

# CATALYST

DENVER MUSEUM OF NATURE & SCIENCE MAGAZINE

DECEMBER 2012 | JANUARY 2013

INSIDE /// A DAY IN POMPEII  
ROCKY MOUNTAIN EXPRESS IN IMAX  
CURIOSITY ROVER MODEL





# ROCKY MOUNTAIN EXPRESS

Presented in 2D in Phipps IMAX Theater



Climb on board a steam train and journey through the breathtaking vistas of the Canadian Rockies as you experience the epic story of building the nation's first transcontinental railway.

**MEMBERS SAVE 30% ON TICKETS EVERY DAY.**  
SHOWTIMES @ [WWW.DMNS.ORG](http://WWW.DMNS.ORG)

Dear Members,

Appreciation and generosity are focal points this time of year as we gather to give thanks for what matters most to us and to exchange gifts in the spirit of kindness. As a Museum member, you already appreciate the value of supporting cultural institutions. As you make your lists and plans this season, please keep in mind several ways your holiday activities can support the Museum.



- Come see A Day in Pompeii before it leaves in early January, and the beautiful new IMAX film *Rocky Mountain Express*, presented in 2D.
- Bring your out-of-town visitors to the Museum. A visit is a relaxing way to be together, especially during the holiday rush.
- Enjoy your discounts in the Museum Shop and T-Rex Cafe, where your purchases support Museum education, research, and collections.
- Buy gift memberships! Memberships are a thoughtful gift that last year-round. It is also a wonderful way to show your enthusiasm for the Museum because you are our primary public champions.
- Each time you make a purchase in most of metro Denver, a mere one penny of every \$10 supports the Scientific & Cultural Facilities District, an enrichment tax district in seven metro area counties. What may seem a small amount adds up to about \$40 million distributed each year to 300 scientific and cultural organizations, including the Museum. The SCFD has brought the Denver area national recognition as a world-class cultural center, but more important, the SCFD offers quality enlightenment and entertainment to millions in our community. And supporting it is as simple as doing your holiday shopping.

As we approach a new year, we will continue to share the excitement of construction on the new Education and Collections Facility. The Museum will be open every day during construction, and we appreciate your willingness to "pardon our dust." We are also planning another fantastic year of programming in 2013, including the exhibitions *Mammoths & Mastodons: Titans of the Ice Age* and *MythBusters: The Explosive Exhibition*, as well as new IMAX and Planetarium shows.

We have much to be thankful for at the Museum, including you—our members—whose steadfast support boosts all we do. Best wishes for a safe and joyful holiday season.

George Sparks  
President & CEO

You may contact George Sparks by e-mail: [president@dmns.org](mailto:president@dmns.org).

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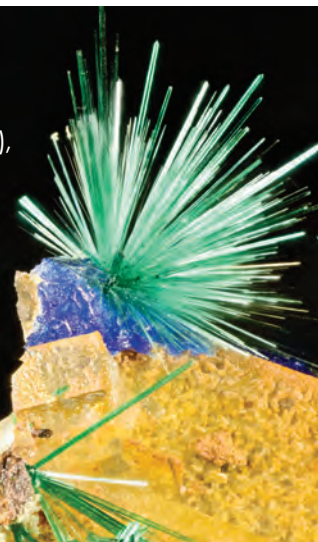
From the geology collections

Brochantite (green), linarite (blue), fluorite (clear)

DMNH M1727

Blanchard Mine,  
Socorro County, N.M.

Actual size: less than a  
quarter inch







Open cluster NGC 225 in Cassiopeia

## HEAVENS ABOVE

Most people probably think stars are white or yellow, but the colors of stars actually vary. The colors stand out particularly well when you compare stars of contrasting colors, such as Betelgeuse and Rigel in the constellation Orion. Betelgeuse is clearly reddish, and Rigel has more of a bluish tint. Aldebaran in Taurus is another colorful star whose color is orange.

