  
Forensic Anthropologist, Victorian  
Institute of Forensic Medicine





There were a large number of presentations in the field of forensic anthropology and bioarchaeology, with many studies focusing on subadult aging, craniofacial analysis, taphonomy, skeletal pathology and method evaluation for constructing biological profiles.

The event was very effectively arranged by the chair, Donna MacGregor (QUT) and the organising committee including Dr Judith Littleton (Auckland), Dr Debra Judge (UWA), Miss Teghan Lucas (Adelaide), Dr Kate Domett (JCU) and Dr Sarah Croker (Sydney) with onsite assistance from Dr Nikki Lottering and myself. The conference venue was situated in the Brisbane CBD, with the venue directly opposite the Brisbane City Botanical Gardens and QUT University, allowing delegates to explore the centre of Brisbane and nearby attractions. The conference also included a very exciting outing to the Queensland Museum. Attendees were very privileged to receive a

behind the scenes tour with knowledgeable staff providing informative tours, allowing access to view many Indigenous Australian artefacts and a vast range of different invertebrate collections. The conference was very welcoming to student presenters, and the friendly atmosphere was very encouraging for students to be involved. There were a number of monetary student prizes awarded, including 8 travel awards, and a first (\$150), second (\$100) and third (\$50) placing for the student presentations. All attendees were very approachable and more than happy to offer career advice to students.

Although still unconfirmed, there is a possibility that the next ASHB conference will be held in Samoa in December 2016. I would recommend all forensic anthropolo-

gy and archeology students consider presenting at the annual meeting, and becoming a student member, as it is a great chance to showcase

*“ASHB is very encouraging and supportive to all students, and it is a great opportunity to network and gain experience in presenting.”*

your own research and to gain an understanding of the other types of research in this field being undertaken in Australasia. ASHB is very encouraging and supportive to all

students, and it is a great opportunity to network and gain experience in presenting. Further details about ASHB and memberships can be found at: <http://school.anhb.uwa.edu.au/ashb/>.



(Photo courtesy of Donna MacGregor)

The student winners (from the left): Jaimee Dudley - University of Auckland (3rd place), Nicolene Lottering - Queensland University of Technology (2nd place) and Sarah Karstens - University of Auckland (1st place).



ASHB attendees

(Photo courtesy of Donna MacGregor)



# Identifying Scars of Parturition – New Findings from Old Data

By Clare McFadden

Department of Anthropology and Archaeology, Australian National University (clare.mcfadden@anu.edu.au)

The ability to identify whether a woman has been pregnant or given birth (parturition), has significant implications for our understanding of individuals and populations, and has relevance to both forensic investigations and archaeological research. Within the forensic context in particular, parturition can play an important role in the identification process, as the ability to identify if a deceased female individual has given birth further narrows down the list of missing persons. The meaning of ‘scars of parturition’, their causes, and their significance, are a matter of contention however.

Recent research from the Australian National University (ANU) was undertaken to determine the overall degree to which pelvic scarring (namely dorsal pubic pitting and the preauricular groove) can predict sex and parity, based on the existing literature. Findings of this research are discussed here.

Angel (1969), Stewart (1970), Houghton (1974) and Putschar (1976) were the main proponents of ‘parturition scars’. Dorsal pubic pitting and the preauricular groove, the two most commonly discussed ‘scars of parturition’, were reported to be associated with remodelling of ligaments during pregnancy and childbirth.

*“We can conclude that there is little evidence to support a causal link between pregnancy or childbirth and ‘scars of parturition’ “*

Remodelling was said to occur at the

site of the ligament attachments as a result of,

- Ligament loosening due to hormonal changes through pregnancy, and
- Haemorrhaging and tearing of ligaments during childbirth.

Over the past two decades, the literature has focused on testing the potential for pelvic scarring to indicate parity status. These re-evaluations have produced a variety of results and conclusions, often in direct conflict with each other! No consensus has been reached as to the relationship between pelvic scarring and parity and sex, nor the numerous other proposed causes and factors.

