

# EXPEDITION<sup>®</sup>

THE MAGAZINE OF THE UNIVERSITY OF PENNSYLVANIA MUSEUM OF ARCHAEOLOGY AND ANTHROPOLOGY



WINTER 2016 | VOLUME 58, NUMBER 3



## SEARCHING FOR NOMADIC ART

Ancient Minoan Textile Dyes | Adventures in the Kalahari | Childbirth Magic in Ancient Egypt



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# Contents

**8 Chinese Nomadic Art and the Journey to Collect: The Legacy of the Mayer Collection**

*By Fangyi Cheng*

**20 Aegean Dyes: Unearthing the Colors of Ancient Minoan Textiles**

*By Marie Nicole Pareja, Philip P. Betancourt, Vili Apostolakou, Thomas M. Brogan, and Andrew J. Koh*

**28 Kalahari Adventures: Bob Dyson's Travels in Africa**

*By Ilisa Barbash*

**38 Childbirth Magic: Deciphering Bed Figurines from Ancient Egypt**

*By Charlotte Rose*

## Departments

**2 From the Editor**

**3 From the Director**

**4 The New Penn Museum Building Transformation**

**6 In the Galleries**

**7 Museum Events**

**46 In the Labs**  
High Schoolers Take Over the CAAM Labs

**48 Global Classroom**

**50 Portrait**  
Erle Verdun Leichty, 1933–2016

**51 From the Archives**

**54 Member News**

**59 Museum News**

**62 Looking Ahead**

**64 Looking Back**

### PENN MUSEUM

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Tuesday–Sunday: 10:00 am to 5:00 pm  
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#### Admission

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#### Tours

Docents offer tours most Saturdays and Sundays at 1:30 pm. Check the Museum website for topics. Group discounts and docent-led tours are available for groups of 10 or more with reservations.

#### Museum Library

Open to the general public with ID. Call 215.898.4021 for information and hours.

### ON THE COVER:

Bronze stag ornament for clothing or horse tack. Northern China, 8th–5th centuries BCE, Mayer Collection. PM object 41-37-57. See pages 8–19.

ABOVE: Dusk in the Kalahari Desert, Namibia, Africa. Photograph by Digital Vision.



# Stories from China, Greece, the Kalahari, and Egypt

**T**he Winter 2016 issue of *Expedition* opens with an article by Fangyi Cheng on the legacy of the Museum's Mayer Collection. Isabel and William Mayer collected over 400 bronze objects from China's northern frontier. Using archival documents and photographs as well as interviews with Mayer family descendants, Cheng provides a vivid account of Americans in China in the early 20th century in addition to a careful study of selected bronze ornaments.

Our next article, by five archaeologists who work in the Aegean, describes the recent excavation of a Bronze Age dye workshop in eastern Crete. Evidence that dyes were produced at Alatzomouri-Pefka is provided not only by the physical remains of rock-cut vats and basins, but also by the residues found in pots recovered at the site. This article is illustrated with wall paintings from Akrotiri, Thera, that demonstrate the vibrant colors used in ancient textile production.

We then move to an article by Ilisa Barbash on the early career of former Williams Director, Dr. Robert H. Dyson, Jr., who is known to most of us for his work in the Near East. When Dyson was a graduate student at Harvard, he accompanied an American family to the Kalahari Desert in search of indigenous peoples untouched by modern culture. Barbash examines a rich collection of films, photographs, diaries, and letters from the expedition in her account of Dyson's African adventure.

Our last article, "Childbirth Magic," is by Charlotte Rose. Ancient Egyptians used spells, amulets, and other objects to ensure survival of both mother and child during childbirth. Rose studies "bed figurines" from the Museum's Egyptian collection that may have been connected with fertility and birth.

Included in this issue is "The New Penn Museum," an update on changes that will take place at the Museum in the coming years. You will also find short features on the first CAAM summer program for teens and recent projects undertaken by Learning Programs. Dr. Grant Frame remembers Dr. Erle Leichty, Curator Emeritus of the Babylonian Section, who recently passed away. And Alessandro Pezzati digs deep into the Museum Archives with his story of an expedition by Henry and Frances Hall to Sierra Leone. Don't miss the recipes for Baked Bananas and Banana Fritters recorded by Frances in her diary!



JANE HICKMAN, PH.D.  
EDITOR



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# The Digital Penn Museum

The Penn Museum has extraordinary collections and resources. Now, they are more easily available than ever before: we have launched The Digital Penn Museum, a centralized online portal for our vast range of digital content (found at [www.penn.museum/collections/](http://www.penn.museum/collections/)). Visitors can explore the collections online through collections highlights that bring together resources for iconic objects like Queen Puabi's headdress, which is grouped with its historical background, object records, excavation history, and online resources. Or they can learn more about the Hasanlu Lovers or the Taizong Horses; scroll through thematic groupings of objects like Flowers, Animals, or the Egyptian Afterlife; or find out more about our Roman glass or cuneiform collections, for instance. The Digital Penn Museum also makes available the Museum's archival films like *What in the World!* episodes; Museum blog posts that delve into our collections in fascinating ways; exhibition websites; and Lecture Series recordings ranging from Great Riddles to Great Beasts, Secrets of the Silk Road to Great Voyages. The Digital Penn Museum really brings our digital resources together in unprecedented ways; I hope you will enjoy finding out more about your favorite parts of the collection and perhaps make some new discoveries as well.

The Digital Penn Museum makes available to virtual visitors near and far our collections and resources, encouraging exploration and learning. Of course, the Museum itself is also a site for exploration and questioning, for promoting discovery and conversation. In October, our Conservation Department celebrated its 50th anniversary with a symposium, *Engaging Conservation: Collaboration across Disciplines*, that brought together over 100 conservation professionals from nine countries. The Public Classroom @ Penn Museum explored in five public forum classes from September to November



pressing questions of race and science, law, genetics, geography, and violence. In April, we will host a two-day conference with the Penn Law School's Center for Ethics and the Rule of Law that will explore cultural heritage in times of armed conflict.

The Museum is, clearly, a place of many explorations. Our Building Transformation will result in a new Penn Museum that engages even more visitors, of many backgrounds and interests, in more than 35,000 square feet of renovated gallery space. The next few pages will present an overview of the three phases of this project and offer a sneak peek into our Galleries of the Ancient Middle East, opening in spring 2018. I hope you enjoy this preview, as well as this issue exploring some of the myriad facets of our work here at the Museum.

A handwritten signature in black ink that reads "Julian Siggers". The signature is written in a cursive, slightly stylized font.

JULIAN SIGGERS, PH.D.  
WILLIAMS DIRECTOR



# Building Transformation

The Penn Museum's Building Renovations and New Galleries Project—comprising the complete renovation of the historic Harrison and Coxe (Egyptian) Wings, opened in 1915 and 1926, respectively, and the reinstallation of the iconic galleries housing collections from the ancient Near East, Egypt, and Asia—will transform our landmark building into a dynamic destination, with over 35,000 square feet of reinstalled gallery space. This project—and its exciting implications for the Museum—has been detailed in the pages of *Expedition* before, as we share these exciting changes with our most loyal supporters.



ABOVE: The first of the Galleries of the Ancient Middle East visitors will enter, *Toward Cities*, will showcase finds from Tepe Gawra and its associated settlements, and the Ubaid period at Ur. Rendering by Haley Sharpe.

Now, the project is becoming a reality. In late 2015, Penn and the Museum were pleased to engage Gluckman Tang Architects (New York City), to lead the team designing the Coxe and Harrison Wing Renovation component, and Haley Sharpe Design (Leicester, England), with interpretive planners Tim Gardom Associates (London, England), to work with the curatorial team for the Galleries of the Ancient Middle East on design and narrative development. *Expedition* Circle and Loren Eiseley Society members had an opportunity to see a preview of the design and a virtual tour of the object groups selected for those galleries at a special event in June 2016.

The following month, HSC Building & Construction Managers (Exton, PA) was selected to review schematic designs and advise on and oversee construction for the Coxe and Harrison Wing Renovation Project. We are pleased to now share the scope and timeline for this project, which is designed in three phases, the first to commence later this year with demolition beginning

in November, and to conclude by spring 2019.

### The Inaugural Phase Will Include:

- A complete renovation of the historic Harrison Auditorium and its adjoining lobby area and restrooms, which will be rendered level and fully ADA accessible;
- Additional ADA and visitor comfort improvements in the Harrison Wing including a new passenger elevator to all levels, and water fountains;
- The reopening of the original 1899 staircase inside the Main Kamin Entrance to the first floor level, providing access to the Harrison Auditorium (this new access route will also connect the CAAM and Conservation Labs directly to the Auditorium on the first floor level for the first time);
- The concurrent removal of the 1915 staircase dividing the Main Kamin Entrance area from the current Museum Shop, allowing the creation of a large new gallery;



ABOVE: Collaboration with the design team of the New Patient Pavilion has established the possibility of a new garden and event space at the Harrison Auditorium entrance, as envisioned in this preliminary rendering. Image courtesy of OLIN and Ground Reconsidered.



ABOVE: Visitors will step through the doors of the Main Kamin Entrance into a welcoming, airy space created by removing the existing staircase. Behind it, the new Crossroads Gallery will showcase the Museum's excavations at Beth Shean, Israel. Image courtesy Gluckman Tang Architects.

- The transformation of the pathway from the Main Kamin Entrance to the Egyptian Galleries, which will be widened by several feet, installed with floor-to-ceiling windows on the courtyard side, and—for universal accessibility—leveled and directed to a new elevator to all Coxe (Egyptian) Wing floors;
- New restrooms on both gallery floors of the Coxe Wing.

Because of the scope of the accessibility upgrades, we have shifted the opening of our new Galleries of the Ancient Middle East to April 2018 (from a previously reported date of fall 2017) as the timeline and location of demolition work in the Harrison Wing brings a risk of vibration and possible danger to the objects in proximity. With the same collections stewardship concerns, the *Amarna: Egypt's Place in the Sun* and *The Egyptian Mummy: Secrets and Science* exhibitions will be de-installed in summer 2017 before the onset of demolition, and objects along the walls of both Egyptian Galleries closest to the Inaugural Phase construction zone will be secured in place behind a protective construction wall surrounding the entire scope of work. So, in fact, the Galleries of the Ancient Middle East will open alongside a construction wall: we hope members and visitors attending the opening events will pardon our appearance, and share our excitement at the new entrance experience taking shape behind it.

Phase Two (pending funding) will proceed directly following Phase One and complete the renovation of the Coxe Wing, including the reinstallation of its Egyptian Galleries with the palace of the Pharaoh Merenptah at

full height in the upper floor, alongside two new side galleries showcasing our significant collections from ancient Nubia (in modern-day southern Egypt and Sudan). This phase will also include new, fully climate-controlled storerooms for the Egyptian Collection. Phase Three will complete the renovation of Pepper Hall and the Museum's iconic Rotunda, as well as the installation of new galleries of Buddhism and the History of China.

We continue to work in close coordination with the leadership of Penn Medicine as the construction of their New Patient Pavilion goes forward immediately to our south. This construction project will create a major new landscaped walkway between the Museum and the New Patient Pavilion. Collaboration with the design team of the New Patient Pavilion has established the possibility of a new garden and event space at the Harrison Auditorium entrance, as envisioned in the preliminary rendering above left.

The largest building renovation in our history, the Building Transformation project will improve the accessibility of our historic galleries, while the reinstallation of touchstone galleries will provide new interpretations of many of our remarkable collections—a key feature in a Museum that is constantly exploring new stories and dimensions about the past. We thank you, our members, for your continued loyal support as we commence a multi-year construction period, and we look forward to keeping you updated on our progress through these pages in the months and years to come, and offering you a first glimpse of the exciting new galleries and renovated areas as they come online. ●



## JUST OPENED

### The Idea Lounge

*3rd Floor Special Exhibitions Gallery*

This changing space will allow visitors to drop in and try out elements that are being developed for upcoming exhibitions and galleries. Visitors' feedback will be integrated into the final designs.



ABOVE: The new Idea Lounge at the Penn Museum.

## NEW ARCHIVES EXHIBITION

### “Timely Exhibits of Interest to Everyone”

*2nd Floor Archives Corridor*

By means of photographs, posters, and ephemera, *Timely Exhibits of Interest to Everyone* surveys a century of public exhibitions at the Penn Museum, 1890–1990. Presented in conjunction with the University of Pennsylvania’s *Year of Media*, the exhibition explores how styles of display have changed, and features important exhibitions, such as the World’s Fairs (1890s), the first tour of King Tut artifacts in the U.S. (1961), the John F. Kennedy Library exhibition (1964), and more. The title is from a Museum flyer, 1942.



ABOVE: American Gallery in the former University Library (Furness Building), ca. 1898. UPM image 153359.

## NOW ON VIEW



### Magic in the Ancient World

THROUGH SEPTEMBER 4, 2017

*1st Floor Merle-Smith Galleries*



### Kourion at the Crossroads: Exploring Ancient Cyprus

THROUGH FEBRUARY, 2017

*2nd Floor Elevator Lobby*

**COMING SOON**

**Objects Speak:  
Media through Time**

OPENS MARCH 17, 2017

*2nd Floor Elevator Lobby*

This student-curated, cross-sectional exhibition will showcase diverse messages in various media from the Penn collection, making connections between the past and today.



**Cultures in the Crossfire:  
Stories from Syria and Iraq**

OPENS APRIL 8, 2017

*3rd Floor Upper Baugh Pavilion*

The Fertile Crescent has been a land of cross-cultural interactions since the dawn of history. This exhibition will show artifacts reflecting this, and will highlight the work being done to help protect cultural heritage in the region.



**The Moundbuilders: Ancient  
Architects of North America**

OPENS SUMMER 2017

*1st Floor Merle-Smith Galleries*

This exhibition will explore the history of Native American mound-building through a variety of photographs, artifacts, archival materials, and excavation tools and records.



CONTINUING LECTURE SERIES

**Great Beasts of Legend**

Throughout history, great beasts and monsters have terrorized, enchanted, and eluded humans. Join leading Penn scholars on an exploration of some of the best stories from around the world and meet some memorable beasts, including Underwater Panthers, “Blood-seed” Demons, and Winged Lions.