The color is an important clue to a star's physical nature because it reveals a star's surface temperature. The bluest stars are the hottest; Rigel's surface temperature runs about 21,000°F or a bit more than twice as hot as the solar surface of the sun. The cooler the star, the redder it appears; Betelgeuse is about 6,300°F, about two-thirds as hot as the sun. The white and blue-white stars are in the prime of life, but redder stars are nearing the end of their stellar lives. They have reached the so-called "red giant" phase of a star's life, a period marked by a dramatic expansion that spreads the star's energy over a larger surface area and reduces its surface temperature.

Although stars may appear white at first glance, if you look carefully, you will notice a range of colors from blue to white, red, and even gold. One of the many pleasures of stargazing is noticing and enjoying the various colors that stars display in dark skies. These hues offer direct visual evidence of how stellar temperatures vary.

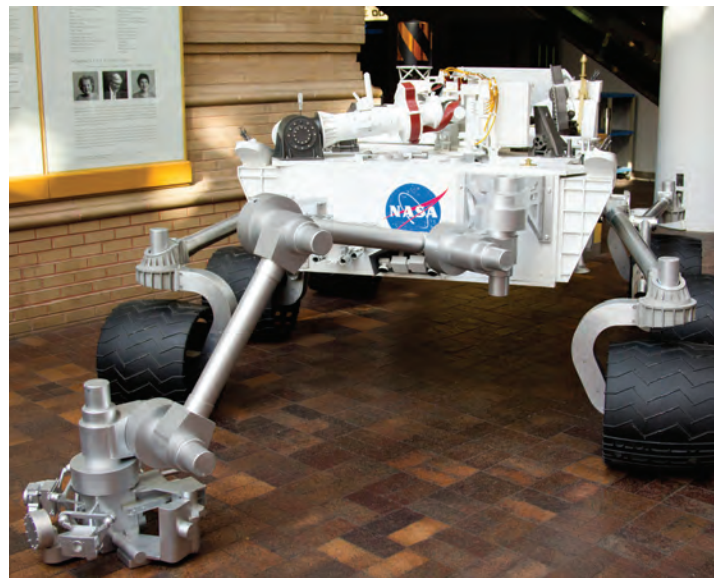
Find sky information for December and January @ [www.dmns.org/heavensabove](http://www.dmns.org/heavensabove).

## ROVER MODEL LANDS AT MUSEUM

A full-scale, detailed model of *Curiosity*, the famous rover heading up the Mars Science Laboratory Mission, is on display at the Museum through the holidays.

The real *Curiosity* landed on Mars on August 7, after the so-called "seven minutes of terror" that described its technically challenging, well-executed descent. It landed in Gale Crater, which scientists think may have held a lake at one time. The heart of its mission is to explore whether the Martian environment has ever been able to support life. The rover has 17 cameras, a rock-vaporizing laser, and a robotic arm that can grip a variety of different tools to aid in sample collection and analysis. It is powered with an onboard plutonium power plant and should be able to return data for at least two years.

The model is located on Level 1 of the Museum, near seating for the T-Rex Cafe. Find out more about the Mars Science Laboratory Mission @ [mars.jpl.nasa.gov/msl](http://mars.jpl.nasa.gov/msl).



## WE'RE OPEN THROUGH THE HOLIDAYS

Just a reminder that the Museum will be open throughout the holiday season, except for December 25. A Day in Pompeii will be open until 7 p.m. for several evenings around Thanksgiving and Christmas. Find out more about tickets and extended hours @ [www.dmns.org/pompeii](http://www.dmns.org/pompeii). We look forward to seeing you and your holiday visitors at the Museum!





## CONSTRUCTION UPDATE

The underground levels in the new Education and Collections Facility are now enclosed, shaping the future home of the Rocky Mountain Science Collections Center. Pictured above is Level B2 looking west from a point near the Zoology Collections Workshop, where curators and volunteers will catalog and process mammal, bird, and insect specimens. The opening in the wall in the background will be closed after equipment for mechanical systems is installed. In other construction activity, the concrete for the Nature Plaza located outside the new wing was poured in mid-November. The plaza is the location of the new school entrance.

