FRIEND of BAN CHIANG – a UNESCO World Heritage Site –

The Ban Chiang UpDATE

Newsletter for the Friends of Ban Chiang

*Preserving a **UNESCO** World Heritage Site Issue #18 Spring 2011*

From the Director

by Joyce C. White

Year of Ceramics

We are currently in the third year of our four-year grant from the Henry Luce Foundation. The purpose of the Luce grant is to strengthen the study of Southeast Asian Archaeology in North America and Southeast Asia. In Luce Year Three, instead of going to Southeast Asia for field research, we "brought Southeast Asia to Philadelphia." How? With the assistance of two visiting Southeast Asian archaeologists and other scholars, we are studying the more than 500 ceramic vessels from Ban Chiang and nearby sites that are on loan to Penn from the government of Thailand.

This "Year of Ceramics" is made possible by an amazing consortium of funders and institutional partnerships. As part of Penn's contribution to the program, the Office of the Vice Provost for Research gave us support for a post-doctoral scholar specializing in ceramics, allowing us to hire Dr. Marie-Claude Boileau to lead our study of Ban Chiang pots. A University Research Foundation Grant enabled Penn Museum to co-host, with the Smithsonian's Freer and Sackler Galleries, an international workshop on Southeast Asian ceramics. Other funding enabled the creation of a beautiful teaching and research ceramics lab at the Museum. A two-semester course at Penn, *Introduction to Archaeological Ceramics I and II*, is being co-taught by Dr. Boileau, Dr. Tom Tartaron, and me using Ban Chiang ceramics as the class's case study.

The Ban Chiang Project has designated the academic year 2010-11 as the Year of Ceramics (YOC), with activities to advance the scholarly study of the ceramics of Ban Chiang.

We are well into the second semester, which focuses on petrography and other technical analyses. Eight graduate students from several Penn departments are enrolled in the class. Through their laboratory analyses of Ban Chiang vessels in the new Ceramics Lab, these students are having a real research experience and contributing to knowledge. They employ scientific methods to study an archaeological collection and address questions in the humanities and social sciences. It is wonderful and personally satisfying that through this course, the Ban Chiang Project brought Southeast Asian archaeology into the general curriculum here at Penn. The course also included sessions at Penn's Laboratory for Research on the Structure of Matter (LRSM). Dr. Doug Yates and Stephen Szewczyk gave hands-on demonstrations of scanning electron microscopy (SEM) and X-ray diffraction analysis (XRD) in order to identify clays, slips, and additives in ancient Ban Chiang pottery.

Another component of the Year of Ceramics was the *International Workshop on Southeast Asian Ceramic Archaeology: Directions for Methodology and Collaboration*. The workshop was held in Washington D.C. at the Smithsonian's Freer and Sackler Galleries and in Philadelphia at the Penn Museum November 4-8, 2010. More than thirty scholars from Laos, Cambodia, Thailand, Vietnam, Japan, China, France, Australia, New Zealand, Canada, and the United States came together to discuss the current status of ceramics studies for this region.

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University of Pennsylvania Museum of Archaeology and Anthropology
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penn.museum/banchiang and *penn.museum/sites/mmap*

At the Freer and Sackler galleries, workshop participants concentrated on historic period ceramics. We were able also to see behind-the-scenes storage and the exhibition, "Taking Shape: Ceramics in Southeast Asia," featuring about 200 ceramic vessels providing a record of human activity in the region from prehistoric times to the present. At the Penn Museum, workshop participants discussed the state of study of prehistoric pottery from Southeast Asia and examined at first hand vessels from Ban Chiang and related sites. Several presentations on studies of modern day potters in Southeast Asia also enriched the discussions.