FEBRUARY 1, 2017 | DR. SIMON MARTIN

**Monsters of the Maya Cosmos**

MARCH 1, 2017 | DR. MEGAN KASSABAUM

**Underwater Panthers and Their Place  
in the Native American Cosmos**

APRIL 5, 2017 | DR. PATRICK GLAUTHIER

**Beasts in the Night Sky: The Constellation  
Myths of Greece and Rome**

MAY 3, 2017 | DR. DEVEN PATELK

**Man-lions, “Blood-seed” Demons, and  
Wish-fulfilling Cows: Assorted Beings  
from the Indian Imagination**

JUNE 7, 2017 | DR. ADAM SMITH

**Tomb Guardians: The Story of the Chinese  
Winged Lions in the Penn Museum**

ALL AGES EVENT

**World Culture Day Series**

See the whole world...all under one roof! The Penn Museum’s popular World Culture Series is designed to introduce visitors of all ages to the rich cultural traditions found throughout the Museum’s galleries and, indeed, throughout the world.

SATURDAY, MARCH 11

**Hello India**

SATURDAY, APRIL 22

**Rome’s Birthday**

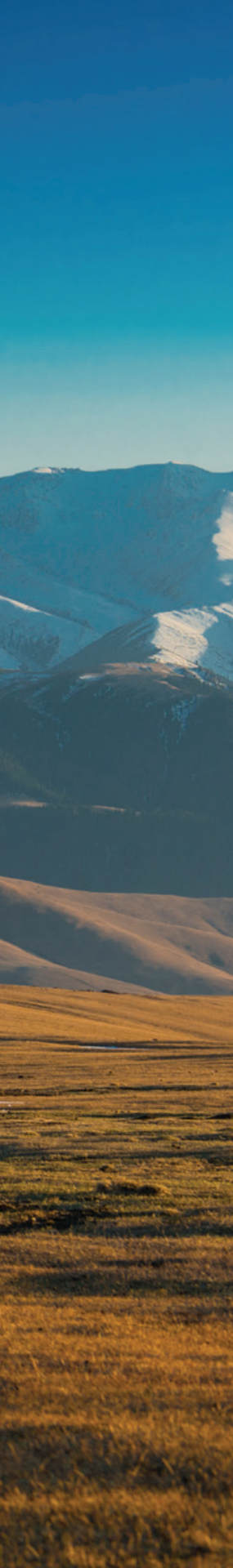






Nomadic cultures of Central Eurasia lived in rugged frontier landscapes. Photograph by Aureliy. OPPOSITE: Bronze ornaments collected by the Mayers. PM object 41-37-57 (top) and 41-37-3 (bottom).





# CHINESE NOMADIC ART AND THE JOURNEY TO COLLECT

•  
*The Legacy of the Mayer Collection*

*By Fangyi Cheng*

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For foreigners in China, the 1920s and '30s were the golden age for collecting artifacts. Professional curators and dealers sent by foundations or governments stayed in Beijing, Tianjin, and other big cities to search for Chinese antiquities or to do fieldwork. Others were amateur collectors of more modest personal means.

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William Mayer (1892–1975) and his wife Isabel (1902–1988), *née* Ingram, were in the second category. Although they were not professionally involved in the antiquities market, they managed to assemble a significant collection of bronze art produced by the nomadic cultures of China’s northern frontier. Despite its cultural importance, their collection of over 400 objects has attracted very little attention since its purchase by the Penn Museum in 1941. Their contributions to Penn’s collections aside, the Mayers’ personal histories are also fascinating.

### Early Years in Beijing and Philadelphia

Isabel Ingram was born in Beijing in 1902, where she grew up as the daughter of an American Congregational missionary, James Henry Ingram. She attended Wellesley College, but went back to Beijing after graduating in 1922, taking over from her sister the role of tutor to Empress Wanrong, wife of the last Manchu Emperor. The Emperor, Aisin Gioro Puyi of the Qing Dynasty, abdicated in 1912, but had retained his title and residency, courtesy of the government of the Republic of China.

Living inside the Forbidden City gave Ingram connections with curators, scholars, and explorers passing through China, especially with the help of her sociable colleague, Reginald Johnston, who was the tutor of Emperor Puyi. On a court visit in 1924, Ingram met the distinguished Bengali poet Rabindranath Tagore and Chinese poets Xu Zhimo and Lin Huiyin. That same year, Puyi and Wanrong were expelled from the Forbidden City, and Ingram’s career as the imperial tutor ended.

Ingram went back to America to serve as an assistant to Dr. Horace H.F. Jayne, the Curator of Oriental Art at the Philadelphia Museum of Art (PMA), whom she had met in Beijing. In 1928, she traveled to China and Japan to purchase major architectural collections for the PMA. In 1929, Jayne became Director of the University Museum, today’s University of Pennsylvania Museum of Archaeology and Anthropology. Ingram began publishing scholarly papers on Chinese painting and Buddhist

sculpture in the *Bulletin of the Pennsylvania Museum*, a PMA publication. In early February 1930, Isabel Ingram and William Mayer were married in Beijing. Unlike Ingram, Mayer was not a native of China but, as an officer in the U.S. Army, he had multiple postings to China, serving as military observer and attaché at the U.S. Embassy.

### Assembling the Mayer Collection

At the time, an interest in small bronze artifacts from China’s northern frontier regions flourished in Beijing among private collectors for whom the more spectacular bronzes, sculptures, and paintings were out of reach. Bronzes of this type are often referred to as “Ordos” or “northern zone” bronzes. One of the reasons for their popularity was a renewed interest in the Scythians, an Iranian nomadic group inhabiting the Eurasian steppes between the 7th and the 4th centuries BCE. Documented discoveries of Scythian objects, magnificently wrought in gold and silver with a distinctive “animal-style,” began in southern Russia in 1763. In the 19th and 20th centuries, many similar forms were found in the vast steppe region extending from China to Eastern Europe. The so-called Maikop Treasure from the Crimea, a portion of which



ABOVE: Examples of the diverse bronze ornaments found in the Mayer Collection. PM objects (from top to bottom) 41-37-278, 41-37-365, and 41-37-378A.



ABOVE: Isabel Ingram (front right) with Rabindranath Tagore (front, sitting), and Chinese poets Xu Zhimo (rear left) and Lin Huiyin (front left), 1924. Collection of Kenneth Mayer.

OPPOSITE: Isabel Ingram (right) with Empress Wanrong (seated) and Reginald Johnston in the Forbidden City, Beijing, 1924. Collection of Kenneth Mayer.





## Mapping the Route

LEFT: Map showing the cities the Mayers visited on their collecting expedition in 1930. Their travels focused on the region in northern China where farming gave way to nomadism.

## Searching the Chinese Markets

RIGHT: The market in Chefang, China, ca. 1930s. The Mayers would have encountered similar market places on their collecting journey. Photograph from the Library of Congress.



is in the collection of the Penn Museum, is one such early 20th-century discovery. The spectacular finds in Eastern Europe and Ingram's familiarity with contemporary Scythian scholarship, evident from her correspondence with Horace Jayne, might have inspired the Mayers to become interested in these objects with similar motifs from northern China.

A map of the Eurasian steppes sent to William Mayer by Ellis H. Minns, a Scythian scholar at the University of Cambridge, is among the Mayers' surviving papers and bears the words, "From Ellis H. Minns, beyond the west of this map, to William B. Mayer, beyond its eastern edge. A symbol of how far interest in the Scythians extends. 19 May, 1931." The close relationship between Isabel Ingram and Frans August

LEFT: A bronze knife and knife sheath from the Mayer Collection. PM objects 41-37-191 (top) and 41-37-264 (bottom).

Larson, an influential figure in the study of the nomadic culture of Northern Asia who was in Mongolia at that time, might also have encouraged their collecting.

The Mayers started their collecting journey around 1930. According to their *Descriptive List of the Mayer Collection of Scythian Bronzes* in the Penn Museum Archives, the collection was "gathered from Mongolia, Kuei Hua Ch'eng [modern Hohhot], Kalgan [Zhangjiakou], Sianfu [Xi'an], Taiyuanfu [Taiyuan] and Peking [modern Beijing]." In a letter to Horace Jayne on March 6, 1931 from Peking, Ingram wrote about their collecting experience, "We are enormously proud of the collection; it represents a year's work and travel from Sianfu to Suiyuan and Mongolia. We have found the richest sources to be North East Mongolia, Suiyuan, and North Shensi [Shaanxi]. If there are any curio shops in Peking where we have not looked, it's only because they are not visible to the naked eye." As the letter shows, the main cities where the Mayers purchased their collection were Xi'an, Taiyuan, Hohhot, Zhangjiakou, and Beijing in the region where farming traditionally gave way to nomadism in Northern China.

Once this group of objects had been brought together, the collection attracted the interest of the Beijing



expatriate community. Carl Whiting Bishop, representative of the Freer Gallery of Art in Beijing, wrote expressing his gratitude to William Mayer for letting him see the collection. The Swedish sinologist and art historian, Orvar Karlbeck—in Beijing collecting for the Stockholm Museum and private collectors—assisted the Mayers in cataloging their objects, which he rated highly. Karlbeck also mentioned the William Mayer Collection to Olov Janse, a Swedish archaeologist, who referred to the collection in “Un Groupe de bronzes anciennes propres à l’Extrême-Asie méridionale” published in the *Bulletin of the Museum of Far Eastern Antiquities* in 1931.

### Finding a Home for the Collection

The close relationship between Isabel Ingram and Horace Jayne might have led the Mayers to approach the Penn Museum about their collection, which they offered for purchase in 1931. The Museum paid Isabel Ingram in advance and the collection was sent on approval. However, when these objects arrived at the Penn Museum in April of that year, Jayne was disappointed with “the lack of fine, large pieces.” In the 1930s, large Chinese ritual bronzes were more enthusiastically welcomed by Chinese and Western collectors. After some haggling back and



ABOVE: Yuan style painting in ink and muted color on silk. A fur-clad, leather booted Tartar horseman is depicted here on a small Mongolian pony returning from a winter hunt with a slain deer and a large bird slung over the saddle. Ornaments examined by the author may have decorated the tack of horses like this. PM object C448.





Nomads in Mongolia still rely on horses for transportation and herding. Photograph by Alastair Rae, London, U.K., via Wikimedia Commons.

forth between William Mayer and Jayne and with Jayne's successor, Director George Clapp Vaillant, the Mayer Collection was eventually purchased by the Museum and formally accessioned in 1941.

In addition to the items William Mayer shipped to Philadelphia in 1931, the Mayers also retained a small group of objects from their collection activities. William Mayer offered these additional objects to the dealer C.T.



ABOVE: Modern Mongolian horse tack is highly decorated, with design motifs similar to those found in the Mayer Collection. Photograph from Wikimedia.

Loo in the early 1950s. In 1960, the great collector of Chinese bronzes, Arthur M. Sackler, purchased this part of the collection from Frank Caro, who had taken over C.T. Loo's business when he retired. In this small group of objects, William Mayer retained artifact types such as the dagger, buckle, plaque,

and spoon, which have counterparts in the collection at Penn. Most of Mayer's objects that entered the Sackler Collection were published in Emma Bunker's 1997 catalog, *Ancient Bronzes of the Eastern Eurasian Steppes*. In her contribution to this book, Trudy Kawami, while writing about the formation of the Sackler Collection, noted that, "although it was assumed that Mayer kept his Ordos collection intact, family members may have retained some examples, while the disposition of others is unknown." We may now state that the main part of the Mayer's "lost" Ordos collection is in fact in the Penn Museum.

The Mayer Collection in the Penn Museum comprises 464 small bronzes, including daggers, harnesses, decorative plaques, and a variety of small ornaments. In their original classification, the Mayers identified two categories, "Scythian Bronzes" and "Sino-Scythian Bronzes." The Penn Museum catalog subsequently adopted the term "Ordos bronzes" devised by the Swedish scholar Johan G. Andersson, who was the Director of the Museum of Far Eastern Antiquities in Stockholm in the 1930s. Nowadays the term "Ordos" refers not only to today's "Ordos region" of southern Mongolia near Shaanxi and Ningxia provinces, but more generally to everything east and south of the Langshan mountain range in Inner Mongolia, Shaanxi, Hebei, and Shanxi provinces.



## Bronze Adornment

Clockwise, from top left: a clothing buckle, two harness ornaments, a bell, a horse bit, and a harness ornament from the Mayer Collection. PM objects 41-37-207, 41-37-335, 41-37-419, 41-37-338, 41-37-244, and 41-37-367.

## Metallurgical Analysis of the Bronzes

With the dramatic advances in Chinese archaeology since the 1950s, scientifically recorded archaeological contexts for comparable objects have become available. One thing that has become clear is that the Mayer Collection is regionally and chronologically diverse in a way that may not have been obvious to the Mayers at the time they were pursuing “Scythian” artifacts. Besides the Ordos bronzes, which are usually dated between the 12th century BCE and 3rd century CE, there are also many objects made not only of bronze but also brass or other materials from later periods, such as the Medieval period and even the Liao and Jin dynasties (10th to 13th centuries CE). Some decorative motifs of these objects can be clearly traced to the Chinese Central Plains, rather than the nomadic northern zone.

In the spring of 2016, Moritz Jansen, Teaching Specialist in the Center for the Analysis of Archaeological Materials (CAAM) at the Penn Museum, and I conducted a metallurgical analysis on the Mayer Collection. In this analysis, we primarily used portable X-ray fluorescence spectrometry (XRF) to do the non-destructive qualitative compositional analysis of the surface of all the objects. The results show that there is much diversity within the Mayer Collection. Various types of alloys are

represented, with the majority being leaded bronze. Gilt and tin-enriched surfaces were also found. A description of objects and results of the metallurgical analysis begin on page 16. Both the comparable objects with intact archaeological context and the results from the metallurgical analysis provide new evidence that will enable future re-cataloging and research on the Mayer Collection at Penn. ●

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### FOR FURTHER READING

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# Decoding Animal Bronzes: Onagers and Oxen

## *A Closer Look at the Mayer Collection*



### **BRONZE PLAQUE WITH ONAGER OR WILD ASS**

Northern China, 8th–5th centuries BCE, H. 4.95 cm

Mayer Collection, PM object 41-37-22

- ◀ On this openwork garment plaque, the forequarters of two pairs of onagers are enclosed in a rectangular frame, with heads turned back, ears perforated, and slight depressions to mark the eyes, nostrils, and mouth. The reverse of the plaque is slightly concave and without attachment devices. Examination by XRF shows this plaque is made of leaded bronze.
- ◀ Several similar objects were excavated at Ganzibao cemetery in Huailai county, Hebei province, China. Unfortunately, the archaeological context of these objects was disturbed by looting. However, we still know that objects of this type date to the 8th through 5th centuries BCE. Four other plaques embellished with the same animal are included in the Mayer Collection, one of them divided in half by a vertical line in the middle.



