

CATALYST

DENVER MUSEUM OF NATURE & SCIENCE MAGAZINE

AUTUMN 2018



INSIDE ///

¡CUBA!

MINDBENDER MANSION

OCEANS: OUR BLUE PLANET 3D



OPEN

the



DOOR

PUZZLES

GALORE.



Mindbender
 **Mansion**

Exhibition Now Open
FREE for Members

DMNS.ORG/MINDBENDER

A wacky, puzzling world where brains come to play.

DEAR MEMBERS:

How fortunate we are at the Museum that so many individuals and groups throughout the community have given their time to provide unique perspectives and insights about a variety of issues over the years. Recently, it has been especially exciting to connect around our temporary exhibitions. For example, there was strong interest in *Vikings* last year among local Scandinavian groups, and through this community passion we made many new friends who helped us spread the word about the exhibition and plan some related events.

For *Dead Sea Scrolls*, leaders from various faith and academic communities in the Denver area were a tremendous help as we prepared for the exhibition. They brought important additional perspectives to the content and again helped us reach out, including to people who may be new to the Museum. The response to the exhibition was phenomenal as hundreds of thousands of guests from Colorado and across the region enjoyed a once-in-a-lifetime opportunity to see these world heritage artifacts.

As we prepared for *iCUBA!*, we welcomed the insights of a group of Cuban Americans in Denver who enriched our perspectives on this complex island nation. They also helped us develop a special enhancement for the exhibition: profiles of local Cuban Americans featuring mementos that help tell their personal stories. We look forward to welcoming everyone to this dynamic exhibition when it opens in October.

The Museum was established by a group of Colorado citizens for public enjoyment and enlightenment, and we remain committed to serving our community. These days, we are particularly devoted to connecting with more and diverse people around nature and science in ways that are meaningful to them in today's world, and we can't do it alone. Thank you to all of our community partners, including our members, whose support enriches Museum experiences for everyone, everywhere.



George Sparks
President and CEO
president@dmns.org



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FIND IT @ DMNS.ORG

- Print-at-home tickets for surcharged exhibitions, Planetarium and IMAX shows, lectures, and programs
- Reservations for members events
- Museum scientists
- Heavens Above sky information
- Membership renewals and purchases

Join Our Community:



Photo by Mark Wicker

ON THE COVER

From the zoology collections
Painted snails (*Polymita picta*)
ZC.29125 and ZC.15926

These air-breathing land snails are endemic to the island nation of Cuba and appear as if they were hand-painted in beautiful colors.

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From the far reaches of space to the depths of Earth's core, with countless wonders in between, the Museum's educational programs take 21st-century learners on adventures that inspire them to think, learn, and grow through science!

Teachers choose from a wide variety of offerings:

- Offsite: At Your Place includes six brand-new experiences that transform classrooms to a wonderland of discovery through guided or unguided activity boxes loaded with all the tools needed to fuel students' passion and curiosity for nature and science.
- Onsite: At the Museum offerings include flexible self-guided field trips, Field Trip Adventures facilitated programs, and Overnight Experiences.
- Virtual Experiences connect classrooms with the Museum, for fun interactive science workshops and broadcasts from the field with scientists.

The new online booking tool makes reserving school programs easier than ever. Remember, school and organized youth groups receive **free** admission to the Museum every day, and scholarships are available for many fee-based programs. Make the Museum part of your child's back-to-school experience! Learn more at dmns.org/teachers.

Educators! Please come see what the Museum and other organizations in the Scientific & Cultural Facilities District have to offer you and your students during SCFD Educators Night on Monday, September 24. Take in surprising sights and sounds, grab a snack and a cocktail, preview IMAX and Planetarium shows, and connect with your colleagues. Reservations required at dmns.org/educatorsnight.





VR ARCADE NOW OPEN

Come on in, jump on board, and have some fun in VR Arcade, a “pop-up” experience that uses virtual reality (VR) technology to let you explore wherever your curiosity leads. The entrance is located in the passageway to *Space Odyssey* on Level 1.

VR Arcade features six bays for individual VR experiences and a four-person Virtual Reality Transporter ride. There are a variety of games and levels to choose from. It will be open daily from 10 a.m. to 5 p.m. for the next several months. A special ticket is required and may be purchased onsite only.

Please note that games in the bays are for ages 10 and up. Guests must be able to wear a tethered headset and need to have good balance. For the transporter, riders must be at least 42 inches tall. Other health-related considerations are posted in the arcade.

Find out more at dmns.org/vrarcade.

GET A KICK-START ON YOUR HOLIDAY SHOPPING!

With great appreciation for your membership support, enjoy special rewards during the annual Members Holiday Shop Sale and Appreciation Weekend, Friday–Sunday, November 2–4.

- 25% off select items in the main Museum Shop*
- 10% off gift memberships
- 20% off in T-Rex Cafe
- 50% off IMAX and Planetarium tickets

*Extra 15% discount does not apply to books or *Mindbender Mansion* and *iCUBA!* shops. Special rewards are valid only in person in the Museum on November 2–4, 2018.



COMING SOON TO IMAX

Take a global odyssey to explore the largest, most mysterious habitat on Earth when *Oceans: Our Blue Planet 3D* opens in Phipps IMAX Theater on Friday, September 7. New science and technology have led to more discoveries in the past 10 years than the last 100, revealing a richer diversity in the ocean than ever imagined. Leaping dolphins greet you as dive into the blue and meet sea otters feeding on purple urchins, an ingenious tusk fish living in a coral reef, and a cunning octopus that uses an armory of shells to hide from predators. These extraordinary encounters will connect you to our water worlds as never before.

On Friday, October 26, *Cuba 2D* will open as the perfect complement to the new *iCUBA!* exhibition. Cuba’s vibrant culture, distinctive colonial architecture, and unspoiled ecosystems all provide a vivid window into the past.

Also, your Hollywood Favorites will continue to be presented three nights a week in the IMAX Theater. For tickets and showtimes, visit dmns.org/imax.

FEATURED EXHIBITION



iCUBA!

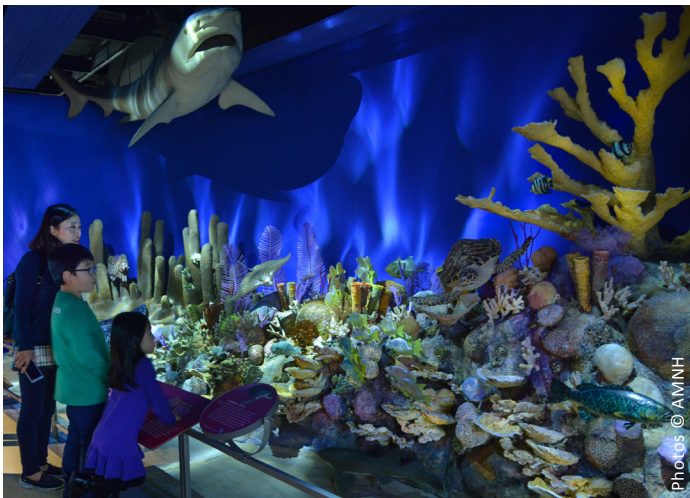
SOAK UP THE ISLAND'S SIGHTS, SOUNDS, AND VITALITY

EXHIBITION OPEN OCT 26-JAN 20

Take a trip to the Caribbean's largest island nation without a plane ticket! *iCUBA!*, opening at the Museum on Friday, October 26, is a lively exhibition for all ages that will immerse you in the extraordinary biodiversity, cultural traditions, and daily life of this intriguing country. It is presented in English and Spanish, and admission is free for members.