Some comments from the workshop participants:

"Thank you very much for such an interesting workshop! The presentations and the discussions were really rewarding and stimulating. It was a rare and precious moment which will recur I hope! The organisation of this workshop was amazing and I hope to be able to participate in the organisation of the next one" –Béatrice Wisniewski, École pratique des hautes études, France

"This was a great time, I have not only learned more from other sites in Southeast Asia but also build good connections with other researchers. Furthermore, I had good advices from them and got some precious documents and some program for improving my research career in Cambodia. I am so proud what you have done." –Visoth Chhay, National Museum of Cambodia/Denver

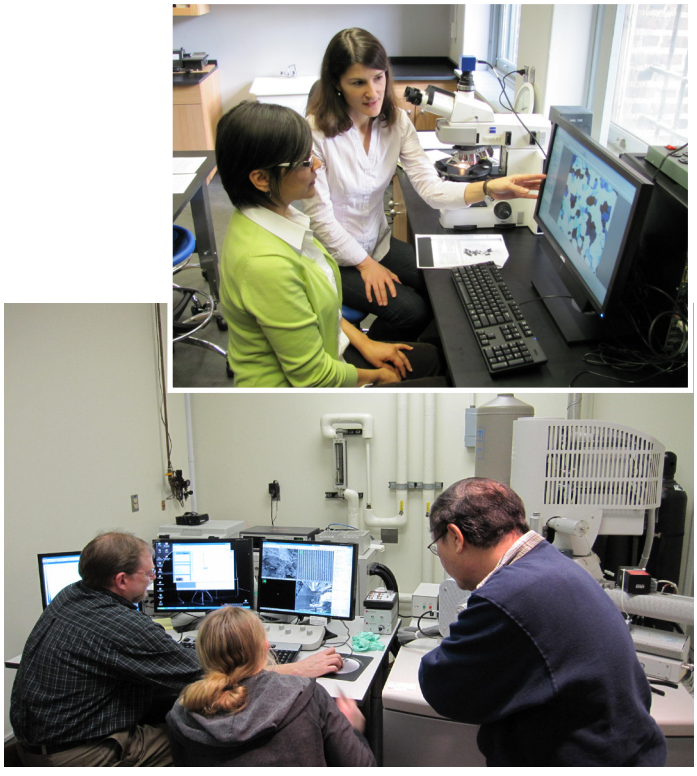
A layperson may not realize the central importance of ceramics in the study of most prehistoric archaeological societies. Ceramics are often the primary basis for studying everything from the chronology and cultural sequence of a site, to the economic organization of the past society, to the ritual behavior at ancient funerals. The study of ceramics is labor-intensive, often lasting several years and involving several researchers. Reconstructing broken vessels, technical drawing, photography, measuring and other descriptive tasks, studying their in situ context, plus a wide array of scientific analyses all contribute to gleaning the knowledge ceramics can hold so that archaeologists can make statements about past societies.

The data from pottery of Ban Chiang are particularly important to the study of Southeast Asian prehistory. Because most were grave goods from over 150 burials spanning more than 2000 years (2100 BCE to 300 CE), their condition, contexts, and range of styles and technologies are highly informative about life at the core of Southeast Asia thousands of years ago. Not only is the collection internationally renowned among scholars and laypersons alike, but Penn's Ban Chiang Project has pioneered the application of techniques such as radiography and refiring to understanding how the Southeast Asian vessels were made. During our Year of Ceramics, we are building on these past pilot studies by systematically recording evidence from each of the 500+ vessels. Taking the lead in this effort are our visiting scholars, Bounheuang Bouasisengpaseuth and Sureeratana Bubpha, who are coding the vessels into our Access regional database (see page four).

Although we will have collected a lot of data on Ban Chiang pottery by the end of this fiscal year, a monograph synthesizing the data from pottery into a larger picture remains to be written. Given the wonderful post-doc ceramics specialist we have in Dr. Marie-Claude Boileau and the need to eventually return all Ban Chiang materials to Thailand, I am working to find support for Dr. Boileau to remain here for another year (through July 2012) to assist us in writing the Ban Chiang pottery monograph. Other participating specialists include petrographer Dr. Brian Vincent of New Zealand. We also would like during this year to complete the Ban Chiang metals monograph. The metals monograph, which I have co-written with Dr. Elizabeth Hamilton and other contributing scholars, is about 85% finished.

