

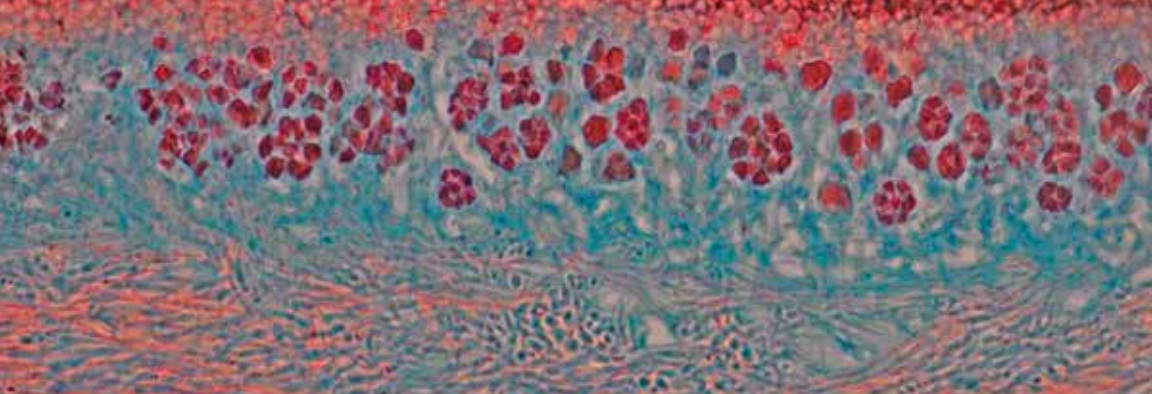


HARVARD MUSEUMS ^{OF} SCIENCE & CULTURE

SPRING 2018 PROGRAMS • EXHIBITS • CLASSES

Collection of Historical Scientific Instruments
Harvard Museum of Natural History
Harvard Semitic Museum
Peabody Museum of Archaeology & Ethnology





One world. Four museums.

Museums are gatekeepers of time, linking past, present, and future through tangible objects. They hold the material evidence of the past, allowing us to experience the world's changes and reminding us that we are a work in progress. The historical perspective they provide illuminates the constructs that have shaped humans and their world, enabling us to see ourselves on a physical, cultural, and intellectual timeline.

Time is always a theme in HMSC programming. In the spring lecture series, talks on plate tectonics, early modern human artwork, evolving fungal decay mechanisms, and the application of digital technology to the studies of the ancient pyramids, all connect the past and present. The effects of climate change and the impact of radionavigation on our worldview raise questions for the future. Our new interactive *Microbial Life* exhibition, opening in February, will transport visitors to a microscopic world that was instrumental in the development of life on Earth and that continues to shape and sustain our biosphere.

HMSC is a portal to Harvard University's world-renowned collections and research on the natural world, scientific innovation, and human cultural history. We hope you will make time to join us. Come see the world in four museums.

- **Collection of Historical Scientific Instruments**
- **Harvard Museum of Natural History**
- **Harvard Semitic Museum**
- **Peabody Museum of Archaeology & Ethnology**



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Free event parking is available at the 52 Oxford Street Garage for all events marked with a Ⓟ (not applicable to classes or exhibitions).

FRONT COVER IMAGES (clockwise from top left)



Yakut Week Calendar

Highly ornated carved wooden week calendar. An indigenous people of the Sakha Republic of Russia, located in Siberia, the Yakut made use of week or year calendars of this type, moving a peg from hole to hole to track the days. The calendar is carved with a double headed eagle—possibly the Russian imperial symbol—at the center, surrounded by animal carvings. Late nineteenth or early twentieth century.

Peabody Museum of Archaeology & Ethnology #24-48-60/D2327



Banded Iron Formation, Ishpeming, Michigan

Iron formations often indicate the presence of oxygen. Some formed under low-oxygen conditions in ocean basins around the world more than 2,400 million years ago. They reappeared in the geologic record between 1,900 and 1,800 million years ago, perhaps in response to cataclysmic volcanic eruptions or meteorite impacts. This specimen, from the Negaunee Iron Formation of the Marquette Iron Range in Michigan's Upper Peninsula, is about 1,850 million years old.

Mineralogical & Geological Museum at Harvard University #2017.13



Clock Watch Face

The detail of this champlévé hour dial is from a silver pair-case pocket watch, made c. 1680 to 1708. The recessed center has repoussé scrollwork with leaves and a shell, as well as the maker's name: John Pepys, a London clockmaker. The outer case is richly engraved with scrolling acanthus leaves. An interesting feature of this object is the presence of another watchmaker's label glued inside the back cover, suggesting the watch was repaired in the 1750s.

Collection of Historical Scientific Instruments #7953



Dream Stela of King Thutmose IV with Year 1 Date

Between the front legs of the Great Sphinx at Giza stands a tall stela, a round-topped slab of granite, that is carved in hieroglyphs. This inscription relates a romantic tale of royal propaganda, in which the Sphinx, as a form of the sun god, appears to then prince Thutmose in a dream. Thutmose is instructed to clear away the sand from the Sphinx, which he does, subsequently becoming king as a reward. Thutmose inscribed the stela with the account of his dream in his first regnal year to commemorate the event.

Egypt, New Kingdom, Dynasty 18, reign of Thutmose IV, about 1400-1390 BCE; modern reproduction in resin, based on a plaster cast from the 1860s. Harvard Semitic Museum #2017.1.1

Images © President and Fellows of Harvard College

Saturday, February 10, 10:00 am–4:00 pm

I ♥ Science

Explore the marvelous science of our natural world in this annual daylong festival featuring dozens of activities. Observe tiny, tough tardigrades (microscopic “water bears”) and make your own model. Design a LEGO® brick home for an insect or invent a flying creation for our wind tunnel. Meet scientists who investigate fossils, microbes, insect flight, and more! Awaken your love of science with activities led by Harvard scientists, graduate students, and enthusiastic explorers. Hear short talks on current research at Harvard. This program has something for everyone and is appropriate for children and adults of all ages.