Cuba is a place of stunning contrasts: mysterious caves and bright avenues, sweltering fields and cool forests, hard challenges and high energy. The nation is actually an archipelago of more than 4,000 islands and keys, and home to 11 million people. Cuba is also one of the region's most ecologically diverse countries, with the Caribbean's healthiest coral reefs, most significant wetlands, and largest rainforest.

The exhibition was organized by the American Museum of Natural History in New York. The main feature is a "plaza" evoking city life and lined with displays and activities. Tabletops along the streetscape encourage guests to try activities related to Cuban dominoes, Cuban foods and coffee, music you might find on a local radio station, and the nation's obsession with baseball and its 16 teams. A 1955 Chevrolet Bel Air on display reveals the story behind the vintage cars that famously rumble down Cuban streets.



Top: A re-creation of the Gardens of the Queen coral reef has models of a hawksbill turtle, tiger shark, and spotted eagle ray. Bottom left: A display featuring a 1955 Chevrolet Bel Air reveals the reason vintage cars famously rumble down Cuban streets. Bottom right: Walk through any Cuban city in the evening, and you'll likely see people outside enjoying games of dominoes. Try it out for yourself!

There are also beautiful re-creations of the island's habitats, with lifelike models representing its distinctive wildlife, both modern and extinct. About 50 percent of its plants and 32 percent of its vertebrate animals are endemic, found only on the island. Highlights include the Zapata wetlands, home to the endangered Cuban crocodile, and a reconstructed cave environment.

The Cuban community in Denver provided additional insights and helped with enhancements, including musical performances and exhibits with profiles and personal mementos of local Cuban Americans.

Other highlights:

- A tobacco shed exhibit telling the story of the legendary Cuban cigar, one of the country's leading exports, with around 100 million handcrafted and shipped around the world each year.
- Altars exploring an Afro-Cuban religious faith, often called Regla de Ocha or Santería, in which practitioners sometimes create elaborate altars or "thrones" for deities known as *orishas*.
- A stunning carnival costume on stilts from one of the country's most elaborate festivals, the Carnival of Santiago de Cuba, which occurs every summer.
- A bicitaxi—part bicycle, part taxi—that has become an entrepreneurial enterprise in Cuba, providing a primary form of transportation for locals and tourists.
- An interactive art "gallery," where guests can view paintings, sculptures, or performance art by Cuban artists projected on the walls.
- Vintage memorabilia from Cuba's past.
- An exploration station with artifacts exploring a day in the life of some of Cuba's indigenous people.

DISCOVER MORE

Members Preview Day for *iCUBA!* is Thursday, October 25. See the back cover for details on all members events. Please note that reservations are required.

iCUBA! will be open daily until Monday, January 20, except on December 25. Visit dmns.org/cuba.

The dazzling new film *Cuba 2D* opens in Phipps IMAX Theater on Friday, October 26. It is the perfect complement to the exhibition. IMAX tickets and schedule are available at dmns.org/imax.

iCUBA! is organized by the American Museum of Natural History, New York (amnh.org), in collaboration with the Cuban National Museum of Natural History.



TEEN SCHOLARS EXPERIENCE A SUMMER OF SCIENCE

BY YUSURA ALI

From a very young age I was curious about the world around me. I wanted to learn how things worked, and about the sun and other planets, how plants grew, and the behavior of animals. I wanted to know everything there is to know about the world. I would sometimes spend time on my own searching for the answers to the questions that buzzed in my ears. I was afraid to show my interests to the people around me. I was already being bullied for looking different, and I didn't want to add the pressure of also enjoying something different.

The summer before sixth grade I moved to Montbello and started attending Noel Community Arts School. I later joined the film program. Although the school is made up of minorities, seeing a Muslim is still unusual. So I thought if other students were able to change how some people perceived them by using the arts, I would do the same.

As I was falling in love with making videos, I also started to become very interested in my science classes. I enjoyed earth science and chemistry, and I would go home and do more research than necessary on the class assignments. I not only loved to learn about scientific theories, but I also enjoyed teaching them to my classmates.

As my sophomore year drew to a close, I was frequently asked, "What do you want to do after high school?" I never knew how to answer this question. I wanted to explore my mixture of interests and find something that challenged yet excited me. Sometimes something can sound really appealing and exciting, but once you are actually doing it, it isn't at all what you expected.

After searching page after page on Google for a program that would give me a chance to explore a career in the sciences, I stumbled across the Teen Science Scholars program, offering internships for rising juniors and seniors in a field of interest at the Museum.

After reading more about it and watching videos about past Teen Science Scholars, my heart leapt with joy. The application required answering multiple essay questions about topics such as my favorite scientific theory and if I could change one thing in the world what would it be and why. After being interviewed, I was accepted into the program. I was surprised, but, of course, very excited.



As a Teen Science Scholar, I met other teens who are smart and incredible human beings. In popular culture, some aspects of science aren't really appreciated or accepted. I was honestly shocked by how educated the other interns were about the world around them and their willingness to positively contribute to the world. This program is a great way to put our passion and knowledge into use. I have also met some amazing adults at the Museum, who have created an environment for the teens to express themselves.

I interned in the Zoology Department. I chose zoology because I have almost always dreamed about working with animals and learning about their behavior and relationship to the world we humans have produced. I helped with organizing the birds in the collections and saw so many unique and beautiful birds up close. I also helped out a bit with pinning insects and taking tissue samples from prairie dogs. I learned how to work in a team and how to take my time when I am doing my work so I can produce the best result.

The program also taught us valuable information about how to go on from here. Each week the interns would eat together and work on team-building skills. I learned to get out of my comfort zone and work more on my communication skills. We were also taught other life skills, such as budgeting, that we probably won't be taught at school.

The program allowed me to dig a little deeper into my interests and definitely inspired me to seriously think about going into the sciences in the future. I have realized there are different ways to be involved in the sciences. My interests in film-making and science can be combined, such as making a documentary on a scientific theory or creating a piece of art that symbolizes a scientific fact, idea, or theory. This program has allowed me to see that I don't have to choose one over the other, but I can do both. It has opened doors not only for myself but the other interns, and I think we're all looking forward to seeing where this takes us from here.

DISCOVER MORE

Thank you to Yusura Ali for writing this article. She is pictured in the photo on the facing page working with Faith Herrera (left) in the zoology collections.

All photos for this article were taken by teen scholar Anavelle Hernandez. Pictured on this page are scholars at work in the genetics lab, in the field for ornithology, in the paleobotany collections, and at the Magic Mountain site.

Best wishes for the coming school year to the 2018 summer scholars: in addition to Yusura, Faith, and Anavelle, Malcolm Bamba, Ayanah Gutierrez, Isata Kanu, Renat Mohamed, Hanan Mohammed, Olivia Robinson, Jennifer Sitompul, Sophia Tribelhorn, Yessica Villagrana, Cheyenne Calzada, Andy Dena-Bustos, Noha Eljalafi, Jairo Fontes, Alan Garcia-Duarte, Maya Lara, Lyndsy Wilson, Brynn Wooten, Samantha Buyungo, Isabella Marx, Kevin Seijas, Isaira Urias-Martinez, Jasminemarie Quiosay-Mack, Lacina Sangare, Cullynn Shaw, Mikayla Grijalba, Israel Salas Reyes, Aja Hammond, Tammy Zhang, Elliott Perez-Schmitt, and Shelby Trotter.

