

Southeast Asia Bioarchaeology Newsletter

Issue No 1
April 2004

Introduction

Welcome to the first newsletter designated to update you on the happenings of bioarchaeology in Southeast Asia. This newsletter has come about as a direct result of discussions held during the Osteoarchaeology meeting in Siem Reap, January 2004, sponsored by the Center for Khmer Studies and the École française d'Extrême-Orient (EFEO). The outcome of this discussion forum was to establish a network of bioarchaeologists and those interested in bioarchaeology working in Southeast Asia. A Pro tem committee was established consisting of

1. Dr Kate Domett, James Cook University, Townsville, Australia
2. Dr Nancy Tayles, University of Otago, Dunedin, New Zealand
3. Mon Pureepatpong, Silpakorn University, Bangkok, Thailand
4. Phlong Pisith, Royal University of Fine Arts, Phnom Penh, Cambodia

We hope this newsletter, perhaps annual to begin with, will provide researchers and students a forum for sharing their latest projects, asking for help, suggestions of sources of funding and contacts and any new publications relevant to the field. This current newsletter firstly reports on the successful meeting of bioarchaeologists and interested parties in Siem Reap in January 2004. Congratulations for the success of this conference go to the organisers, Professor Rethy K Chhem, Dr Nancy Tayles, Dr Fabrice Demeter and the CKS and EFEO staff. We would like to hold a second meeting in two years time (approximately January 2006) and call for suggestions of a location!

Report on the First Congress on Bioarchaeology in Southeast Asia Siemreap, January 6-7, 2004

Professor Rethy K Chhem, Conference coordinator
Paleoradiology Research Unit, University of Western Ontario, Canada

The rapid development of Bioarchaeology and the recent fieldwork of many teams in Southeast Asia call for a forum to share this vast experience in a region. The initial idea of setting up a regional conference on this topic was first discussed with Dr Fabrice Demeter when we met in Paris in the summer of 2002. Dr Nancy Tayles was invited to join our team, to which she had agreed without hesitation.

Siemreap-Angkor in Cambodia was selected as the venue because of its central geographical location at the heart of Southeast Asia, but also the exceptional role of Angkor in attracting cultural tourism. The presence of the Center for Khmer Studies in Siemreap was another factor that helps us to achieve this dream, along with the Ecole Francaise d'Extreme Orient. I quickly secured the funding necessary for the organization of the meeting through the generous donation of Professor Lois Demenil, Chair of the Board of Directors of the Center for Khmer Studies. Nancy and Fabrice established the scientific programme. A workshop on the fundamental of physical anthropology and the techniques for excavation, recording, curation and storage of skeletal remains, was conducted by Dr Nancy Tayles with the collaboration of Dr Kate Domett, Dr Nancy Beavan and Sian Halcrow. The scientific session included a review on Bioarchaeology in South East Asia, the biological evidence for Human origins, dispersals and relationships as well as for the quality of life, diseases. A forum on the future of Bioarchaeological research in Southeast Asia was organized at the end of the two days conference. Fifty participants, students and lecturers and experts from eight countries attended the conference, among them anatomists, anthropologists, paleoanthropologists, archaeologists, molecular biologists, paleoradiologists, etc. It was indeed a wonderful

two days of learning and exchange, as well as a great opportunity for experts of Bioarchaeology to build a strong network among their peers. The workshop has been very successful, thanks also to the generosity of the Head monk of Wat Bo who lent us his collection of prehistoric skeletal remains for teaching purposes.

All participants enjoyed the conference and wished to explore for further development in the future. The two main outcomes were the election of a *pro tem* Committee in charge of establishing of a Southeast Asian Society for Bioarchaeology and the launch of this Newsletter to keep all participants informed of the progress and events related to Bioarchaeology in Southeast Asia. Kate deserved a round applause for this initiative, which will be extremely useful for all us living as we do all over the globe, but yet sharing the same passion and driven by the same quest for knowledge on the human past in Southeast Asia.

Summary of the Discussion Forum held during the Bioarchaeology meeting

Kate Domett, James Cook University, Townsville, Australia.