By focusing on monograph preparation for Academic Year 2012, we aim during our "Year of Monographs" to produce two manuscripts ready for peer review by the end of summer 2012.❖

Joyce White,
Director, Ban Chiang Project



Top: Dr. Marie-Claude Boileau and Griselle Rodriguez-Gonzalez (student) looking at a ceramic thin section. They are using the digital camera system that is linked to the polarizing microscope.
Bottom: Dr. Doug Yates (Technical Director, Nanotechnology Facility, LRSM) shows students Sarah Hilker and Bounheuang Bouasisengpaseuth how the SEM can be used to analyse pottery.

Quelles Belles Céramiques!

Late last summer, after weeks of fieldwork in Syria and years of living abroad, I moved to my new home in Philadelphia to start yet another exciting adventure. I joined the Ban Chiang team as part of a one-year postdoctoral appointment, splitting my time between teaching ceramic analysis to Penn graduate students and conducting a detailed analytical study of the Ban Chiang mortuary ceramics. Although a seasoned ceramic specialist, I was little prepared for the task at hand. On my very first day on the job Dr. Joyce White led me to the Museum sub-basement where over 500 complete or partially reconstructed pots were awaiting further study. After the initial shock of seeing so many complete pots (I usually work with large fragmentary assemblages made up of thousands of sherds), my eyes picked up on the surprising diversity of shapes, sizes, colors and designs these pots exhibit. Variability suddenly took a whole new meaning. Supported by Joyce and her team of researchers, interns, work-study students, and volunteers, I embraced the new challenge, thinking about the types of questions I wanted to address and the different analytical methods needed to acquire the necessary scientific data.

As a ceramic specialist, I have always been fascinated by the amount of knowledge we can gain from the in-depth study of sherds. Doing ceramic analysis is like writing a biography—a biography of pots, as they progress from raw materials to formed pots via various forming techniques, to firing, use, and discard. During the "life" of the pot, we can learn so much about social aspects of ancient societies. Where was the pot made? Did the potter work in his/her house or did he or she work with other potters in a workshop? How did the potter learn the craft? Does the decoration on the pot reflect social identity? Was the pot fired quickly in a bonfire or was it fired in a controlled kiln environment? How exactly was the pot used? How long was it used? Was the pot found deposited in a grave made specifically for the funerary ritual or was it previously used in another setting? I could go on for a long time with these questions but these are the very questions I seek to answer for Ban Chiang. The analytical techniques I use in my work are borrowed from the sciences, such as thin section petrography, computed radiography, bulk geochemical composition, scanning electron microscopy, and the questions that guide my research come from the humanities and deal with, to name a few, craft specialization, technological choices, consumption patterns, networks of exchange, and communities of practice.

These issues, which link culture and materiality, are at the core of the graduate course I am currently co-teaching with Joyce and Tom Tartaron. Over the two semesters and using Ban Chiang ceramics as a teaching collection, we encourage the students to think about ceramics from an anthropologically informed perspective and we train them on a number of analytical instruments.

Looking back at the first eight months spent at the Museum, one of the highlights has been setting up a new Archaeological Ceramic Laboratory, equipped with research and teaching polarizing microscopes, reference collections, a kiln, and enough space to hold a class of 10-12 people. Philadelphia's blooming cherry trees remind me that April is already here and there are only 4 months left to go, with so much left to do...❖

Marie-Claude Boileau
Year of Ceramics Post-Doc

An Interview with Joom & Boun

The Henry Luce Foundation, as part of its commitment to international collaboration in Asian archaeology and the training of new scholars, is supporting two visiting researchers for the Ban Chiang Project. Since September 2010, Bounheuang Bouasisengpaseuth (Boun) from the National Museum of Laos and Sureeratana Bubpha (Joom) of Thammasat University, Bangkok, have been studying Ban Chiang ceramics under the supervision of Dr. White, Dr. Boileau, and Professor Tartaron. Their study program finishes in May 2011. They are focusing specifically on the more than 500 intact or reconstructed vessels excavated by the University of Pennsylvania and Thai Fine Arts Department at Ban Chiang and three related sites during the 1970s.

