



AMERICAN MUSEUM OF NATURAL HISTORY

# ROTUNDA

Member Magazine  
Winter 2013 Vol. 38 No. 1

## CONSERVATION SCIENCE TODAY

**Restoring Museum Treasures**



HERPETOLOGY, PAST *and* PRESENT



# From the President

Ellen V. Futter



As many of you know, this past fall the Museum unveiled its fully restored Theodore Roosevelt Memorial, New York State’s official Memorial to its 33rd governor and the 26th President of the United States.

That New York State chose to place its memorial to Theodore Roosevelt at the Museum is testament to the close association between the Museum and our Conservation President. TR knew and consulted extensively with Museum curators, including the great ornithologist Frank Chapman, with whom he maintained a 20-year correspondence around issues of conservation.

The Theodore Roosevelt Memorial Hall on the first floor can now be seen as the lynchpin for the Museum’s galleries on conservation—the Gottesman Hall of Planet Earth, the Hall of Biodiversity, the Milstein Hall of Ocean Life, the Hall of North American Forests, and, notably,

the iconic Jill and Lewis Bernard Family Hall of North American Mammals, newly restored and named in recognition of the support of Museum Chairman Lewis Bernard, his wife Jill, and their family.

This conservation zone gives voice and presence to the Museum’s longstanding research in biodiversity conservation, which achieves global reach through the Center for Biodiversity and Conservation. Theodore Roosevelt’s legacy lives on in the Museum’s enduring commitment to understanding, teaching about, and stewarding our fragile planet. TR observed, “The nation behaves well if it treats the natural resources as assets which it must turn over to the next generation increased; and not impaired in value.” May his words inspire and energize all of us to action.

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## ROTUNDA

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# Whales: Giants of the Deep Opens March 23



Coming soon: a new special exhibition this spring explores the world’s largest mammals, whales.

This spring, the new special exhibition *Whales: Giants of the Deep* will bring visitors closer than ever to some of the mightiest, most massive, and most mysterious mammals on Earth.

Featuring life-size models, interactive exhibits, and films—as well as stunning whale skeletons—the family-friendly exhibition was originally developed at Te Papa, the national museum of New Zealand. In that Pacific nation, whales have long played a central role in human lives, and the exhibition reveals the history of that close relationship, from the traditions of Maori whale riders to the whaling industry and the later rise of laws protecting whales from commercial hunters.

Bringing the exhibition to New York this spring also will allow for the addition of rarely viewed specimens from the Museum’s world-class collections.

“Our collections of cultural objects, fossils, and modern mammals are among the best in the world,” says John Flynn, Frick Curator of Fossil Mammals who is overseeing the exhibition at the Museum. “We have the exciting opportunity to draw from our unique collections to select specimens that complement the wonderful stories already being told in this exhibit, including some specimens that may never have been on public display.”

More than 20 skulls and skeletons from various whale species, including a nearly 60-foot-long skeleton of a sperm whale, will allow visitors to explore whale anatomy and diversity. Interactive exhibits include one that re-creates the experience of depth-defying dives of sperm whales as they hunt for squid far below the ocean’s surface. In another section, visitors will learn about long-extinct Eocene “walking” whales, which left the land to invade the sea millions of years ago.



*Whales: Giants of the Deep* is free for Members.

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

Generous support for Whales has been provided by the Eileen P. Bernard Exhibition Fund.

## MEMBER PREVIEW THURSDAY, MARCH 21, 4–8 PM



Here at the Museum, you may have marveled at the 94-foot-long replica of a blue whale, the largest animal alive today, in the Milstein Hall of Ocean Life. In *Whales: Giants of the Deep*, visitors can actually climb into a life-sized model of the species’ heart, which is the size of a Volkswagen Beetle.

Members are invited to see *Whales: Giants of the Deep* at a special preview on Thursday, March 21, beginning at 4 pm. View the exhibition and stay for a wine reception from 6 to 8 pm. Please RSVP by calling the Membership Office at 212-769-5606.

Top: © Brandon Cole; Bottom: © Museum of New Zealand Te Papa Tongarewa, 2008



WINDOWS ON NATURE

When Chapman joined the Museum, bird exhibits were just beginning to move beyond simple displays of isolated specimens. Chapman helped create a popular grouping of New York-area birds, adding a painted background and changing the exhibit monthly to reflect seasonal population shifts. Later, he developed habitat groups featuring multiple species of animals and plants in realistic landscapes based on careful field observations.

SOUTH AMERICAN STUDIES

Before Chapman, Europeans dominated the study of South American birds. Convinced that “we should not be obliged to go abroad to study the birds of our own hemisphere,” Chapman went to Colombia in 1911 and became intrigued by bird distribution in the Andes. He went on to travel widely in Latin America and published major studies on the birds of Colombia and Ecuador.

A LIFELONG FRIENDSHIP

Theodore Roosevelt frequently consulted Chapman about identifying birds. In 1908, President Roosevelt wrote, “I wonder how I ever got on without your ‘Birds of the Eastern United States.’” Twenty years later, Chapman received the Roosevelt Memorial Association medal for making America “bird conscious.” The award noted that his “*Handbook of the Birds of Eastern North America*, first published 33 years ago, is still as standard as Webster’s Dictionary.”

TEACHING PHOTOGRAPHY

Chapman wrote about photography equipment and techniques in many of his publications, including *Bird Studies with a Camera* (1900) and *Camps and Cruises of an Ornithologist* (1908), hoping to “stimulate fresh interest in the subject of bird photography.” Before a trip to Africa in 1909, Theodore Roosevelt asked Chapman to instruct his son Kermit in photography; Kermit then became head photographer of the expedition.