### **COPPER BELT BUCKLE WITH OX**

Northern China, 3rd century BCE–1st century CE, H. 4.1 cm

Mayer Collection, PM object 41-37-8



- ◀ This belt buckle depicts a standing ox within a rope-patterned frame, showing all four legs of the beast, with its head towards the viewer and tail curving between its legs. On the reverse are two vertical attachment loops. XRF reveals that this object is unalloyed copper with a gilt front side.
- ◀ Belt buckles of this kind usually appear in pairs to be fastened together. This example is the left member of such a pair. The right counterpart would normally have had a bulging curved ring used to fasten them together. Similar objects have been excavated in Northern China, dated to the 3rd century BCE to 1st century CE.



## Decoding Animal Bronzes: Horses and Birds

*A Closer Look at the Mayer Collection*



### **BRONZE SPOON WITH HORSE AND BIRD**

Northern China, 13th–11th centuries BCE, L. 10.5 cm  
Mayer Collection, PM object 41-37-230

► The spoon handle terminates in a horse's head (see top and right images) and pendants are attached to several loops, perhaps to make a jingling sound with the moving of the spoon. If the spoon is turned on its side, a bird sits on the end of the handle (see circle inset above). XRF analysis shows this object is made of leaded bronze.

► Three similar objects were excavated in the Lüliang and Linfen area of Southern Shanxi, China. One of them was found at the waist of a human burial dated around the 13th to 11th centuries BCE.





# Decoding Animal Bronzes: Horses

## *A Closer Look at the Mayer Collection*



### **BRONZE PLAQUE WITH TWO HORSES**

Northern China, 3rd–5th centuries CE, H. 2.6 cm  
Mayer Collection, PM object 41-37-38

- ◀ This openwork garment plaque bears the highly distinctive motif of a small horse on the back of a larger horse, each with a fan-shaped forelock. XRF analysis confirms this object is leaded bronze.
- ◀ Similar objects can be found in the Arthur M. Sackler Collection and have been unearthed in Inner Mongolia, Shanxi, Hebei, and Qinghai. On the basis of the archeological evidence, it is likely that these objects belonged to the Xianbei people, and should be dated between the 3rd and 5th centuries CE.



### **BRONZE PLAQUE WITH TWO HORSES**

Southern Siberia, 2nd–1st centuries BCE, H. 4.4 cm  
Mayer Collection, PM object 41-37-3

- ◀ The pattern on the rectangular openwork plaque is a pair of grazing or confronting horses with the frame decorated by sunken rectangular cells. The back of the plaque is slightly concave.
- ◀ XRF examination shows this object is leaded bronze with traces of arsenic. A similar example was found in southern Siberia and is dated between the 2nd and 1st centuries BCE.



# Decoding Animal Bronzes: Stags

*A Closer Look at the Mayer Collection*



## BRONZE AND GOLD PLAQUES WITH STAGS

▲ Bronze ornaments for clothing or horse tack, in the form of stags. Northern China, 8th–5th centuries BCE, Mayer Collection. Center: Gold plaque with similar stag form, with birds' heads among its antlers from the Maikop Treasure. Kuban, Russia, 5th century BCE.

▲ Clockwise from top right: PM objects 41-37-57 (H. 3.3 cm), 41-37-71 (H. 3.8 cm), 41-37-69 (H. 2.6 cm), 41-37-70 (H. 2.1 cm), 41-37-72 (H. 3.7 cm), and 41-37-33 (L. 4.4 cm). Center: PM object 30-33-1.1 (H. 3 cm).







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# AEGEAN DYES

## UNEARTHING THE COLORS OF ANCIENT MINOAN TEXTILES

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By Marie Nicole Pareja, Philip P. Betancourt, Vili Apostolakou, Thomas M. Brogan, and Andrew J. Koh

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BRONZE AGE CLOTHING in Minoan Crete was multicolored and made from intricately woven textiles. Until now, our only evidence related to the colors in the textiles came from the study of costume in wall paintings. Fortunately, recent research has revealed that several different dyes were produced in Minoan Crete.

Clothing is depicted in frescoes and other art forms from various Middle to Late Bronze Age Aegean sites (ca. 1700–1400 BCE). Many of these images—such as those on the tiny surface of seals—fail to convey the strikingly colorful nature of Minoan garments. And the representation of a blue bodice is not sufficient evidence to conclude that Minoans wore indigo-dyed, blue, woolen clothing. To identify the dyestuffs used during this period, we conducted scientific analysis of the pottery from a dye workshop at Alatzomouri-Pefka in Crete.

### Minoan Clothing

In Minoan art, men and women are shown dressed in various garments that involve a range of simple and complex designs. This clothing incorporates a variety of colors, many of which must have been derived from

natural dyestuffs. Some organic dyes, though none that we found, also require the use of a mordant, an inorganic oxide that creates a chemical bond between the fiber and the dye. The choice of fiber also played an important role in the use of color. Linen fabrics are widely attested as used in Bronze Age Crete, but experiments have shown that linen is not easily dyed. On the other hand, woolen fibers accept dyes well and, therefore, are more likely to have been used as material for the creation of brightly colored clothing.

Many of the vibrant hues found on Minoan clothing are executed as patterns. The warp-weighted loom is well suited for the creation of such designs, and its use by the Minoans is documented by the presence of caches of loom weights from several sites. These weights—the only inorganic part of the loom—provide evidence for the widespread use of this loom throughout Minoan Crete. Dye workshops, however, are much rarer finds.

### The Workshop at Alatzomouri-Pefka

The archaeological site of Alatzomouri-Pefka, dating to Middle Minoan IIB (ca. 1750–1700 BCE), is located along the rocky, northern Cretan coastline, west of the



OPPOSITE: Detail of the Saffron Gatherer fresco, discovered at Akrotiri, Thera. The figure wears a brightly colored skirt and bodice. Image courtesy of Philip P. Betancourt.





## Dyeing Vats

LEFT: One of the several rock-cut basins (Basin 1) in which textiles from Alatzomouri-Pefka were dyed. Photograph courtesy of Philip P. Betancourt.

village of Pacheia Ammos. Several settlements dotted this region during the Bronze Age. Although this small site may have been associated with Gournia, the largest nearby settlement, it is situated well beyond the area that would today be considered the suburbs of Gournia. The distant location may be related to the sometimes odiferous nature of processing dyes.

Features found at the site provide evidence for a dye workshop. Dye production required a large amount of water. Alatzomouri-Pefka has a deep well, rock-cut vats, and basins. The well is in the northern area, surrounded by the largest rectangular basin on site. A shallow, circular, rock-cut vat is nearby as is a row of seven rectangular basins. It is not surprising that the site is composed of several artificial cavities in the bedrock because multiple separate dye baths were probably created and used simultaneously. Nearby crumbling stone walls were probably not associated with a permanent house, but may have been part of a shelter for the craftsmen and craftswomen who worked on site.

Water is integral to the creation and use of dyes—to wash wool, create a dye bath, and to soak fibers—all of which could occur in the rock-cut vats. Additionally, many tripod vessels from the site were burned on

the outside of their bases, suggesting that heat was necessary for the preparation of at least one dye. Several crushed murex shells from the site indicate the possible manufacture of purple dye, which could be used for embroidery, like that seen on the sleeve of the Seated Goddess from Thera (see image on page 25 of this issue, in the bottom right corner). Many pigment sources, like murex, must be crushed and heated during production, and evidence for these activities is supplied by the burned tripods and also by the many recovered stone tools that may have been used for these types of tasks.

## Methodology for Dye Identification

Ceramic tripods, as well as other clay vessels from the site, were certainly involved in the processing of the raw material for dyestuffs. The porous nature of pottery allows for the absorption of a tiny amount of the ancient contents into the walls of the vessel. The residues from these contents may be extracted and then subjected to gas-chromatography mass-spectrometry (GC-MS), an analysis method that identifies the chemical composition of organic compounds.

Samples were extracted from vessel walls by heating pottery submerged in solvents at the INSTAP Study Center for East Crete and then taken to the Brandeis University Department of Chemistry for GC-MS analysis under the direction of Dr. Andrew Koh. The procedure took 28 minutes to analyze each residue. In order to verify that no contaminants existed from pre-

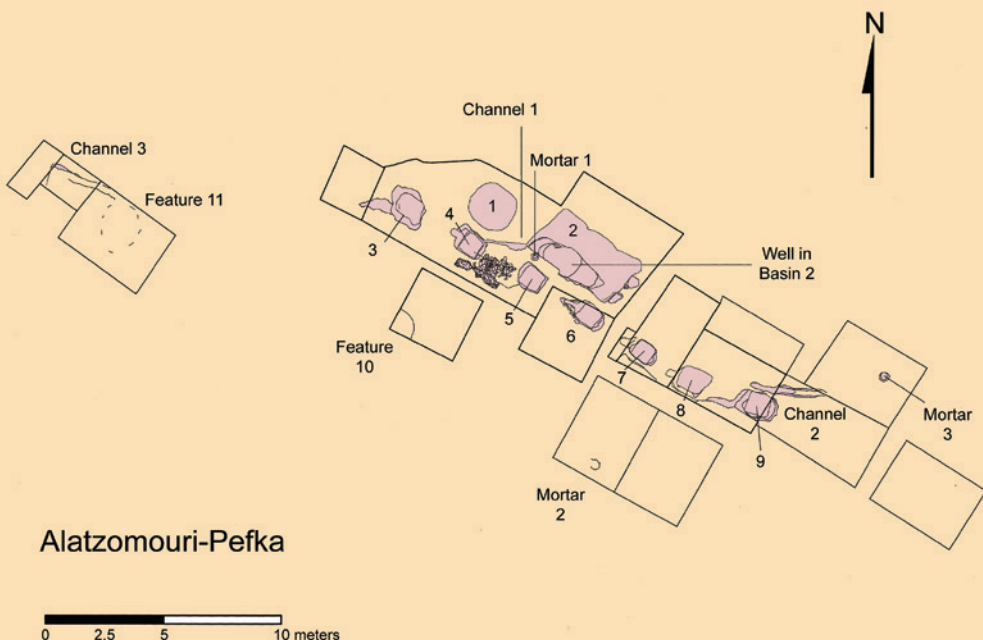


LEFT: Reconstructed tripod cooking vessel for processing dyes. Photograph by Chronis Papanikolopoulos.

## Workshop Plan

RIGHT: Discovered at Alatzomouri-Pefka, Crete, this dye production workshop revealed several man-made features that provided evidence that dyes were produced here, including a deep well and rock-cut vats and basins.

The workshop was located at a distance from the closest settlement, perhaps because of the unpleasant odor associated with processing dyes. Image courtesy of Philip P. Betancourt.



Alatzomouri-Pefka



### Identifying Residues in Pottery

- Gas-chromatography mass-spectrometry (GC-MS) is a non-destructive method of analysis for identifying the degraded residues of pottery.
- Gas-chromatography is a way of separating the molecular compounds present in a sample by firing it through a column of non-reactive gas (typically helium, hydrogen, and/or nitrogen).
- Different molecules pass through the column at different speeds, and the mass-spectrometer is able to then distinguish the compounds present in the sample based on the speed of each one.
- The results are presented in a graph, and the highest spikes indicate the most prominent compounds in the sample. In our study, a total of 21 objects were selected for analysis. Two samples were taken from each vessel, and 42 samples were analyzed.

Photograph by Fotokon.

vious runs, solvent blanks were used intermittently. This process was successfully used to discover the contents of the clay vessels from Alatzomouri-Pefka.

### Dyes from Shells and Plants

As initially indicated by the presence of *Hexaplex trunculus* shells (a species of murex) at the site, “royal purple” may have been one of the dyes manufactured at the workshop. Ancient writers, including Aristotle and Pliny, describe in detail the creation of purple dye from the mollusk. First, the creature is crushed and a tiny gland is extracted. The secretion from this gland is oxidized, added to water, and heated to create a brilliant purple dye. Residues from murex purple dye were indeed discovered in several clay vessels from the site, including a large decorated pot.

Madder is a source of many red dyes today and has been identified in several clay vessels that we examined. The plant that renders this beautiful dye, *Rubia tinctorum*, grows all over the world, including Greece. Textual evidence exists for the use of madder in dye-making as early as Classical times, but it was



RIGHT: Illustration of *Rubia Tinctorum*, source of ancient red dye, from *Köhler's Medicinal-Pflanzen* by Franz Eugen Köhler. Note the red root, which is crushed to make the textile dye. Image from Wikimedia.



## AEGEAN DYES



Small *Hexaplex trunculus* shells (a species of Murex) were used to produce purple dye in the Bronze Age. Photograph from Wikimedia.



A unique triple vessel found at Alatzomouri-Pefka was used in the dyeing process. It contained traces of urine and murex dye. Photograph by Chronis Papanikolopoulos.

apparently used before then in Crete. The plant's roots are severed and mashed, then heated to produce the dye. The abundance of the plant, the brilliance and beauty of the resulting color, and the resistance of this dye to fading led to the widespread popularity of the dye in the ancient world.

Evidence for the use of a lovely yellow dye was also recovered from this workshop. *Reseda lutiola*, another dye-producing plant, is commonly referred to as weld. Like madder, the plant material must be processed to create the pigment: all parts of the plant except the roots are chopped and muddled, then heated in water. Unlike most yellow dyes, this plant creates a deep golden color that does not fade easily. Residue from weld was discovered in one vessel that also contained murex purple, but whether they were mixed together or used independently is currently unknown.

### Other Materials Used in Dye-Making

Lanolin, the oil produced by sheep, clings to wool fibers when they are removed from the animal. The wool is cleaned (scoured) to remove the oil from the fibers because if the lanolin is not removed, the wool will not accept a water-based dye. Water is used for the scouring process and the separated oil will then float on top of it. This substance can then be skimmed off the surface and reused for other purposes, like treating leather. Lanolin residue was discovered inside pottery found at the site.