Special Event. Regular museum admission rates apply. **HMNH**
Harvard Museum of Natural History, 26 Oxford Street



Monday, February 12, 6:00 pm

New Discoveries at Wadi al-Jarf

Gregory Marouard, Research Associate in Egyptian Archaeology
Oriental Institute, University of Chicago



Located along the Egyptian coast of the Red Sea, Wadi al-Jarf is considered the oldest known harbor in the world. This exceptional 4,600-year-old site dates to the beginning of the Fourth Dynasty, the “golden age” of ancient Egypt. Gregory Marouard will discuss recent archaeological excavations at Wadi al-Jarf, including the discovery of hundreds of papyrus fragments that provide important details about the construction of the Great Pyramid at Giza and insights into the complex organization and well-structured logistics of royal Egyptian projects.

Lecture. Free and open to the public. **HSM**
Geological Lecture Hall, 24 Oxford Street

Thursday, February 15, 6:00 pm

Microbial Life

A Universe at the Edge of Sight

Roberto Kolter, Professor Emeritus, Department of Microbiology and Immunobiology,
Harvard Medical School; Director, Microbial Sciences Initiative, Harvard University

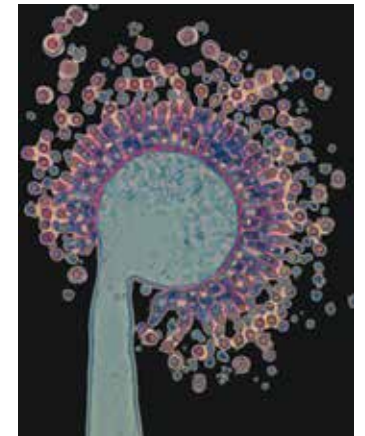
Scott Chimileski, Microbiologist and Photographer, Kolter Lab, Harvard Medical School
Harvard University

Although largely invisible, microbes are ubiquitous and have a profound influence on daily life. Using the familiar environment of our homes as a basis for their talk, Roberto Kolter and Scott Chimileski will guide the audience through a tour of the remarkable microbial universe, from “invisible chefs” instrumental in preparing many of our favorite foods, to microbes that inhabit our bodies and help keep us healthy. In considering the role microbes play in shaping both human life and the natural history of the planet, this lecture will introduce the new *Microbial Life* exhibition opening Saturday, February 17.

Evolution Matters Lecture Series

Exhibition Opening Lecture. Free and open to the public. **HMNH**
Geological Lecture Hall, 24 Oxford Street

Presented in collaboration with the Microbial Sciences Initiative
Series supported by a generous gift from Drs. Herman and Joan Suit



Thursday, February 22, 6:00 pm

The Changing Landscape of Plate Tectonics

W. Jason Morgan, Professor Emeritus, Princeton University
Visiting Scholar, Department of Earth and Planetary Sciences, Harvard University

Plate tectonic theory, a milestone in twentieth-century science, has been instrumental in advancing our understanding of Earth’s geological history, the formation of its surface features, and its earthquake movement. Geophysicist W. Jason Morgan—who introduced plate tectonics at a 1967 meeting of the American Geophysical Union—will discuss how the theory came about, highlighting both the role of ocean exploration in the 1950s and 1960s and early observations of seafloor spreading and ocean magnetic anomalies. He will also touch on the advances made in understanding Earth’s movements since the development of space geodesy instruments and technologies.



Lecture. Free and open to the public. **HMNH**
Geological Lecture Hall, 24 Oxford Street

Presented in collaboration with the Department of Earth and Planetary Sciences, Harvard University

Tuesday, February 27, 6:00 pm

As the Seas Rise, Can We Restore Our Coastal Habitats?

Steven Handel, Distinguished Professor of Ecology and Evolution, Rutgers University
Visiting Professor in Landscape Architecture, Graduate School of Design, Harvard University



As sea levels rise, the potential loss of coastal habitats is a threat across the globe. This is of particular concern in the eastern United States, where coastlines are largely developed and offer few open spaces for habitats to move inland if present natural lands are lost. Considering the current conditions of coastlines, as well as future development scenarios, Steven Handel will discuss strategies to help maintain our coastal character and the ecological services of coastal habitats that are critical to the social, cultural, and environmental well-being of our region.

Lecture. Free and open to the public. **HMNH**
Geological Lecture Hall, 24 Oxford Street (P)
Presented in collaboration with the Association to Preserve Cape Cod

Monday, March 5, 6:00 pm

Wild Diagnosis

Human Health and the Animal Kingdom

Barbara Natterson-Horowitz, Professor of Medicine, Division of Cardiology, and Co-Director, Evolutionary Medicine Program, UCLA; Visiting Professor, Department of Human and Evolutionary Biology, Harvard University



Sudden cardiac death in kangaroos. Breast cancer in jaguars. Compulsive disorder in polar bears. All animals, including humans, are subject to a wide range of physical and psychological illnesses. Using pathological specimens from Harvard's Museum of Comparative Zoology, Barbara Natterson-Horowitz will discuss disorders in both living and extinct species. She will also examine the importance of comparative and evolutionary perspectives in deepening scientific understanding of disease and increasing our compassion toward affected patients—both human and non-human animals.

Lecture. Free and open to the public. **PMAE HMNH**
Geological Lecture Hall, 24 Oxford Street (P)

Tuesday, March 6, 6:00 pm

Tangible Things of American Astronomy, or What Does a Computer Have in Common with a Teapot?

Sara J. Schechner, David P. Wheatland Curator,
Collection of Historical Scientific Instruments, Harvard University

As a science that studies distant celestial objects, astronomy deals with few things that can be touched directly. And yet, astronomy has many tangible things—scientific instruments and observatories, for example—that link the past to the present. There is little question about maintaining things still valuable for scientific research purposes, but why should we care about documenting and preserving the old and obsolete? Sara Schechner, recipient of the 2018 LeRoy E. Doggett Prize for Historical Astronomy, will discuss what can be learned from a sundial, a tea set, some telescopes and clocks, a life mask, a rotating desk, photographs, and even fly spankers.

