

CATALYST

DENVER MUSEUM OF NATURE & SCIENCE MAGAZINE

FEBRUARY | MARCH 2015

INSIDE ///

TRAVELING THE SILK ROAD

GIRLS AND SCIENCE

MYTHIC CREATURES





WHALES

SPOTTED IN DENVER

Whales: Giants of the Deep, the all new immersive exhibition at the Denver Museum of Nature & Science.

FREE WITH ADMISSION | CLOSES FEB 16



Developed and presented by the Museum of New Zealand Te Papa Tongarewa. This exhibition was made possible through the support of the New Zealand Government (and the Smithsonian Institution).

Presented in Denver by



Dear Members,

February 14 marks one year since we celebrated the grand opening of the Morgridge Family Exploration Center. The new wing was created to bring a fresh approach to discovery and inspire people of all ages to newly connect with our amazing world. The result has been very gratifying.



Within the first few weeks of opening, we launched Field Trip Adventures in the wing's bright, airy Exploration Studios, where emerging technologies encourage highly personalized, inquiry-driven experiences complemented by the Museum's exhibits and science collections. By the time the holidays arrived, 20,000 students had participated in this innovative approach to school visits.

The completely reimagined play-and-learn area for young children, Discovery Zone, made possible by Kaiser Permanente, received an astonishing 250,000 visits within six months after opening in June! In the new Anschutz Gallery, we have already staged two popular cultural exhibitions, Maya: Hidden Worlds Revealed and Traveling the Silk Road, that have attracted thousands of visitors.

The Science Atrium, with its gigantic Art and Imagination Screen, has been a lively destination for dozens of events, such as the Día del Niño celebration last spring when we welcomed 12,250 guests, including many first-time visitors. More than 650 guests attended the Urban Advantage Science Celebration in May, during which seventh graders shared their science projects with their families and professional scientists. We also hosted Denver Mayor Michael Hancock at a press conference to announce the new cultural benefits available to schoolchildren using their My Denver Card.

In December, 500 people arrived at the Museum at 4 a.m. for an Orion rocket launch viewing party we cohosted with United Launch Alliance (ULA) and Lockheed Martin. The crowd included Museum members, workers from the Colorado space industry, and students from Girls Inc. A model of the Delta IV Heavy rocket, donated by ULA, is on display in Space Odyssey so that all Coloradans can share in this historic event.

During the past year, we have made new friends, collaborated with longtime partners, and continued our commitment to igniting our community's passion for nature and science. Thank you for your support, and we look forward to seeing you at the Museum in 2015.

George Sparks
President and CEO

You may contact George Sparks by e-mail at president@dmns.org.

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Join Our Community:



ON THE COVER FROM THE ZOOLOGY COLLECTIONS

Japanese oak silk moth

Antheraea yamamai

DMNS ZE.246 • Origin: Japan

Reared in captivity in 1971 by Dr. Ric Peigler, former Museum entomologist



SUMMER OF SCIENCE FOR TEEN SCHOLARS

Teens! If you have a passion for science that you'd like to put into action, consider applying for the Teen Science Scholars program. Each summer, these explore and work side by side with the Museum's professional scientists on authentic research projects.

Teen Scholars will receive an opportunity to collaborate with Museum scientists, archivists, collections managers, and conservators on these projects in summer 2015:

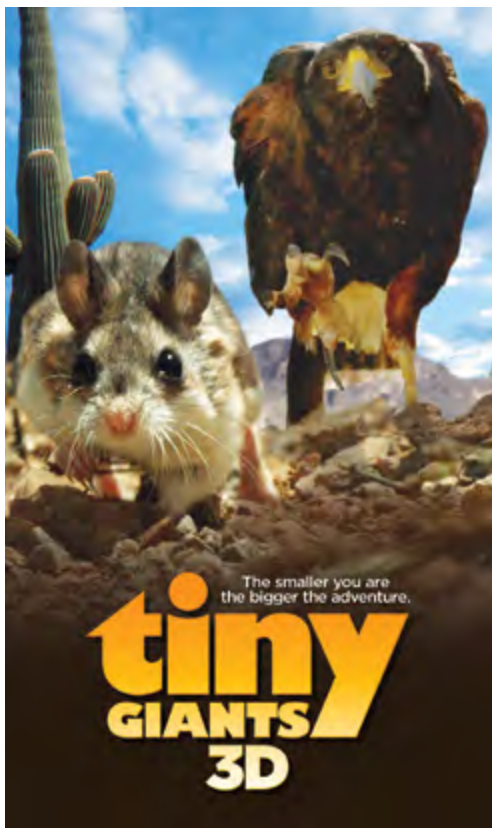
- Anthropology—Conduct surveys of archaeological sites in the American West.
- Museum Conservation—Study techniques that help repair, prepare, and protect the Museum's specimens and artifacts.
- Health Sciences—Study how genetics affect an individual's taste, and acquire techniques to analyze human genomics.
- Earth Sciences—Work at a field site in the western United States to collect data and fossils, and prepare and analyze the specimens.
- Space Sciences—Study the visualizations of astronomical datasets in education, and use software tools to create visualizations.
- Zoology—Work at field sites in the western United States, and prepare and analyze specimens for the Museum's collection.