Urine was also detected in one of the vessels from Alatzomouri-Pefka. The substance was discovered in the right rear vase of a triple vessel that is composed of three different yet connected containers. Through a hole, the two rear vessels connect to the front spouted pot; the substances in the two back jars come together before the mixture is poured out of the front, spouted container. Evidence of murex dye was recovered from the spouted jar. Pliny describes mixing murex and urine to create

an attractive pale purple color (rather than using murex alone), but he does not explain how or in what proportions the ingredients should be mixed. Unfortunately, we cannot learn this information through residue analysis.

### Evidence for Minoan Dyes in Frescoes

Evidence for all three of the dyes discovered at Alatzomouri-Pefka survives in wall paintings from the same period. In the frescoes from Akrotiri, Thera (once called Santorini), images of young women dressed in elaborate Minoan clothing—with red, yellow, and purple details—are preserved. Although the striking red and yellow pigments survive well, the purple has largely faded so that all that remains of this pigment is a ghost, a gray stain in raking light. For this reason, both photographs and watercolor reproductions of the frescoes are provided here to show the nearly invisible purple details on clothing.

In the frescoes from Xeste 3 at Akrotiri, each figure is named for a distinguishing trait: the Necklace Swinger holds a necklace of red beads in one hand, the Veiled Girl wears a full-length yellow veil that is dotted with red beads or embroidery, and the Seated Goddess sits in front of a heraldic griffin and accepts an offering of crocus stems from a blue monkey. The clothing of each of these figures depicts further evidence for Minoan textiles that were colored with dyes like those discovered at Alatzomouri-Pefka.

The Necklace Swinger wears a multi-layered flounced skirt and an open bodice, both of which appear standard in depictions of women from Xeste 3. She is adorned with several types of elaborate jewelry and wears a sash or ribbon in her hair. Both the sash and bodice feature the vibrant colors that are positively identified as dyes like those that came from the workshop on Crete. The sash, yellow with red borders, could have been dyed using weld and madder. The same two colors are found on the band that runs down the arm of the gauzy open bodice.



► Necklace Swinger

Discovered at Akrotiri, Thera. She wears a flounced skirt and a gauzy open bodice, clothing typical of the women in the Xeste 3 frescoes. Wall painting courtesy of Akrotiri Archive. Reconstruction courtesy of Ray Porter.



▼ Veiled Girl

Discovered at Akrotiri, Thera. Her yellow veil may be the largest yellow textile preserved in Aegean fresco. Wall painting courtesy of Akrotiri Archive. Reconstruction courtesy of Ray Porter.



► Seated Goddess

Discovered at Akrotiri, Thera. Her garments are decorated with crocuses. Wall painting courtesy of Akrotiri Archive. Reconstruction courtesy of Ray Porter.







ABOVE: The Wounded Woman fresco, discovered at Akrotiri, Thera. Photograph courtesy of the Akrotiri Archive.



ABOVE: View of the ongoing excavation at Akrotiri, Thera. The Minoan Bronze Age settlement is located on the Greek island of Santorini.

Although the woman's silhouette is seen through the sheer material, purple crocuses with red stamens dot the fabric of her bodice. These decorative motifs may have been embroidered on the clothing, perhaps with woolen thread.

A similar color scheme appears on the Veiled Girl, who wears a white bodice with thick blue bands and thin red bands at the sleeves and shoulders. Additional bright red bands also decorate the back of the garment and, in the otherwise blank space, purple crocuses are painted. If the garment in the fresco actually existed, the bands and crocuses may have also been woolen embroidery, as was the case on the Necklace Swinger's bodice. Additionally, the yellow veil that nearly covers the young girl may be the largest yellow textile preserved in Aegean fresco.

Finally, the Seated Goddess features even more crocus iconography than the Veiled Girl or the Necklace Swinger. On an open white bodice, purple crocuses with red stamens dot the fabric.



LEFT: Seed pods from the carob tree were possibly used by the Minoans to create black fabric dyes during the Bronze Age. Photograph by Dionisvero.

Black crocuses are painted on the blue bands that line her shoulders and arms. Another band of fabric across her knees features a repeating pattern of abstracted black crocuses. A purple crocus, again complete with red stamens, is either tattooed on her cheek or rests against her cheek with the stem tucked behind her ear. Although the color represented most often on the goddess figure is purple, small, circular, red and yellow objects—perhaps beads or small pompom-like decorations—and red tassels ornament the bottom of her sleeves.

The only two colors represented on the clothing in these frescoes that are not identified as dyes that may have come from Alatzomouri-Pefka are black and blue. Black dye may have been produced during the Bronze Age by boiling pods from the carob tree. Unfortunately, no chemical evidence has been found for the raw material used to create blue dyes for the blue clothing seen in frescoes from the Minoan period.

Residue analysis has verified the production of red, yellow, and purple dyes in Crete, as well as the use of wool in Bronze Age textiles. The relationship between representations of textiles in art and the reality of ana-



The frescoes from Akrotiri support evidence of colored dyes used in Minoan textiles. Photograph courtesy of Norbert Nagel, Wikimedia.

lyzed residues presents great opportunities for future research in both archaeology and art history. As this study shows, portions of the information presented in Minoan wall paintings illustrate a clear, demonstrable tie to the material reality of the Bronze Age Aegean. •

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Detail of the Lady of Panel B, a seated woman from Pseira, illustrating colorful textiles used for clothing. Photograph courtesy of Philip P. Betancourt.

**The Research Team**

After the site of Alatzomouri-Pefka was excavated, a research team was organized to investigate traces of organic residues in the pottery. The project had three co-directors: Vili Apostolou, Director of the excavations and Director Emerita of the 24th Ephorate of Prehistoric and Classical Antiquities in East Crete; Dr. Thomas M. Brogan, Director of the INSTAP Study Center for East Crete; and Prof. Philip P. Betancourt, Professor at Temple University, Philadelphia and Consulting Scholar in the Mediterranean Section at the Penn Museum.

Other members of the team included: Kathy Hall, Senior Conservator at the INSTAP Study Center for East Crete; Prof. Andrew Koh at Brandeis University; Dr. Marie Nicole Pareja, Managing Editor of the Corpus of Aegean Wall Paintings Project at INSTAP and Consulting Scholar in the Mediterranean Section at the Penn Museum; and Alison M. Crandall, student at Brandeis University.

Working under a permit issued by the Greek government, samples from sherds were removed using non-destructive means under the supervision of Kathy Hall. The INSTAP Study Center for East Crete is the headquarters for archaeological scholarship in Crete, whose U.S. affiliation is the Penn Museum. Samples were analyzed at the Brandeis University Department of Chemistry in Waltham, Massachusetts.



# KALAHARI ADVENTURES

BOB DYSON'S TRAVELS IN AFRICA *By Ilisa Barbash*

Sunrise in the Kalahari Desert, Namibia,  
Africa. Photograph by Rbulthuis.





**BEFORE DR. ROBERT H. DYSON, JR.** became Williams Director of the Penn Museum in 1981, he established himself as an archaeologist working in the Near East. This story takes us back to 1951,

when Dyson was a graduate student in anthropology at Harvard University. He traveled to the Kalahari Desert in southern Africa with the Marshall family, to study remote African peoples.



## *U.S. Scientists to Film South-West Bushmen in Natural Surroundings.*

This was the headline of the 1951 *Windhoek Advertiser* article heralding a series of expeditions undertaken by the Marshall family of Cambridge, Massachusetts, to the Kalahari Desert. Upon retirement, Laurence Marshall, a founder of Raytheon Industries, was determined to create a constructive family project. Neither he nor his wife Lorna, an English teacher, had training in anthropology or film, but they—and their teenage children, John and Elizabeth—decided to find and extensively document a group of hunter-gatherers who were untouched by modernity.

Despite forming an affiliation with the Peabody Museum of Archaeology and Ethnology, the Marshalls were unable to find a professional anthropologist to accompany them. At the time, both the Peabody and Harvard's anthropology department were more focused on Native North and South Americans; the indigenous peoples of Africa were more commonly studied by European scholars because of their colonization of the continent. In the absence of an available Africanist, the Marshalls enlisted a promising young Harvard graduate student: Robert (Bob) H. Dyson, Jr.

Dyson was widely considered to be one of the anthropology department's best graduate students and was already a member of Harvard's exclusive Society of Fellows. He had enrolled at Harvard as an older undergraduate, after serving in the Navy during World War II. He had accompanied Peabody Museum Director J. Otis Brew for two seasons to study the Awatovi Ruins in the American Southwest and had conducted fieldwork on prehistoric sites in Maine and New Brunswick (Canada).



### Negotiating the Kalahari

Bob Dyson and Laurence Marshall arrived in southern Africa in May 1951—a month before the rest of the expedition—to do reconnaissance and determine exactly where they would seek unacculturated people. Based on various consultations with academics and prospectors, Marshall and Dyson decided “to work on a Bushman group” near the waterhole known as Gautscha Pan, located at roughly 20° S, 20° E in Southwest Africa (now Namibia). *Bushman*—a term later deemed pejorative—referred at the time to a number of southern African peoples, including the Ju’hoansi, with whom the Marshalls and Dyson ultimately worked.

In addition to helping with logistics and guiding the Marshalls in research methodology, Dyson was tasked with posting regular reports on the expedition’s activities for Peabody Museum Director Brew. The missives, which are the most thorough documentation of the expedition, are professional—covering details from archaeology, of which there were few useful artifacts, to filming and still photography, to logistics. Above all, they also reveal that Dyson had a wry sense of humor.

In his first report, he described the difficult journey to southern Africa: “Started in Rome. Had breakfast at Kano in Nigeria, lunch in the Hotel at Brazzaville (Fr. EQ.AF.) overlooking the Congo; dinner somewhere over the Kalahari Desert, and bed in Jo’burg.” Ultimately, in addition to Dyson and the Marshalls, the large and ethnically diverse expedition included local scholars, a government official, and a staff of mechanics, interpreters, and cooks. After loading up with petrol drums,



FOREGROUND, LEFT TO RIGHT: Robert Dyson standing, Laurence Marshall, Elizabeth Marshall, and Lorna Marshall with unidentified Ju/'hoansi, 1951. Photograph probably by John Marshall. PM 2001.29.876 (99170061)

medicines, spare auto parts, water, and food, the team (which Dyson likened to a “stampede”) caravanned out of Windhoek in “the Dodge, the Chuck Wagon, and the Hotel. (The latter having luggage compartments and sleeping decks).” Angling over heavy sand dunes, plowing through tangled scrub, their radiators boiling over, five huge trucks made their way past brush fires and steep cliffs “through the wildest remaining Bushman country.” “Little game and no water. Backs all sore from constant jouncing up and down. Lead Dodge fell into a hole,” Dyson groaned. Under these conditions, the expedition

had fewer than six weeks to find Bushmen, explain their purpose, negotiate a working relationship, get to know individuals, and observe and document their customs.

### **Studying the Ju/'hoansi**

It took them two full weeks to reach the isolated Nyae Nyae area in the western Kalahari. In its center, was a circle of 13 water pans (flat expanses of ground that contain water), where animals and people grouped during the annual dry season. In the middle of that, was Gautscha Pan. There they set up camp among jackals,









ABOVE: Ju/'hoansi woman tending a fire, 1951. Photograph by Bob Dyson, 1951. Image courtesy of Mary Voigt.

vultures, guinea fowl, wildebeests, kudu, lions, snakes, and scorpions. It was four anxious days before they had a glimpse of Ju/'hoansi. Lorna Marshall described the first meeting in her 1951 diary:

*We walked back in the noon heat along the edge of the pan. The heat was crushing. We sat down in the shade with a cup of tea and chatted a little while. Suddenly Bob [Dyson] looked up and there sitting in a circle 60 feet from us were 7 Bushmen. Our two guards and five others. We had not seen or heard them come. I am very excited and happy. Bob gave them tobacco... (July 3, 1951)*

After introductions, the expedition team persuaded the Ju/'hoansi to move their families closer to Gautscha Pan where the team could better observe their daily activities. Lorna recorded the Marshalls' response:

*Mr. [Claude] McIntyre [soon to be commissioner of Bushman Affairs, S.W.A.] and Bob [Dyson], with Picanin interpreting, had a conference this morning with the Bushmen about the plans. They were asked to bring all their belongings. Bob explained the reason as follows. He said that at home there was a very big house [Harvard's Peabody Museum]. Each people had a room in it, with all their things in it to show the way they lived. The English had a room. The Bantus had a room and so on. Bob thought*

OPPOSITE: John Marshall straddles two trees for a better filming angle of goats and their keepers, 1953. Photograph probably by Lorna or Laurence Marshall. PM 2001.29.574 (98780029)











ABOVE: The expedition's still photography of objects, such as these knives was initially methodical and conventional—much more so than their motion picture filming, 1951. Photograph probably by John Marshall. PM 2001.29.700 (98800041)

*that they seemed pleased to think Bushmen would have a room, too. Bob said that we had nothing yet to put in it and that was why we were asking them to make things for us. (July 8, 1951)*

As Dyson reported to Brew, “To begin our work here we had them all load up (the trucks) with their belongings and move to a new place where they set up a new *werft* [homestead] including fire making, etc., etc.” Once the Ju/'hoansi families arrived, the camp bustled with activity. Lorna Marshall spent her time observing women and children and recording names for kinship charts. Elizabeth shared modeling clay, paint, and crayons with the children, recording the results. Laurence occupied himself with the expedition management while Dyson and John Marshall concentrated on filming “most of the important aspects of both technology and culture” such as “playing, misc. activities, making the bow, arrow, shell beads, working skins, cutting up meat, building skerms [temporary dwellings], making fire, using digging sticks, cooking, making their axe-adze, collecting and applying poison, hunting (staged however), collecting water, eating, making metal arrow points, making dance rattles and so on.”

From the outset, the expedition's work was fruitful. “In general we had a marvelous time, getting to know each Bushman as a personal friend,” wrote Dyson with-

OPPOSITE: John Marshall photographing Toma demonstrating how to throw the assegai or spear, 1955. Photograph probably by Daniel Blitz. PM 2001.29.656 (98780111)





Photographs of the Ju/'hoansi at the Ju/'hoansi Living Museum. TOP: Men on a bushwalk. BELOW: Women engage in a traditional dance. © Living Culture Foundation Namibia. For more information on the Ju/'hoansi Living Museum, visit [www.lcfn.info/juhoansi/home](http://www.lcfn.info/juhoansi/home).

out a trace of irony. “They soon understood the language difficulty and overcame it very easily by pantomime. The language is not so difficult as one might think. They only use four clicks but vary the tones.”