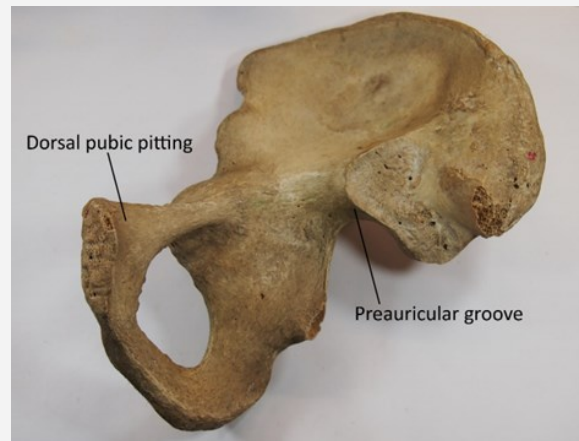
The ANU study employed a novel approach of evaluating the literature utilising meta-analytic techniques. Criteria set for inclusion in the meta-analysis was: the study must test a hypothesis relating to pelvic scarring and sex or parity, and the study must contain categorical data. Eleven studies were identified for inclusion.

Meta-analysis uses the combined power of multiple studies to determine the correlation between variables (dorsal pubic pitting and the preauricular groove) and outcomes (parity and sex), or the size of the effect, producing four individual analyses in this study. Fisher’s exact

test was used to calculate the significance of the association between key variables. A one-tailed test was used because the hypotheses relating to parity and sex specify the direction of the expected outcome. A chi-square test and its associated  $I^2$  were used to test heterogeneity; a measure of the variation between the included studies (Higgins and Green, 2011).

The meta-analyses found that neither dorsal pubic pitting nor the preauricular groove are predictors of parity status (55% and 46% cor-

rectly classified respectively, both heterogeneous), but that dorsal pubic pitting is a moderate predictor of sex (70% correctly classified in a homogenous group). We can conclude that there is little evidence to support a causal link between pregnancy or childbirth and ‘scars of parturition’. Furthermore, any relationship is likely the result of pregnancy and childbirth being subcategories of sex and subsequently, caution is urged with using this feature in forensic identification work. The cause of pelvic scarring remains unknown, however the correlation with sex will undoubtedly be useful in future investigations and is an area of research that will be further investigated as part of my PhD (commence 2016).



(Photo courtesy of C. McFadden)



## “Is this bone human?”

# A New Comparative Skeletal Anatomy Text Specific to Australian Fauna

By Samantha Rowbotham

Department of Forensic Medicine, Monash University (Samantha.Rowbotham@vifm.org)

Fillios M, Blake N. (2015) *Animal Bones in Australian Archaeology: A Field Guide to Common Native and Introduced Species*. Australia: Sydney University Press.

One of the most common questions forensic anthropologists and archaeologists encounter in their routine work is, “is this bone human?” Identifying if a bone is human or non-human is a key component of forensic anthropology case work with non-human bone fragments regularly being handed in to federal authorities or museums/universities by the public. For forensic archaeologists, identifying human from non-human is also a necessary part of their role, as they often encounter faunal remains when excavating human remains or are involved in Disaster Victim Identification work (i.e. the 2009 Victorian bushfires where family pets died with their owners).

Identifying a bone as just ‘non-human’ is often enough detail for the

brilliant comparative skeletal anatomy textbooks available, there are no texts detailing Australian skeletal fauna.

Subsequently, the release of ‘Animal Bones in Australian Archaeology’ in December 2015 is very welcomed. The Sydney University Press book was written by Melanie Fillios (archaeological consultant) and Natalie Blake (archaeological consultant and PhD candidate with the University of Sydney). The 157-page book may be intended for Australian archaeologists and zooarchaeologists, however the authors have structured the book as a visual field manual intended for the non-expert in faunal remains; this makes the book a very user-friendly comparative skeletal anatomy reference source for osteology students.

The manual dedicates a chapter to each of the major skeletal elements: mandible, scapula, humerus, radius, ulna, pelvis, femur, tibia and hands/feet. Each chapter provides multiple black and white photographs of the bone for humans and the 15 major Australian native and introduced faunal species. Native species comprise: kangaroo, wombat, wallaby, quoll, brushtail possum, emu and badicoot. Introduced species comprise: dingo/dog, sheep, cow, pig, rabbit, chicken, horse/donkey and cat. Accompanying the photographic visual aids for each