This program began in 2007 with six students and has grown to more than 20 students participating each year. A majority of scholars have gone on to college and majored in a STEM field of study. The program is open to teens entering their junior or senior year of high school in fall 2015 and who demonstrate their qualifications through their application, essay, and interview.

The Museum thanks the following donors for their generous support of the Teen Science Scholars program: Harvey Family Foundation and Paul and Harriet Rosen, as well as AJL Charitable Foundation, Keith and Michelle Callendar, Robert and Barbara Danos, Susan and Lee McIntire, Sue McMillan, Newmont Mining Corporation, Thomas and Linda Nolan, John and Suzanne Oró Charitable Gift Fund, Richard and Barbara Stucky, Sonnie and Dick Talley, India Wood and Paul Mandel, and Mary Young.

Completed applications are due by Monday, March 16. Find out more @ www.dmns.org/sciencescholars.



NEW IN PHIPPS IMAX THEATER

Members save 30% on IMAX tickets every day. Find showtimes @ www.dmns.org/imax.

DEEPSEA CHALLENGE 3D

As a boy, award-winning filmmaker James Cameron dreamed of a journey to the deepest part of the ocean. *Deepsea Challenge 3D* is the dramatic fulfillment of Cameron's dream as it chronicles his solo dive to the untouched depths of the Mariana Trench—nearly seven miles beneath the ocean's surface—piloting a submersible he designed himself. Recommended for ages 7 and up. Now showing.

TINY GIANTS 3D

Lower yourself to the level of some of nature's smallest creatures as they experience some gigantic adventures! *Tiny Giants 3D* follows a chipmunk in an untamed woodland and a grasshopper mouse in Arizona's scorched desert as both are forced to grow up fast when they find themselves on their own and using their ingenious superpowers to face off with some ferocious rivals and predators. Recommended for ages 8 and up. Now showing.

PREHISTORIC PLANET: WALKING WITH DINOSAURS 3D

Travel alongside hundreds of plant-eating dinosaurs as they face the challenges of a changing world in *Prehistoric Planet: Walking with Dinosaurs 3D*. From the time they are hatched, these prehistoric giants face natural disasters and ferocious predators while also playing, hunting, feeding, and undertaking epic migrations. Based on scientific data, the digital dinosaurs come to life against the backdrop of modern Alaska, immersing you in a Cretaceous adventure where you will feel the rumble of these massive herds. Recommended for ages 8 and up. Opens Friday, February 13.

HEAVENS ABOVE

Observers of the night sky know the planets shift slightly eastward from night to night, drifting slowly against the backdrop of stars from west to east. This is known as direct or prograde motion. But every once in a while a planet will appear to move backward for a period of time, in the opposite direction, to the west. This is retrograde motion.

Ancient sky watchers went to great lengths to try and explain these motions until astronomers like Copernicus and Kepler realized Earth orbited the sun. Today we are aware that planets continually orbit in the same uniform direction, and this apparent backward motion is caused by the orbit of one planet being lapped by another in their orbits around the sun. Both planets move in a direct eastward movement around the sun, but the planet with the inside (smaller) orbit moves faster than the planet on the outside (larger) orbit, and when it passes the slower-moving planet, each sees the other one as moving backward relative to its usual motion. Neither planet is actually moving backward; it is an illusion caused by Earth's orbital motion. However, there are true retrograde motions in the solar system.