AA: Where have you been living since you came to America?

Boun: I live in West Philadelphia, at the home-stay of Anne and Seth. My room is on the third floor rear part of the house where I can see the Vientiane Café and community gardens from my window. Anne and Seth have five children as well as three home-stay visitors, two men (one from Japan and the other from Saudi Arabia) and myself (I'm from Laos). All together there are ten people living in the house, making it a very lively place, which I like very much.

Joom: I also live in West Philadelphia, at the home-stay of James & Viet-Huong who also happen to be Friends of Ban Chiang!

AA: What has been your primary job here at the Ban Chiang Project?

Boun: Pot coding! I usually pick out a pot from an assortment brought up to our office from the sub-basement storage room by Jenny, our work-study student. We then record the pot in the Access Database, this is also known as "Pottery Coding," which is a very detailed description of the pot. For example, we record what its

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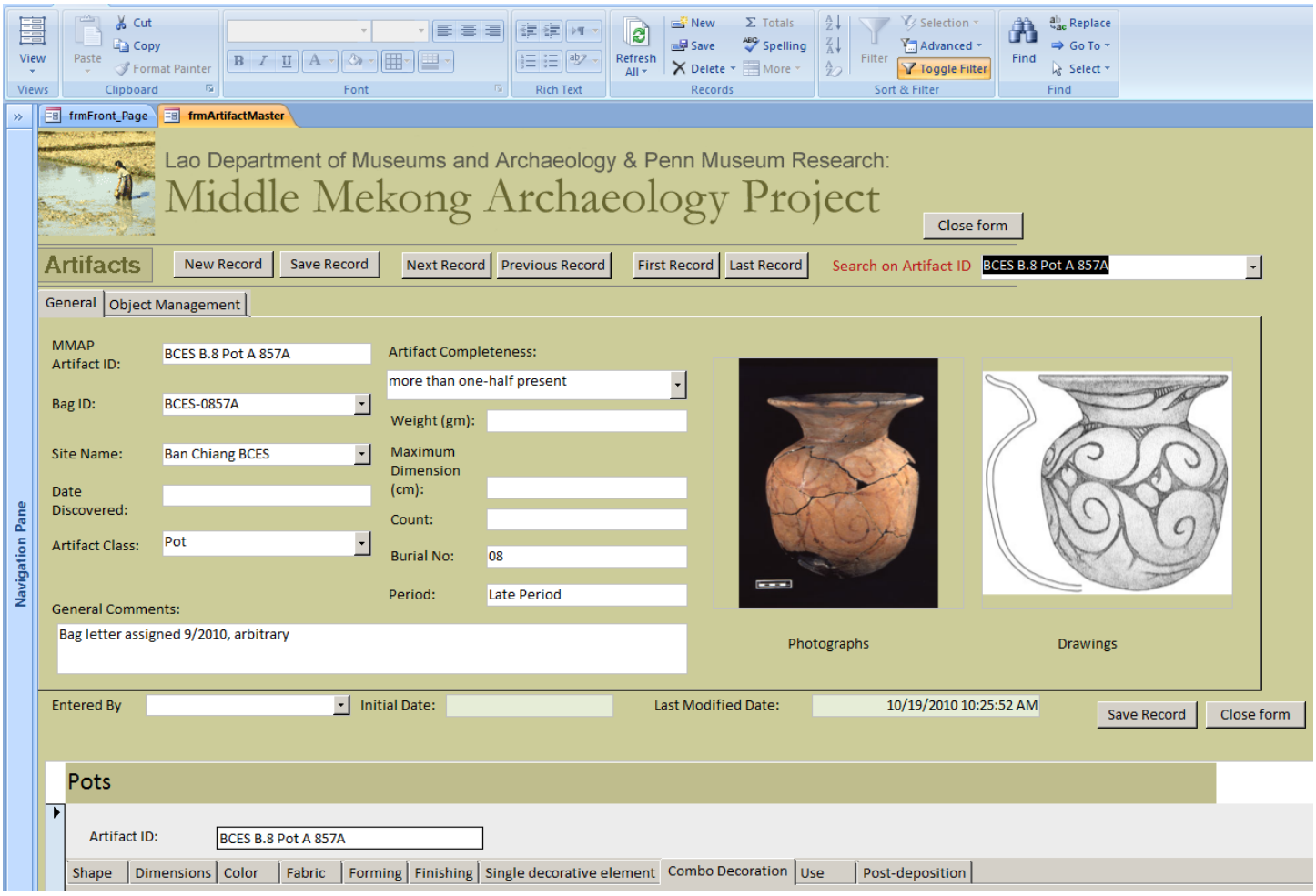