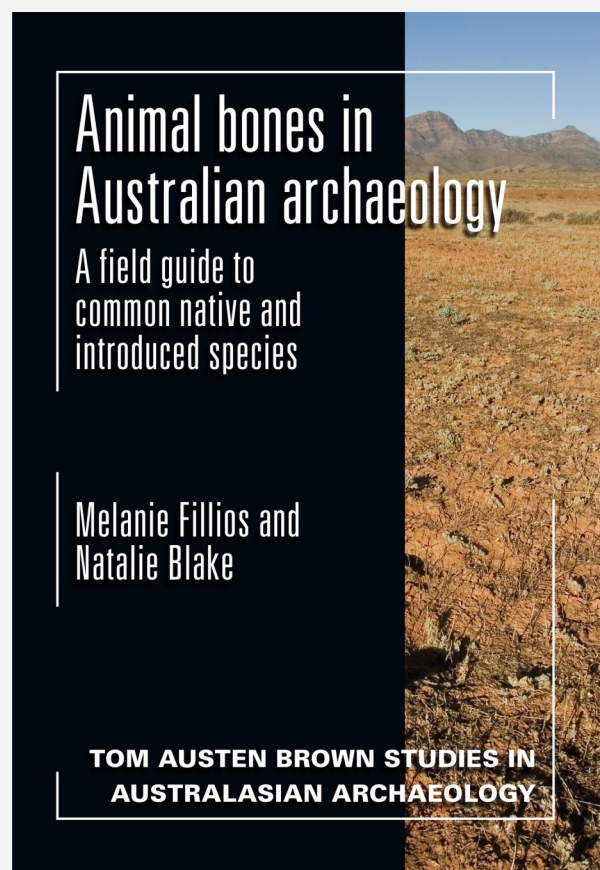
skeletal element, are detailed explanations of the anatomical functioning of that bone, the relevant diagnostic features to help with its identification, and flow charts to guide you through the identification process.

I certainly recommend this field manual. Not only will it help you improve your comparative skeletal anatomy (as it has for me), but it will improve your ability to differentiate human from non-human in a timely and efficient manner; an essential skill for any forensic anthropologist or archaeologist.

For those interested, the book is available in paperback and wire-bound versions for \$40, and can be ordered online through the University of Sydney at <http://ses.library.usyd.edu.au/handle/2123/14053>.

*“This book was developed out of a need for a clear and concise field manual that could be used to make basic identifications of animal bones from archaeological sites in Australia.”* (Fillios and Blake 2015: xix)

anthropologist/archaeologist; a conclusion we can often come to through examining the bone’s size, morphology and cortical structure. However, there are occasionally situations in which it is advantageous to identify the species of animal. Reference sources to help with identifying which animal a bone may belong to however, are problematic as, although there are a number of



(Cover of *Animal bones in Australian archaeology*, ©Sydney University Press)



# Identification of Individuals from Images - Personal Experiences with Another Side of Forensic Anthropology

By Teghan Lucas

Biological and Comparative Anatomy Research Unit, School of Medical Sciences, University of Adelaide  
(teghan.lucas@student.adelaide.edu.au)

Many people associate the words 'forensic anthropology' with the identification of skeletal remains, and why wouldn't they? The TV show 'BONES' has made it famous and a preliminary search to define the field only mentions skeletal remains.

I am a student studying forensic anthropology who assists police stations across Australia, yet I have never been hired to identify individuals from skeletal remains. Although it is an area I teach and can practice, it was not the topic of my PhD research, nor my consultancy work. I have spent the past three years researching and practicing the identification of individuals from images.

The most common scenario being: people walk into a bank and rob it, police have suspects (based on other evidence) and have taken images of them. When the suspects deny the crime they are accused of, we are asked to compare

the images the police took with the images from the crime (often CCTV footage).

*“I have spent the past three years researching and practicing the identification of individuals from images”*

To achieve this, we use anatomical traits to ascertain the degree of similarity between persons committing the crimes and the accused. I was first introduced to this field by my supervisor Professor Maciej Henneberg.

It is an extremely significant area of research as CCTV surveillance cameras are everywhere and are constantly capturing criminal offences. A great deal of research still needs to be conducted in this field unlike the traditional 'skeletal' topics which many study. I personally think it would be great if one day, people associated forensic anthropology with more than just skeletal remains.