All the planets orbit the sun in the same direction that the sun is rotating, which is counterclockwise when viewed from above the sun's north pole. Six of the planets rotate along their axis in this same counterclockwise direction, but Venus, Uranus, and Pluto are known to have retrograde motion. Venus is rotating in the opposite direction to its orbit while the Uranus axis of rotation is nearly parallel with the plane of the solar system. Some moons, such as Neptune's Triton, also have retrograde orbits around their planets, orbiting in the opposite direction of their parent planet.

Find sky information for February and March @ www.dmns.org/heavensabove.

RHODOCHROSITE IS A "SIGNIFICANT" ARTIFACT

The Museum's stunning rhodochrosite crystal was named one of Colorado's Top 10 Most Significant Artifacts in 2014, sponsored by Colorado Connecting to Collections.

The Alma King rhodochrosite is the "crown jewel" of Coors Gems and Minerals Hall. It is the largest and finest known rhodochrosite crystal on Earth. Embedded in a delicate matrix of white quartz and purple fluorite crystals, the five-by-seven-inch cherry red crystal was discovered in 1992 in the Sweet Home Mine, near the tiny hamlet of Alma, Colorado. By sheer luck, a Museum video crew accompanied the miners that fateful day. You can witness the historic discovery for yourself on the monitors flanking this Colorado treasure.

Find out more about other top artifacts in Colorado @ <https://collectioncare.auraria.edu>.



MYTHIC CREATURES INVADE THE MUSEUM

Did you know there really was a huge, now-extinct ape called *Gigantopithecus* that has inspired myths about creatures like Bigfoot for years? See a model and touch the jaw of *Gigantopithecus* when the new exhibition Mythic Creatures: Dragons, Unicorns, and Mermaids opens to members on Thursday, March 19. Admission will be free for members! See the back cover for members-only events, and find out more about the exhibition @ www.dmns.org/mythiccreatures.



MEET THE PEOPLE OF THE SILK ROAD

By Jennifer Moss Logan

Keep your eyes open as you journey through Traveling the Silk Road! You may encounter someone dressed a little differently than everyone else. Could that be an ancient scholar or merchant, or perhaps a camel driver? The Museum's historical enactors are at it again, this time portraying people whose lives were intricately bound with the trade, knowledge, and culture of the Silk Road.



The Museum introduced the historical enactor program in 2007 to enhance a temporary exhibition about Benjamin Franklin. Guests enjoyed it so much that enactors have been used ever since for various exhibitions, as well as for every day interpretation in the diorama halls. The professional actors work very intentionally to develop storylines and costumes for their respective characters, then to assemble interesting props and collections objects they can share with visitors. The actors' backgrounds in improvisation and educational theater make each encounter with a visitor a unique experience.

Here are the characters you will meet when you travel the Silk Road and venture back to the latter half of the 8th century. Hear their stories, lament their plights, and take a moment to see and touch the goods they have to trade and share.

Kāng Baobi (kaang bu-AK b-jEE) is the proprietor of the finest caravansery in Samarkand. The seasoned travelers who come to the oasis city seek out his opulent accommodations to rest and water their beasts of burden, as well as themselves, in this hub of trade along the Silk Road. It is said he can procure anything for anyone. He is a skilled player who will be most happy to challenge you to a game of chance, but beware: you may exit his establishment with a smaller bundle than when you entered. Baobi is portrayed by Michael A. Parker.

Ma'shūq al Zarqa bith Hamid (ma-SHOOK al zar-KAA bit ha-MEED) is the wife of a wealthy and respected goods agent in Samarkand. Ma'shūq can often be found checking in on the family business and tending to the rare and exotic merchandise her husband sells. Since her husband's illness, she has become well-versed in the subject of herbs and healing, and often shares her knowledge with those around her. Ma'shūq is portrayed by Amelia Wagner.

Ma Amri (ma am-REE) is an Eritrean-born Chinese official in the city of Turfan. Established as a trusted official under the Tang Code, he governs the movement of goods and people entering and exiting the city. He is a highly respected authority and has powerful business connections in Chang'an. Ask him how to ensure your caravan entrance into the city, no matter what the contents. Ma Amri is portrayed by Isaiah Kelley.