A screen shot of pottery coding using Microsoft Access at the Ban Chiang Project.

surface looks like, the size, and color of the pot. It is a team effort between me and Joom. We often speak in Lao to each other because it is easier, but when Joyce or Marie-Claude overhear us they say, "Speak in English!"

Joom: Boun and I are using the program "File Maker Pro" (FMP) to archive/organize ethnographic images for the Ban Chiang Project but mostly I use the program called "Access" for coding pots. I think I have the Munsell color chart and the color's corresponding numbers completely memorized by now. Certainly after coding 200+ pots I should know it pretty well! We have almost 300 pots to go, I hope we can get them all coded by the time I leave in mid-May, but I don't know. Marie-Claude jokes that she will lock me in the Ban Chiang offices until all the pots have been processed!

Some cool things I have observed while coding pots: How the pot was actually made? Or, what was the "forming technique" used when the pot was made thousands of years ago? Was the pot made with a coil or mold? What was the pot used for? Maybe it was used for holding water, cooking, or food storage. These questions are being answered and recorded for the first time and I get to be a part of it!

AA: What are some things that you have learned in the class,* Introduction to Archaeological Ceramics I and II*?

Boun: Every Wednesday at noon, I attend class in the Museum's new ceramics lab, taught by Dr. Marie-Claude Boileau. I listen and try to understand the very technical lectures about things like petrographic thin section analysis, which is how to explain what kind of mineral we saw in the thin section of the pot which is usually shown under a microscope. Also, what inclusions could be in the clay that the pot was made from; this could be rice husks or straw.

In class, I sit very close so I can see everything Marie-Claude shows us on the microscope which is also being shown to the class on the computer screen. I often have to ask Marie-Claude to explain parts of the lesson I didn't understand on Thursday, which she does very patiently.

Joom: Last semester I would tell my friends back in Thailand that I had a lot of technical papers to read. So many papers! Three to four per week was the norm and it was hard to finish one week's papers before the next week would start again with more papers to read and understand! I needed more time than the Americans in the class because my first language is Thai.

AA: What knowledge will you each take back to Thailand (Joom) and Laos (Boun) when you return in mid-May?

Boun: My wife often asks me, "Boun, why do you never stop working?" and I reply to her that I love my job. When

Sureeratana Bubpha (Thailand) and Bounheuang Bouasisengpaseuth (Laos) are the Year of Ceramics visiting researchers.

I return to my country I would like to improve the database at my museum, the National Museum in Vientiane. I would also like to take my experiences with pottery analysis here at Penn and apply them in my country. We have a lot of pottery sherds that need analysis!

Joom: I hope to apply some of the specific techniques I have learned here to ceramics from an excavation at Ban Chiang conducted in 2003 by the Thailand Fine Arts Department. Also, I hope to teach a course about Ceramics Analysis at a university in Thailand. So the next generation of Thai archaeologists can learn from my experiences here at the Ban Chiang Project.

AA: What will you miss most about your time in America?