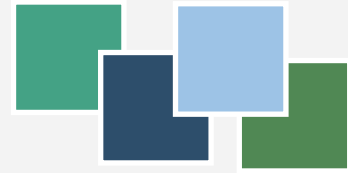


(Lucas and Henneberg 2015)

# Interview with Dr Alanah Buck

## State Forensic Anthropologist for Western Australia

**Occupation:** Forensic Anthropologist and Medical Scientist  
**Employer:** Department of Forensic Pathology, PathWest  
**Years of experience in the discipline:** 20 years



### What first sparked your interest in forensic anthropology?

*As an undergraduate, I was initially interested in the physical anthropology and pre-history of Australia and paleoanthropology in general. I had no early interest in forensic work until I became involved in the area; initially I took up forensic/physical anthropology as the consequence of requiring paid employment!*

### What qualifications did you require?

*My main undergraduate training was in the area of anatomy with another major in anthropology. To work as a clinical forensic anthropologist, I required a PhD in biological anthropology. My practical casework (scene attendance, post-mortems and Court) training was obtained under the mentorship of the forensic pathologists in the department.*

### How long have you been with PathWest and how did you come to take on the role?

*I have been with PathWest for 20yrs. I was initially a part time consultant and was then offered the formal position as the forensic anthropologist. My current role is now a combination of anthropology casework and senior management, as the medical scientist for the Forensic Pathology Dept.*



(photo courtesy of Dr Alanah Buck)

### What different areas of the discipline has your work involved?

*My general casework is quite varied and consists of identifying human from non-human remains, identifying historical skeletal remains, general identification of individuals (including those with advanced decomposition), assisting in the recovery of human remains (suspicious and non-suspicious), and assisting the forensic pathologists in assessing skeletal injury. My areas of expertise and specific interest are:*

- *Post-blast reconstruction and interpretation of human remains*
- *Incinerated remains*
- *Shark related deaths*

*I am also responsible for the management of cold case reviews for the Department. I have attended a number of mass fatality incidents both nationally and internationally and am the forensic anthropology representative on the State Coroner's DVI Committee.*

### Career highlights...

*Not in any particular order: assistance in the investigation of the 2002 Bali Bombings, the 2004 Australian Embassy bombings; the 2009 Victorian Bushfires and becoming a foundation member of the Royal College of Pathologists of Australasia, Faculty of Science.*

### What has been the most rewarding and challenging aspect of the job?

*One of the most rewarding aspects of the job has been assisting in the identification of long term missing persons. The most challenging part of the job has been the presentation of evidence in Supreme Court.*

### Best piece of advice for those seeking a career in the discipline...

*Clinical forensic anthropology can be a rewarding career, but it is one which has very limited employment opportunities.*

# Thesis Research

## HONOURS

**Name:** Meghan McKinnon  
**Affiliation:** School of Medicine (Anatomy & Pathology), University of Adelaide  
**Degree:** Bachelor of Science, Honours  
**Supervisors:** Dr Ellie Simpson (primary) & Professor Maciej Henneberg (co-supervisor)  
**Status:** Early stages  
**Title:** Analysis of craniofacial variation between sub-adult age increments

In forensic cases it is sometimes necessary to make estimations of the possible current appearance of an individual based on aged images or footage. In cases with sub-adults, often the suspect is compared to an out-dated image, due to their rapid growth rates, for likeness. In these cases, the establishment of an average craniofacial ageing system could vastly improve the accuracy of sub-adult ageing techniques and identification processes. The focus of this honours research will be to



(Photo courtesy of M. McKinnon)

investigate the degree of variation of craniofacial morphology that exists between sub-adult age intervals. Though still in the early stages of development, data collection will primarily consist of taking quantitative data measurements from sub-adult populations, as well as archived x-ray images and tracings of lateral radiographs. Data analysis would then involve identification of any trends in craniofacial measurements between different age intervals and measuring the effects of growth on craniofacial variation. Statistical analysis of this data will potentially result in a range of average values that could be applied to craniofacial features of a sub-adult to estimate the effect of decreased or increased age.

## DOCTORATES

**Name:** Felicity Gilbert  
**Affiliation:** Department of Anthropology and Archaeology, Australian National University  
**Degree:** Doctor of Philosophy  
**Supervisors:** Dr Marc Oxenham (primary)  
**Status:** Near completion (submission December 2016)  
**Title:** Modelling decomposition in aquatic environments

Decomposition is not merely a product of time but a product of its environment and every environment will produce variations on the typical process of decay. Research into decomposition in aquatic environments in particular, has gained some momentum over the past few decades. However, very few actualistic taphonomic experiments on aquatic decomposition have been attempted and a large percentage of research has been based on anecdotal data. This is essentially due to the multitude of variables that can affect the process and in the case of experimentation, the logistics of recreating or controlling an aquatic environment.