The scholars share more about their experiences at dmns.org/TSS2018. Applications for 2019 will open early next year. Thank you to the generous donors who make this program possible.

GUT PARKAS

BY JUDE SOUTHWARD AND JESSICA FLETCHER

Thanks to a grant from the Institute of Museum and Library Services (IMLS), three parkas from the anthropology collections received an unusual treatment to preserve them.

These aren't just any parkas—these are constructed from marine mammal intestine, most likely seal or walrus. The intestine is cleaned thoroughly and stretched to dry. It is split lengthwise to produce strips that are tightly sewn together. These parkas are lightweight, strong, and waterproof. They are often embellished with other materials, such as feathers, fur, and yarn. The parkas were used during fishing, hunting, and gathering activities or during ceremonies.

The first parka we treated is pictured (A2021.1). It is attributed to the Yup'ik people of southwestern Alaska, acquired in Hooper Bay. The parka dates to circa 1900 and entered the Museum collections in 1974 in poor condition. It was brittle and twisted. We mapped out a plan to expose the parka to a controlled source of moisture so it could be gradually unfolded, padded for shaping and support, and examined for condition and further treatment.

A tent was constructed of plumbing pipe covered in polyethylene plastic with a clear window incorporated to keep an eye on the process. A monitor to record temperature and relative humidity was also placed in the tent. During the work day, the parka was humidified in 70 to 80 percent relative humidity using a home humidifier. The parka was periodically pulled out of the tent for a few minutes to reshape it before it began to stiffen again. As it was gradually unfolded, the parka was reshaped and padded using delicate polyester fabrics that had been laundered to soften their texture. The intricate stitching in sinew and fibrous grass was revealed. Once the parka regained its shape, various large tears were visible and were repaired using a material made from ox intestine that is colorless and strong.

The treatment plan was successful and applied to the other two parkas. These beautiful objects are held in perpetuity in the Avenir Collections Center for preservation and study.

DISCOVER MORE

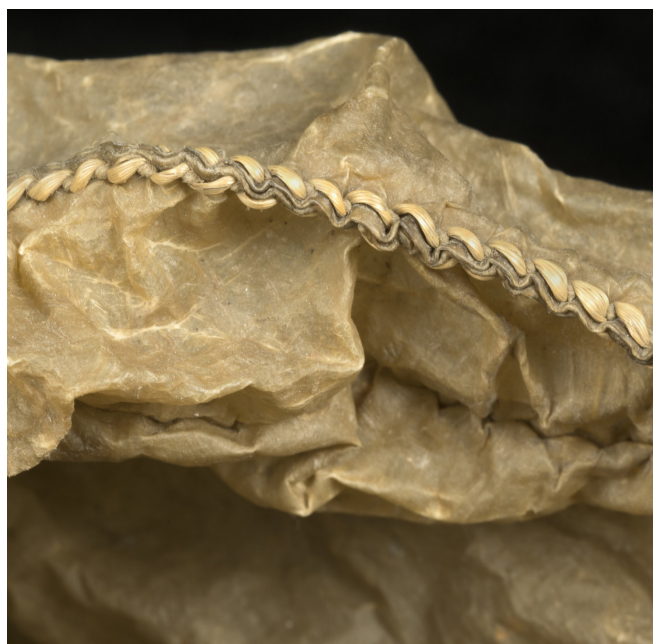
Jude Southward is lead conservator in the Avenir Conservation Center, and Jessica Fletcher is a contract conservator. Find out more about Museum conservation at dmns.org/anthropology.

This project was made possible by a Museum for America grant from the Institute of Museum and Library Services (MA-30-16-0288-16).

Clockwise from upper left: The parka before treatment; the parka after being humidified and reshaped; Jude Southward (right) and Jessica Fletcher reach into the humidified tent to check on progress; detail shot of the beautifully crafted stitching on the parka.



Photos by Rick Wicker





WE GOT OUR GLOW ON!

More than 800 guests sparkled at Museum After Dark: GLOW in June, raising \$580,000 to support incredible opportunities for students—from early learners to high schoolers—to participate in science. Presented by The Burkett Family Foundation, the annual gala's new strolling party format was a hit as guests discovered new sights, sounds, scents, and tastes around every corner.

The evening delved into the world of living things that blink, glow, flash, flicker, sparkle, and shine, featuring the temporary exhibition *Creatures of Light*, beautiful specimens from the Museum collections, and cool science demonstrations. In true Museum style, guests enjoyed a huge variety of drinks and dishes that opened minds, and appetites, to the science behind the food. The culinary team created an amazing menu using curation and fermentation, sous vide, molecular gastronomy, and liquid nitrogen.

The evening was capped by the After Dark Soiree, with an additional 500 guests hosted by the Young Professionals Committee.

The Museum sincerely thanks The Burkett Family Foundation, as well as event co-chairs Matthew and Priya Burkett and John and Katie Levisay. We also appreciate the efforts and support of the YP Committee and all of the evening's many volunteers, sponsors, auction donors, and guests who are helping to bring science to life for children of all ages. We look forward to hosting you for another spectacular evening at Museum After Dark on June 14, 2019.

Pictured below from left: Co-chairs John and Katie Levisay and Priya and Matthew Burkett.



LEGACY SUPPORTERS LOOK TO THE FUTURE

The Museum was delighted to honor the Edwin Carter Legacy Society during an annual spring luncheon. Legacy Society members and their friends enjoyed a presentation by Museum educators Robert Payo and Jennifer Moss Logan, who shared a behind-the-scenes look at what it takes to bring a major exhibition like Dead Sea Scrolls to the Colorado community.

The Legacy Society was established to recognize donors who believe in supporting the Museum through a planned gift. The group's namesake, Edwin Carter, was a dedicated naturalist who nearly single-handedly assembled one of the most complete collections of Colorado fauna in existence. His collection was the nucleus for the Museum's founding in 1900. This type of dedication—past, present, and future—allows the Museum to continue to serve our community and encourage lifelong learning and scientific discovery.

Supporters who notify us that they have named the Museum or the DMNS Foundation in their will, trust, or as a beneficiary are invited to join this exclusive group and be recognized and honored through invitations to the annual luncheon and other special events. Find out more @ dmns.planmylegacy.org, or by calling Megan Fisher, director of advancement, at 303.370.8259.

A FUN WAY TO REWARD YOUR EMPLOYEES

Imagine how happy your employees and their families will be as they spend time together experiencing wonder and discovery at the Museum! When your business becomes a Corporate Member, your employees and their families will enjoy Museum admission, events, discounts, and more. At the same time, your organization will impact the community by supporting education for the workforce of the future.

All corporate memberships include

- General admission passes and IMAX and Planetarium tickets. Discounts on personal memberships for employees and their families.
- Annual recognition in the Denver Business Journal, and on the Museum's donor wall and website.
- Opportunities to go behind the scenes at exclusive members-only evening events.
- Plus, your employees will thank you! Corporate Membership is a unique benefit you can add to your total rewards package that your employees will value and enjoy.

Corporate Memberships start at \$2,500 annually and a portion is tax-deductible. Get all the details at dmns.org/corporatemembership or email corporatemembers@dmns.org.