Boun: So many things. I will miss my home-stay family, the Ceramics Course with Marie-Claude, the people I work with here at the Ban Chiang Project, I will even miss the Museum's exhibit, "Archaeologists & Travelers in Ottoman Lands" (including the music) which I walk through every day to get to my office.

Joom: I think I will miss Micah the most. He is the son of my home-stay family. We play many games together like soccer or sometimes we sword fight, which I am actually quite good at because I have training in traditional Thai sword fighting! His older brother is a teenager and gets annoyed with Micah easily, so Micah calls me his "step-sister" because I am so often his play-mate at the house.

At work, I think I will miss the Penn Museum's sub-basement the most. It reminds me of a labyrinth with an atmosphere that is very dark and quiet. I remember one of my first days here at the Museum, Elizabeth and I were working in the Ban Chiang section of the sub-basement. I was so nervous about accidentally dropping one of the pots we were working with—some of them were up on a high shelf and it was hard to get them down. She said that it would be okay if I dropped one because they were already broken. Then I could gain experience in pottery reconstruction...she was joking with me of course! American humor.❖

Bounheuang Bouasisengpaseuth (Boun) *and* ***Sureeratana Bubpha (Joom)****, see "New Faces in the Ban Chiang Lab" on page 8 for their biographies.*

❖For the most up-to-date information, past issues of *UpDATE*, and a secure site for donations to the Ban Chiang Project, please check out our websites, *penn.museum/banchiang* and *penn.museum/mmap*.

THERE'S A NEW CERAMICS LAB IN TOWN!

The following is an excerpt from the Penn Museum's Blog in January. It is an informal account of our struggles to finish the new Ceramics Lab in time for the Introduction to Archaeological Ceramics II *class.*

It wasn't exactly like the show, "Flip This House," but it was certainly fraught with emotional ups and downs as we waited for the new ceramics lab to be completed. There were many trips down the hall to the West Wing of the Museum to look at the progress that was being made by the revolving workmen of various specialties. Anyone who has had work done to a bathroom or a kitchen in their house knows how bad—no, maybe the word is hideous—a room can look one day but then be magically transformed, maybe not the next day, but soon thereafter. We had to be patient. We needed to be able to visualize how great it could be. We were excited and freaked-out about looming deadlines at the same time.

There was less than a week until classes began at Penn, and like a tape recording on a loop in our heads was: "This lab needs to be completed and ready for the

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A before, during, and after triptych of our "flipped lab".

students by January 12th!" Completed and ready? Where were the cabinets and counters? Where was the swipe card access? The highly sensitive (not to mention as expensive as the down payment on a house) microscopes, the computers, the cute blue ergonomic stools all needed to be in place and ready. It seemed as if mountains needed to be moved. Many, many e-mail exchanges later and…*voilà!*

Everything seemed to come together but with very little time to spare: the Lab opened on January 11th, 2011. Students taking *Introduction to Archaeological Ceramics II* have been able to do petrographic and other analyses to learn how and where pottery was made, how widely it was traded, and how production was organized. By constructing an archaeological ceramics laboratory in the Museum's newly renovated West Wing, the Penn Museum is fulfilling its pledge to the Luce Foundation to develop facilities to support the Year of Ceramics, and has made an investment to support future ceramics research and coursework at the University of Pennsylvania.

We sincerely appreciate all the Museum and non-Museum people who made this lab available in an unbelievably short amount of time.❖

Ardeth Anderson Abrams
Illustrator/Artist, Ban Chiang Project

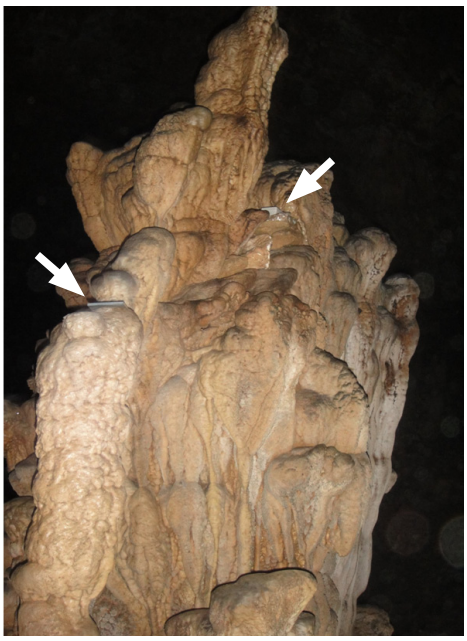
Exciting Preliminary Dates in Speleothem Research