This PhD research is investigating the process of soft-tissue decomposition in aquatic environments. The overall aim is to develop a multivariate mathematical model for aquatic decomposition of large bodied vertebrates in order to improve estimates of time since death (TSD) that can be applied to actual human cases. Development of this TSD model is based on total body scores and environmental variables.

Three animal model experiments have been conducted in different seasons (winter and summer), water types (fresh and salt water), and envi-

ronmental conditions (pond and harbour). The experiments used 24 *Sus scrofa* (white hybrid pigs) and each experimental phase contained a control that was completely submerged at all times. For each experimental phase, continuous monitoring of the environment was conducted and the documentation of decomposition took place at each recording session.

Preliminary research results indicate there is substantial seasonal variation in the progression of decomposition within aquatic environments. Specifically, results indicate there are only minor differences in decomposition between water treatments (salt vs fresh water), and strong similarities in the progression of decomposition between control carcasses (submerged) in all experimental phases, regardless of season and water treatment.

It is anticipated the outcomes of this study will be twofold. Firstly, this research will minimize the number of causal variables in aquatic environments needed to produce a usable system that can help determine TSD. Secondly, this research will contribute to a greater understanding of the decomposition process in aquatic environments and aid forensic investigations in this area.



(Phase 2 control, Day 15 ADD207.9. Photo c. of F. Gilbert)



(Phase 3 control, Day 13 ADD201.6. Photo c. of F. Gilbert)

**Name:** Jennifer Menzies  
**Affiliation:** Discipline of Anatomy & Histology, Faculty of Medicine, University of Sydney  
**Degree:** Doctor of Philosophy  
**Supervisors:** Dr Denise Donlon (primary), Dr Sarah Croker (associate)  
**Status:** Mid-candidature  
**Title:** Establishing new methods for estimating time since death for human skeletal remains in Australian conditions

Taphonomic effects on skeletal human remains are of great interest to researchers in terms of their potential as indicators of time since death.

A PhD field study was set up in 2013 near Belanglo State Forest to record and analyse changes occurring to human remains exposed on the ground surface. The overall aim of the study is to improve methods of ascertaining the post-mortem interval for human skeletal remains in Australian conditions.



(Research Site. Photos courtesy of J. Menzies)



The study is ongoing and was designed to address two specific areas of interest. Firstly, previous research has indicated that taphonomic effects vary considerably between sites in response to environmental factors. This means that processes observed at one site may not be found at another. All macroscopically visible changes to the human remains at this partic-

ular site are being recorded along with weight loss, and temperature and humidity data. This information has the potential



(Photos courtesy of J. Menzies)

to inform improved time since death estimation and in addition, any methods developed have the potential to be tested against forensic cases from Belanglo State Forest. As well, changes found to be measurable and predictable may provide the basis for a template transferable to other sites and regions. Secondly, kangaroo and pig remains were placed out alongside the human remains in order to make interspecies comparisons. Similarities and differences in decomposition processes are being examined here to investigate the validity, or otherwise, of using animal proxies for forensic research on human remains.

The study of human decomposition processes will continue at the Australian Facility for Taphonomic Research (AFTER) this year. Soft tissue decomposition will be observed as a factor in time since death estimation, however, the emphasis will be on changes occurring from the point of skeletonization onward.



**Name:** Caitlin Humphrey  
**Affiliation:** Biological and Comparative Anatomy Research Unit, University of Adelaide  
**Degree:** Doctor of Philosophy in Medicine  
**Supervisors:** Dr Jaliya Kumaratilake, Dr Nick Maiden, Chris Wachsberger  
**Status:** Mid-candidature (commencement January 2015)  
**Title:** Characterisation of abdominal and thoracic bullet wound trauma based on three dimensional anatomical modelling

Current research on bullet trauma uses homogeneous synthetic simulants to represent the human body, however, these do not replicate the bio-mechanical properties or the heterogeneous nature of human tissues.

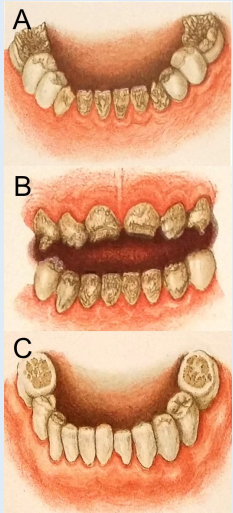
This PhD research involves three stages. Firstly, to determine the three dimensional measurements of the lung, liver, kidney and heart via computed tomography scans. Secondly, to determine the average external anthropometric body dimensions of Australian males 20-40 years. Thirdly, to investigate the energy loss of nominal high and moderate speed (~800m/sec; ~400m/sec) spherical projectiles fired into current simu-

lant materials (20% ballistics gelatine at 10°C, 10% ballistics gelatine at 4°C and clear gel at 16°C), and porcine organs (lung, liver, kidney and heart) at two temperatures (37°C and 16°C). These will then be compared to each other to determine any similarities and differences in order to establish whether the organs can be represented by these simulants in a three dimensional anatomical model.