VOLUNTEERS MAKE A DIFFERENCE

Congratulations to Ann O'Donnell for receiving her 45-year award as a Museum volunteer! She was among more than 100 volunteers who were recognized for giving 10-plus years to the Museum. Ann is pictured above surrounded by her family at the recognition ceremony earlier this year. In 2017, more than 1,700 volunteers of all ages and backgrounds contributed 227,875 hours across the Museum. Whether volunteering in an administrative area, in an exhibit hall, in a lab, or in many other ways, these faithful people have a lasting impact on the success of the Museum. Thank you, volunteers! There's a place for everyone at the Museum. Find out more @ dmns.org/join/volunteering.

INSIGHT: PROBING THE INTERIOR OF THE RED PLANET

BY STEVEN LEE, PhD

Since the dawn of the Space Age, only Earth and its moon have been visited by more spacecraft than Mars. Since 1960, about 40 missions (with about 60 spacecraft) have been launched toward the Red Planet. About one-third succeeded, at least in part. Though the spectacular successes make it look easy, exploring Mars has proven to be one of the most difficult endeavors ever attempted by humans.

Data from these missions and extensive observations from Earth have given us a treasure trove of information about the present and past state of the Martian surface and atmosphere:

- Currently Mars is a frozen, dry, windswept desert. The thin atmosphere holds little heat, leading to temperature swings at the surface of more than 100°F. Surface conditions do not support liquid water, so it either freezes or evaporates.
- The atmospheric pressure is low, but winds are still capable of forming widespread sand drifts and dunes, frequent dust devils, and occasional global-scale dust storms.
- Mars lacks a planetary magnetic field, allowing the solar wind to slowly strip away the upper atmosphere into space.
- Mars was very different billions of years ago, when the atmosphere was thicker and warmer, liquid water flowed, and conditions may have supported simple life-forms. (Think bacteria and algae, not little green men!)

Despite all this discovery, details of the interior structure are still sketchy. How large is the core, and is it molten? What are the properties of the mantle? How thick is the crust? NASA's latest mission, InSight (Interior Exploration Using Seismic Investigations, Geodesy, and Heat Transport), is designed to fill gaps in our knowledge through three primary experiments.

- SEIS (Seismic Experiment for Interior Structure) features an ultrasensitive seismometer deployed from the lander onto the surface using a robotic arm. The prelaunch testing of SEIS was held in Denver, and it detected the signature of ocean waves crashing along the California coast! Detailed analysis of ground vibrations, caused by "Marsquakes," meteoroid impacts, and even storms, will reveal much about the internal structure.

- HP3 (Heat Flow and Physical Properties Probe) is an array of temperature sensors that will use a self-hammering mechanism to burrow 10 to 16 feet beneath the surface. These observations will measure how the surface materials conduct heat and how much heat is flowing toward the surface from the interior of the planet.

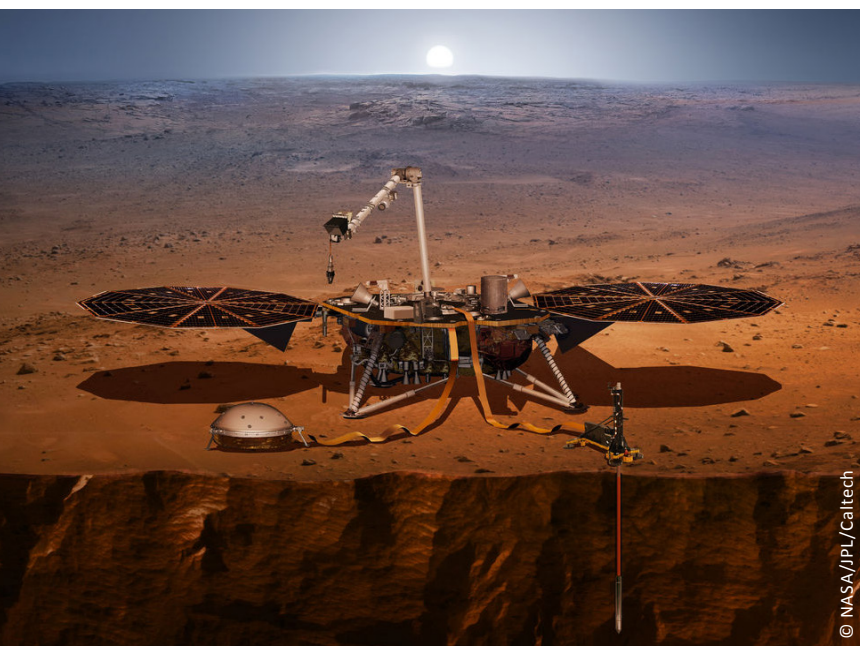
- RISE (Rotation and Interior Structure Experiment) uses InSight's radio connection with Earth to provide information about the Martian core through precise tracking of the location of the spacecraft on the surface as the planet rotates.

The InSight spacecraft was designed, built, and tested right in our own backyard, by Lockheed Martin Space Systems in Littleton. InSight was successfully launched last May 5 aboard an Atlas 5 launch vehicle, provided by United Launch Alliance, based in Centennial, Colorado. The spacecraft is currently on target for a noon landing on November 26. InSight is scheduled for a two-year mission, adding to the ongoing story of a place that continues to capture imaginations and inspire space explorers of today, and tomorrow. Go, InSight!

DISCOVER MORE

Dr. Steve Lee is a space scientist at the Museum. He is also a senior research scientist at the Space Science Institute in Boulder, and a co-investigator on two camera systems orbiting Mars aboard the Mars Reconnaissance Orbiter.

The InSight landing will be broadcast at the Museum live via NASA TV. Dr. Lee and other local experts will set the stage and be your guides through the "7 Minutes of Terror," as InSight enters the Martian atmosphere, descends, and lands on the surface. Find out more on p. 7 of the insert or at dmns.org.



GET THE MOST FROM YOUR MEMBERSHIP

- Visit anytime for free 364 days a year!
- Make sure your eCard is up to date with our latest version, 3.2.2, or download your free eCard if you haven't yet. Please note this app is no longer available for phones using the Windows operating system. Find out more at dmns.org/ecard.
- Read the monthly eNews with members-only news, tips, and special offers. Not receiving eNews or advance notifications? Send your email address to members@dmns.org.
- Keep your membership current with Auto-Renew. Enroll @ 303.370.6306 (daily, 9–5) and get a free gift. Your expiration date is printed on the mail label on the back of this magazine.
- Add another adult to your membership for just \$50. This is a great option for nannies and grandparents, and the add-on member enjoys many benefits! Not valid on Individual level memberships.
- Visit 360 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 @ astc.org/passport.
- Upgrade to the Family Plus level or higher and enjoy additional benefits as well as free admission at the Fort Collins Museum of Discovery.

SCIENCE ON TAP: COME ON GET HAPPY!

Thursday, October 11

Improper City

3201 Walnut St., Suite 101

5:30–8 p.m. (Dr. Garneau at 6:30 p.m.)

Happiness feels elusive to many people, and it is notoriously hard to define. Yet at the intersection of happiness is neuroscience and human connection, and habits that lead us to a more happy, healthy, and fulfilling life.

Our very own Dr. Nicole Garneau—a ColoradoBiz 2018 Top 5 Young Professional—will share the neuroscience of happiness during this popular annual event for Young Professionals. Improper City, a new beer garden and food truck park in RiNo, and Wibby Brewing have collaborated with us to create a fun and educational evening.