Lecture. Free and open to the public. **CHSI**
Visit website for event details: chsi.harvard.edu (P)



Monday, March 19, 6:00 pm

Ancient Egypt in Africa

New Excavations at the Island Fortress of Uronarti

Laurel Bestock, Associate Professor of Archaeology and the Ancient World, Egyptology and Assyriology, and the History of Art and Architecture, Brown University

Ancient Egyptian kings conquered Lower Nubia—today northern Sudan—nearly 4,000 years ago, defending it with a string of monumental fortresses along the Nile River. Previously thought lost, when the construction of the Aswan High Dam flooded the area, one fortress, known as Uronarti, was recently rediscovered and is being excavated for the first time since George Reisner's Harvard University-Boston Museum of Fine Arts Expedition worked there in the early twentieth century. Laurel Bestock will highlight recent archaeological finds at the site and discuss the intercultural encounters and lifestyles in this Egyptian colonial outpost.

Lecture. Free and open to the public. **HSM**
Geological Lecture Hall, 24 Oxford Street (P)
Presented with support from the Marcella Tilles Memorial Fund




Tuesday, March 20, 5:30–7:00 pm

Persian New Year Celebration



Celebrate Nowruz, the Persian New Year and the beginning of spring, with poetry, music, traditional sweets, and an exploration of the traditional *haft seen* table. More than 3,000 years old, Nowruz (“new day”) originated in ancient Persia and became a popular celebration in communities influenced by Persian culture, including Iran, the Caucasus, central Asia, and western China. Drop in for a presentation of Nowruz customs and activities and help build community for 1397, the new year in the Persian calendar.

Special Event. Free and open to the public. **HSM**
Reservations required by March 16: semiticmuseum.fas.harvard.edu
Harvard Semitic Museum, 6 Divinity Avenue 
Presented in collaboration with the Davis Center for Russian and Eurasian Studies, the Center for Middle Eastern Studies, the Harvard GSAS Iranian Student Association, the Harvard College Iranian Association, and the Alwaleed Islamic Studies Program, Harvard University

Tuesday, March 20, 6:00 pm

Modern Humans’ Earliest Artwork and Music


New European Discoveries

Randall White, Professor, Department of Anthropology, New York University



The earliest evidence of artwork made by modern humans, Aurignacian art, was created more than 35,000 years ago and has been found in French, German, and Romanian archaeological sites. Randall White will discuss the rich corpus of Aurignacian painting, engraving, bas-relief sculpture, musical instruments, and personal ornamentation that was studied before World War I in southwest France, along with recent discoveries from classic Aurignacian sites. He will also highlight how the combined study of archives, long-forgotten museum collections—and even back dirt (excavated material)—is contributing new discoveries and contextual data about early Eurasian expressive culture.


2018 Hallam L. Movius, Jr. Lecture and Reception

Free and open to the public. **PMAE**
Geological Lecture Hall, 24 Oxford Street 

Saturday, March 24, 1:00–4:00 pm

Amazing Archaeology Fair at Harvard

Harvard archaeologists and students will bring history alive for families by presenting hands-on activities, sharing their research, and providing demonstrations of ancient and up-to-the-minute technologies. Join in colonial-era excavations using smartphones. Use a Google Cardboard viewer and “travel” via virtual reality with a tour guide to Egypt or Israel. Throw a handmade spear with a spear thrower (weather permitting). Talk to archaeologists about their work and their discoveries. Activities spread across both the Peabody and the Harvard Semitic Museums. Live music provided by THUD, The Harvard Undergraduate Drummers.

Special Event. Regular museum admission rates apply. **PMAE HSM**
Visit website for event details: peabody.harvard.edu
Peabody Museum of Archaeology & Ethnology, 11 Divinity Avenue 




Tuesday, March 27, 6:00 pm

How Mushrooms Changed the World

David Hibbett, Professor of Biology, Clark University
2017–2018 Fellow, Radcliffe Institute for Advanced Study, Harvard University

Fungi receive little attention in mainstream media, but these organisms have an enormous impact on ecosystems and on the production of food and pharmaceuticals. As decomposers, fungi recycle nutrients and are key contributors to the global carbon cycle. David Hibbett will examine the diversity of fungal decay mechanisms and how they have evolved across geologic time. He will also address the controversial hypothesis that fungal evolution contributed to the decline in coal formation at the end of the Carboniferous Period.

Evolution Matters Lecture Series

Free and open to the public. **HMNH**
Geological Lecture Hall, 24 Oxford Street 
Series supported by a generous gift from Drs. Herman and Joan Suit



Thursday, March 29, 6:00 pm

Teotihuacan and the Making of a World City

Deborah L. Nichols, William J. Bryant 1925 Professor of Anthropology; Chair, Latin America, Latino, and Caribbean Studies, Department of Anthropology, Dartmouth College



In the first century CE, Teotihuacan became the capital of the area known today as Central Mexico. The city grew to include 100,000 people, drawing immigrants from Western Mexico, the Valley of Oaxaca, Veracruz, and the Maya region. Deborah Nichols will discuss how Teotihuacan became the largest and most influential city in Mexico and Central America; how it maintained this position for 500 years through diplomacy, pilgrimages, military incursions, and commerce; why modern scholars consider it a “world city”; and what challenges exist in advancing an understanding of its legacy.

2018 Gordon R. Willey Lecture and Reception

Free and open to the public. PMAE
Geological Lecture Hall, 24 Oxford Street

Tuesday, April 3, 6:00 pm

Life's Engines

How Microbes Made Earth Habitable

Paul Falkowski, Distinguished Professor, Bennett L. Smith Chair in Business and Natural Resources, Departments of Earth and Planetary Sciences and Marine and Coastal Sciences, Rutgers University



For almost four billion years, microbes had the primordial oceans all to themselves. Over time, they transformed the chemistry of our planet, making it habitable for plants, animals, and humans. Paul Falkowski will discuss how microbes made life on Earth possible—and how human life would cease without them today. By examining the inner workings of these miniature “engines” and the processes by which they are built and assembled—like building blocks—within every creature that walks, swims, or flies, he will reveal how microbes are the great stewards of life on Earth.