Shǐ Dara (shrr da-RA) is the cherished second wife of a much respected Sogdian merchant in Turfan. She has learned a great deal from her husband about the trade caravans he leads over mountains and deserts, through peril and thirst. Alas, her beloved husband has disappeared, yet the goods remain and must be delivered. With her young son at her side she braves the rigors of a journey along the Silk Road. When you encounter Shǐ Dara, perhaps you will share with her a clue as to the whereabouts of her heart's companion. Shǐ Dara is portrayed by Erin Prestia-Robins.

Faruq Ibn Khalil Ibn Yousuf Abu al-Mani (fa-ROOK ibin ka-LEEL ibin u-SEF abu al MA-nee) is a scholar from the House of Wisdom in Baghdad. He is a seeker of knowledge, an emissary, and a pilgrim heading east to China. He is well-taught and skilled,

and has learned that the stories of fellow travelers are gems of wisdom. You will often find Faruq away from his envoy, meeting new people and exchanging stories and skills he has learned on his travels. If you happen to come across him, ask him how he uses his astrolabe to tell time and make maps. Faruq is portrayed by Jose Zuniga.

There is no telling who you'll meet as you travel the ancient pathway that led to the modern world.

FIND IT @ DMNS.ORG

Jennifer Moss Logan is the educator and coordinator for nature and culture gallery programs and co-lead educator for Traveling the Silk Road. Find out more about the exhibition and related programs @ www.dmns.org/silkroad.

MEMBERS TIPS

- Traveling the Silk Road is open daily through Sunday, May 3, in Anschutz Gallery, Level 3. Members receive a deep discount to this surcharged exhibition and timed tickets are required. Book your print-at-home tickets for Silk Road @ www.dmns.org and avoid a handling fee.
- Reservations for Silk Road are also available at 303.370.6000 (daily, 9–5). There is a \$2 fee per ticket by phone. Afternoon is the best time to call.
- Giving Club members may redeem their Silk Road “anytime” tickets by heading straight to the exhibition for quick and easy access, even if it's sold out.
- Weekday late afternoons and weekend early mornings tend to be less busy in our temporary exhibitions. School groups generally visit during weekday mornings. Spring Break 2015 in metro Denver will occur from March 23 to April 3.
- Complimentary guest tickets that came with your membership may be upgraded for admission to Silk Road.
- Enjoy shopping for your own “exotic” goods in the Silk Road retail shop where members save 10% every day!
- Will you earn the title of Master Merchant or lowly Camel Groomer? Play the Silk Road game and find out @ www.dmns.org/experience.

Facing page: Amelia Wagner in character. This page: Wagner is joined by, from left, Jose Zuniga, Michael Parker, Erin Prestia-Robins, and Isaiah Kelley.



KONOVALENKOS MARK 30TH ANNIVERSARY

By Stephen E. Nash, PhD

On Thursday, March 15, 1984, the Museum hosted a lavish Russian-themed dinner for 150 guests and dignitaries. The menu included carved-to-order smoked salmon, marinated herring, lamb kabobs, borscht, cucumber soup, and buttered blini with sour cream and caviar, accompanied by Russian desserts, tea, and Stolichnaya vodka. The event marked the opening of a temporary exhibition of a collection of imaginative, colorful, and dynamic gem sculptures by the Russian master carver and artist Vasily Vasilevich Konovalenko, who was honored that evening.



Fast-forward more than 30 years.

On Sunday, November 16, 2014, a United Airlines flight from New York touched down at Denver International Airport. On board was Anna Konovalenko, Vasily's widow, along with several family members and Dr. Tatiana Muntian, the Fabergé collection curator and special researcher at the Kremlin Museum. The party traveled to Denver to celebrate the 30th anniversary of the "temporary" exhibition and the publication of *A Stone Lives On*, the first comprehensive English volume documenting the sculptures at the Museum, affectionately known as "the Konovalenkos."

A Stone Lives On details in words and beautiful images the 20 beloved sculptures at the Museum, arguably the best public display of Konovalenko's work in the world. The volume was published as a *Denver Museum of Nature & Science Annals*. This is but a first step in fully documenting Konovalenko's work. Since late 2009, I have been collaborating with our Museum photographer, Rick Wicker, to not only reanalyze and rephotograph our sculptures but to document an additional 50 works by Konovalenko located in private and museum collections in the United States and overseas. Although my professional research primarily lies in the archaeology of the American Southwest, I also focus on the history of museums, so I wondered how and why the Konovalenko gem carvings ended up in Denver? And what are they, really?