Tickets include two drinks, a tasting flight, and a dessert at this 21+ only event. Several food trucks will be onsite and offer discounts on food purchases to ticket holders.

A portion of your ticket, plus \$1 from every Wibby Beer you purchase, will benefit the Museum's initiative to bring a mobile Museum to where you live, work, play, and learn! Give back, kick back, make a big impact!

The Young Professionals are metro-area leaders who support the Museum's mission to ignite a passion for nature and science in everyone. Tickets are \$35 for YP members (or use one of your free tickets), and \$40 for nonmembers at dmns.org/tap.

UPDATE YOUR PREFERENCES

We want to send you information about the events and topics that interest you most. Please scroll to the bottom of any Museum email you have received since July 1, and update your email preferences. Thank you!

FREE GIFT WITH AUTO RENEW

Enjoy the convenience of having your membership automatically renewed! With Auto Renew, you receive uninterrupted Museum access and benefits while saving time and resources. Enroll today and get a free gift: a reusable, collapsible water bottle.

It's now easier than ever to enroll in Auto Renew online at dmns.org/renew or by phone at 303.370.6306 (daily, 9–5). Your expiration date is printed on this magazine's mail label. Easy for you, good for the environment!

WE'RE HERE FOR YOU

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

THANK YOU FOR YOUR SUPPORT!

Your membership helps us provide outstanding science education programs, exhibitions, and research.

ENJOY EXCLUSIVE ACCESS! **iCUBA!** MEMBERS-ONLY EVENTS

MEMBERS-ONLY PREVIEW DAY

Thursday, October 25 • 9 a.m.–9 p.m.

See it before it opens to the public! Enjoy an extra 10% off in the T-Rex Cafe and Grab & Go until 4 p.m. this day only. Reservations and a timed ticket are required due to gallery capacity.

MEMBERS-ONLY EVENING

Tuesday, November 6 • 6–9 p.m.

Reservations and a timed ticket are required due to gallery capacity.

An optional prepurchased dinner is available for an additional charge:

\$14 adult, junior, senior member; \$9 child. See menu at dmns.org/memberevents.

Dinner reservations due by October 23.

MEMBERS-ONLY EVENING FOR 21+

Tuesday, November 13 • 6–9 p.m.

\$50 member, \$60 nonmember

In addition to an adults-only evening in the exhibition, enjoy hors d'oeuvres and a cash bar, followed by dinner. See menu at dmns.org/memberevents. Reservations due by October 30.



Required RSVP begins September 17 at dmns.org/memberevents. Space is limited!
No walk-up tickets will be available. Only iCUBA! will be open on Members Evenings;
the rest of the Museum will be closed.

DISCOVER

ADULTS | CHILDREN | FAMILIES | TEENS

AUTUMN 2018





SEPTEMBER 20: TATTOO YOU

Peep into the artistic, ritualistic, and just plain fun side of tattooing and body modification as we explore the history and different modern facets of these long-running human traditions. See body ornamentation tools from around the world from the Museum's anthropology collections.

OCTOBER 18: THE SCIENCE OF FEAR

Celebrate the spookiest time of year by delving into the primal emotion of FEAR! Can you actually smell fear? What causes goosebumps? Ask the scariest, spine-tingliest, and most cold-sweat-inducing questions about why we often find it fun to be frightened. Costumes encouraged, especially the scary ones!

NOVEMBER 15: ASTEROIDS!

Crash land into a night of fun and space-rock some asteroid science! Learn what asteroids are made of and how they have impacted Earth in the past. Find out about the OSIRIS-REx mission to the asteroid Bennu, which may contain the molecular precursors to the origin of life and Earth's oceans.

MEDIA SPONSORS

BUY TICKETS AT [DMNS.ORG/SCIENCELOUNGE](https://dmns.org/scienceLounge)
\$13 MUSEUM MEMBER, \$15 NONMEMBER

5280
MAGAZINE

Westword

AUTUMN 2018

EXHIBITIONS

Dead Sea Scrolls

Closes September 3 • Phipps Gallery • Special timed ticket required
See authentic Dead Sea Scrolls along with hundreds of historical artifacts that explore the origin of the modern world. Tickets often sell out; advance reservations strongly encouraged.

Mindbender Mansion

Now open through January 6 • Anschutz Gallery • Free for members
Enter *Mindbender Mansion*, a quirky place full of puzzles, brainteasers, and interactive challenges that put minds of all ages to the test.

¡Cuba!

Opens October 26 • Phipps Gallery • Free for members
In this lively exhibition, discover the dynamic culture, abundant biodiversity, and unexpected contrasts of the Caribbean’s largest island nation.

PHIPPS IMAX 3D THEATER • Now showing

America’s Musical Journey 3D • Closes September 6
Cuba 2D • Opens October 26
Jerusalem 3D • Closes September 6
Oceans: Our Blue Planet 3D • Opens September 7
Pandas 3D
Hollywood Favorites • Check dmns.org/imax

GATES PLANETARIUM • Now showing

Black Holes: The Other Side of Infinity
Cosmic Journey
Destination Solar System
One World, One Sky: Big Bird’s Adventure
Space Tours Live



ADMISSION Special timed ticket required for *Dead Sea Scrolls*.

	MUSEUM	IMAX	PLANETARIUM
Adult member	FREE	\$7	\$5
Senior member (65+)	FREE	\$6	\$4
Child/Junior member (3–18)	FREE	\$6	\$4


The Museum is open daily 9 a.m.–5 p.m., with extended hours at various times. Dates, times, prices, and schedules subject to change. Find more ways to discover @ dmns.org.

On the cover: Painted Cuban snails (*Polymita picta*), ZC.26689 (front) and ZC.29125 (background).

SEPTEMBER

SUN	MON	TUE	WED	THU	FRI	SAT
Discover more @ dmns.org						1
	Dead Sea Scrolls closes			Jerusalem and Musical Journey close in IMAX Stay up with the Stars, p. 10	Oceans: Our Blue Planet 3D opens in IMAX	Dissection Connections, p. 11
2	3	4	5	6	7	8
	Reading Colorado, p. 9	Indigenous Film, p. 5	SCFD Community Free Night (4–10 p.m.)  SCFD Scientific & Cultural Foundation of Denver <small>CITIZENS MAKING IT POSSIBLE</small>	Game Night, p. 5		
9	10	11	12	13	14	15
	Brave New Arctic, p. 5			Science Lounge, inside cover		Autumnal equinox
16	17	18	19	20	21	22
23						
SCFD Community Free Day  SCFD Scientific & Cultural Foundation of Denver <small>CITIZENS MAKING IT POSSIBLE</small>	Fall Educators Night		60 Minutes in Space, p. 6	Fall Photography, p. 9		I Art Science, p. 11
30	24	25	26	27	28	29

OCTOBER

SUN	MON	TUE	WED	THU	FRI	SAT
	General Arachnology, p. 9	Sun-Earth Connection, p. 6	A Light in the Void, p. 6			
	1	2	3	4	5	6
Indigenous Film Festival, p. 5				Close Encounters with Humankind, p. 6 Family Game Night, p. 11		
7	8	9	10	11	12	13
SCFD Community Free Day  SCFD Scientific & Cultural Facilities District <small>OUTREACH MAKING IT POSSIBLE</small>				Science Lounge, inside cover		Drones Kids Workshop, p. 12
14	15	16	17	18	19	20
	Geography of People, p. 9	Fossil Essentials, p. 10		<i>iCUBA!</i> members preview	<i>iCUBA!</i> exhibition and <i>Cuba 2D</i> open Family Overnight, p. 11	
21	22	23	24	25	26	27
	Ancient Flora in Graphite, p. 10	Journey of the Juncos, p. 8	60 Minutes in Space, p. 6			
28	29	30	31			