Evolution Matters Lecture Series

Free and open to the public. HMNH
Geological Lecture Hall, 24 Oxford Street
Series supported by a generous gift from Drs. Herman and Joan Sait

Wednesday, April 4, 6:00 pm

Why Cancer Is Everywhere

Athena Aktipis, Assistant Professor, Department of Psychology; Lincoln Professor, Lincoln Center for Applied Ethics; Director, Cooperation and Conflict Lab, Arizona State University

Humans are not alone in their struggle with cancer. All multicellular organisms grapple with this disease because cancer is intricately linked to the evolution of multicellularity and to the systems of cellular cooperation that enable complex organisms to thrive. Evolution underlies the processes that lead cancer cells to overproliferate and overconsume resources as well as their ability to resist aggressive medical treatments. Athena Aktipis will discuss how an evolutionary approach to understanding and treating cancer can transform it from being a disease that threatens our lives to one we can live with, as our multicellular ancestors have for millions of years.



Lecture. Free and open to the public. PMAE HMNH
Geological Lecture Hall, 24 Oxford Street

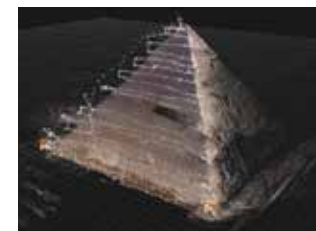
Thursday, April 5, 6:00 pm

Analyzing Egyptian Pyramids in the Digital Age

Yukinori Kawae, Research Fellow, Research Center for Cultural Heritage and Text, Graduate School of Letters, Nagoya University, Japan

Current studies of pyramids in the Memphis area of ancient Egypt are being conducted from multiple perspectives, and archaeological data about them is now available from both texts and excavations. The survey data of the pyramids, however, has rarely been updated. Yukinori Kawae will provide historical insights on the development of pyramid construction methods and discuss how a Japanese consortium is using 3D documentation to update survey data in collaboration with the Japanese production company, TV MAN UNION, using drones and Global Navigation Satellite System equipment.

Lecture. Free and open to the public. HSM
Geological Lecture Hall, 24 Oxford Street



Tuesday, April 10, 6:00 pm

Eduardo Matos Moctezuma Discovers Himself

Excavations of the Great Aztec Temple

Eduardo Matos Moctezuma, Archaeologist and Author



The 1978 discovery of the Great Aztec Temple in downtown Mexico City riveted the international archaeological world. This monumental shrine dedicated to the Aztec war and rain gods had been buried beneath the city's main plaza since the sixteenth-century Spanish conquest. Facing a project of great historical significance with demanding scientific challenges, Mexico appointed archaeologist Eduardo Matos Moctezuma to lead the multiyear, multidisciplinary team that ultimately unearthed the Great Temple and its Aztec treasures. Matos Moctezuma will discuss the professional and personal transformations that he and his team experienced as they unearthed and interpreted the heart of the Aztec world.

Eduardo Matos Moctezuma Lecture Series, Inaugural Presentation

Free and open to the public. **PMAE**

Geological Lecture Hall, 24 Oxford Street (P)

Cosponsored by the David Rockefeller Center for Latin American Studies, the Moses Mesoamerican Archive, and Harvard Divinity School

Thursday, April 12, 6:00 pm

Crossing Over

A Photographer in the Museum of Comparative Zoology

Rosamond Purcell, Photographer and Author



Photographer Rosamond Purcell explores the hidden corners of scientific collections, the boundaries between art and science, and the mysteries of metamorphosis. In this lecture, Purcell will recount her long-standing relationship with Harvard's Museum of Comparative Zoology and explain how its collections have served as models and inspiration for her strangely beautiful, often unsettling images. Following the presentation, Jane Winchell, Director of The Dotty Brown Art & Nature Center at the Peabody Essex Museum, will engage Purcell and audience members in a discussion about the value of seeing natural history collections as works of art in order to better appreciate and understand nature.

Lecture. Free and open to the public. **HMNH**

Geological Lecture Hall, 24 Oxford Street (P)



Tuesday, April 17, 6:00 pm

Becoming Invisible in the Ocean

The Story of a Hawaiian Squid

Margaret McFall-Ngai, Professor and Director,
Pacific Biosciences Research Center, University of Hawai'i at Mānoa

Until recently, biologists considered bacteria to be pathogens that negatively affected the health of humans and other animals. Over the last decade, however, scientists have discovered that most animals live with bacteria in mutually beneficial relationships. Using the Hawaiian bobtail squid and its bioluminescent bacterial partner as a model, Margaret McFall-Ngai will address how animals select their bacteria—sometimes thousands of species—and how they maintain “diplomatic relations” with these microbial organisms.



Evolution Matters Lecture Series

Free and open to the public. **HMNH**

Geological Lecture Hall, 24 Oxford Street (P)

Series supported by a generous gift from Drs. Herman and Joan Suit

Wednesday, April 18, 6:00 pm

Unseen Connections

A Natural History of Cell Phones

Joshua A. Bell, Curator of Globalization, Department of Anthropology,
National Museum of Natural History, Smithsonian Institution

Cell phones are among people's most prized possessions. They play an important role in daily life, facilitating everything from communications with others to the recording of social experiences and emotions. Despite the importance and ubiquity of cell phones, few people know how these devices are made or what happens to them after they are discarded. Using an anthropological lens, Joshua Bell will discuss the international network of relations that underpins the production, repair, and disposal of cell phones and the emerging social implications of this network at both global and local levels.