The Konovalenko family has been incredibly open and helpful during this research odyssey. The artist's daughter Vasilisa Konovalenko Duras and her husband, Alan, graciously opened their home to Rick and me, and our respective spouses, when we first visited them in Europe in 2012. While Rick took photographs of sculptures in their private collection, I recorded more than a dozen hours of oral history with Anna regarding her husband's life and work.

In 2013, Rick and I traveled to Moscow to meet with Anna and photograph 24 sculptures at the Samotsvety, the State Gems Museum, which is the only other place in the world where Konovalenko gem carvings are on public display. Galina Gubanova, an independent scholar from St. Petersburg, shared an unpublished manuscript and her knowledge of Konovalenko's early career during an interview. Her research has been critical to our efforts because she discovered detailed biographical information, including a curriculum vitae handwritten by Konovalenko from the archives at the Mariinsky Theatre in St. Petersburg. The Konovalenko papers at the Mariinsky contain previously unpublished critical details about his early life and career. This trip was also the first time we met Dr. Muntian at the Kremlin Museum, and she shared her insights about Konovalenko's oeuvre from an unpublished manuscript.

All of these individuals—as well as a group of generous donors—have been our partners in the exciting project. The result is not only *A Stone Lives On* but also a volume now in the hands of University of Colorado Press that includes photos, descriptions, and analysis of more than 70 Konovalenko pieces from around the world. The carvings are notable for how they project compelling personalities,

set dynamic scenes, and capture snapshots in time. The artist's own life story is a slice of history since he was born in Russia in 1929 and lived there during volatile times, motivating him to eventually emigrate to the United States. Despite Vasily's compelling biography and his remarkable talent for making silent stones speak, remarkably no substantive English-language treatment of Konovalenko's life and work has ever been published. Until now.

So when Anna Konovalenko, her son-in-law Alan and his daughter Amilia, Anna's brother Naum Nikolayevsky and his wife, Elena, and Dr. Muntian came to Denver for a week, we celebrated! Mrs. Konovalenko and Dr. Muntian shared their insights, expertise, and perspectives on the sculptures with hundreds of Museum guests during multiple tours and evening programs, at lunch with President and CEO George Sparks, at a Trustees reception, and at the Museum After Dark gala. The Konovalenko family is now preparing for the first major exhibition of Vasily's work at the Oceanographic Museum in Monaco in summer 2015, another opportunity to widely share these special works of art that have delighted Denver for 30 years.

FIND IT @ DMNS.ORG

Dr. Steve Nash is chair and curator of archaeology in the Anthropology Department. Find out more about him @ www.dmns.org/nashlab.

A Stone Lives On: Vasily Konovalenko's Gem Carving Sculptures at the Denver Museum of Nature & Science is available for download or purchase @ www.dmns.org/science/museum-publications. The Konovalenko gem carvings are on display on Level 3 of the Museum.

Facing page: For *Prisoners*, sculptor Vasily Konovalenko used zebra jasper to create the distinctive uniforms. Below: Anna Konovalenko examines *Prisoners* during her visit to the Museum last November.



PAWNEE LIGHTNING ARROWS

By Roger Echo-Hawk and Chip Colwell, PhD

More than a century ago, a traditional Pawnee priest in Oklahoma sat down with an anthropologist to record his people's traditional histories. Roaming Scout, a leading priest of the Skidi Band, spoke about the creation of his people. In the beginning time, the celestial deities bestow upon the first man certain gifts—an assortment of items that include a bow and arrow. In this narrative, the first man acquired these items at a location “where Lightning had struck upon the mountains.” There he “found flint-stones with bows and arrows ... so that he now made bow and arrows.”





The Museum’s collections include a Pawnee bow, quiver, and 17 arrows. Fifteen of the arrows are metal, one is flint, and one is obsidian (volcanic glass). These items entered the collections as a gift in 1968 as part of the 12,000-piece donation from Mary and Frances Crane. But they were first collected nearly a century before that.

In the late 1860s, George A. Cuneo began a collection of Native American artifacts. Cuneo was an Italian immigrant and a faithful Catholic who first worked in Georgetown, Colorado, as a bartender. He moved for a time to Deadwood, South Dakota, where his interest in Native American culture was perhaps spurred on by the various Plains tribes that lived around that infamous frontier town. He might have also been encouraged through his passing friendships with Chief Red Cloud and Buffalo Bill Cody.