This discussion was contributed to by both local (Thai, Khmer) researchers and students, and foreign researchers and students, all who have an interest in seeing the development of bioarchaeology. The following issues were discussed. While we cannot immediately 'fix' many of these issues, we hope by building an association together will go some way to address concerns.

1. Development of local expertise

This is a primary aim of the association. We hope in the near future that appropriate training programmes and workshops run by established bioarchaeologists working in the region will be undertaken. It was suggested that workshops could be held by foreign investigators each time they visited Southeast Asia to carry out research. It is acknowledged that extra funding would be required for this and there are a number of associations that support this type of work (see below).

Through the development of local expertise, it is anticipated that local researchers will be placed in a better position to make local people proud of their heritage and expose them to the wealth of information that can be gained from the study of historic and prehistoric human skeletal remains. This may go some way to helping protect sites but we appreciate that it may be pertinent for local and foreign researchers to include in their research budget funding for helping protect sites, including involving local people in the management of these sites.

2. Funding for training and research

As part of each SEBA newsletter, we will provide details of current sources of funding.

3. Storage for collections

In order to carry out scientific research that will be accepted by an international audience, appropriate documentation, storage and laboratory conditions need to be available. Local universities, museums and other such organisations are the appropriate place for this and funding needs to be found to help set up appropriate curation facilities. Foreign and local researchers would need to work together on this.

4. Relationship between local and foreign researchers

Collaborations between local and foreign researchers are well established or becoming established in many areas of Southeast Asia including Thailand, Burma, Cambodia, Vietnam and Laos. This should not only involve joint projects in the field but also for grant applications and publications. In this way many publications could then also be published in English and the local language.

Access to research and excavations in Southeast Asia are important to the foreign bioarchaeologist so we must ensure that interactions with Southeast Asian people are fair and culturally sensitive. Foreign bioarchaeologists can provide expert assistance and involve local students in their projects with local researchers.

5. Synthesis, proposals and solutions

Call for the establishment of a Southeast Asian Bioarchaeology Association (SEBA) - an association of students, archaeologists and anthropologists and other interested parties. The association will meet every two years in Southeast Asia for a scientific conference and workshops. The association will provide a

newsletter once or twice a year and provide a source of contact addresses and emails for dissemination to its members.

News

From Dr Mike Pietrusewsky, University of Hawai'i:

Email: mikep@hawaii.edu

I and one of my graduate students, Roan Ikehara, are in the data recording phase of an osteological study of approximately 40 skeletons from Angkor Borei, Cambodia (200 B.C- 200 A.D.), material that excavated in 1999 and 2000 by Dr. Miriam Stark as part of the University of Hawaii's Lower Mekong Archaeological Project (LOMAP) project.

I and Michele T. Douglas, Affiliate Graduate Faculty, will present a paper at the Wenner-Gren sponsored conference, "Paleopathology at the Origins of Agriculture", to be held in Clearwater, Florida, April 18-21, 2004. The title of our paper is: "Biological consequences of sedentism and agricultural intensification in northeast Thailand."

From Vireak Prak, Royal University of Fine Arts, Phnom Penh:

Email: vireak_prak@yahoo.com

According the outcome our meeting in Siem Reap ago, I have a project relevant to the Phum Snay site. I am looking for sponsors to do it. The proposal is for a Looted Site Education Campaign at Banteay Meanchey.

Overview: In 2000, there was a tremendous discovery of a rich archaeology sit in Prah Net Prah. People in all most every district of the province started active looting of this archaeological site. In 2001, a team of faculty & students from RUFA (Royal University of Fine Arts, Phnom Penh) and Otago University (New Zealand) began a rescue excavation in Phum Snay. After that, there have been annual excavations at the site. Some students from the RUFA Department of Archaeology have been recruited. In a period of three years 2001-2003 there have been a few theses written by Cambodian students that relate to some of this looted area.

Objectives: The objective of the campaign is to design some effective methods & educate people at the looted site in some districts of Banteay Meanchey province. There will be a gathering of group of people to provide them with lessons about Khmer Culture, Archaeological heritage & explanation of their possible effects on preserving cultural properties. The target people are: Officers at commune level, monks, teachers, students, local people, and businessmen dealing with traffic of cultural properties.