The Museum is open *every day* during construction. Find out more about the Education and Collections Facility @ [www.dmns.org/futureplans](http://www.dmns.org/futureplans).

## GET READY FOR SPRING BREAK AND SUMMER DAY CAMPS

Spring Break and Summer Day Camps at the Museum are more than just something to do during the long vacation break. The wonders never cease at the Museum, so our camps are an engaging way for your children to explore science in a hands-on, dynamic way that helps them realize that science will always be an everyday part of their lives.

Registration is now open for Spring Break Day Camps; see the list of programs on p. 7 in the magazine insert. As a Museum member, you have the benefit of advance notification and registration for our Summer Day Camps. If you'd like to be the first to know when registration is open but don't receive our e-communications, please send your name, member number, and e-mail address to [members@dmns.org](mailto:members@dmns.org). Find out more about all our science programs for children @ [www.dmns.org/learn](http://www.dmns.org/learn).



## MEET LYUBA, THE FAMOUS BABY MAMMOTH

In 2007, a Siberian reindeer herder made a fantastic discovery, an intact baby woolly mammoth, preserved in the frozen soil of the Arctic for some 40,000 years. The baby mammoth was named Lyuba (pronounced Lee-OO-bah) after the herder's wife. This incredible specimen is now the centerpiece of the exhibition *Mammoths & Mastodons: Titans of the Ice Age*, opening at the Museum in February. Members will be the first to see it and will receive deep discounts on tickets. Find out more @ [www.dmns.org/exhibitions/upcoming-exhibitions](http://www.dmns.org/exhibitions/upcoming-exhibitions).





## THE CITIZENS OF POMPEII

You may meet them at the thermopolium (an ancient fast-food restaurant), roaming the exhibition, or near the Pompeii Runway cart on Level 2. They are the Museum's historical enactors, sharing tales of life in Pompeii before that fateful day the vibrant city was buried in the ash of Mount Vesuvius.

Here are some of the characters enhancing the experience at A Day in Pompeii:

Lucius Lucretius Paullus (pictured above) is a retired centurion from Rome who gained favor with the emperor Claudius while serving in Germania. Paullus has political aspirations and can often be found expounding on the greatness of the Roman Empire and campaigning in the forum.

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### MEMBERS-ONLY NIGHT IN POMPEII

Don't miss the final opportunity to see A Day in Pompeii during a members-only night on Thursday, January 10, from 6 to 9 p.m. Reservations are required @ [www.dmns.org/memberevents](http://www.dmns.org/memberevents) or 303.370.6000 (M-F, 9-5).





Gnaea Aemilia Natta (pictured above) is a native Pompeiian, former slave, and now a freedwoman. She is an expert spinner, dyer, and weaver. A grandmotherly figure to some of the younger women, she is comfortable helping behind the counter at the thermopolium but prefers to chat with customers about her life as she spins.

Lucia Aurelia Celeris is a retired vestal virgin and an honorable woman in the empire. Fiercely devoted to Rome, she shares stories of her life in service to the goddess Vesta. Now married, she lends her status and support to her politically ambitious husband, Paullus.

Gaia Aemilia Avita is the wife of Darius, the thermopolium owner, and has earned her freedom upon giving birth to her third child. Avita now works in the thermopolium, but her duties as a slave honed her skills as a midwife.

Aula Nautia Poplicola is an exuberant young woman who lives under the guardianship of her cousin Darius. Though she loves working in the thermopolium, she dreams of marrying her betrothed, Celsus, and can often be seen working on items for her new household.

Assefa Calidus is an eques gladiator from Ethiopia. Unlike many who were forced into the games through slavery, Calidus chose to become a gladiator hoping success will help him bring his kin to Rome. With 30 fights battled and won, Calidus's name and exploits are known across the region.