Lecture. Free and open to the public. **PMAE**

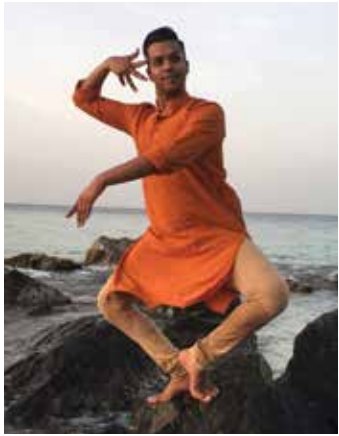
Geological Lecture Hall, 24 Oxford Street (P)



Wednesday, April 18 and Thursday, April 19

Through Fish Eyes Dance Exploring Marine Life

Prakriti Dance, Performing Company, Bethesda, Maryland

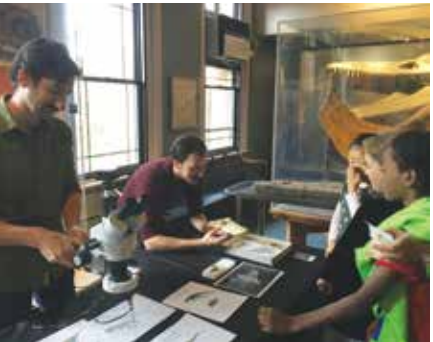


Using the versatile movement vocabulary of the classical Indian dance form, Bharata Natyam, Prakriti Dance will perform representations of marine creatures and their underwater interactions. Through dance, the group will bring to life ecosystems that exist beneath the surface of the ocean and will involve museum visitors in the process of developing the piece.

Special Event. Regular museum admission rates apply. **HMNH**
 April 18 performances: 11:00–11:30 am and 2:00–2:30 pm
 April 19 performances: 2:00–2:30 pm and 3:00–3:30 pm
 Harvard Museum of Natural History, 26 Oxford Street
 Visit website for event details: hmnh.harvard.edu
 Presented in collaboration with the Cambridge Science Festival

Thursday, April 19, 10:00 am–12:00 pm

Meet a Scientist at the Harvard Museum of Natural History



Come see the world through the eyes of a scientist and explore what research reveals about life and our planet. Graduate students from the departments of Organismic and Evolutionary Biology, Human Evolutionary Biology, Molecular and Cellular Biology, and Earth and Planetary Sciences at Harvard University will share their research through hands-on activities in the museum galleries. This program is designed to actively engage families in learning more about science and exciting new discoveries in our natural world.

Special Event. Regular museum admission rates apply. **HMNH**
 Harvard Museum of Natural History, 26 Oxford Street
 Presented in collaboration with the Cambridge Science Festival

Thursday, April 19, 6:00 pm

A Dive into the Northeast Canyons and Seamounts Marine National Monument

Scott Kraus, Vice President, Senior Adviser, and Chief Scientist of Marine Mammals, Anderson Cabot Center for Ocean Life at the New England Aquarium

The Northeast Canyons and Seamounts Marine National Monument, located just 150 miles off the coast of Cape Cod, is home to endangered whales, 1,000-year-old deep-sea coral communities, and a plethora of fish and seabird species. Designated on September 15, 2016, by President Barack Obama, this is New England's only marine monument and the only marine national monument in the U.S. Atlantic Ocean. Scott Kraus will provide a tour of this biologically rich area and discuss its scientific and ecological importance, while also highlighting what needs to be done to ensure its continued protection.

Lecture. Free and open to the public. **HMNH**
 Geological Lecture Hall, 24 Oxford Street ©
 Presented in collaboration with the Conservation Law Foundation



Sunday, April 22, 10:00 am–12:00 pm

Ancient Engineering

Zoe Eddy (Wendat-Huron, Mohawk), Graduate Student in Archaeology, Department of Anthropology, Harvard University

Native Americans built different types of homes to address the challenges of widely varied environments. In this program, families will explore ancient engineering while constructing simple models of a sod house, a *wetu*, a plank house, and a tipi, and they will have the opportunity to compare Native American homes in the museum exhibit dioramas.

Family Event (ages 9+). Regular museum admission rates apply. Advance reservations required: peabody.harvard.edu. **PMAE**
 Designed for adults and children to share; at least one adult requested for every four children.

Peabody Museum of Archaeology & Ethnology, 11 Divinity Avenue
 Presented in collaboration with the Cambridge Science Festival



Tuesday, April 24, 6:00 pm

From Site to Sight

Anthropology, Photography, and the Power of Imagery

Melissa Banta, Projects Curator, Weissman Preservation Center, Harvard Library
Museum Associate, Peabody Museum of Archaeology & Ethnology, Harvard University



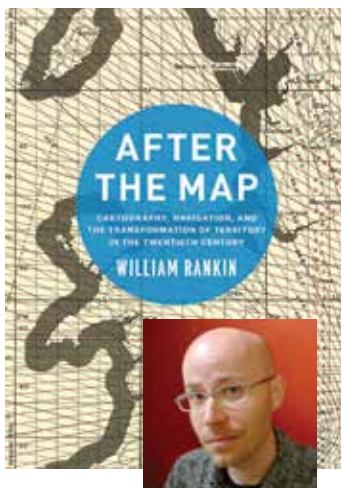
In 1986, the Peabody Museum mounted *From Site to Sight*, a groundbreaking traveling exhibition on the historic and contemporary uses of photography in anthropology. Using visual materials from the museum's photographic archives and research by Harvard anthropologists, the recently reissued exhibition catalog investigates how anthropologists have employed the camera as a recording and analytic tool, as well as the broader implications of the uses—and misuses—of visual imagery within the human sciences. Melissa Banta, coauthor of the publication, will discuss the history and diversity of the Peabody's photographic archive and developments in the history of photography since the publication of *From Site to Sight*.