NOVEMBER

SUN	MON	TUE	WED	THU	FRI	SAT
					Members Holiday Shop Sale	
				Digital Mars, p. 6		Denver Arts Week Night at the Museums
				1	2	3
Members Holiday Shop Sale						
Junior Surgeons, p. 12	Flora and Fauna of Cuba, p. 10			Gateway to the Infinite, p. 7	A Night in Havana (Adults), p. 7	A Night in Havana (Families), p. 10
Daylight saving time ends 4	5	6	7	8	9	10
	Cuba 2D program, p. 7		Indigenous Film, p. 5 Feather Thief, p. 8	Science Lounge, inside cover		
11	12	13	14	15	16	17
	Thanksgiving Break Camp, p. 12					
				Thanksgiving, Museum open until 3 p.m.		
18	19	20	21	22	23	24
	InSight Mars Lander, p. 7		60 Minutes in Space, p. 6			
25	26	27	28	29	30	

AfterHOURS

AT THE DENVER MUSEUM OF NATURE & SCIENCE

Indigenous Film Series

The Museum is pleased to partner with the International Institute for Indigenous Resource Management and the Denver American Indian Commission to present Indigenous Film, a monthly series. Join us for a variety of films, from documentaries to feature films and youth film showcases. Then participate in a discussion with the Denver American Indian Commission and other special guests. Concessions available for purchase. In October, don't miss opening night of the annual Indigenous Film Festival with a screening and reception. More information at dmns.org/adults.

Tuesday, September 11, Wednesday, November 14 • 6:30 p.m. • Phipps Theater • free
Film Festival: Sunday, October 7 • 6 p.m. • Phipps Theater • free

Game Night at the Museum

Get your game face on! Flex your mental muscles by solving puzzles in the temporary exhibition *Mindbender Mansion*. Bring a table top game to share or enjoy hands-on activities and games. For an additional \$10, purchase time in the Museum's new pop-up experience, *VR Arcade*. Light snacks and cash bar. Ages 21+.

Thursday, September 13 • 7 p.m. • \$12 member, \$15 nonmember

Brave New Arctic

In his new book, *Brave New Arctic: The Untold Story of the Melting North*, Dr. Mark Serreze describes how puzzlement turned to astonishment as researchers came to understand that the Arctic of old was quickly disappearing. Serreze's gripping scientific adventure story blends invaluable insights from his own career with those of other pioneering scientists who ushered in an exciting new age of Arctic exploration. He describes the cutting-edge science that led to



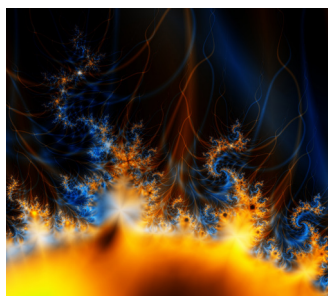
the alarming conclusion that the Arctic is rapidly thawing due to human-caused climate change, with potentially devastating implications for the entire planet. Serreze is director of the National Snow and Ice Data Center in Boulder, and a renowned Arctic geographer and climatologist who has conducted fieldwork on ice caps, glaciers, and sea ice.

Monday, September 17 • 7 p.m. • Phipps Theater • \$8 member, \$10 nonmember • book sale & signing

60 Minutes in Space

Go “behind the stories” with space scientists Dr. Steve Lee and Dr. Ka Chun Yu using the best images and animation available to help understand new developments. No reservations required. Seating is limited to first-come, first-served.

Wednesdays, September 26, October 31, November 28 • 7 p.m. • Ricketson Auditorium • free



The Sun-Earth Connection

Examine how the sun affects the conditions on our home planet with Dr. Mark Miesch, solar physicist and Museum space science department associate, and curator of space science, Dr. Ka Chun Yu. Using dynamic digitized simulations and satellite imagery, see how solar storms shape Earth's space environment and impact our technological society.

Tuesday, October 2 • 7 p.m. • Gates Planetarium • \$8 member, \$10 nonmember

A Light in the Void

Three world-renowned female scientists will bring unforgettable science stories to the Museum's stage, using a special blend of content, music, and visuals to tell a story 13.8 billion years in the making. Dr. Maria Spiropulu is the Shang Yi Ch'en Professor of Physics and an experimental high-energy particle physicist in the Lauritsen Lab at Caltech. Dr. Alice Roberts is professor of anthropology and paleopathology at the University of Birmingham. Dr. Carolyn Porco is professor of planetary science at the University of Colorado Boulder and a former project leader for the Cassini-Huygens Space Probe. Musical accompaniment by composer Austin Wintory. A Light in the Void concert with the Colorado Symphony will be on Friday, October 5. Tickets at coloradosymphony.org.

Wednesday, October 3 • 7 p.m. • Phipps Theater • \$15 member, \$18 nonmember

Annual Marie Wormington Lecture Close Encounters with Humankind

Dr. Sang-Hee Lee, Korea's first paleoanthropologist, provides fresh perspectives about our first hominin ancestors and traditional ideas about evolution in her bestselling book *Close Encounters with Humankind: A Paleoanthropologist Investigates Our Evolving Species*. With Lee as our guide, we discover that from our first steps on two feet to our first forays into toolmaking and forming community, we have always been a species of continuous change. She will explore one of today's most pressing scientific questions: Does humanity continue to evolve? Lee is a professor at the University of California Riverside. The Marie Wormington Lecture is named for the renowned anthropologist who had an illustrious career at the Museum.

Thursday, October 11 • 7 p.m. • Ricketson Auditorium • \$8 member, \$10 nonmember • book sale & signing

Digital Mars

Traverse the surface of Mars! See and learn about spectacular Martian landmarks up close, including the landing area of Mars InSight, NASA's latest spacecraft, touching down on November 26. Museum Mars scientist Dr. Steve Lee and Dr. Ka Chun Yu, curator of space science, will be your guides to stunning visualizations of the Red Planet based on the latest imagery beamed back by our robotic explorers.

Thursday, November 1 • 7 p.m. • Gates Planetarium • \$8 member, \$10 nonmember

A Gateway to the Infinite: Archaeoastronomy of the Aztec Empire

Explore the cosmos through the perspectives of the Aztec empire during this unique journey in Gates Planetarium. Learn about the pantheon of Aztec deities, such as Quetzalcoatl, and how important Aztec temples and observatories were often aligned with astronomical events. Using satellite imagery on the full dome, visit Tenochtitlán and other sites in Mexico that reflect the meaningful place the skies held in Aztec culture. Presented in partnership with Museo de las Americas El Infinito.

Thursday, November 8 • 7 p.m. • Gates Planetarium • \$8 member, \$10 nonmember

A Night in Havana!

Dance the night away to the sounds of Cuba! Taste savory appetizers inspired by our Caribbean neighbor. Discover amazing and diverse wildlife, learn about Cuban art, and walk along a Cuban streetscape in the temporary exhibition *¡CUBA!* Ticket includes one drink. Ages 21+.