Quinta Aemilia Lupa is a foundling raised as a slave in the household of Aemilius. She is the busy, talkative errand girl for her esteemed master, a Roman senator. Lupa is passionate about the gladiatorial games and can often be found gossiping about her favorite gladiators in the thermopolium.

These characters are portrayed respectively by the following professional actors who are members of the Museum's Visitor Programs team: Michael A. Parker, Jane Stanfield, Mary Jane Bradbury, Misha Johnson, Amelia Newport, Isaiah Kelley, and Erin Prestia-Robins. The enactors conduct extensive research and create authentic costumes to bring history to life and give you a sense of what it would have been like to spend a day in Pompeii.

## VISITING TIPS FOR MEMBERS

A Day in Pompeii is open daily from 9 a.m. to 5 p.m., with some extended hours during the holidays. Timed tickets are required. Find ticket availability @ [www.dmns.org/pompeii](http://www.dmns.org/pompeii).

High attendance is expected during the holidays, so advance tickets are recommended. Weekday late afternoons and weekend early mornings tend to be less busy. School groups generally visit during weekday mornings.

Members receive a deep discount on Pompeii admission: \$10 adult, \$6 senior (65+), and \$6 student (with ID) or junior (3–18). There is a \$2 handling fee per ticket by phone or online. Purchase tickets @ [www.dmns.org/pompeii](http://www.dmns.org/pompeii) or 303.370.6000 (M–F, 9–5). Afternoon is the best time to call.

Please allow extra time for parking and ticketing, and plan to spend 60–90 minutes in the exhibition.

Audio tours are available in English and Spanish for \$4 adult, \$3 junior, and include family and adult tour stops.

Complimentary "pink" member guest vouchers are valid only for general Museum admission and cannot be used for Pompeii.

Enhance your Pompeii experience with the new Planetarium show *SuperVolcanoes*. Members save 30% on Planetarium tickets every day. For showtimes, visit [www.dmns.org/planetarium](http://www.dmns.org/planetarium).

## FIND IT @ DMNS.ORG

Find A Day in Pompeii tickets, information for planning your visit, exhibition highlights, educational resources, and more @ [www.dmns.org/pompeii](http://www.dmns.org/pompeii). The exhibition is open through Sunday, January 13.

A Day in Pompeii is based on the design and presentation developed by the Gulf Coast Exploreum, the Science Museum of Minnesota, the San Diego Natural History Museum, and Discovery Place. Organized by Soprintendenza Speciale per i Beni Archeologici di Napoli e Pompei (SANP).





## DINOSAURS OF THE LOST ISLAND

BY JOSEPH SERTICH, PhD

Located off the southeast coast of Africa, the island nation of Madagascar is home to one of the world's most uniquely diverse and threatened assemblages of plants and animals. Famous for its monkey-like lemurs, colorful chameleons, and rotund baobab trees, as many as 90 percent of the plants and animals are endemic, found nowhere else on Earth. In many ways, stepping into the forests of Madagascar is like stepping back in time. Recent research suggests that ancestors of many of the animals arrived millions of years ago, marooned to evolve and diversify in lonely isolation. The deep historical roots of these immigrations have been the subject of intense scrutiny.





I first began exploring Madagascar seven years ago with my colleague Dr. David Krause of Stony Brook University, who was drawn to the island's fossilized past in search of clues related to its singular story of solitude. This work in the sandstone rocks of the Mahajanga Basin in northwestern Madagascar revealed an ecosystem of dinosaurs and other animals nearly 68 million years old. Among the thousands of fossils collected are the strange carnivorous dinosaurs *Majungasaurus* and *Masiakasaurus*; incredible crocodiles, like the pug-snouted, plant-eating *Simosuchus*; and feathered bird-dinosaurs, like *Rahonavis*.

Although this bizarre fossil menagerie significantly enhances our view of ancient Madagascar, the Mahajanga Basin represents only a single, isolated window into the past. With more fossils, Madagascar's geologic history could potentially act as an ancient laboratory for evolution in isolation, all on an easy to reconstruct, island-size scale found nowhere else on Earth. After several years of exploring the Mahajanga Basin, I wanted more!