Lecture and Book Signing. Free and open to the public. **PMAE**
Geological Lecture Hall, 24 Oxford Street

Wednesday, May 2, 6:00 pm

Radionavigation and the Politics of Geographic Knowledge

William Rankin, Assistant Professor of the History of Science, Yale University



For most of the twentieth century, maps were indispensable to governments' understanding, management, and defense of territory, but by century's end, a decisive transition occurred toward electronic navigation systems. William Rankin, author of *After the Map: Cartography, Navigation, and the Transformation of Territory in the Twentieth Century*, argues that this shift radically changed our experience of geographic space, from the bird's-eye view of the map to the embedded subjectivity of GPS. The adoption of radionavigation offers crucial insight into the history of twentieth-century territoriality and the broad geopolitical shift from internationalism to globalization.

Lecture and Book Signing. Free and open to the public. **CHSI**
Visit website for event details: www.chsi.harvard.edu

Thursday, May 3, 6:00 pm

Apples

A New England History

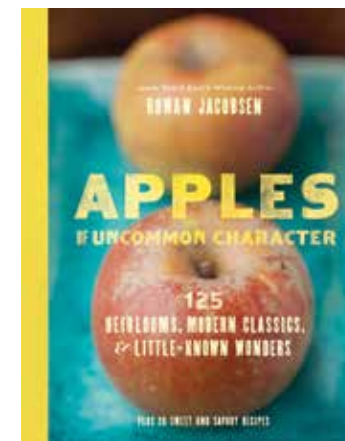
Rowan Jacobsen, Author; Knight Science Journalism Fellow,
Massachusetts Institute of Technology

No other fruit embodies the horticultural and cultural range of the apple. Originally from the mountains of Kazakhstan, apples have seduced bees, intoxicated monks, nourished colonists, and inspired artists, from Paul Cézanne to Rudolf Blaschka, who created Harvard's collection of botanically precise glass apples (now on view in the Glass Flowers gallery). James Beard Award-winning author, Rowan Jacobsen, will discuss his book, *Apples of Uncommon Character*, and will explore the surprising ways in which the apple has shaped New England history. A tasting of heirloom ciders from Vermont's Eden Specialty Ciders will follow the talk.

Lecture and Book Signing. **HMNH**
Free and open to the public. Reservations required.
Visit website for event details: hmn.harvard.edu
Geological Lecture Hall, 24 Oxford Street

Reception sponsored by the Harvard Chapter of Sigma Xi

Visit the HMNH exhibit *Rotten Apples: Botanical Models of Diversity and Disease* in the Glass Flowers Gallery





Thursday, June 21, 5:00–9:00 pm

Summer Solstice Celebration 2018 Night at the Harvard Museums of Science & Culture

Celebrate the longest day of the year and mark the beginning of the summer season at the Harvard Museums of Science and Culture. Enjoy free admission to four museums and access to special performances, make flower crowns and other sun-inspired crafts, and learn about the astronomical significance of the solstice. Save the date and stay tuned for details.

Special Event. Free and open to the public. For all ages. **HMSC**
Visit website for event details: hmsc.harvard.edu

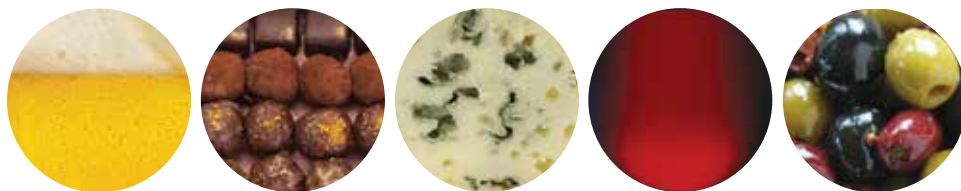


Thursday, July 19, 7:30–10:00 pm

MicroChefs: An Evening for Curious Adults

Wine, beer, sake, coffee, kombucha, yogurt, cheese, chocolate—some of our favorite beverages and foods owe their existence to microscopic “chefs” that are rarely acknowledged or appreciated. Get to know some of these beneficial microorganisms while you sample their masterful creations at this one-of-a-kind evening exclusively for guests over 21. Stay tuned for the full program!

Special Event. **HMNH**
Visit website for event details: www.hmnh.harvard.edu



SPRING 2018 LECTURE SERIES

EVOLUTION MATTERS

Thursday, February 15, 6:00 pm

Microbial Life A Universe at the Edge of Sight

ROBERTO KOLTER

Professor Emeritus, Department of Microbiology and Immunobiology
Harvard Medical School; Director, Microbial Sciences Initiative, Harvard University

SCOTT CHIMILESKI
Microbiologist and Photographer,
Kolter Lab, Harvard Medical School,
Harvard University

Tuesday, April 3, 6:00 pm

Life's Engines How Microbes Made Earth Habitable

PAUL FALKOWSKI
Distinguished Professor, Bennett L. Smith Chair in Business and Natural Resources, Departments of Earth and Planetary Sciences and Marine and Coastal Sciences, Rutgers University

Tuesday, April 17, 6:00 pm

Becoming Invisible in the Ocean

The Story of a Hawaiian Squid
MARGARET MCFALL-NGAI
Professor and Director, Pacific Biosciences Research Center, University of Hawai'i at Mānoa

Tuesday, March 27, 6:00 pm

How Mushrooms Changed the World

DAVID HIBBETT
Professor of Biology, Clark University
2017–2018 Fellow, Radcliffe Institute for Advanced Study, Harvard University

Background Photo: Courtesy Scott Chimileski



All lectures are free and open to the public
Geological Lecture Hall, 24 Oxford Street
Free parking: 52 Oxford Street Garage. Event details: hmnh.harvard.edu