Friday, November 9 • 7–10 p.m. • \$27 member, \$33 nonmember

Cuba 2D with Director Peter Chang

Experience a land of spectacular beauty that's home to people renowned for their passion in the film *Cuba 2D*. The island nation is preserved in time yet poised on the cusp of dramatic change. You will be transported across breathtaking island landscapes, below the ocean surface to dazzling reefs, and into streets invigorated by music and dance in the heart of Havana. After the film, director Peter Chang will discuss the making of the film and reflect on his time in Cuba.

Monday, November 12 • 7 p.m. • Phipps IMAX Theater • \$12 member, \$15 nonmember

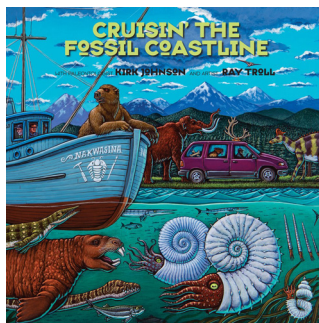
InSight Arrives at Mars: Landing Event

In another historic moment in space exploration, NASA's newest lander InSight is on its way to Mars! The spacecraft was launched on May 5, 2018, and is targeted to land at noon MST on November 26. InSight—or Interior Exploration Using Seismic Investigations, Geodesy, and Heat Transport—will explore the planet's interior structure. The lander uses cutting-edge instruments to delve deep beneath the surface and seek the fingerprints of the processes that



formed the rocky terrestrial planets. Join the Museum's Mars scientist Dr. Steve Lee and other local experts to learn about this ambitious mission and what's in store for the new lander. Then look over the shoulders of mission controllers during live NASA TV coverage of the landing. Please note: This ticket provides you with a seat in Ricketson Auditorium during the panel discussion and live landing. The landing will also be broadcast in standing-room locations in the building.

Monday, November 26 • 10 a.m.–2 p.m. • Ricketson Auditorium • \$12 member, \$15 nonmember



Cruisin' the Fossil Coastline with Kirk Johnson

At the Smithsonian National Museum of Natural History, Dr. Kirk Johnson oversees the largest natural history collection in the world. But before he went to D.C., in 2012, Johnson was one of our own here at the Museum for 21 years. Johnson returns to share his newest book with Ray Troll, *Cruisin' the Fossil Coastline: The Travels of an Artist and a Scientist along the Shores of the Prehistoric Pacific*. Johnson and Troll are back on the road—driving, flying, and

boating their way from Baja, California, to northern Alaska in search of the fossil secrets of North America's Pacific Coast. As one of the oldest coasts on Earth, it is rich ground for fossil discovery, with extinct marine mammals, pygmy mammoths, oyster bears, shark-bitten camels, polar dinosaurs, California walruses, and a lava-baked rhinoceros. Join us for a lively evening with Johnson as he takes you on a fossil journey through deep time and shows how the West Coast became the place it is today.

Monday, December 3 • 7 p.m. • Phipps Theater • \$8 member, \$10 nonmember • book sale & signing

ANNUAL BIRD LECTURES

Presented in partnership with the Bird Conservancy of the Rockies.

Journey of the Juncos: Migration and Adaptation in Our Changing World

When animal populations are impacted by human-caused changes, they are forced to move to new places, modify how they behave, or face extinction. Dr. Ellen D. Ketterson, professor of biology at Indiana University Bloomington, addresses our need as invested citizens to understand animal migration and seasonality in relation to the loss of biodiversity. Ketterson will examine the very real implications of our changing world through the lens of the dark-eyed junco, a model bird species commonly known as the snowbird. Focusing on the causes and consequences of environmental change helps equip humans to predict future responses and champion the biodiversity that makes our planet so amazing.

Tuesday, October 30 • 7 p.m. • Ricketson Auditorium • \$12 Museum or Bird Conservancy of the Rockies member, \$15 nonmember

The Feather Thief

American flautist Edwin Rist had an unusual obsession: the Victorian art of fly-tying. Bizarrely, Rist broke into the Tring Museum north of London in 2009, home to rare bird specimens with feathers worth staggering amounts of money among flytiers. Once inside, the champion salmon flytier grabbed hundreds of bird skins and escaped. After hearing about this unusual event, author Kirk Wallace Johnson was catapulted into an obsession of his own that took him around the world. Hear Johnson share his relentless pursuit to find the missing birds, which he documents in his book *The Feather Thief: Beauty, Obsession, and the Natural History Heist of the Century*. Pictured: The spangled cotinga (*Cotinga cayana*) is one of the seven subspecies known to fly-tiers as the blue chatterer.



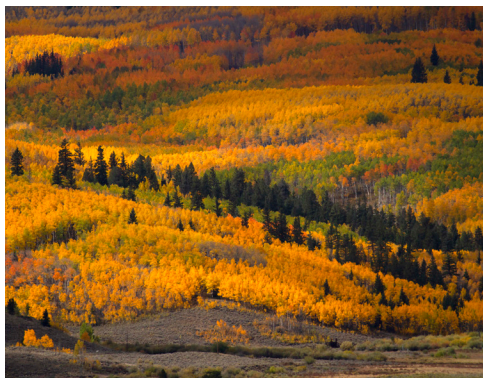
Wednesday, November 14 • 7 p.m. • Ricketson Auditorium • \$12 Museum or Bird Conservancy of the Rockies member, \$15 nonmember • book sale & signing

COURSES

Reading Colorado: An Introduction to the Geology of Colorado

Discover geology fundamentals as applied to the fossil record. With Dr. Bob Reynolds, earth sciences research associate, learn the basics of stratigraphy, sedimentology, geological mapping, and dating techniques, and complete a field report. Course includes two full-day field trips: one to introduce you to the Denver Basin and Front Range structure and stratigraphy, and the second to highlight specific sites in central Colorado discussed during class.

Mondays & Wednesdays, September 10–19 • 6:30–8:30 p.m. • Field trips: Sunday, September 16, and Saturday, September 22 • \$225 member, \$255 nonmember



Fall Foliage Photography: Capturing Colorful Colorado

Colorado's fall color is a sight to behold. The gold aspen trees surrounded by the green pine and spruce, and framed by majestic peaks, is a photographer's dream come true. Join Bob Dean, local freelance nature and travel photographer, to learn how to capture these magnificent scenes with your camera. Explore how to make strong images from broad

panoramas to intimate close-ups. The course includes a class to learn the basics, a daylong field trip to the mountains to capture images, and a painless follow-up critique session to share feedback and ideas.

Thursdays, September 27 & October 4 • 6:30–8:30 p.m. • Field trip: Saturday, September 29 • \$110 member, \$140 nonmember

General Arachnology

Learn the evolutionary history of arachnids—such as scorpions, camel spiders, daddy longlegs, and ticks—the natural history and biology of the different groups, and the medical and economic importance of these animals. Experience a behind-the-scenes look at the wealth of specimens in the zoology collections with Dr. Paula Cushing, curator of invertebrate zoology.

Mondays & Wednesdays, October 1–10 • 6:30–8:30 p.m. • \$75 member, \$105 nonmember

The Geography of People

Using the state-of-the-art visualization technology of Science on a Sphere in *Space Odyssey* and the full-dome experience of Gates Planetarium, explore patterns of human settlements and the forces that influence the lives of peoples around our globe. With geologist Dr. Bob Reynolds, examine the geological framework of Earth and how it influences our human habitat. Humans have spread across the entire globe and our population grows daily. Though we strain our resource base, innovation and education have the potential to mitigate many challenges, and wise planning can help future generations lead more secure lives.