Cuneo moved to Denver by 1880, where he would live the rest of his days, working as a railroad fireman, real estate man, and then successful wholesaler and retailer of liquor. Through his life he continued his hobby of collecting “Indian trophies,” with a particular interest in weapons of war. At some point he picked up the Pawnee bow, quiver, and arrows. Cuneo evidently had been told something curious about the arrows. His brief surviving note mentioned that they came “with a history.” But since no history has survived in the records, we are left to uncover what history he might have heard.

It is possible that Cuneo was told about the significance of two of the arrows—the flint and obsidian points. One word for flint in the Skidi dialect is *tahuuru’*. This term is applied to three classes of objects: meteorites, flint projectile points, and flint fire-strikers. In addition, in Pawnee culture flint is symbolically linked with lightning, a sensible connection given that flint is made into arrow points, which fly as swiftly and as deadly as lightning. Fascinatingly, the association of the celestial, arrows, and fire is recognized by other groups, such as the Apache.

An oral tradition published in 1889 records that Pawnees did not have metal arrow points until after the arrival of Europeans. “They say that, so long as the Pawnees used flint for making arrow heads, they used to find plenty of these stones lying on the prairie,” a Pawnee elder said, “but that when the whites brought them iron, *Ti-ra-wa* [a divine power] said to himself, ‘The Pawnees no longer need these flint stones; I will make no more of them.’”

However, even after flint points were no longer used for everyday hunting, they retained their magic power. They were still used to hunt bison and deer in a ceremony to sacrifice them. They were still used in holy bundles, included with items such as bird skins, tobacco, and sweet grass.

The obsidian point is a side-notched type common on the Great Plains between 1,000 and 600 years ago. A study of the obsidian point’s chemical composition, however, suggests that the point originally came from New Mexico. Pawnee origin stories refer to the American Southwest as an origin point for an ancient population that helped give rise to the later Pawnees. In Pawnee tradition, the ancient southwest homeland lay beyond two mountain ranges, and in the Skidi creation story the first use of flint-tipped arrows is associated with mountains.

One scenario is that both points could indeed have been made, used, and abandoned on the Great Plains long ago. A Pawnee could then have found the points and picked them up for reuse. Another scenario is that both points were made by ancestors of the Pawnees who handed them down through many generations to the Pawnee who conveyed them to Cuneo in 1869. In either case, both theories are compatible with Pawnee tradition about ancient times.

By 1869 iron projectile points had become common in Pawneeland, and it is likely that the observations of later ethnographers about the significance of stone arrow points applied to both the flint and obsidian points. Whether found and reused or handed down as heirlooms over the centuries, these arrows were no doubt kept for special, sacred uses.

FIND IT @ DMNS.ORG

Dr. Chip Colwell is curator of anthropology in the Department of Anthropology. Roger Echo-Hawk is a citizen of the Pawnee Nation and a student of traditional literature worldwide. Find out more about the Museum’s anthropology research @ www.dmns.org/science/research/anthropology.

Facing page: Detail of the obsidian (left) and flint Pawnee lightning arrows. Above: Roger Echo-Hawk (left) and Chip Colwell examine the arrows.



MUSEUM AFTER DARK 2014: PARTY LIKE IT'S AD 1600

Live camels! Sword swallows! Snake charmers! It was an evening our guests won't soon forget as they were transported in time and place to the Silk Road for the annual Museum After Dark gala on Friday, November 21. More than 650 revelers raised \$850,000 to support the Museum's educational programs, which seek to inspire young minds to think, learn, and grow through science.

Event chairs Lee and Susan McIntire (pictured right) hosted an evening of exotic entertainment and cuisine that not only celebrated history's most remarkable trade route but also another memorable year at the Museum, particularly with the opening of the new Morgridge Family Exploration Center and Rocky Mountain Science Collections Center. The party went well into the wee hours as the Young Professionals Committee hosted 300 people at the annual After Dark Soiree.

The Museum sincerely thanks the major sponsors for Museum After Dark 2014—CH2M HILL, Henry and Lorie Gordon, and M. Ray Thomasson and Merrill Shields, and Soiree sponsor Newmont Mining—as well as all our guests who helped make the event a success. We look forward to seeing you this year on Friday, November 13!