In 2007, news emerged that a dinosaur had been discovered in western Madagascar, in rocks up to 15 million years older than the rocks containing the Mahajanga fossils. This was our chance to learn about Madagascar immediately after it became an island nearly 88 million years ago. Ammonites, the intricately shelled cousins of today's squid and octopus, have long been collected from the rocks of Morondava Basin in western and southwestern parts of the island. A team of ammonite researchers had stumbled upon the fossilized bones of a large animal within these beds. The following season, I assembled a small team of researchers to return to the site for a brief week of exploration. What we found astonished us. The rocks were packed with fossils from a shallow

coastal system that had shifted back and forth over western Madagascar for more than 60 million years. A major exploratory effort was definitely warranted.

This past summer, I was joined in Madagascar by a crew that included our own Dr. Ian Miller, curator of paleontology and a paleobotanist, as well as staff and students from the United States and Madagascar. An expedition of this size, to such a remote and logistically challenging locale, comes with its own set of hazards and headaches. We spent nearly the entire first week of the trip organizing and shipping supplies—such as 2,000 pounds of plaster of paris and 500 pounds of burlap for jacketing fossils—and meeting with various officials and agencies for final approval.

Days later, while driving down the world-famous Avenue of Baobabs, we finally had a sense that we were on the cusp of major new discoveries. Within hours of arriving and locating the field site, we were neck deep in fossils. Though unremarkable at first glance, the grassy plains of western Madagascar are deeply incised by small streams and rivers, a sad byproduct of millennia of deforestation. These incisions expose rocks between 120 and 66 million years old and contain fossils from ancient, coastal Madagascar. Much to Dr. Miller's delight, the first exposures of rocks immediately produced fossil plants, some of the first of their type from the Cretaceous.

For two weeks, the crew collected nearly 10,000 pounds of fossils, including an immense long-necked sauropod dinosaur. With a femur, or thigh bone, nearly seven feet long, this beast is among the largest dinosaurs ever discovered and undoubtedly represents a species new to science. The bones were so large we had to use nearly 20 cattle-drawn carts to carry them 10 miles back to the main road! From there a large truck transported them to the capital city of Antananarivo for study and export.

With any luck, this stunning new collection of dinosaurs and fossils will make their way back to Denver and our Museum in the coming months. Keep an eye out for them in our fossil preparation laboratory in Prehistoric Journey!

Facing page: Plaster jackets containing huge dinosaur bones are loaded onto cattle-drawn carts for transport out of the field site in remote Madagascar. This page: Madagascar's famous Avenue of Baobabs.

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Dr. Joe Sertich is curator of vertebrate paleontology. Find out more about his research @ [www.dmns.org/science/museum-scientists/joseph-sertich](http://www.dmns.org/science/museum-scientists/joseph-sertich).

Dr. Ian Miller shares his first impressions of Madagascar @ [www.dmns.org/science/museum-scientists/ian-miller](http://www.dmns.org/science/museum-scientists/ian-miller).

See more photos from Madagascar on the digital version of the December 2012/January 2013 Catalyst @ [www.dmns.org/catalyst](http://www.dmns.org/catalyst).



## SCIENTIFIC INSTRUMENTS

BY MARTA LINDSAY

When you hear the words *Museum collections*, you likely think of vials of tiny spiders or bones of giant mastodons. But the Museum also has a collection of scientific instruments that emphasizes the preservation of instruments that are of particular importance to the history of science. The collection is not intended for research use today, although many of the items have played important roles in past research programs.





The scientific pursuit of knowledge is as old as human history. Through the ages, various instruments have been created to enhance our ability to make precise and accurate observations and measurements. The term *scientific instrument* is a convenient moniker for describing complex or technical artifacts used in various scientific and technical practices.