Although at the time it was not unusual in southern Africa to force anthropological subjects to cooperate, the Marshalls instead distributed food, coffee, sugar, salt, and tobacco to the Ju/'hoansi they photographed and interviewed that year. In order to keep up with the demand for meat, the expedition was compelled to shoot more game than their permits allowed. In addition, said Dyson “we badly calculated our own supplies and fell short of sugar, coffee, and mealie meal before we were finished... The moment they got hungry they simply became non-cooperative.”

As Dyson commented, “The whole thing was done with express train rapidity and it is astounding that we covered what we did in the time.” This included a nascent kinship study, information about inheritance of the

headman’s position, film footage of a curing ceremony, numerous pictures of artifacts and people, and records of body measurements. They interrogated the Ju/'hoansi to compare what they learned with earlier records. As Dyson said “There were a few deviations (for example God’s two story house now has a corrugated tin roof, and God himself has obtained a pair of white trousers!)” This, he surmised, “probably comes from the missionary work among the Bechuana with whom these people trade.”

Nevertheless, the team did not collect many artifacts because they did not have “sufficient goods” for trading, as “for objects in use, like mortars and pestles, one must be able to replace them with equal equipment and this we could not do.” They found, though, in and around most of the water holes they visited, evidence of Late Stone Age sites, with implements such as blades, as well as more recent potsherds and some European glass beads.

Much to the dismay of Dyson and the Marshalls, local officials suddenly cut short the Nyae Nyae stay from six weeks to less than a full month. As they left, the Marshalls handed out presents to all involved.

Before returning to the United States, the Marshalls, along with Dyson, attempted to do comparative research on other African peoples in nearby Angola, but rampant brush fires and rain-swollen rivers made travel difficult. Undaunted, they began to plan a longer trip for the following year. Even in 1951, it was clear that the Ju/'hoansi’s lives were about to change significantly—beyond whatever might be due to their incursion. Moreover, there was talk of opening up the land to farmers and putting the hunter-gatherers on a reservation, something that eventually happened in 1960.

### Future Expeditions

Ultimately, the Marshall family went on to conduct six more expeditions to Nyae Nyae before 1961, with the various Marshalls returning at different points into the 21st century. They produced over 24 ethnographic films, several anthropological books and articles, and some 40,000 photographs. The results were a comprehensive study of the Ju/'hoansi, which countered prevalent negative stereotypes of the Bushman, revitalized academic interest in Bushmen, and charted new pathways in anthropological fieldwork, ethnographic film, and documentary photography that have relevance to this day.





Filming Ju/'hoansi in the Kalahari are (left to right) Daniel Blitz recording sound, John Marshall with camera, and Lorna Marshall taking notes, 1952 or 53. Photograph probably by William Donnellan. PM 2001.29.588 (98780043)

Bob Dyson never returned to Nyae Nyae and there is no evidence that he published about the Kalahari journey. Dyson went on to a distinguished career as an archaeologist and, after participating in the Jericho excavations, directed the Hasanlu (Iran) excavation project from 1956–74. He served as Williams Director of the University of Pennsylvania Museum of Archaeology and Anthropology from 1981 to 1994. ●



ABOVE: Bob Dyson and the author at the time of this article's writing.

**ILISA BARBASH** is Curator of Visual Anthropology at the Peabody Museum of Archaeology and Ethnology at Harvard University. Her book on the Marshall Family Photo Collection, titled *Where the Roads All End: Photography and Anthropology in the Kalahari*, will be published in 2017 by Peabody Museum Press.

**This article refers to the following materials at the Peabody Museum of Archaeology and Ethnology:**

Laurence K. Marshall and Lorna J. Marshall Photographic Collection at the Peabody Museum and Marshall Kalahari. Expeditions Photographic Catalogs, 2001.29, Peabody Museum of Archaeology and Ethnology, Harvard University.  
Lorna Jean Marshall, LJM Diary 1951, Peabody Museum. 51-60-50/13156.1.1.

#51-60, South-West Africa Expedition Records, Peabody Museum of Archaeology and Ethnology, Harvard University.

A link to John Marshall's films can be found at: <http://www.der.org/films/kung-series.html>

Except where otherwise noted all images in this article are Gift of Laurence K. Marshall and Lorna J. Marshall © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology.

All Robert Dyson quotes are courtesy of South West Africa Expedition Records (#51-60), Peabody Museum of Archaeology and Ethnology, Harvard University.





Terracotta, flat-backed female figurine from Dra' Abu el-Naga, Egypt. L. 10.5 cm. PM object 29-86-583.

OPPOSITE: Bed figurine from Memphis, Egypt. PM object 29-71-817.





# CHILDBIRTH MAGIC

DECIPHERING BED FIGURINES  
*from* ANCIENT EGYPT

*By Charlotte Rose*



Ancient Egyptians welcomed childbirth with ritual, using medico-magical spells, amulets, and various other objects to help ensure the survival of mother and child.





### Model Women

Flat-backed and model bed figurines depicting females with and without a suckling child have been found throughout Egypt. PM objects 29-71-817 (left), 29-71-795 (center), and E119 (right).

Objects used in childbirth rituals took many forms. For example, a Middle Kingdom (2055–1650 BCE) magical birth brick discovered by the Penn Museum in South Abydos—used to support the mother during labor—depicts images of protective demons as well as a scene of a mother holding her child, flanked by midwives (see *Expedition* 48.2 [2006]: 35). Such imagery also occurs on contemporary Egyptian ivory birth wands, which functioned to protect newborns.

### Female Figurines and Model Beds

Figurines that may relate to birth and fertility include “bed figurines,” which depict a nude woman on a bed (sometimes shown with a child) and “model beds,” which do not have human figures. Slender, nude female figures also occur on two-dimensional votive beds—objects dedicated to temples and shrines.

The model beds range from simple beds that sometimes preserve painted designs to beds with molded decoration. While previous typologies of Egyptian



LEFT: Painted model bed from Dra' Abu el-Naga, Egypt. PM object 29-86-605.

figurines list the woman-on-a-bed style as having lasted from the New Kingdom (1550–1069 BCE) to the Third Intermediate Period (1069–653 BCE), the Penn Museum has 64 unpublished examples of such figurines, primarily from Memphis, dating to the Greco-Roman period (332 BCE–395 CE). They are, thus, the latest known examples of this special type of figurine.

Unfortunately, the records from the Coxe excavations of the late 1910s to 1920s that uncovered the Museum's figurines are unpublished and do not discuss the objects in detail, so reconstruction of the archaeological contexts of the material proved necessary. Previous theories suggested that these bed figurines were “concubine figures,” they represented a divine mother, or that they were ritually broken to ward off evil spirits. However, new evidence suggests that Egyptians intended these figurines to be used as aids in fertility and birth, both in life and the afterlife.

### Concubines of the Dead and Other Theories

When 19th century excavators first found bed figurines in tombs, the nudity of these objects was immediately noticed. From this observation, the initial interpretation was that they represented “concubines,” who would sexually stimulate the deceased male. Specific Coffin Text spells do indeed discuss the deceased as capable of copulation, just





### Giving Birth

This birth brick (left) from South Abydos, Egypt, was used to support the mother during labor. The reconstruction (above) shows a scene of a mother and a newborn sitting on a throne. Images from *Expedition 48.2* (2006), page 35. Painting by Dr. Jennifer Houser Wegner. Photograph by Elizabeth Jean Walker.

as in life. However, bed figurines have also been found in the tombs of women and children, as well as in temples and town sites. None of the women are in obviously sexual poses. Likewise, this theory does not account for those bed figurines that depict a child as well, which otherwise do not differ from those of just the woman.

The “divine mother” theory has been offered to explain bed figurines and flat-backed figurines that include children. This “divine mother” may represent Hathor, goddess of fertility, or Isis, mother of Horus. This explanation is partly based on the Hathoric wigs on a number of the figurines and it supposes that female figurines with children are different in function from those without children. Those who believe the divine mother interpretation suggest that childless figurines functioned as charms for sexual fulfillment for women. This does not explain the presence of these figurines in male graves as well as female graves.

The third interpretation suggested that the figurines were ritually broken to ward off evil spirits. Egyptologist Elizabeth Waraksa recently proposed that female figurines, with or without children, served as execration objects that diverted harm away from mother and child to the objects, which were then broken to render threats inert. The objects, mostly in terracotta, would be easy to

break, and some ancient texts seem to support this theory. A snake spell in Papyrus Turin 54003, dating to the First Intermediate Period, mentions a “clay [figurine] of Isis” used in this manner. Another passage, a stomach ache spell from Papyrus Leiden I 348, from the New Kingdom, discusses a portable representation of a goddess in clay: “As for any of his suffering in the belly, the affliction shall go down from him into the female figure of Isis until he is healthy.” However, excavators have found a number of bed and flat-backed figurines intact and Kasia Szpakowska and Richard Johnston’s experiment with the breakage of terracotta cobra figures demonstrates that deliberate breakage is difficult to prove. Also, this does not explain those bed and flat-backed figurines in limestone or faience, which are stylistically the same as those in terracotta.

### Fertility and Birth

The most compelling hypothesis to explain the bed figurines and the model beds is that these objects aided in matters of fertility and



RIGHT: Statuette of an Egyptian woman, interpreted as a concubine or fertility figurine. PM object E482.







birth. The occurrence of these objects in towns (domestic contexts), temples, and tombs indicates broad usage, which may suggest that they relate to various stages in the human reproductive process from conception to post-birth recovery. The vast majority of the Penn Museum material was found in the temple storerooms of one of the Greco-Roman Period temples at Memphis, while those from Dra' Abu el-Naga were discovered in tombs. Furthermore, much of the imagery of the figurines and bed models parallels Egyptian fertility iconography.

### Birth Deities and Iconography

Egyptians conducted fertility and birth rituals both for this life and for rebirth in the afterlife. A bed figurine from the Boston Museum of Fine Arts (object number 72.739) depicts the birth deities Taweret and Bes. Bes also occurs as a tattoo on the thighs of women on some bed figurines. Depictions of these two deities appear in New Kingdom wall paintings above domestic altars in Amarna and Deir el-Medina, as well as on birth wands, which protected infants in life and were later placed in tombs to provide protection in the afterlife. While birth imagery occurs on many objects, the iconography seen on the more decorated bed figurines and bed models—such as snakes, *Convulvus* plants, and mirrors—is most similar to the scenes depicted on New Kingdom ostraca from Deir el-Medina, where a woman suckles her child under a structure made from plants. Such structures are not seen outside of bed figurines and ostraca, indicating they may have been exclusive to the birth process.

As in most bed figurines, the ladies wear perfume cones and jewelry, such as large spherical earrings, collar necklaces, and girdles. The snake might represent a *kerket*, a protector spirit of a place, in its role as a fertility guardian, or it could refer to scenes of Isis and Horus flanked by serpents. The woman on the ostraca appears in two different ways: on a stool suckling her infant, and on a bed with a child on her lap or lying beside her. The latter, due to the emphasis on servants offering mirrors and ointments, supposedly represents the celebration of purification, which certain texts indicate took place 14 days following childbirth. The highly elaborate bed models, with Bes frequently decorating the posts, are paralleled in the beds depicted in a number of the ostraca.

Do the scenes on the ostraca contain sexual references? Louis Keimer has argued that these women are marked

OPPOSITE: Bronze statuette of Isis nursing the infant Horus. Isis was known as the Egyptian goddess of rebirth. She wears a Hathoric headdress. H. 40.8 cm. PM object E12548.



### The Power of Bes

ABOVE LEFT: Fragment of a protective Bes figure (lower-half of body) centrally positioned on a model bed, PM object 29-71-778. ABOVE RIGHT: Figurine of the deity Bes, PM object E14358.

BELOW: Bes figures decorating a model bed, PM object 29-87-572C. BOTTOM: Bes motif decorating a model bed fragment, suggesting rebirth, PM object E1983.









## Magic Wand

Carved from hippopotamus tusk, this wand was used to draw a circle around the place where a woman was to give birth or nurse her infant. Nine magical figures, including Taweret, the goddess of childbirth, are represented. 1938–1739 BCE, 12th Dynasty, Egypt. PM object E2914.



as prostitutes because tattoos of Bes appear on some of them. Tattoos of Bes also appear on women in the bed figurines and on female musicians in tomb wall paintings. No evidence exists to support this assumption about tattoos and prostitution in ancient Egypt. This association of Bes with prostitution also ignores the main role of Bes as a protector of women and children in childbirth. Bes even replaces the woman on one of the bed figurines (see PM object 29-71-778, page 43). The tattoos are more likely connected with fertility and birth, as is the rest of the iconography of the scenes.

Excavators have found flat-backed figurines on top of bed models in some temples and domestic shrines. Women employed beds for recovery, since no evidence suggests use during labor. However, some flat-backed figurines appear too small for the elaborate beds, the Museum beds from tombs in Dra' Abu el-Naga do not accompany figurines, and no beds are known from the Greco-Roman period. The scenery on molded bed models may relate to Old Kingdom (2625–2130 BCE) tomb scenes of plucking papyrus and New Kingdom erotic symbolism. The former had associations with Hathor, with captions stating that the woman “pulls papyrus for Hathor,” and their location near scenes of wine, dancing, and singing, also connected with the goddess. Certain elements depicted on bed models, such as lute-players (also depicted in tomb scenes) and the Bes figures, suggest rebirth. Thus, these bed models on their own could commemorate birth, celebrate fertility, or serve as protection of a child, with their occurrence in tombs implying continued use in the afterlife.

Whether used together or separately, the imagery on bed figurines, flat-backed figurines and bed models suggests that these objects may have helped with fertility and childbirth. Those desiring or expecting a child would have presented them at temples as votive offerings, especially for Hathor, and kept them in household shrines

with the hope of successful procreation or birth. In the afterlife, these figurines appear to have served a similar purpose for the deceased, ensuring rebirth. As the latest examples discovered to date, the Penn Museum figurines demonstrate the survival of this tradition. The context of most of the Penn figurines—within a Greco-Roman temple in Memphis—indicates they likely served as votive offerings. •

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### ACKNOWLEDGMENTS

This article would not have been possible without access to Penn Museum Egyptian storage and the Museum Archives. I would like to thank Jean Walker and Dr. Jennifer Wegner for granting me access to the figurines. Alessandro Pezzati and Eric Schnitknecht provided very helpful archival material, allowing me to research the context of the finds. Guidance from Dr. Josef Wegner and Dr. Jane Hickman also aided me tremendously.