One of the pioneering aspects of Penn's Middle Mekong Archaeological Project (MMAP) has been the incorporation of palaeoclimate research in our work in Luang Prabang Province. We started this work in January 2010 with the participation of two experts in speleothem research, Dr. Kathleen Johnson and Dr. Michael Griffiths from the University of California Irvine, who visited while we were excavating at the cave called Tham An Mah. They returned to Laos in December 2010 to collect more samples.

Dr. Kathleen Johnson is an Assistant Professor in the Department of Earth System Science at UC Irvine. Her research interests include geochemistry, climate change, monsoons, and tropical climates. Kathleen came to Laos to collect speleothem samples. "Speleothem" is the technical name for stalagmites, stalactites, and other similar calcite formations in caves.

Cave deposits like stalagmites form over thousands of years as calcium carbonate precipitates from dripping water in caves. Chemical variations preserved in these stalagmites, which can be precisely dated using the decay of radioactive uranium, reflect changing climate over time. Dr. Johnson and Dr. Griffiths are working to reconstruct past variability in Asian monsoon rainfall using stalagmites collected from Lao caves. This work will provide the first long record of Lao paleoclimate and may help improve our understanding of the role of climate in past cultural changes in Southeast Asia. In short, we hope that the speleothem research will help reconstruct the climate and its changes for the periods of time MMAP is finding archaeological evidence of human settlement in northern Laos. MMAP has documented human settlement of the Luang Prabang region since 13,000 years ago.

Kathleen recently shared that she had obtained some preliminary radiocarbon dates on the Laos stalagmites from three sample caves. She reports that they have samples covering the entire Holocene/Deglacial, and some of the glacial. For the lay person this means evidence from roughly the past 50,000 years. Very exciting! Next she will complete sampling for U-series and hopes to have enough data to present at the AGU (American Geophysical Union) meetings in December.❖



The glass plate and drip rate logger have been placed in the upper half of this stalagmite (see arrows).

Dr. Kathleen Johnson in a cave in Luang Prabang province, MMAP Season 2010.

LAB notes

Conferences

❖In early November 2010, Penn lent support to an international four-day workshop on **Southeast Asian Ceramics**. More than thirty invited specialists in Southeast Asian ceramics participated in sessions at the Smithsonian and Penn Museum. The workshop offered a first-time opportunity for these scholars to gather in one place to discuss the current state of the field and to plan future directions. The workshop was held in collaboration with the **Smithsonian's Freer and Sackler Galleries**.

Publications

Eyre, Chureekamol Onsuwan
2010 "Social Variation and Dynamics in Metal Age and Proto-historic Central Thailand: A Regional Perspective," *Asian Perspectives* 49(1).

White, J. C. and Onsuwan Eyre, C.
2011 "Residential Burial and the Metal Age of Thailand," *Archeological Papers of the American Anthropology Association*, Vol. 20.

White, J. C. and Hamilton, E. G.
2011 "Transmission of Early Bronze Technology to Southeast Asia: New Perspectives," In Chinese. *Southern Ethnology and Archaeology*, Vol. VII, Beijing: Science Press 2011.

In the Lab

❖In July 2010, **Dr. Helen Lewis**, Lecturer, University College Dublin, Ireland, visited the Ban Chiang Project to work on the context assignments of strata from all MMAP seasons, but especially from Tham An Mah Cave excavations (Season 2010).

❖On February 7th, 2011, **Vincent Price** (Penn's Provost) and **Leslie Kruhly** (Secretary of the University), visited the new Ceramics Lab and the Ban Chiang offices (see photo).