Please contact me if you can provide any assistance with this project.

From Dr Kyle Latinis, National University of Singapore:

Email: seadKL@nus.edu.sg

RECENT WORK ON CAMBODIAN BURIALS.

The Prei Khmeng extended burials and Cardamom Mountain jar burials are two of the joint projects currently being investigated by the Royal University of Fine Arts (RUFA), EFEO (Ecole Francaise d'Extreme-Orient), National University of Singapore (NUS) and National University Hospital (NUH, Singapore) teams. The projects represent a pre-Angkor burial site (ca. 1500-2000 BP; contact Christoffe Pottier for details on C-14 dates) and a post-Angkor jar burial site respectively. An adult and a juvenile (Bony I and Bony II) from the Prei Khmeng site have been analyzed in Singapore thus far. The medical and genetic assessments are provided by ORG (Osteoarchaeology Group) at Singapore, headed by Rethy Chhem

and Erik Yap).

The results demonstrate the utility of diagnostic imaging, genetic analyses, microstructural analyses, orthopedic assessments, etc. However, the sample size is small and more extensive work is necessary in order to understand the nature of Prei Khmeng's pre-Angkor population. Future work will necessitate a professional physical anthropologist, not only in the lab but in the field due to the fragile nature of many of the skeletons. Most of the burials encountered during excavation were not removed. Other burials are almost certain to exist. Eventually, the site should yield a respectable sample size for future research.

The cleaning procedure entails CT scanning before soil removal. This provides a relatively unadulterated image of the skeletal remains in their excavated position. It also provides an opportunity for the cleaner to be sensitive in areas that contain fragile artifacts (e.g., metal bangles, plates and high lead content beads easily appear in the CT images) and to also take caution when approaching skeletal material.

The bones in both skeletons are fragmented due to compression, shear, soil creep, post depositional disturbances such as post holes dug through some bones, differential decomposition of grave goods (perhaps baskets or organic fish/animal traps) and constant shrinkage and expansion of soils from annual wet and dry periods. Thus, the soil is more or less what keeps many of the bones in a seemingly complete position. Once soil removal is completed, CT scanning is conducted again along with X-Ray images. Generally, the bones are highly fragmented by this stage.

Archaeological materials include the occurrence of animal bones (frequently pig skulls) bronze, iron, wood, glass, pottery and plaited mat impressions. Many of the items are ornamental and/or presumably exotic and prestige goods. Several conclusions can be drawn. The Prei Khmeng inhabitants conducted ritual burial practices which were not differentiated by age (i.e., children were highly respected as well, perhaps even more than adults). There may have been some kind of belief in an afterlife, the transformation of the individual or the individual's spirit, or the transition to another realm of existence. There may have been a belief in connectivity to the soil or earth, not unexpected for agriculturalists. Prestige, wealth and exotic good items not only indicate that they had access to prestige and exotic goods, but that the society may have had significantly important ranks or class distinctions. Many other speculations can be drawn as well which need not be detailed here.

The Prei Khmeng burials seem to fit within the general variability of many ancient Thai burial sites and the Angkor Borei burials. However, the burials seem qualitatively different from the Phum Snay burials (in physical features of the skeletal remains as well as grave goods). Nonetheless, only cursory visual assessments have been conducted and this is purely untested speculation.

Energy Dispersive X-Ray Fluorescence analysis has been conducted on beads from the Prei Khmeng and Cardamom sites. The results are very interesting. A forthcoming article by Miksic and Latinis will detail the results.

From Dr Nancy Tayles, University of Otago, New Zealand:

Email: nancy.tayles@stonebow.otago.ac.nz

REPORT ON 2004 FIELD SEASON, BAN NON WAT, THAILAND

A third field season was held at the site of Ban Non Wat in the Upper Mun River Valley, Northeast Thailand, by the Origins of Angkor project team lead by Prof. Charles Higham of the University of Otago, Dunedin, New Zealand and Dr Rachanie Thosarat of the Fine Arts Department, Bangkok. This site was first excavated in Jan-March 2002, with a second season in Dec 2002-March 2003. The third season began in December 2003 and is now completed. This mound site has proved to be extraordinarily rich archaeologically and in terms of human skeletal remains. The number of burials from the three seasons is now close to 200, with about 80 from the current season added to the 118 from the first two seasons.