It is expected this model will lead to an objective analysis of the physiological effects of firearm trauma, be applicable in protective equipment development and testing, and assist in the treatment of bullet trauma.

**Name:** Stella Ioannou  
**Affiliation:** Biological Anthropology and Comparative Anatomy Research Unit, University of Adelaide  
**Degree:** Doctor of Philosophy in Medicine  
**Supervisors:** Prof Maciej Henneberg (primary), Dr Renata J. Henneberg, Prof Frank Rühli, Prof Han Baltussen  
**Status:** Final year candidature (commencement February 2014)  
**Title:** Paleopathology: history of syphilis in the Old World: skeletal evidence and literary sources

The first recorded European epidemic of syphilis coincides with Christopher Columbus' return from the New World in 1493. As a result, scholars have since disputed the origins of the disease.



(Ioannou et al 2015)

Various theories include the pre-Columbian, post-Columbian and Unitarian theory. Another factor that may be contributing to this debate/confusion, is that scholars have not considered the effects of treatment on dental development in the congenital form of the disease. This is especially the case in specimens pre-dating the introduction of salvarsan and penicillin in the 20th century. Knowledge of the type of treatments used to combat syphilis and congenital syphilis throughout history have been well documented. These range from natural remedies, chemical compounds and, recently, penicillin. Our knowledge of the effects of the-

se treatments on hard tissues of the body however, has not been explored in depth. Sir Jonathan Hutchinson and Henry Moon studied patients with congenital syphilis during the 19th century, a time when mercury's use as a treatment for syphilis was widespread, even in mothers during pregnancy. It was noticed that dental changes were influenced not only by the disease but also treatment containing mercury.

This PhD research is currently investigating whether treatments used to treat congenital syphilis prior to the introduction of penicillin in the 20<sup>th</sup> century, particularly mercury, effects dental development to an extent that can aid in the differential diagnosis of the disease. In particular, this research will investigate specimens that have been disregarded in the past for not displaying the "typical" dental signs associated with congenital syphilis as defined by Hutchinson. A review of Hutchinson and Moon's original works will be conducted to establish the differences in tooth morphology between patients with congenital syphilis and those treated with mercury. This will then be applied to paleopathological specimens and those in the literature. By applying this method, we will establish the differences in dental changes which will aid in the differential diagnosis.



**Name:** Mikaela Reynolds  
**Affiliation:** Skeletal Biology and Forensic Anthropology Research Laboratory, School of Biomedical Sciences, Faculty of Health, Queensland University of Technology, Brisbane  
**Degree:** Doctor of Philosophy  
**Supervisors:** Ms Donna MacGregor, A/Prof Laura Gregory, Mr Mark Barry  
**Status:** Mid-candidature (commencement August 2014)  
**Title:** Constructing improved standards for bone age assessment of Australian children

Radiographic analyses of the hand and wrist are most frequently used to observe skeletal development, relating 'bone age' and chronological age to assess growth. The technique is often used in forensic/legal cases and, in recent years, has been used to estimate age in young sporting athletes.



(Photo courtesy of M.Reynolds)

This research will investigate the skeletal maturation of the hand and wrist in detail, perform an Australian inter-state comparison of child development and will introduce contemporary radiographic and MRI bone age assessment standards for an Australian population for use in both a clinical and forensic setting. Specifically, this PhD research will establish improved standards specific to the Australian population so this technique may be applied with a

greater level of accuracy. Diverse methodologies will be employed in addition to traditional morphological assessments, including a robust quantitative analysis and automated computerised techniques. Using statistical modelling, contemporary sex-specific bone age standards will be constructed based on the documented ossification timings.



(Photo courtesy of M.Reynolds)

The modern standards will be assessed on an inter-state sample to determine if they are representative of an Australian population at large. This study will also provide the first comprehensive developmental analysis of the hand and wrist in an Australian Indigenous population, to determine if differences are present in ossification timings.