SUPPORTED BY A GENEROUS GIFT FROM DRS. HERMAN AND JOAN SUIT

MUSEUM CLASSES

KIDS' DRAWING CLASSES

All drawing classes taught by Erica Beade

Saturday, March 24, 2:00–3:30 pm

Capturing Imaginary Animals with Pencil and Paper

Ages 9–13

\$25 members/\$35 nonmembers HMNH



Saturday, April 7, 2:00–3:30 pm

Capturing Mammals with Pencil and Paper

Ages 9–13

\$25 members/\$35 nonmembers HMNH



ADULT CLASSES

All skill levels welcome

Saturday, February 3, 9:30 am–12:30 pm

Avian Coloration

An Art and Science Workshop

Dakota McCoy and Erica Beade, Instructors

\$45 members/\$55 nonmembers HMNH



Sunday, March 4, 1:00–4:00 pm

Cabinet of Curiosities Workshop

Mickey Alice Kwapis, Instructor

\$140 members/\$150 nonmembers HMNH

Saturday, March 10, 9:30 am–12:00 pm

Sketching Mammals

Erica Beade, Instructor

\$40 members/\$50 nonmembers HMNH

Four Saturdays: April 7, 14, 21, and 28
9:30–11:30 am

The Art of Botanical Drawing

A Four-Week Course

Erica Beade, Instructor

\$110 members/\$130 nonmembers HMNH



FAMILY CLASSES

A learning experience for adults and children to share. Designed for families with elementary-age children, with at least one adult required. Fees are per person.

Saturday, March 3, 10:30 am–12:00 pm

Exploring Science Together: Minerals!

Ages 5+

Amy Gunzelmann, HMNH Science Educator

\$10 members/\$20 nonmembers HMNH

Saturday, April 21, 1:30–3:30 pm

Hidden Diversity: Amphibian Adaptations

Ages 8+

Mara Laslo, Instructor

\$10 members/\$20 nonmembers HMNH



Saturday, May 5, 10:30 am–12:00 pm

Exploring Science Together: Marine Life!

Ages 5+

Amy Gunzelmann, HMNH Science Educator

\$10 members/\$20 nonmembers HMNH

Saturday, July 7, 10:30 am–12:00 pm

Exploring Science Together: Bugs!

Ages 5+

Amy Gunzelmann, HMNH Science Educator

\$10 members/\$20 nonmembers HMNH



SCHOOL VACATION WEEK ACTIVITY

Four Days:
Tuesday, April 17–Friday, April 20, 9:30 am–12:00 pm

Palace Walls

Four-Day Program Grades 3–4


Andy Majewski, HMSC Education Specialist

Peabody Museum of Archaeology & Ethnology
11 Divinity Avenue

\$160 members/\$180 nonmembers HSM



All classes are held at 26 Oxford Street unless otherwise indicated. Advance registration is required. For easy online registration, visit: hmsc.harvard.edu/education



THRIVING within and around us is a minute world of astonishingly diverse lifeforms, so small they cannot be seen by the human eye. *Microbial Life: A Universe at the Edge of Sight* takes visitors on a multimedia journey into this fascinating, invisible realm, where bacteria and other microbes bustle about their lives, interacting with one another and with organisms of all sizes in every corner of the globe.

The visitor's journey begins with a familiar entrance point to microbial life—a full-scale kitchen model. Drawing on cutting-edge scientific research, the exhibit uses interactive stations to introduce people to the tiny cohabitants of this human-built space through such age-old questions as, “Can I eat the leftovers?” and “What stinks?”

MICROBIAL LIFE

From there, museum-goers can examine live colonies of soil bacteria or delve into ocean depths with a Harvard scientist to discover bizarre microbial sea life. Captivating specimen displays and models from the collections of Harvard's Museum of Comparative Zoology and the Harvard Medical School highlight ways in which microbes engage with and sustain bodies of all animals, from termites to humans. Scheduled live demonstrations by Harvard students and researchers will provide hands-on, multisensory opportunities to experience the wonders of microbial activity and the surprising beauty of bacterial forms.

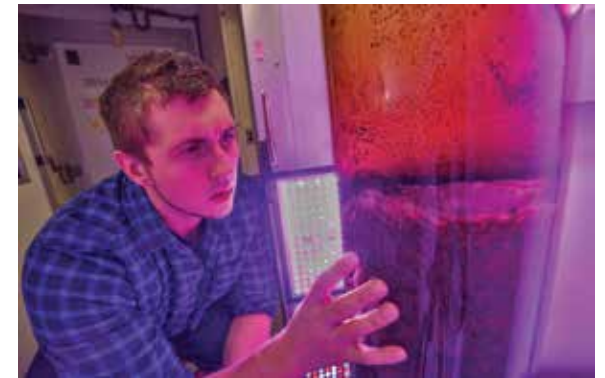
Explore the lives of Earth's first inhabitants, as they continue to shape the planet's biosphere in ways that science is only just beginning to understand.



NEW EXHIBITION OPENS SATURDAY, FEBRUARY 17, 2018

HARVARD MUSEUM OF NATURAL HISTORY

A UNIVERSE AT THE EDGE OF SIGHT



This project was made possible in part through grants from the Alfred P. Sloan Foundation and the National Science Foundation, and a generous gift from Clark Bernard MBA '68 and Susana Bernard. We would also like to thank Harvard's Microbial Science Initiative for its support and guidance in planning the exhibition.





SPECIAL ONLINE EXHIBIT

islands.hmnh.harvard.edu

ISLANDS

Evolving in Isolation

Islands are havens for some of the most unusual creatures on our planet. HMNH's new online exhibit, *Islands: Evolving in Isolation*, unravels the mysteries of island biodiversity and evolution. Packed with examples from

around the globe, this website features stories about island plants and animals, including woodpecker-like primates, flightless birds, bizarre lizards, giant pitcher plants, hissing cockroaches, Galápagos tortoises, Malagasy

lemurs, Komodo dragons from the Indonesian islands, and *Homo floresiensis*, a dwarf relative of modern humans. Full of surprises, *Islands: Evolving in Isolation* highlights some of the latest research and discoveries made by Harvard scientists.



This project was made possible through a grant from the National Science Foundation.



LEARN MORE ABOUT THE MUSEUMS

The Harvard Museums of Science & Culture offer opportunities for visitors to learn more about current exhibitions, the thousands of artifacts and specimens on display, and the Harvard collections from which they draw. Sign up for a museum/gallery tour or take a self-guided tour using a mobile gallery guide.