Microscopes and microscopy are common denominators that are basic to all science. Surveying instruments played a key role in the early territorial, geographical, and geological surveys of the country, as well as underground mapping of ore deposits from which many mineral specimens have originated. Astronomical instruments are fundamental to the study of space science. Instruments of measurement, such as balances, weights, and scales are also components of the basic “tool kit” used in the study of the natural sciences. In more recent history, computers have become the most widely used element of the modern “research” tool kit.

The Museum’s collection is composed of instruments that were used by Museum staff members, were part of crucial experiments involving key scientists in their pursuit of knowledge, or are excellent type-examples of particular instruments. Items in the collection include underground surveying instruments, with appropriate accessories and

related photographs; various microscopes and accessories; instruments of measurement; and a type specimen of an early personal computer, one of the first 100 units of the 8086 IBM PC.

A particularly spectacular instrument at the Museum is the Zentmayer Centennial binocular microscope (pictured on the facing page). The scope was patented in 1876 to commemorate the 100th anniversary of the U.S. Declaration of Independence and made its debut at the Philadelphia International Exhibition that same year. The Centennial won acclaim for excellent handmade workmanship. Its creator was Joseph Zentmayer, a German immigrant trained in optics and instrument making. He started his business in Philadelphia in 1853, where he created instruments that have become world-renowned for their superior precision and mechanism. In addition, he dedicated his life to the advancement of science through his membership in many scientific academies and societies. He died in 1888.

The Centennial’s innovative design includes a glass “gliding” stage to hold slides and objects for viewing. It also incorporates a novel substage lighting system that allows oblique illumination of the slide or object via light sources such as a kerosene lamp. This microscope was first used by George W. Fiss, a renowned amateur mineralogist who worked with microscopic mineral specimens. Only nine of the original 44 Centennials are known to still exist. Ours came to the Museum in 1986 thanks to notable mineralogists Paul and Hilde Seel.

The Museum also has a Leitz petrographic microscope from 1896 (pictured left), along with its case and accessories. Ernst Leitz was a German engineer who took over the Optical Institute in Wetzlar, Germany, in 1869. By the early 1900s, the company had grown greatly and was producing hundreds of microscopes at a time when the development of scientific technology was quickly accelerating. Leitz is also known as the parent company of the Leica, the first small 35 mm camera. Although modernized over time, petrographic microscopes continue to be the primary laboratory tool for geologists and mineralogists for rock study and rock analysis. This Leitz microscope was donated to the Museum by Dan Kile, a longtime research associate in the Earth Sciences Department.

These world-class microscopes and all of the items in the scientific instruments collection are true artifacts of the history of science and humankind’s insatiable desire to explore the world.



#### FIND IT @ DMNS.ORG

Marta Lindsay is the space sciences collections manager. Learn more @ [www.dmns.org/science/collections](http://www.dmns.org/science/collections).

The Museum is responsible for preserving collections that are timeless in origin and value. To fulfill this responsibility, the Museum is currently constructing the new Rocky Mountain Science Collections Center. Find out more @ [www.dmns.org/futureplans](http://www.dmns.org/futureplans).



## GET EVEN MORE OUT OF MUSEUM MEMBERSHIP

Upgrade your membership to the Giving Club and enjoy additional perks at the Museum!

There's still time to take advantage of one of our most popular benefits for Giving Club (\$300+) members: **free "anytime" tickets to surcharged exhibitions**, including A Day in Pompeii (through January 13) and 2013's offerings, Mammoths & Mastodons: Titans of the Ice Age and MythBusters: The Explosive Exhibition. This new benefit guarantees quick and easy access to every temporary exhibition, making your visit even more convenient. No reservations needed, even if it's sold out!

You'll also enjoy unique access to the Museum, with new opportunities for discovery and learning. Giving Club members receive invitations to Behind-the-Scenes Night, breakfast with the curators, and other specially planned programs.

In addition, you'll get first notification about special events, such as a program with Dr. Scott of *Dinosaur Train*, returning to the Museum in spring 2013!

When you join the Giving Club, you become part of a family of contributors who help ensure the Museum's record of excellence and value to the community. Explore the various Giving Club membership levels today and see how you can enrich your Museum experience.