The excavations have been spread over three areas, with the main focus on a large central square that has been extended over the three seasons. The deposits are variously between 4 and 7 metres in depth, with variable distribution of burials (and variable preservation and completeness). The recovery and curation of the human skeletal remains has been under my care, and I have been ably assisted in this over the three

seasons by Sian Halcrow and a series of postgraduate students and volunteers.

The burials range in age from neolithic to bronze age, with highly variable richness of grave goods and representation of age and sex groups over that time and between the excavation squares. The materials from all three seasons are currently stored in Thailand and awaiting cleaning and data collection. This will begin in July this year, when I have a sabbatical and will spend about three months beginning the process, with the assistance of Kate Domett.

There will be a large amount of work to be done and information to be gathered from this splendid collection. Any definitive research will take some time to complete but the Ban Non Wat collection provides an extraordinary opportunity to address questions of quality of life and relationships within the site and with the neighbouring sites of Noen U-Loke and Ban Lum Khao (excavated by the Origins of Angkor project in 1996-1998). It will enable us to develop a comprehensive picture of human bioarchaeology in late prehistory in this tributary river of the Mekong.

From Dr Kate Domett, James Cook University, Australia:

Email: kate.Domett@jcu.edu.au

UPCOMING ANALYSIS OF PHUM SNAY SKELETAL REMAINS

I am currently planning for the analysis of the Phum Snay prehistoric skeletal material to be carried out in January and February 2005 in collaboration with my colleague Dr Hallie Buckley, University of Otago, New Zealand. This includes the material excavated over the last 3 years and the material collected after local looting and now stored at two local wats. We are very interested in involving local Cambodian archaeology graduates so if there is anyone interested in assisting us with this project please contact me. Time permitting, we also hope to hold a brief Bioarchaeology workshop at RUFA, Phnom Penh at the same time.

With my colleague Dr Nancy Tayles, we are presenting our work on "Population Health from the Bronze to the Iron Age in the Mun River Valley, Northeast Thailand" at the upcoming Wenner Gren sponsored conference in Florida, "Paleopathology at the Origins of Agriculture", to be held April 18-21, 2004.

From Anne-Sophie Coupey, Mission Archéologique Française, France:

Email: coupeyas@yahoo.fr

MYO HLA PROTOHISTORIC SITES, YAMETHIN TOWNSHIP, MANDALAY, MYANMAR.

Three Bronze and Iron Age cemeteries were excavated in the Samon basin (central Myanmar) between 2001 and 2004 by a Burmese-French team (with the help of French Ministry of Foreign Affairs).

During the latest field season of January 2004 new research has been conducted in Myo Hla cemeteries, near Yamethin. Previous sites included Hnaw Kan (Mahlaing) and Ywa Htin (Pyaw Bwe). The Burmese-French team studied remains collected by villagers (among which a lot of bronze artefacts), and carried out surveys and test pits on Myo Hla cemetery 1. The test pits revealed 33 graves (adults, children, burial jars); 15 were incomplete where only the lower parts of the bodies remained, the upper part of the tomb having been destroyed by bead hunters. The preservation of the bones was very poor.

Usual deposits included ceramic vessels placed near the feet, some iron tools and weapons, necklaces, bangles and pieces of meat (large herbivorous). One part of the cemetery contained rich graves. One of these included armbands of ivory rings. This grave also contained a long bracelet of cornelian and glass beads, cattle limbs deposited under legs, ceramic and bronze vessels at the feet. The corpse was lying in a wooden coffin. Another burial had traces of a monoxylic coffin with a lid. After the decision of authorities to preserve, *in situ*, the main part of the vestiges, the skeletons were uncovered but not removed from the ground. It was impossible to conduct a physical anthropological study and also to excavate underlying levels.

The results of test pits and surveys on Myo Hla sites complete those obtained in Hnaw Kan and Ywa

Htin in the same Samon basin. They show the existence of a community possessing its own specific features but some comparisons can be established with other sites in central Myanmar, but also with the Chinese world, India and other neighbouring countries.