CORPORATE MEMBERSHIP INCREASES THE MUSEUM'S REACH

Our corporate members receive many special perks that reward their employees with exclusive opportunities to enjoy the Museum while helping to further the Museum's mission in our community. Various levels are available with benefits commensurate to the level of support:

- Tickets to the Museum, IMAX Theater, and Planetarium
- Discount on tickets to temporary exhibitions
- 20% discount on individual memberships for employees
- Annual recognition in the *Denver Business Journal* and *Catalyst* magazine
- Website recognition
- Corporate Members Days with VIP opportunities
- Discount on one-time private use of the Museum with access to the in-house events staff and executive chef
- Behind-the-scenes tours
- Special volunteer opportunities

"Corporate membership is a great way for EON Office to support our community and give our employees special benefits that they really enjoy," says Elena Sirpolaidis, president and CEO of EON Office. "Corporate Member Days are especially popular; the Museum offers VIP hospitality, and our tickets always go fast. Corporate membership is a good investment, and EON Office is proud to partner with the Museum year after year."

The Museum is grateful for the support of our corporate partners. We invite you to join us too. Find out more @ www.dmns.org/give/corporate-giving or contact the corporate relations team @ corporate@dmns.org or 303.370.6324.

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For information about corporate partnerships and memberships, please contact Megan Fisher, director of corporate relations, at 303.370.8259 or megan.fisher@dmns.org.



a map. Other days I work with teams of volunteers to catalog fossils, research the latest technology for collecting field data, and pull specimens for visiting researchers. I enjoy collaborating with colleagues in the Museum and other scientists to help further scientific discovery.

Snowmastodon was the biggest research project in Museum history, and you were right in the middle of it.

Yes, I worked for the duration of the dig, living in Snowmass Village for over nine weeks between fall 2010 and spring 2011. I managed the data and ensured that we recorded the location of every single bone that came out of the site. I also created maps that we used to monitor our progress and discuss next steps. I have never worked so hard in my life, spending all day digging and then nights entering data and ensuring the bones were safely transported. (Lucking is pictured left holding the jaw of an Ice Age deer.)

What are some of the other cool things you get to do in your job?

My favorite thing about paleontology is going into the field to collect fossils. We camp in beautifully remote places and spend the day hiking and looking for spectacular fossils. Then we get to use power tools, like rock saws and jack hammers, to get the fossils out of the ground. It is also a unique chance to really get to know my coworkers and Museum volunteers. Nothing beats sitting around the campfire after a hard day laughing with everyone.

What advice would you offer girls and women today as they pursue their interest in science?

My advice is to find ways to do what you enjoy. Taking advantage of volunteer and internship opportunities is key not only for building connections but for helping you figure out what you want to do. I started at the Museum over 10 years ago as an intern in the Anthropology Department. I realized I actually didn't want to be an anthropologist! But I met people in Earth Sciences, and I have now been employed full-time in that department for five years.

What's been the highlight of your career so far?

Being pictured in *National Geographic* magazine sawing a baby hadrosaur fossil out of a rock as part of the Laramidia Project. It made me realize how lucky I am to work in such a unique job, and *National Geographic* reaches over 30 million people worldwide—hopefully someone will see that picture and be inspired by it!

GIRLS AND SCIENCE

The girls of today are the scientists of tomorrow is the emphasis of Girls and Science, a daylong event at the Museum on Saturday, February 7. Carol Lucking visited the Museum as a girl, and today is assistant collections manager in the Earth Sciences Department. Lucking majored in history and anthropology with a minor in geology at DePauw University and earned her master's degree in environmental history at Colorado State University. Last fall, she was among the authors of the Snowmastodon Project Science Volume in the international journal *Quaternary Research*. But she was drawn to science long before then ...

When did you first become interested in science?

I wanted to be a paleontologist when I was in first grade. I was fascinated by dinosaurs and learned to spell all of the names. My favorite dinosaur was *Ankylosaurus*. I still remember one of my first jobs at the Museum was working with ankylosaurs. The first grader in me was so excited!

Who encouraged you to pursue your interest?

My parents have always supported my sister and me in our interests. Whether we wanted to be paleontologists, professional book readers, archaeologists, fort builders, Lincoln log engineers, or historians, they encouraged us to pursue our passions and gave us the tools to do so, including books and the confidence that we could do anything.

What ultimately attracted you to science as a career?