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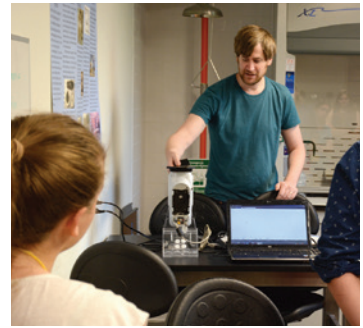
OPPOSITE: Limestone column capital in the form of Hathor. Those desiring or expecting a child worshiped this deity. PM object E11816.



# High Schoolers Take Over the CAAM Labs

BY MARIE-CLAUDE BOILEAU, PH.D. AND KATHERINE M. MOORE, PH.D.

For two weeks last summer, the Center for the Analysis of Archaeological Materials (CAAM) and the Museum’s Learning Programs Department offered an intensive learning experience for high school students called the Summer Institute in Archaeological Science (SIAS). Co-led by instructors Katherine Moore and Marie-Claude Boileau, SIAS explored the essential heritage of human technology through archaeology.



Moritz Jansen teaches SIAS participants how to collect elemental data on obsidian tools in an effort to trace the material provenance.



ABOVE: Students examine carbonized seeds in the multi-purpose laboratory.



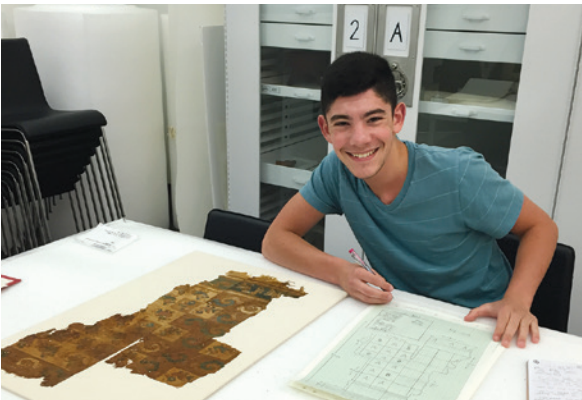
BOTTOM: Students practice de-husking and grinding grain on the Museum lawn with Katherine Moore. Students sampled bread and porridge made from this coarse flour.

Students followed human innovation from the invention of fire to the development of stone tools, pottery, textiles, and metals. Plants and animals used as food showed the students how humans transformed food and landscapes. The physical impact of these changes on the human body was explored using skeletal remains from the Museum’s collections. Through lectures, discussions and hands-on laboratory activities students became familiar with the Museum’s collections and the scientific methods used to study different materials.

In an effort to provide a strong archaeological background to the course’s scientific lessons, the Ur and Pachacamac collections were used as

case studies. Students learned about Ur first by visiting *Iraq’s Ancient Past* and then seeing more objects from the site in the Collection Study Room. None of the Museum’s large collection of textiles, tools, and ceramics from Pachacamac (a Peruvian ceremonial center) is on display so the students visited American Section storage to see objects that very few people have seen. Their “behind the scenes” experiences also extended to the Archives and the Conservation Department. The students were attentive to the many different kinds of scientific knowledge used in the daily work of Museum staffers, both in the care of objects and the analytical work carried out in CAAM. They were also challenged to develop





ABOVE, TOP LEFT: Marie-Claude Boileau discusses the manufacturing of alabaster objects from Ur in *Iraq's Ancient Past*.

ABOVE, TOP RIGHT: A student posted the following on Instagram: "The woolly mammoth (*mammuthus primigenius*) is an extinct animal that is recorded to be anywhere from 9 to 11 feet tall! Comparing its scapula to that of a common mouse shows the diversity found in mammals. This vicious beast was one to not be messed with (meaning the mouse of course)."

ABOVE, BOTTOM ROW: Quin Mastrangelo and Faith Williams in the Collections Study Room working on their object biographies.

their skills in drawing and graphic composition.

Among the daily assignments, the writing of an Instagram post and taking photographs in the galleries and the laboratories proved popular. See the caption above on the woolly

mammoth to read what Giuliana Trinchieri shared on Instagram after the zooarchaeology lab activity.

For their final project, students applied their newly acquired scientific knowledge and skills to an object biography, choosing an artifact from the Ur or Pachacamac collections to analyze. For three afternoons, students examined, drew, measured, described, and researched their favorite object. On the last day, they presented the results of their research to their peers, instructors, and family.

As a pilot project, SIAS was a success. Students learned about the scope and significance of archaeological science and experienced a glimpse of college-level workloads

and challenges. One of the summer participants, Claire Byrnes, a junior at the Science Leadership Academy, is now a CAAM intern for the school year 2016–17, helping us in the labs with various projects. Other students are using their experiences in planning or starting their college work. Moving forward, CAAM and Learning Programs will find different ways to engage with high school students. ●



Meredith Amato presenting her results in the CAAM classroom.



## NEWS FROM LEARNING PROGRAMS

### Mayor Speaks at Festival of International Students

On October 14, 2016, the Penn Museum continued its 47-year tradition of hosting a free, Museum-wide reception for the region's international students and scholars at the Festival of International Students. More than 800 guests from all over the globe mingled in the Penn Museum galleries to celebrate the talents and cultural diversity that international students bring to the Philadelphia area. The Museum's International Classroom program teamed with the Academic Engagement Department to host this unforgettable evening, with lead sponsorship from the Penn Language Center and Penn Global. Campus Philly and Global Philadelphia helped to publicize the event among their networks.



Participants enjoyed global music and dance performances, networking opportunities, and the chance to win prizes from several local institutions. Interactive information tables offered fun activities to learn about different cultures. Among the special guests were Philadelphia Mayor Jim Kenney and Consular Corps of Philadelphia President Peter Longstreth.

### Museum Partners with Philadelphia Museum of Art

While the Penn Museum and the Philadelphia Museum of Art (PMA) have shared both objects and professional relationships over the years, the PMA exhibition *Creative Africa* marked the first time that the museums partnered on K-12 education programs and school resources. The



Learning Programs Department initially invited PMA education staff to tour the Penn Museum's Africa and Imagine Africa Galleries and to hear a talk by the Keeper of our African collection, Dwaune Latimer.

In June 2016, we co-hosted a teacher professional development program in the PMA's Perelman Building for 37 local educators. The PMA offered a talk by Project Coordinator John Vick titled "Look Again: Contemporary Perspectives on African Art," while the Penn Museum allowed teachers to study and touch African artifacts in the Penn Museum's teaching collection. Our International Classroom cultural program invited Kenyan Beatrice Bolger to present a lesson about East African textiles, and teachers were able to make their own paper *kangas* (traditional East African garments). We also provided similar activities during the PMA's Visual Arts as Sources for Teaching (VAST) program and during their African-themed homeschool day. This partnership marks the beginning of more collaboration in the future.

# Chinese Students Learn about Museums

For four weeks this past summer, 39 Chinese undergraduates from Jiangsu province took part in the Museum's second intensive summer program (the JESIE program) in museum careers. The program, named "Discovering the Museum," was designed to give students a well-

rounded understanding of museums and arts administration. It featured presentations by a wide range of Museum personnel on topics ranging from conservation to public programming. Chinese students from Penn's Graduate School of Education assisted with the classes.



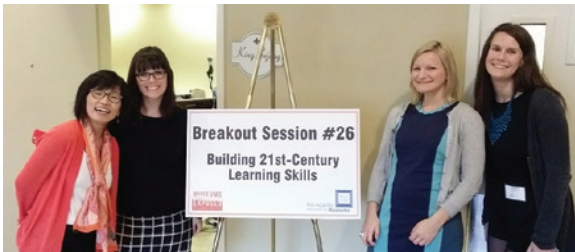
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## Museum Staff Presents at Conference

Celebrating its 71st year, the Mid-Atlantic Association of Museums hosted its annual conference in Wilmington, Delaware with the theme "Museums Exposed: Real Issues, Real Talk." Nine Penn Museum staff presented at the conference: American Section Curator and Senior Keeper Lucy Fowler Williams, Ph.D. and Education

Programs Manager Kevin Schott, along with Lenni-Lenape consultant Tina Fragoso, spoke about collaborative approaches for exhibitions and programs featuring Native American material; Public Programs Manager Jenn Reifsteck presented on programs that attract millennial audiences; Ellen Owens, Merle-Smith Director of Learning Programs, and Emily Hirshorn, GRoW Annenberg Program Manager, discussed best practices for offering education programs to Title I schools.

Finally, Owens, along with Diversity Manager Hitomi Yoshida, Outreach Manager Allyson Mitchell, and Research Liaison Sarah Linn, closed the conference with a session about activating museum collections with 21st century learning skills.



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## Encouraging Local Students to Engage with History

Each year, thousands of Philadelphia middle and high school students participate in National History Day, a national program that helps students develop critical thinking, research, reading, and communication skills. Students prepare original projects using primary sources and compete in local contests, with the winners advancing to state and national competitions. This year's theme is "Taking a Stand in

History." Students gain experience conducting historical research and analysis and produce a documentary, exhibit, essay, performance, or website.

The Penn Museum helped with professional development for teachers at the Historical Society of Pennsylvania, demonstrating how our resources, including the new Digital Penn Museum, can be used for student projects. In February,

the National History Day volunteer judges will come to the Museum to learn how to provide critical feedback to participating students.



RIGHT: Photograph by Richard Gouldey, courtesy of Philadelphia Department of Records.





## Remembering Erle Verdun Leichty, 1933–2016

BY GRANT FRAME, PH.D.

**D**octor Erle Verdun Leichty, Curator Emeritus of the Babylonian Section of the Penn Museum, Clark Research Professor Emeritus of Assyriology at the University of Pennsylvania, and resident of Media, Pennsylvania, died September 19, 2016 at age 83.

Though Erle was highly regarded by his fellow Assyriologists, University and Museum colleagues, and students, he was a very modest man. The only way we could persuade him to allow a celebratory lunch on his 80th birthday in 2013 was to hold it at The New Deck Tavern, where he went for lunch every day, and to promise that there would be no tributes to him. He threatened to get up and leave if anyone started to praise him. So Dr. Roger Allen, his long-time colleague in the Department of Near Eastern Languages and Civilizations, simply stood up at the start of the lunch, in front of about 20 friends and colleagues, and said “We all know why we are here,” and then sat down. Erle deemed this acceptable and stayed for the remainder of the lunch. Erle’s manner as well as his scholarship will be greatly missed by his colleagues and friends.



Erle was born on August 7, 1933 in Alpena, Michigan and received a B.A. in Arabic and Islamic Studies and an M.A. in Islamic Art from the

University of Michigan. He received his Ph.D. in Assyriology from the Oriental Institute of the University of Chicago in 1960, after only three years. Following three more years working on the Chicago Assyrian Dictionary and five years on the faculty of the University of Minnesota, he joined the University of Pennsylvania in 1968 as Associate Professor of Oriental Studies, teaching Akkadian Language and Literature. He was also Curator of the Penn Museum’s Babylonian Section, which holds over 25,000 cuneiform tablets. Erle was particularly interested in advancing the work of the Babylonian Section. Upon his arrival at Penn, he immediately set about turning the Section into a major Assyriological research facility and making its collections accessible to scholars and graduate students from around the world. When he retired, he donated his personal library of approximately 1,200 volumes to the Babylonian Section. He also established an endowment to advance the work of the Section.

Erle was well known for his expertise in reading cuneiform documents from a wide range of periods and genres. This was the result of working for many years as Curator in the Babylonian Section as well as spending almost every summer in the Student Room of the Department of Western Asiatic Antiquities (now Ancient Near East) at the British Museum. While working in the Student Room, he was always helpful to any student or scholar who came to him for aid. He was happy to go off to a pub for lunch with those he met there, regaling them with stories about the earlier great Assyriologists whom he had known or about the Penn Museum’s tablet collection and its history.

Dr. Leichty was the recipient of many awards, including a Guggenheim Fellowship and election to the Honorary Council of the International Association for Assyriology. He played a major role in the success of the Pennsylvania Sumerian Dictionary project. Erle edited the *Journal of Cuneiform Studies* for 19 years, and wrote numerous books, articles, and book chapters. Erle was Editor of *Expedition* magazine from 1971-73. Dr. Leichty is survived by three children and many grandchildren and great grandchildren. His wife, Annette Sherman Leichty, passed away five days after his death. A memorial service is planned for Dr. Leichty on February 10, 2017 at the Penn Museum. ●

# Banana Recipes from West Africa, 1937

**H**enry Usher Hall (1876–1944), Curator of the General Ethnology Section from 1915 to 1935, undertook two expeditions for the Penn Museum in dramatically distinct areas of the world: he was in Siberia in 1914–1915, at the beginning of his career, and in Sierra Leone, West Africa, in 1936–1937, at the end of it.



Street view in the Sherbro town of Rotifunk, Sierra Leone. Photograph by Henry Usher Hall, 1937. UPM image 24522.

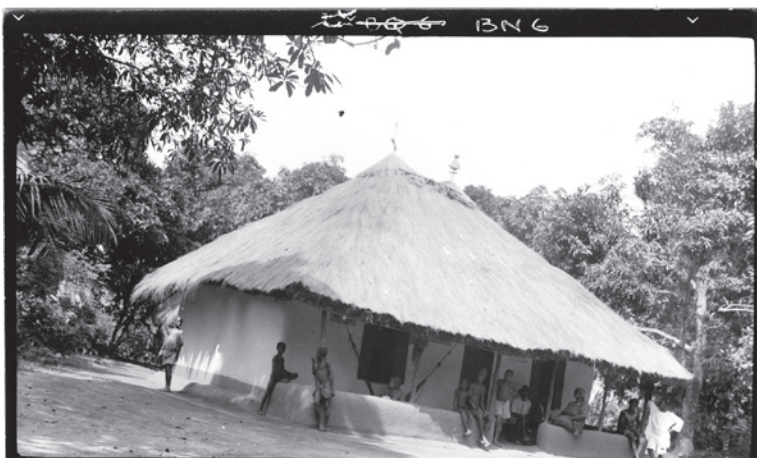
Due to the tight financial situation at the Museum in the 1930s, Hall was laid off in 1935. The next year, however, the Museum re-employed him to lead an expedition to West Africa. The trip was supported in part by the American Philosophical

Society, as well as, sadly, a sale of African objects from the collections, considered to be “duplicates.”