# Publications

**Ioannou, S.**, Sassani, S., Henneberg, M. and R.J. Henneberg. 2015. Diagnosing congenital syphilis using Hutchinson's method: differentiating between syphilitic, mercurial, and syphilitic-mercurial dental defects. *American Journal of Physical Anthropology*. DOI: 10.1002/ajpa.22924.

**Lucas, T.** and M. Henneberg. 2015. Are human faces unique? A metric approach to finding single individuals without duplicates in large samples. *Forensic Science International*. DOI: <http://dx.doi.org/10.1016/j.forsciint.2015.09.003>.

**McFadden, C.** and M.F. Oxenham. 2015. Revisiting the Phenice technique sex classification results reported by MacLaughlin and Bruce (1990). *American Journal of Physical Anthropology*. 159(1): 182-183.

Franklin, D., Flavel, A., **Noble, J.M.**, **Swift, L.J.** and S. Karkhanis. 2015. Forensic age estimation in living individuals: methodological considerations in the context of medico-legal practice. *Research and Reports in Forensic Medical Science*. 5: 53-66.



# Achievements & Awards

Congratulations to Lauren Swift and Teghan Lucas on the recent submission of their theses.

**Swift, L.** Post-Mortem environment and DNA quality: studies addressing the forensic utility of routine molecular analyses. Master's Thesis. University of Western Australia.

**Lucas, T.** Identification from images: theory and methods. Doctoral Thesis. University of Adelaide.

# Forthcoming Conferences



Together  
InForming Justice

ANZSS  
23rd International Symposium  
on the Forensic Sciences  
18 - 23 September 2016  
Auckland, New Zealand  
[www.anzfss2016.org](http://www.anzfss2016.org)



2016

*The Australian and New Zealand Forensic  
Science Society*

This September (18<sup>th</sup>-23<sup>rd</sup>) the ANZFSS is holding their 23<sup>rd</sup> International Symposium in Auckland, New Zealand. The conference welcomes students and practitioners from all forensic science disciplines including anthropology and archaeology. Registration for the conference and workshops will become available in late February. Further details (including the plenary speakers) can be found here: [www.anzfss2016.org/](http://www.anzfss2016.org/).



2016

## National Archaeology Student Conference

by Georgia Roberts, La Trobe University  
(Georgia.Roberts@latrobe.edu.au)

The National Archaeology Student Conference (NASC) was rejuvenated in 2014 by the Flinders University Archaeological Society. Over the last two years, it has grown to become an important calendar item in the student year. One of the principle goals of the conference is to give students in archaeology (and related disciplines) the opportunity to come and present a paper in a formal setting, gaining experience on how to write, present and communicate research effectively. A panel of judges provides feedback to participants, helping to create this event into a valuable learning experience. More than this, it is a chance to network with peers, learn about what other people are doing, and set up collaborative projects for down the track.



This year, NASC is to be held at the University of Western Australia between the 29th and the 31st of July. Presentations from related disciplines are welcome, and we would invite any forensic archaeology students to come along and either present or attend. A poster session is also held during the conference. Further information about the conference can be found at the NASC webpage: <http://www.nascaustralia.com/>.

### Contact:

For any enquires please contact  
Samantha.Rowbotham@monash.edu



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- <http://www.yourdictionary.com/images/3489.16.caliper.jpg>
- [http://www.vanishingtattoo.com/tds/images/caduceus/caduceus\\_large/caduceus\\_009.jpg](http://www.vanishingtattoo.com/tds/images/caduceus/caduceus_large/caduceus_009.jpg)
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- <http://www.michelherbelin.co.nz/stockists/search>
- <http://www.nascaustralia.com/>
- <http://www.anhb.uwa.edu.au>

Ioannou, S., Sassani, S., Henneberg, M. and Henneberg, R. J. (2015), Diagnosing congenital syphilis using Hutchinson's method: Differentiating between syphilitic, mercurial, and syphilitic-mercurial dental defects. *Am. J. Phys. Anthropol.* doi: 10.1002/ajpa.22924

Lucas, T. and M. Henneberg. 2015. Are human faces unique? A metric approach to finding single individuals without duplicates in large samples. *Forensic Science International*. DOI: <http://dx.doi.org/10.1016/j.forsciint.2015.09.003>.

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Without your support and involvement this newsletter would not be possible.



We welcome comments/feedback and encourage students at all stages of research to consider contributing to future issues.