(2004 Field team, *French Archaeological Mission in Myanmar*: J.-P. Pautreau, P. Mornais, A.-S. Coupey, C. Maitay, and for the *Department of Archaeology in Mandalay*: Aung Aung Kyaw).

Funding

- Ford Foundation:
<http://www.fordfound.org/about/guideline.cfm>
- Toyota foundation
<http://www.toyotafound.or.jp/etop.htm>
- National Geographic Research and Exploration grants
<http://www.nationalgeographic.com/research/grant/rg1.html>
Also includes link to Earthwatch – a source of volunteers.
- Nippon Foundation
<http://www.nippon-foundation.or.jp/eng/index.php3>
- Wenner Gren Foundation for anthropological research
<http://www.wennergren.org/>
- ASEAN fellowship in National University of Singapore
<http://www.nus.edu.sg/registrar/prospective/graduate/gsa.html>

Upcoming meetings

- Paleopathology Association, Tampa, Florida USA April 2004
<http://www.paleopathology.org/>
- American Association of Physical Anthropologist, Tampa, Florida USA April 2004
<http://physanth.org/>
- Paleopathology at the Origins of Agriculture, Clearwater, Florida, April 2004.
- European Association of Paleopathology, Durham UK August 2004
<http://www.dur.ac.uk/ppa2004.conference/PPAStuff/PPAConfPage.php3>

Interesting weblinks

- Centre for Khmer Studies
<http://www.khmerstudies.org/>
Includes all the abstracts from our recent Bioarchaeology conference.
- Pre-Angkorian Archaeology project
<http://www.khmerstudies.org/programs/preangk.htm>
- Heritage Watch
<http://www.heritagewatch.org/>
- Origins of Angkor Project
<http://www.otago.ac.nz/Anthropology/Angkor/index.html>
- British Association of Biological Anthropology and Osteoarchaeology
<http://www.soton.ac.uk/~babao/links.htm>
Includes a list of postgraduate courses on biological anthropology in United Kingdom
- Southeast Asian Bibliographic database
<http://seasia.museum.upenn.edu/>
- Indo-Pacific Prehistory Association

<http://arts.anu.edu.au/arcworld/ipa/ipa.htm>

- Biological Anthropology resources on the web

<http://www.geocities.com/CapeCanaveral/Lab/9893/index.html>

Recent Publications

- Douglas, M.T.

2003 Review of "Health in Late Prehistoric Thailand". K.M. Domett. British Archaeological Reports International Series 946 (2001). Archaeopress: Cambridge. Asian Perspectives 42(1): 167-169.

- Pautreau, J-P, Mornais, P. and Doy-asa, T.

Ban Wang Hai: Excavations of an Iron-Age Cemetery in Northern Thailand. Silkworm Books: Chiang Mai.

- Pietrusewsky, M (Book Review)

2004 Genetic, Linguistic, and Archaeological Perspectives on Human Diversity in Southeast Asia. Edited by Li Jin, Mark Seielstad and Chunjie Xiao. Recent Advances in Human Biology, Volume 8. World Scientific, New Jersey, 2001. Reviewed for Asian Perspectives 43: 179-181.

- Pietrusewsky, M. and Ching-fang Chang

2003 Taiwan Aborigines and peoples of the Pacific-Asian region: Multivariate craniometric comparisons. Anthropological Science 111(3): 293-332.

- Pietrusewsky, M. and Cheng-hwa Tsang

2003 A preliminary assessment of health and disease in human skeletal remains from Shi San Hang: A prehistoric aboriginal site on Taiwan. Anthropological Science 111(2): 203-223.

- Tayles, N.

2003 Murder or Mortuary Behaviour? An Iron Age enigma from Northeast Thailand. International Journal of Osteoarchaeology 13(4): 197-206.

Final Note

Please email Kate Domett (kate.domett@jcu.edu.au) if you have any contributions or comments for the next newsletter.

I would also like to make available a list of all bioarchaeologists and other relevant people so please send me your full name, affiliation, and email and contact addresses.