Guided Tours

Glass Flowers Tours

Groups can reserve docent-led tours of the famous Blaschka *Glass Flowers* and *Sea Creatures in Glass* exhibits on Tuesday and Thursday afternoons. Advance registration is required. For registration, capacity, and fee information, [visit: hmnh.harvard.edu/group-visits](http://hmnh.harvard.edu/group-visits).

Harvard Semitic Museum Tours

The museum offers free half-hour lunchtime tours each month; individualized group tours can also be scheduled. **Go to the "Visit" page at www.semiticmuseum.fas.harvard.edu for more information.**

Peabody Museum Highlights Tours

The museum offers drop-in tours designed for adult visitors, led by Harvard student guides on Fridays, Saturdays, and Sundays during the academic year. Free with regular admission, tours last 45 minutes and encourage audience discussion. Group tours may also be scheduled for other times. They are available in French, Spanish, or Mandarin by advance request. For schedule, reservation, and tour topic information, [visit: peabody.harvard.edu/visit](http://peabody.harvard.edu/visit).

Self-Guided Tours

Mobile Gallery Guides

Enhance your visit with additional multimedia for your cell phone or tablet.

From the Nile to the Euphrates: Creating the Harvard Semitic Museum **HSM**
Digging Veritas: Archaeology and History of the Indian College and Student Life at Colonial Harvard **PMAE**



One membership. Four museums... and countless opportunities!

Membership in the Harvard Museums of Science & Culture opens the doors to four museums and provides special access and opportunities. In return, members support everything we do, from free public lectures and educational outreach to new exhibitions.



Museum Access

HMSC members enjoy great benefits that include unlimited admission to all four HMSC museums, the Harvard Art Museums, and science centers worldwide through the ASTC Travel Passport Program.



Additional Benefits

HMSC offers members special prices on classes, discounts in our museum shops, and access to several Harvard libraries. Free parking and guest passes are included at some membership levels.

Exclusive Events

Members receive invitations to exclusive programs, including curator-led exhibit tours and opportunities to go behind-the-scenes into Harvard's vast museum collections. During recent events, members touched extraordinary fossils from the Museum of Comparative Zoology's paleontology collections, learned about artifacts in the Peabody Museum, and viewed rarely seen gold and jewels from the Mineralogical and Geological Museum.

For a full list of benefits or to become a member today, visit www.hmsc.harvard.edu/membership.

Contact the Membership/Development Office
617.496.6972 or members@hmsc.harvard.edu

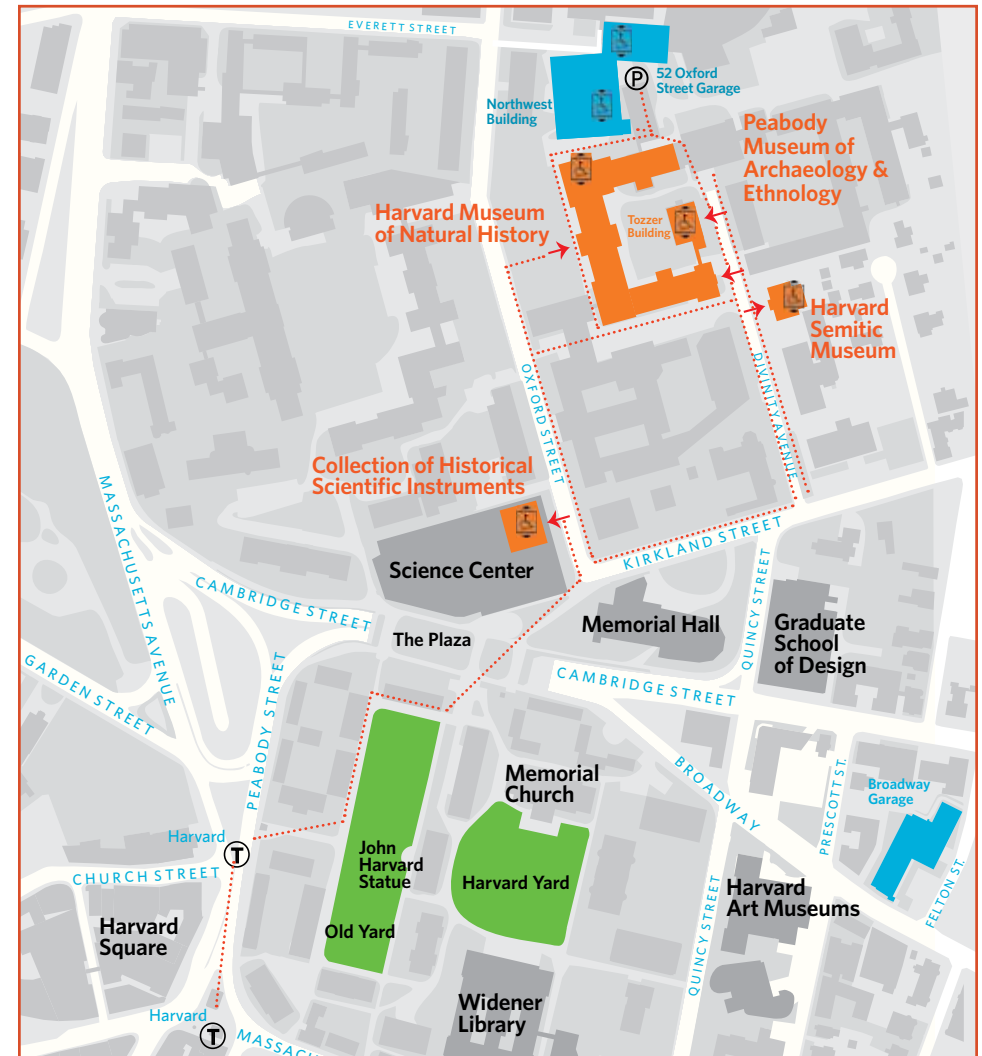


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