Find out more @ [www.dmns.org/join/givingclub](http://www.dmns.org/join/givingclub) or 303.370.6373.



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Melissa Spencer, director of corporate giving and donor research, at  
303.370.8259 or [melissa.spencer@dmns.org](mailto:melissa.spencer@dmns.org).



## THE MOCHE OF ANCIENT PERU

BY MICHELE KOONS, PhD

When most people think of archaeology in Peru, visions of the rugged Andes mountains and the Inca site of Machu Picchu often come to mind. However, the Inca Empire (1438–1532 AD) was the last of the many great ancient civilizations to inhabit modern Peru prior to the Spanish Conquest. Centuries before the Inca, and far from their mountainous heartland, the Moche civilization (300–900 AD) lived on the dry desert coastal plain of northern Peru.

The arid conditions of Peru's north coast preserve ancient remains incredibly well, very much like the preservation we see in cliff sites across the American West. Because of the abundance of artifacts and architectural remains in the region, archaeologists are able to reconstruct the activities of past civilizations that lived there with great detail. Moche remains are found over 400 miles along the coast, spanning 10 river valleys. They include immense and elaborately decorated adobe pyramid complexes, wealthy elite burials, and exquisite red and cream painted ceramics. Moche art on these ceramics portray living and mythical beings engaged in various activities.

One of the most famous scenes found on ceramic vessels is the Sacrifice Ceremony. It involves personified objects and animals slitting the throats of prisoners and filling goblets with their blood. The blood is then given to two mythical beings to be presented to a presumably higher deity.

For more than 100 years it was unclear whether or not the Sacrifice Ceremony represented a real Moche event or was a mythical tale, similar to those of the heroes and gods of ancient Greece and Rome. This changed in 1987 when grave robbers were discovered illicitly excavating hoards of gold at the site of Sipán. Authorities notified archaeologist Walter Alva, and he initiated a three-year salvage program that uncovered extraordinary Moche tombs.

One tomb contained the “Lord of Sipán,” which remains the richest tomb ever excavated in the western hemisphere. To the surprise of the archaeologists, the Lord of Sipán was buried with accoutrements from the Sacrifice Ceremony, when compared to the scenes painted on the ceramics. Another tomb contained a bird mask and a goblet evidently from the ceremony. Since the discovery at Sipán, excavations at another site, San José de Moro, have uncovered seven different priestesses buried with ceremonial paraphernalia. This includes copper plumes from headdresses and a ceramic goblet. Residue analysis of the interior of a goblet recovered at yet another site indicated that it once contained blood.

These discoveries demonstrated that the Sacrifice Ceremony was an actual ritual and not just a story or myth. Multiple burials have been found with costumes, indicating that these were not necessarily important individuals themselves but were people engaged in role playing. Moche scholars have proposed that these entombed individuals could have acted as god impersonators, or were perhaps akin to clergymen. The Sacrifice Ceremony is now understood as the crux of Moche religion.

My recent investigations at the previously unstudied Moche ceremonial center of Lipaca II revealed additional evidence for the enactment of the Sacrifice Ceremony or something similar. In 2010, we recovered the remains of eight ceramic goblets in an adobe pyramid similar to those seen associated with the Sacrifice Ceremony. The goblets were found in a looter's tunnel that likely led to a robbed tomb deeper inside the pyramid. This discovery is significant because the goblets were of a unique artistic style and were found in a region where evidence for the ceremony had not been scientifically recorded. My future investigations will further explore how and by whom these goblets were used and if their presence can be definitively linked to Moche religious practices of sacrifice at the site.

Pictured above: Michele Koons photographing a pyramid during an excavation at Lipaca II.



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Dr. Michele Koons is a post-doctoral research fellow in the Anthropology Department. She recently completed her PhD in anthropology at Harvard University and received her master's degree from the University of Denver in 2006. Find out more about the Anthropology Department @ [www.dmns.org/science/research/anthropology](http://www.dmns.org/science/research/anthropology).



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