I like the wide variety of skills necessary to do my job. Every day is different. Some days I give tours to visitors, clean up data in spreadsheets, and dust off my high school trigonometry to create

FIND IT @ DMNS.ORG

Be inspired by women in science! The Girls and Science event on February 7 will feature a variety of Science Clubhouses, where girls will meet women scientists and experience many diverse opportunities a future in science, technology, engineering, art, and math can bring. The event is free with Museum admission, and ages 18 and under will receive 50% off admission. Find out more @ www.dmns.org/girlsandscience.

Girls and Science is copresented by the Museum and CBS4. MWH Global is the presenting sponsor, with additional sponsorship support from Encana and SparkFun.





MEMBERS APPRECIATION DAY SUNDAY, FEBRUARY 22

Enjoy these special discounts just for you!

- 20% off in all Museum Shops*
- 20% off in the T-Rex Cafe and Deli
- 10% off gift memberships
- 50% off IMAX and Planetarium tickets
- Loyalty Lounge for our 10+ year members

*Extra 10% discount does not apply to DVDs, CDs, and books. Special offers are valid in person only on February 22, 2015, and are not redeemable over the phone or online.

GET THE MOST FROM YOUR MEMBERSHIP

- Visit anytime for free 364 days a year!
- Read the monthly Members eNews with members-only news, tips, and special offers. By sharing your e-mail address, you can also take advantage of advance registration for popular programs such as Summer Day Camps and receive other insider updates. Not getting the eNews or advance notifications? Send your e-mail address to members@dmns.org.
- Go electronic and keep your membership card on your smart phone by downloading the free eCard app from your device's app store. Find out how @ www.dmns.org/membcard.
- Keep your membership current with Auto-Renew, an easy automatic renewal process. Enroll in Auto-Renew @ 303.370.6306 (daily, 9–5) and get a free gift.
- Add another person to your membership for just \$20. The Add-on option is great for nannies and grandparents! Add-on members must be enrolled by name in case they want to visit on their own. Not valid on Individual level memberships.
- Visit 330 science centers and museums using your free admission through the ASTC Passport Program. Free admission begins outside a 90-mile radius of Denver and your residence. Find out more @ www.astc.org/passport.

- Upgrade to the Giving Club level and gain even more access and benefits, such as free “anytime” tickets to surcharged exhibitions, free tickets to IMAX and Planetarium shows, and invitations to exclusive events, such as the popular annual Behind-the-Scenes Night.

DON'T WAIT IN LINE—PRINT AT HOME!

Save time at the Museum and use print-at-home tickets for surcharged exhibitions, IMAX and Planetarium shows, and lectures and programs. Print-at-home allows you to print your tickets as soon as you finish making your purchase online—with no handling fee! When you arrive, proceed directly to the Ticket Taker booth with your printed tickets and begin enjoying the Museum.

WE VALUE YOUR OPINION

We look forward to receiving your feedback from our 2015 members survey. Be on the lookout in February for a survey requesting your honest assessment about your membership experience with the Museum. Your input will enhance the members experience and inform the future of the membership program and benefits.

QUESTIONS?

- 303.370.6306 (daily, 9–5)
- members@dmns.org
- www.dmns.org/members
- Stop by the Members Express Lane at the Ticketing Desk

THANK YOU FOR YOUR SUPPORT! Your membership helps us provide outstanding science education programs, exhibitions, and research.



MEMBERS-ONLY

MYTHIC CREATURES: DRAGONS, UNICORNS, AND MERMAIDS

Come face-to-face with dragons, Bigfoot, Loch Ness Monster, unicorns, and mermaids! For centuries these legendary creatures have captured imaginations and inspired stories, music, art, and many theories about their origins and existence. Now you and your family can explore these wondrous creatures and uncover the truths behind the myths.

Members-Only Preview Day and Evening

Thursday, March 19
9 a.m.–9 p.m.

Members-Only After-Hours Event

Thursday, April 2
6–9 p.m.
Optional pre-purchased dinner available.

Members-Only After-Hours Event (21+)

Enjoy food, drinks, and the exhibition.
Friday, April 24
6–9 p.m.

Reservations for these events open on Monday, February 23.

Admission to Mythic Creatures is free for members, however, RESERVATIONS ARE REQUIRED FOR ALL EVENTS, and charges apply for meals. Find out more @ dmns.org/memberevents or call 303.370.6000 (daily, 9–5).

MYTHIC CREATURES

Dragons, Unicorns & Mermaids