Monday & Wednesday, October 22 & 24 • 6:30–8:30 p.m. • \$20 member, \$25 nonmember

Fossil Essentials

Lay the foundation of your fossil know-how with research associate Dr. Lou Taylor as you explore basic concepts in paleontology and geology. Beginning with the origins of life on Earth, this course progresses into the formation of fossils, their scientific significance, and the basics of collection, data recovery, curation, and study. Examine fossil specimens and take a field trip to explore Colorado's ancient past.

Tuesdays & Thursdays, October 23–November 6 • 6:30–8:30 p.m. • Field Trip: Saturday, October 27 • \$150 member, \$180 nonmember

Reconstructing Ancient Flora in Graphite

Join Marjorie Leggitt, award-winning illustrator, whose work you enjoy when you visit *Prehistoric Journey*, for a course exploring the reconstruction of ancient landscapes and plants. Take on the role of a paleobotanical artist, “reviving” plant fossils into realistic looking leaves and branches! Begin with an overview of paleobotany from Dr. Ian Miller and a tour of the Earth Sciences Lab, and learn why plants provide so little in the way of a fossil record. Then create preliminary pencil sketches from trace fossils and build 3D models to observe how a flower or branch might look in the field. Step-by-step instruction guides you to produce a final pencil drawing of an Upper Cretaceous terrestrial or aquatic plant.

Mondays & Thursdays, October 29–November 8 • 6–9 p.m. • \$225 member, \$255 nonmember

The Flora and Fauna of Cuba: Bulldog Bats, Butterfly Jasmine, and Boa Constrictors

Cuba is a fascinating place full of beautiful trees and flowers, breathtaking landscapes, and some of the most unique and deadly animals on the planet. Join research associate Dr. Sue Ware to explore this enchanting archipelago, the ancient life and geography that shaped this area, the wonderful and weird plants and animals that share their habitat with humans, and some of the most beautiful birds in the world. Class includes a visit to the temporary exhibition *iCUBA!*.



Mondays & Wednesdays, November 5–14 • 6:30–8:30 p.m. • \$110 member, \$140 nonmember

FAMILIES

Stay Up with the Stars • All ages

Stay up late with us as Museum educators and an astrophysicist or two walk us through the incredible Colorado night sky. After a dinner at the Museum, watch planetarium shows, see your favorite fall constellations through high-power telescopes (weather permitting), and make your own star-studded crafts.

Thursday, September 6 • 6–9 p.m. • member: \$20 adult, \$15 child/junior • nonmember: \$25 adult, \$20 child/junior

Dissection Connections Family Workshop • Grades 2–9 with adult

The family that dissects together stays together! With a skilled Museum educator as your guide, observe the dissections of a sheep brain, lung, and heart, then try your hand with a scalpel as you learn about amazing body systems.

Saturday, September 8 • 10 a.m.–2 p.m. • \$40 member pair, \$50 nonmember pair

Family Game Night • All ages

At this fun, interactive night out for the whole family, enjoy dinner, and explore *Mindbender Mansion*. After dinner, decipher puzzles, crack codes, and work together to solve a Museum mystery.

Thursday, October 11 • 6–9 p.m. • member: \$20 adult, \$15 child/junior • nonmember: \$25 adult, \$20 child/junior



Family Overnight: Halloween at the Museum • Grades K–8

It's all treats during this night of ooey-goey activities, spooky fun, and trick-or-treat trivia! Enjoy action-packed fun in the Museum, see an IMAX film, and sleep in the diorama halls. Includes pizza dinner, evening snack, hot breakfast, and of course ... candy!

Friday, October 26 • 6 p.m.–10 a.m. • member: \$65 adult, \$55 child/junior • nonmember: \$80 adult, \$70 child/junior

A Night in Havana • All ages

The whole family will love this new exhibit all about our island neighbor, Cuba! We will have crafts and activities, dinner, dancing, and exclusive access to our newest temporary exhibit *¡CUBA!*.

Saturday, November 10 • 6–9 p.m. • member: \$20 adult, \$15 child/junior • nonmember: \$25 adult, \$20 child/junior

WORKSHOPS FOR KIDS

I Art Science • Grades 3–6

Art and science go together like paint and canvas in this four-hour workshop for kids! Explore how scientists use art in their everyday work, and practice creating your own masterpieces using inspiration from nature and science in the Museum. All supplies included in course fee.

Saturday, September 29 • 10 a.m.–2 p.m. • \$60 member, \$70 nonmember

Drones • Grades 3–6

I hate to drone on about this, but in this awesome program kids will get the opportunity to learn about drones, then build and fly their own. Send your budding engineers to this interactive workshop and get a good introduction to the world of robotic flight!

Saturday, October 20 • 10 a.m.–2 p.m. • \$60 member, \$70 nonmember

Junior Surgeons • Grades 2 & 3 / Cutting Edge • Grades 4–6

Observe and perform dissections to find out how the human body functions. Dissect hearts and lungs, eyes, brains, and frogs. Examine real bones, listen to your own heartbeat, and more!

Sunday, November 4 • 9 a.m.–3 p.m. • \$60 member, \$70 nonmember



SCHOOL BREAK CAMPS • GRADES K-6

At the Museum, your child will spend school breaks experiencing fun and wonder, IMAX films and planetarium shows, and marvels of our exhibitions. Camps available for grades K & 1, 2 & 3, and 4–6. Limited early morning drop-off and late pickup options available.

Thanksgiving

Monday–Wednesday, November 19–21 • 9 a.m.–3:30 p.m. • \$160 member, \$175 nonmember • early or late care, \$30/week for each

Winter Break

Wednesday–Friday, December 26–28 • Wednesday–Friday, January 2–4 • 9 a.m.–3:30 p.m. • \$160 member, \$175 nonmember • early or late care, \$30/week for each

Reservations and general information: 303.370.6000, daily, 9 a.m.–5 p.m., or dmns.org

Print-at-home tickets are available at dmns.org for exhibitions, IMAX and Planetarium shows, and lectures and programs, and there's no handling fee! Please always bring your membership card and photo ID when you visit the Museum.

You will receive a confirmation email for your program, field trip, course, or workshop with further information about your event.

Sales are final on all tickets unless the Museum cancels the event.

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HOLIDAY MUSEUM SHOP SALE FOR MEMBERS ONLY

FRIDAY–SUNDAY, NOVEMBER 2–4

GET A JUMP-START ON YOUR HOLIDAY SHOPPING
AND ENJOY 25% OFF SELECT ITEMS*
IN THE MUSEUM SHOP ON LEVEL 1.

**THERE IS SOMETHING
FOR EVERYONE ON YOUR LIST!**

Save 10% every day in all the Museum Shops, including
Mindbender Market and the *iCUBA!* shop (opening October 26).

*Extra 15% discount does not apply to books.

MEMBERS SAVE 10% EVERY DAY!



**T-REX
CAFE**

SALAD BAR, GRILL, KIDS MEALS – LEVEL 1
11 a.m.–2 p.m.

GRAB & GO SANDWICHES, SNACKS – LEVEL 1
COFFEE LAB – LEVEL 2
9 a.m.–5 p.m.

Proudly serving locally sourced Colorado products.