Hall first considered going to Nigeria, because of its strong cultural heritage, but decided to make the somewhat shorter trip

(again, due to financial constraints) to Sierra Leone instead, which was, like Nigeria, a British colony. He was accompanied by his wife, Frances, an artist, and a graduate of the Pennsylvania Academy of Fine Arts.

From December 1936 to May 1937 the Halls lived among the Sherbro, who inhabit the southwestern coastal region of the country. They worked specifically on Sherbro Island and in the chiefdom of Shenge on the mainland, where cultural traditions were more conservative. Henry Hall gathered ethnographic information, as well



LEFT: House in Trisana, Sherbro Island, Sierra Leone. Shenge Chiefdom. Frances Hall is on the hammock on the veranda. Photograph by Henry Usher Hall, 1937. UPM image 24774.





ABOVE: View in the Sherbro town of Rotifunk, Sierra Leone. Photograph by Henry Usher Hall, 1937. UPM image 24524.

as objects representative of Sherbro material culture. Frances, on the other hand, tended to the sick, managed supplies, and also collected information and stories from the Sherbro women.

In his publication *The Sherbro of Sierra Leone: A Preliminary Report on the Work of The University Museum's Expedition to West Africa* (1937, Philadelphia: The University Museum, University of Pennsylvania, 1938),



## Baked Bananas Recipe

### Ingredients:

6 Bananas, 3 tablespoons of butter, 2 tablespoons of soft sugar, 1 cup pitted cherries, 1 tablespoon of lemon juice

### Cooking Instructions:

Peel bananas and halve lengthwise, arrange in a shallow baking dish. Sprinkle with lemon juice and sugar. Cover with cherries, dot with pats of butter. Bake in a hot oven, basting occasionally with cherry syrup until bananas are soft. Serve with cream. Enough for six persons.

ABOVE: Baked bananas, prepared according to the Frances Hall recipe. Photograph by Kris Forrest.



ABOVE: Imama (who is Timne, not Sherbro) with dye vat. Photograph by Henry Usher Hall, 1937. UPM image 24802.

Henry Hall thanks “...my wife, who, by patiently ministering to the needs of the many sick and maimed whom we encountered everywhere in the bush, did so much to inspire a general feeling of trustfulness and of willingness on the part of the natives to cooperate in the work of the Expedition.”

Frances kept a diary during the trip. In addition to a number of interesting observations, she also collected four recipes, two of which are reproduced here. The recipe for Baked Bananas has been prepared by one of the Penn Museum’s own staff, Kris Forrest, Finance Manager. •

—Alessandro Pezzati, Senior Archivist



## Banana Fritters Recipe

### Ingredients:

4 Bananas, 1 egg, 2 tablespoons flour, 4 oz. sugar

### Cooking Instructions:

Peel and mash bananas, beat the eggs, add in the beaten egg, sugar [and flour]. Heat the pan and put in about 2 tablespoonfuls of the batter at a time; fry until a nice brown, and then sprinkle sugar over. Serve hot.

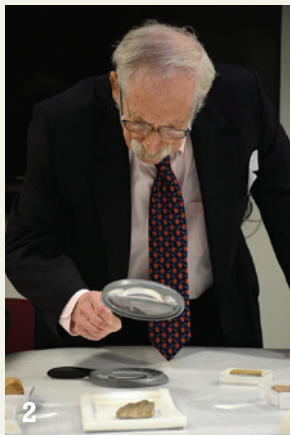
ABOVE: Photograph by Creative-Family.



## Loren Eiseley Society: “Behind the Scenes.”



1



2



3

On November 9, Loren Eiseley Society members gathered for *Behind the Scenes: Journey to the City*. Dr. Stephen Tinney, Deputy Director, and Dr. Richard Zettler, Associate Curator-in-Charge of the Near East Section, led the group in this up-close look at artifacts chosen for the Museum’s upcoming Galleries of the Ancient Middle East.

1. Celina Candrella, Assistant Registrar, shares artifacts with LES members. 2. Robert W. Kalish, M.D., C55 examines a clay tablet. 3. James P. MacElderry, Marilyn Fishman, and Pat Coyle examine beadwork from Ur with Dr. Richard Zettler, Associate Curator-in-Charge of the Near East Section.

## Annual Curator’s Party: Mummies and Monge!



1



2

On October 27, Expedition Circle and Loren Eiseley Society members joined Dr. Janet Monge, Associate Curator-in-Charge and Keeper of Physical Anthropology, for our annual Curator’s Party. Dr. Monge brought out mummies from the Museum Collection for guests to

examine up close. In her lecture, she talked about the 60 mummies that are part of our Collection and the history of mummy studies at the Museum.

1. Dr. Janet Monge with Reed Pyeritz, M.D., HOM02. 2. Janet Monge shows guests a Peruvian mummy.

## SAVE THE DATE FOR THESE UPCOMING MEMBERS' EVENTS!

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### MEMBER APPRECIATION DAY

All Membership Levels

Saturday, March 25, 2017



Enjoy a day of learning and adventure exclusively for Penn Museum members. With special fun and games planned for the kids, and the latest updates on excavations from notable Museum

scholars, there is something for everyone to enjoy. Plus, take advantage of extra members-only discounts in the Museum Shop and Pepper Mill Café.

### DIRECTOR'S EXCLUSIVE

Loren Eiseley Society:

Silver Circle Members and Above

Sunday, February 19, 2017 | 6:00 pm

Silver Circle (and above) members of the Loren Eiseley Society are invited to this year's Director's Exclusive. Join Williams Director Julian Siggers and Egyptian Section Associate Curators Dr. Josef Wegner and Dr. Jennifer Wegner, who will share the latest findings from their excavations at Abydos, Egypt, and their roles in the upcoming reinstallation of the Museum's Egyptian galleries. Hosted at the home of the Loren Eiseley Society co-chairs. *Contact Kate Fox at 215.573.9722 or [kafox@upenn.edu](mailto:kafox@upenn.edu) to RSVP and for more details.*

### LOREN EISELEY SOCIETY DINNER

Loren Eiseley Society Members

Thursday, April 20, 2017 | 5:30 pm

Members of the Loren Eiseley Society are invited to the annual Loren Eiseley Society dinner. Honoring the legacy

of Penn Museum archaeological and anthropological research, the dinner will be hosted by University Provost Vincent Price, in one of his final events before assuming the presidency of Duke University.

## SPECIAL MEMBERS-ONLY TOURS

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Dr. C. Brian Rose, Curator-in-Charge of the Mediterranean Section.



### LOVE AND MYTH IN THE CLASSICAL WORLD

All Membership Levels

Friday, February 10, 2017 | 1:30 pm

Fall in love with the ancient Mediterranean. Members are invited to join Dr. C. Brian Rose, Curator-in-Charge of the Mediterranean Section, in a tour of the Greece and Rome Galleries, with a special look at love and myth in the Classical world.



Dr. Robert Ousterhout, co-curator of *Magic in the Ancient World*.



### MAGIC IN THE ANCIENT WORLD

All Membership Levels

Thursday, March 2, 2017 | 11:00 am

Do you believe in magic? Members are invited to join Dr. Robert Ousterhout, Professor of History of Art and co-curator of our special exhibition *Magic in the Ancient World*, for a historical exploration of this question through the supernatural objects of the ancients.

RSVP

To reserve a place on these popular tours, RSVP to the Membership Office at 215.898.5093 or [membership@pennmuseum.org](mailto:membership@pennmuseum.org).



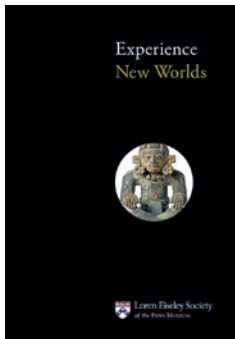
# Experience New Worlds with Leadership Giving



**D**octor Loren C. Eiseley—Provost of the University of Pennsylvania, chair of the Anthropology Department, and Curator of the Early Man Section at the Penn Museum—embodied the spirit of inquiry, discovery, and public engagement that characterizes the Penn Museum. The Loren Eiseley Society was founded in 1982 to uphold his legacy of thoughtful inquiry into the history of humanity.



Mortuary Statue, Palmyra, 2nd century CE, PM object B8904.



A new informational booklet describes the significance and impact of Loren Eiseley Society giving.

Through their generosity, LES members provide the majority of the Museum's unrestricted support—funding that makes an unmistakable impact on our ability to provide compelling exhibitions and educational programming, pursue groundbreaking research around the globe, and care for the roughly one million artifacts in our collection.

As the Loren Eiseley Society celebrates its 35th year, we are proud to have welcomed more than 20 first-time members in the 2015-16 year—the greatest increase ever in one year—and to unveil a new look for the Society: one that hon-

ors the Museum's storied history and looks to the advancements of its future.

And indeed, these advancements will be tremendous: as the Museum undergoes a five-year building renovation, we will see transformations to 70% of its galleries that not only improve visitor access and collections stewardship but change the very way we understand the story of the past. As leadership donors, LES members will join us at each step of this exciting journey.

LES members explore the Penn Museum through in-depth, intimate access to its world-class collections and experts in the fields of archaeology and anthropology.



On April 20, we look forward to celebrating the Museum's Legacy of Research at the annual LES dinner.

For more information on the Loren Eiseley Society, contact Kate Fox at 215.573.9722 or [kafox@upenn.edu](mailto:kafox@upenn.edu).

At the annual Loren Eiseley Society dinner in June 2016, ABOVE: former LES co-chairs Joseph E. Lundy, Esq., W65 and Bonnie Verbit Lundy, CW67; with Women's Committee President Lisa Siegel and Brian Siegel L83; FAR RIGHT: Dan Rahimi, Executive Director of Galleries, previews the Galleries of the Ancient Middle East.

RIGHT: LES member Pat Coyle examines an ancient cuneiform tablet at a Behind-the-Scenes event.





## MEET OUR MEMBERS

### Matthew Storm

**M**atthew Storm is a member of the Director's Council and the Loren Eiseley Society, and a Penn alumnus living in Miami. He spoke with *Expedition* just before bringing his children (ages 6, 9, and 10) to the Museum for the first time.

#### How did you first discover the Penn Museum?

At Penn I studied International Relations: Political Science, History, and Economics. I visited the Museum as an undergrad, probably in 1992 or 1993. I wandered in by complete happenstance. I remember having a hard time fathoming that it existed. I had frequented museums as a kid and that had instilled a love for antiquity in me early on. When I found the Penn Museum on Penn's campus, I was blown away.

#### What inspires you about the Museum?

The Museum contains these objects that exist nowhere else, artifacts that really capture our common past, our evolution. They are like little milestones along the way that completely take down the barriers erected between ethnicities and cultures. In the Museum you can trace the lineage of these objects, and the Museum is rightly proud of the fact that so many of them were found by



Matthew Storm and family during a recent visit to the Penn Museum.

Penn archaeologists. You can follow an unbroken line from the dig to the exhibit that is out of this world! The Gordion exhibit [*The Golden Age of King Midas* ran at the Penn Museum from February 13 to November 27, 2016.] is a fantastic example. The labor, blood, and sweat—and tears, I'm sure—of Penn in the field for the last 60 years brought this extraordinary exhibit to the Museum.

#### How do you stay involved as a family?

I'm actually taking the kids to the Museum next week! They are as fascinated by the Museum as I am, even though they haven't stepped foot in there yet. My 6-year-old has been badgering me incessantly, "When are you taking me, Dad?"

I hope this sparks the same love affair with the place that I have, and that as they get older they'll return and avail themselves of some of the summer internships or classes for high school students.

#### Why is it important for you to support the Museum, especially while living out-of-town?

The Museum has an active mission. It's not a dusty place where something unearthed 150 years ago sits under a dim light. It may sound grandiose, but it's the reality: the Museum works in the field for the benefit of humanity. Penn's work with Turkey, or the Penn Cultural Heritage Center's activities in Syria—those are unbelievably relevant today.

The Museum also belongs to the world in so many ways and speaks to our common patrimony. It is a world-class institution: the treasures it holds go far beyond Penn and Philadelphia. It's of global importance. I love the mission of the Museum today. Williams Director Julian Siggers has been spearheading the effort to take a more academic-oriented institution and turn it into precisely what it should be: a global, cultural resource like the Met, the British Museum, or the Smithsonian.

I loved the idea of joining the Director's Council and helping in some small way to accomplish that transformation and to spread the word. I don't stop babbling about the Museum. The Director's Council is a great opportunity to do so in an official capacity. To the extent that I can support the Museum with my time and other resources, I'm honored to do so. ●

## Museum Objects Travel the World

The Penn Museum currently has objects on loan to over 25 institutions in the United States and abroad. Here is a selection of just some of those objects.

### 1. THE INNER EYE: VISIONS AND TRANSCENDENCE IN AFRICAN ART

**Los Angeles County Museum of Art**

Los Angeles, CA

*Opens February 26, 2017, closes July 9, 2017*

[One object from the African Section](#)

### 2. NOAH'S BEASTS: SCULPTED ANIMALS FROM ANCIENT MESOPOTAMIA, CA. 3300–2250 B.C.

**The Morgan Library and Museum**

New York, NY

*Opens May 26, 2017, closes August 27, 2017*

[Five objects from the Near East Section](#)

### 3. INTERTWINED WORLDS: JAIN, BUDDHIST, AND HINDU MANUSCRIPTS AND OBJECTS FROM SOUTH AND SOUTHEAST ASIA

**Van Pelt-Dietrich Library, Kislak Center**

Philadelphia, PA

*Opens August 21, 2017, closes December 22, 2017*

[Six objects from the Asian Section](#)



2.



1.

ABOVE RIGHT: Lion's head, PM object B17064.

RIGHT: Luba stool, PM object AF5121.

BELOW: Relief of horseman, PM object 29-64-248.



3.