❖On January 25th, former volunteer and major FOBC supporter **John Hastings** and his wife **Cricket** visited the Ban Chiang Project offices to meet our research scholars, see the Ceramics Lab, and catch up on other Year of Ceramics activities.

Other News

❖**Helena Kolenda**, Program Director for Asia at the Luce Foundation, visited the Ban Chiang Labs on March 15th. She took a tour of the new Ceramics Lab and had discussions on the progress of the Luce-supported Year of Ceramics.

❖**Bill Henderson**, who passed away January 2010, was honored as "**Volunteer of the Year**" at the Penn Museum's Volunteer Luncheon in April 2010. Bill's wife Barbara and son Bill, Jr. were in attendance to hear Joyce speak about Bill's many years of dedicated work with the Ban Chiang Project.

From left to right: Marie-Claude Boileau, Joyce, Vincent Price, Bounheuang Bouasisengpaseuth, Tom Tartaron, Richard Hodges, and Sureeratana Bubpha.

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New Faces in the Ban Chiang Lab

Marie-Claude Boileau is the Post-doc for the Year of Ceramics. She specializes in the technological study of archaeological ceramics. She follows the concept of *chaîne opératoire*, tracing the potter's choice and action at every step of the production sequence, from the selection and preparation of raw materials to the firing, distribution, and use of finished products. Central to her research is the reconstruction of technological traditions, their development over time and across space, as a way to approach cultural and social identity. To achieve this goal she uses an integrated methodology, combining typo-stylistic, macroscopic, petrographic, and chemical analyses of ceramics and raw materials. Marie-Claude is currently involved in a number of archaeological projects in Bronze and Early Iron Age Syria, Greece, and Turkey.

David Chamberlin Smith began volunteering for the Ban Chiang Project in April 2010. David's primary focus is digital photography of the small find artifacts from the original field seasons. He received his bachelor's degree from the University of New Mexico, where he learned to love both the field and laboratory aspects of archaeological research. His current hobbies include evolutionary theory and photography.

Bounheuang Bouasisengpaseuth is Deputy Director of the Lao National Museum in Vientiane and Co-director of the Middle Mekong Archaeological Project (MMAP) in Laos. His research interests are Lao prehistory and the protection and conservation of Lao cultural heritage. Mr. Bouasisengpaseuth first worked with Joyce White on the 2001 rapid assessment survey in Luang Prabang Province that provided evidence of over 10,000 years of rich archaeological heritage in this part of the Mekong Valley and pointed the way for MMAP work in Laos.

Sureeratana (Joom) Bubpha is a former lecturer in the Cultural Management Programme in the College of Innovation at Thammasat University in Bangkok. She will return there as a visiting lecturer after the Year of Ceramics. Her BA in Archaeology-Anthropology and MA in Prehistory are from Silpakorn University, Thailand. Sureeratana's main research interest is prehistoric archaeology, especially ceramic ecology. She first joined MMAP in 2008, and has continued with the team in 2009. She is interested in learning more about the "big picture" of Middle Mekong archeology, to better understand the relationship between Lao prehistory and the prehistory of northeast Thailand.

Jenny McAuley has the job of Ceramics Collection Manager for the Ban Chiang Project as her work-study position at Penn. She is currently a sophomore at Penn studying Geology and Anthropology and has a strong interest in archaeology. Inspired by her first dig this past summer in the town of San Pietro d'Asso in Italy, Jenny hopes to become an archaeologist.

Jesse DuBois is the current bibliographer for the Southeast Asian Bibliographic Database as his work-study position. Jesse is a sophomore in the Penn College of Arts and Sciences. He is majoring in Humanistic Philosophy, tentatively concentrating in Religious Studies, while minoring in Classical Studies and pursuing a Certificate in French Language. He spent the summer of 2010 in Tours, France, studying at "La Fac des Tanneurs," and his interests include playing his guitars and writing.❖

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