## Penn Museum Conservation Celebrates 50 Years



The Penn Museum's Conservation Department commemorated the 50th anniversary of the Conservation Lab's founding by hosting an international symposium. "Engaging Conservation: Collaboration across Disciplines" was held October 6–8, 2016 and included 30 presentations by conservators, archaeologists, and allied professionals from seven coun-

tries. The very successful meeting was attended by over 120 people and featured a keynote address by Dr. C. Brian Rose entitled "Negotiating the Interaction of Archaeology and Conservation in Turkey during the 20th and 21st Centuries." The Symposium was divided into five themed sessions: Engaging Education, Engaging Archaeology, Engaging

Community, Engaging Institutions, and Engaging Science. Subjects of papers included pioneering women in conservation; collaboration in Italy, Turkey, Sudan, Egypt, China, and Peru; how museums reach out to their communities; and various new technologies in examining artifacts. A full listing of the presentations may be found at [www.penn.museum/loveconservation](http://www.penn.museum/loveconservation) and a publication is forthcoming. To celebrate the Lab's 50 years, each session started with a short "Penn Conservation Stories" vignette presented by Museum staff members; these can be seen on The Digital Penn Museum (see below).



## Online Engagement: The Digital Penn Museum

In late October, the Penn Museum launched a major new component to its website—The Digital Penn Museum—a portal to a rich array



of digital content. In addition to a new interface for the Museum's online collections database and its cool MyFinds functionality, this portal provides a browsable experience for those interested in learning more about highlights from our collections and on-demand videos (from archival films to our engaging lectures series and other playlists). In

addition, the portal links directly to the Museum's *Expedition* magazine archive, the Museum blog, and our suite of more than 40 legacy websites focused on exhibitions, research projects, and fun interactives. To explore The Digital Penn Museum, visit [www.penn.museum/collections/](http://www.penn.museum/collections/), and be sure to check back often as new content is added.

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## President Obama Announces Sabloff Chairman Appointment

On September 30, 2016, President Obama appointed former Museum Director Dr. Jeremy A. Sabloff to the position of Chairman, Cultural Property Advisory Committee.

Dr. Sabloff is currently an External Professor at the Santa Fe Institute and the Christopher H. Browne Distinguished Professor of Anthropology Emeritus at the University of Pennsylvania, positions he has held since 2015 and 2010, respectively. Previously, Dr. Sabloff served as President of the Santa Fe Institute

from 2009 to 2015, Professor at the University of Pennsylvania from 1994 to 2009, and Williams Director of the University of Pennsylvania Museum of Archaeology and Anthropology from 1994 to 2004.

He is a Member of the National Advisory Board of the Smithsonian's National Museum of Natural History, the National Academy of Sciences, the American Philosophical Society, and a Fellow of the American Academy of Arts and Sciences.

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## Sacred Tlingit Hats Return Home to Alaska



ABOVE: Harold Jacobs, Tlingit Cultural Specialist, thanked the Penn Museum for its role in preserving the hats, now an essential chapter of each objects' social biography. Jacobs and his colleagues untied the crown of each hat and carefully packed the pieces for the return flight to Alaska.

Two clan hats approved for repatriation by the Trustees of the University of Pennsylvania in 2010 were transferred to Tlingit tribal officials on July 17, 2016. Mr. Harold Jacobs, Cultural Preservation Specialist of the Central Council of Tlingit and Haida Indian Tribes of Alaska (CCTHITA), received the Raven of the Roof Hat and basketry Whale Hat on behalf of *L'ooknax.adi* (Coho) Clan leader, Mr. Herman Davis, of Sitka. In a brief presentation, Jacobs noted the diligence with which Louis Shotridge, the early 20th century Tlingit collector and Penn Museum Assistant Curator, recorded the names of the previous owners and stories (or histories) of the hats. Jacobs and Tlingit clan representatives Gilbert Fred, Daniel Brown, Mike Kinville, Hans Chester, and Joe Valley studied the Shotridge collection in storage dur-

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## Exploring Women in Antiquity

Dr. Stephanie L. Budin (Penn Ph.D.) and Dr. Jean MacIntosh Turfa (Consulting Scholar in the Mediterranean Section) have recently published *Women in Antiquity: Real Women Across the Ancient World* (Routledge, 2016). The 1,074 page book features new essays from some of the most respected scholars of ancient history and physical anthropology who give an overview of the lives of real women in antiquity. Many different parts of the world are represented, including Mesopotamia, Egypt, Anatolia, Cyprus, the Levant, the Aegean, Iberia, and Western Europe.



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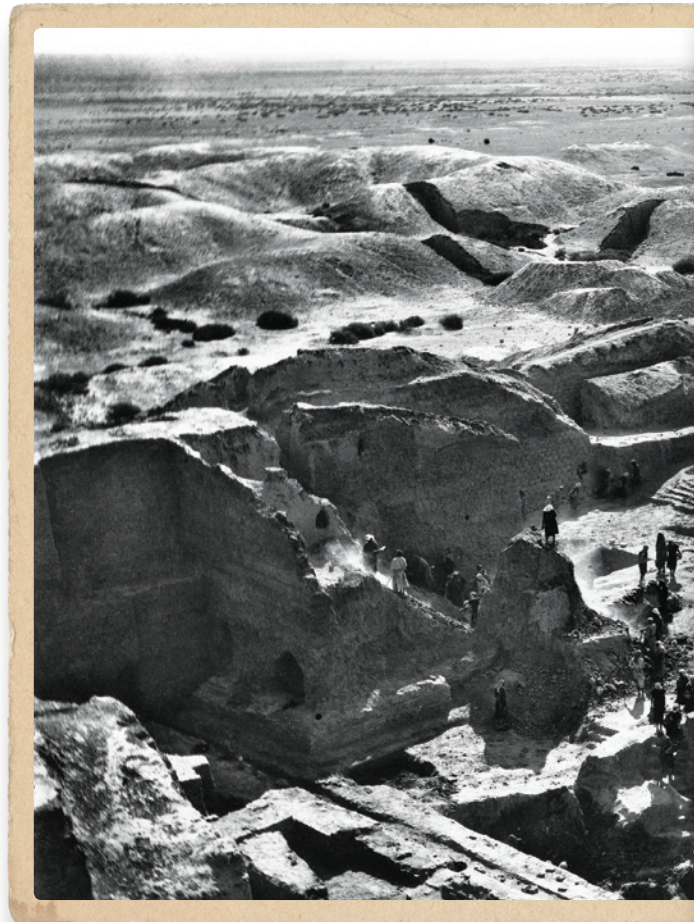
ing their brief visit. They sang songs that “breathed life back into” the old objects. In thanking the Museum, Jacobs underscored the need for accuracy in recording clan histories, and praised the Museum’s role in cultural preservation. He stated that his people have a strong interest in maintaining an ongoing relationship with the Penn Museum. The hats were claimed under NAGPRA as sacred objects of cultural patrimony.





### Ancient Middle East Gallery Sneak Peak: Slipper Coffins

Mesopotamian clay coffins—referred to as “Slipper Coffins” because their distinctive shape tapers toward the foot like a slipper—are in the process of being conserved before their placement in the new Galleries of the Ancient Middle East. These coffins were excavated during the Museum’s Babylonian Expeditions to Nippur in 1893–1895 and 1899–1900. They most likely date to the late Parthian period, the 1st to 2nd centuries CE. The Nippur coffins are significant as they allow us to document burial practices in late periods of Mesopotamian history. A technological study of the coffins is underway and will be published in *Expedition* in 2017.

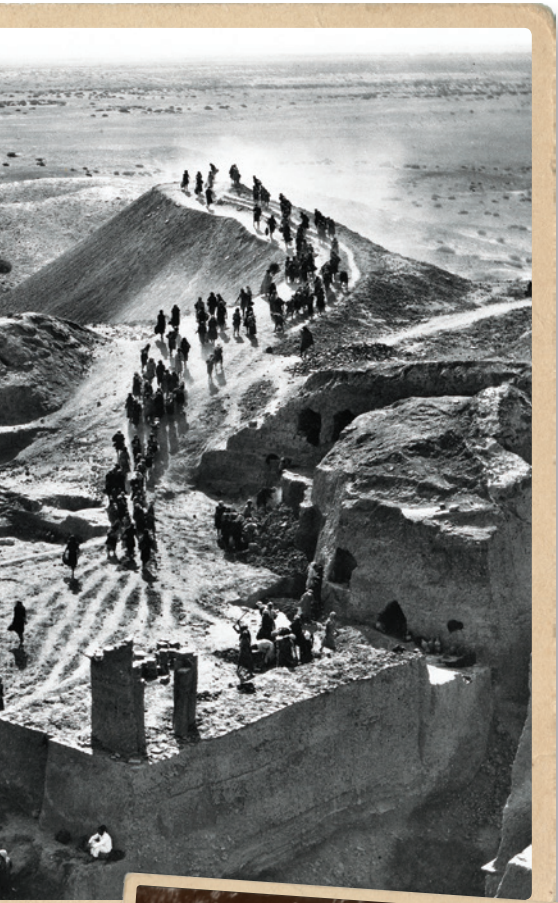


ABOVE: Nippur is located in southern Iraq. It was one of Mesopotamia’s longest-lived cities, occupied from the 6th millennium BCE until ca. 800 CE. Photograph by John Henry Haynes, 1899. PM image 139049.



ABOVE: The Museum’s Slipper Coffins are the only examples of their type in the United States. They measure about two meters long and are decorated with rope-impressed bands, geometric shapes, and human figures (see circle inset above). PM object B9220.





ABOVE: Coffins, in situ. The oval opening at the head and the hole at the foot may have facilitated firing and also aided in moving the body into the coffin. The oval opening was covered with a clay lid and the hole at the foot blocked with bricks. PM image 148755.



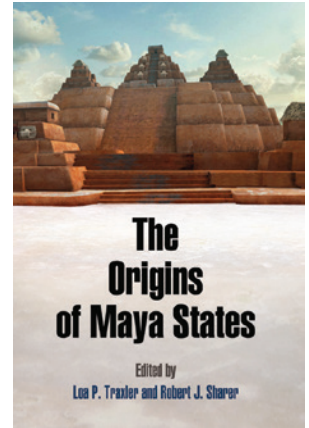
**Penn Museum**  
UNIVERSITY of PENNSYLVANIA MUSEUM  
of ARCHAEOLOGY and ANTHROPOLOGY

## The Origins of Maya States

Edited by Loa P. Traxler  
and Robert J. Sharer

*The Origins of Maya States* is the first study in over 30 years to examine the origins and development of Maya states specifically during the preclassic period, ca. 1000 BCE to 250 CE. Editors Loa P. Traxler and Robert J. Sharer assemble a collection of essays that cover topics such as material signatures for the development of Maya states, evaluations of extant models for the emergence of Maya states, and advancement of new models based on recent archaeological data.

2016 | 704 pages | 6 x 9 | 124 illus.  
ISBN 978-1-934536-86-5 | Cloth | \$69.95  
ISBN 978-1-934536-08-7 | Ebook | \$69.95



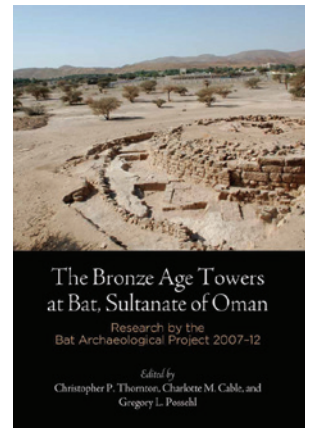
## The Bronze Age Towers at Bat, Sultanate of Oman

*Research by the Bat Archaeological Project, 2007–12*

Edited by  
Christopher P. Thornton,  
Charlotte M. Cable, and  
Gregory L. Possehl

Between 2007 and 2012, the University of Pennsylvania Museum of Archaeology and Anthropology conducted excavations at the UNESCO World Heritage Site of Bat in the Sultanate of Oman under the direction of the late Gregory L. Possehl. This has been the most comprehensive study of nonmortuary Bronze Age monuments ever conducted on the Oman Peninsula, and the results provide new insight into the formation and function of these impressive structures that surely formed the social and political nexus of Magan's kingdom.

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**G**orge Byron Gordon met Suzanne Rognon Bernardi (later Jeffery) in 1905 while in Alaska for the Penn Museum. Bernardi was a teacher from Indiana, who taught at the U.S. Government School in Kingegan, Cape Prince of Wales, Alaska, from 1901 to *ca.* 1906. Kingegan is the

westernmost settlement in North America, an Inuit whaling village only 55 miles from Russia. Bernardi collected a number of artifacts for the Museum, and also sent Gordon about 100 photographs depicting her students and other Inuit of Kingegan. In a Bernardi photograph album at the University

of Washington Libraries, she labeled this same image with the caption: “Teacher’s pets.”

—*Alessandro Pezzati, Senior Archivist*

ABOVE: Inuit boy with cat and puppies, Cape Prince of Wales, Alaska, *ca.* 1905. Photograph by Suzanne Rognon Bernardi. UPM image #170145.

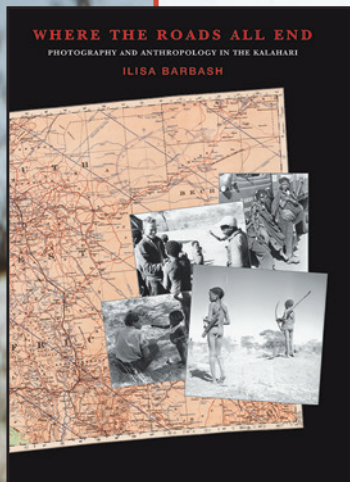


# WHERE THE ROADS ALL END

PHOTOGRAPHY AND ANTHROPOLOGY IN THE KALAHARI

**Ilisa Barbash**

Foreword by Paul Theroux



In *Where the Roads All End*, visual anthropologist Ilisa Barbash tells the remarkable story of an American family's eight anthropological expeditions to the remote Kalahari Desert in South West Africa during the 1950s. In journals, field notes, films, and over 40,000 still photographs, Laurence and Lorna Marshall and their children, John and Elizabeth, recorded the lives of the so-called Bushmen, also known as the Ju/'hoansi or San. Their unparalleled photographic archive, housed at Harvard's Peabody Museum, is explored here for the first time.

"Ilisa Barbash has written a meticulously researched and illuminating book, setting out the historical, anthropological, and visual contexts for the Marshalls' famous expeditions to the Kalahari and giving us a nuanced understanding of both their pioneering work and the San communities they recorded. This is an essential book for anyone interested in the visual representation of southern Africa's peoples and the history of visual anthropology more generally."

—Christopher Morton, Pitt Rivers Museum, University of Oxford

"A most attractive and aesthetically pleasing work of art and of scholarship. It is so well written that one can almost smell the smoke from the campfire and hear Lorna Marshall speak."

—Robert Gordon, University of the Free State, Bloemfontein

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[www.penn.museum/expedition](http://www.penn.museum/expedition)