MOVING IMAGES

Not surprisingly, Chapman also embraced movie-making. As early as 1908, he filmed Brown Pelicans in southern Florida. On January 1, 1909, he held the Museum’s first screening of a motion picture in connection with a lecture on Florida bird life.

Chapman’s Camera

Eminent ornithologist Frank M. Chapman began his 54-year career at the Museum in 1888. An avid birder from boyhood, Chapman went on to become an influential advocate for conservation, even helping persuade President Theodore Roosevelt, a friend and fellow bird-lover, to designate the first federal bird reserve at Pelican Island, Florida, in 1903.

Chapman’s message of conservation was amplified by his pioneering use of photography and other visual images. An early and enthusiastic nature photographer—the first Kodak camera came to market only in 1888—Chapman owned an assortment of cameras, including the 5x7 Graflex original pictured above and now on display in the reopened Theodore Roosevelt Memorial Hall.

He took several cameras into the field, ingeniously adapting them to his needs. To get the camera closer to skittish birds, he rigged up a remote shutter release using a bicycle pump. He devised trip-wires that took photos of animals as they passed by and experimented with different photo blinds—even tying a camera to an umbrella suspended 12 feet in the air to film nesting Spoonbills—to create what he called his “cloak of invisibility” to study “animals in their native haunts...under absolutely natural conditions.”

Sharing such scenes broadly, Chapman believed, was an effective way to draw attention to nature and conservation. In addition to photos, he used lantern slides and motion pictures to bring birds to vivid life in his publications and lectures. At the Museum, he led the development of “habitat group” exhibits, laying the groundwork for such iconic halls as the Akeley Hall of African Mammals. To prepare for the 1902 opening of the original Hall of North American Birds—the first museum hall in the world dedicated to habitat dioramas—he traveled some 90,000 miles around the continent with a team of artists and taxidermists to gather specimens, take photos, and record details about habitat and animal behavior.

Appalled by the widespread killing of birds for sport and for the millinery trade, Chapman founded the influential *Bird-Lore* magazine in 1899 “for the study and protection of birds.” Active in the American Ornithologists’ Union and Audubon Society, he also introduced Christmas Bird Counts, an early “citizen science” effort, and campaigned for protective legislation.

Learn more about Chapman’s friendship with Theodore Roosevelt in the reopened Theodore Roosevelt Memorial Hall.

Catalog no. AMNH Ornithology 1074



Ifugao Figures

In the mountains of northern Luzon in the Philippines, the Ifugao people cultivate rice on elaborate terraces with intricate irrigation systems, a landscaping effort grand enough to have earned designation as a UNESCO World Heritage Site. For the local population, rice is the primary subsistence crop and the cornerstone of daily life. Some households keep carved wooden *bulul* figures representing mythological deities to ensure good harvests and to protect the fields and granaries. These figures are venerated and passed down for generations.

The male and female *bulul* pictured below were collected by Harold C. Conklin, who worked at the Museum as a young man and later became an authority on the peoples of the Phillipines; he acquired these carvings while working among the Ifugao in the early 1960s. Striking examples of the genre, they are about 12 inches high. They are part of a group of several hundred Ifugao objects obtained by Conklin and now part of the Museum’s collections. These include wooden paddle spades for moving the soil to construct and repair pond fields where rice is cultivated as well as woven rattan trays for winnowing and baskets for storing the rice. Many other objects demonstrate the central role of this grain in daily Ifugao life.

Conklin, professor *emeritus* of anthropology at Yale University, has been involved in Philippine research since 1945. In the course of field research in many regions of the country, especially in Mindoro and northern Luzon, he published extensively on Philippine ethnography and linguistics. All told, almost 1,500 objects he collected were acquired by the Museum.

The Museum’s Philippine ethnology collection, the most comprehensive of its kind in the world, consists of more than 14,000 objects representing the varied cultures of the archipelago. The Museum’s Margaret Mead Hall of Pacific Peoples currently displays 145 items collected by Conklin, including 71 Ifugao objects.

Visit the special exhibition *Our Global Kitchen: Food, Nature, Culture*, which is free for Members, to learn more about harvest rituals, farming rice, and more.

Catalog no. 70.5/287 and 288



SOLVING AN ANTHROPOLOGICAL DILEMMA

Given the ritual nature of heirloom carvings, families could not sell, trade, or give them away without courting disaster, so knowledgeable collectors typically commission such figures to be made by local artisans—a common solution used by anthropologists acquiring cultural artifacts. Figures used in Ifugao rituals are covered with blood and fat from sacrificed pigs.

PIONEERS IN PHILIPPINE STUDIES

The objects collected by Conklin in the northern Philippines complement those of an earlier American anthropologist who worked in the southern Philippines: Laura Watson Benedict (1861-1932). Her fieldwork among the Bagobo of Mindanao Island yielded more than 2,500 objects, which the Museum acquired in 1910. Thirty-one of these items are on exhibit in the Margaret Mead Hall of Pacific Peoples.

AMATEUR COLLECTORS

Some 30 percent of the objects in the Museum’s Philippine collection were gathered by American missionaries, doctors, educators, military personnel, and government employees who visited, lived, and worked in the Philippines from 1898, when the Philippines came under U.S. sovereignty, until the country gained independence in 1946. Among them: Theodore Roosevelt Jr., the President’s son, who donated two shields and 14 arrows.

LAUNCHING A CAREER

Conklin, a renowned anthropologist and linguist, began working at the Museum in 1941 while in high school after impressing Curator Clark Wissler with his facility for languages and interest in Native Americans. Conklin calls the job “fabulous;” he met anthropologists including Gregory Bateson and Margaret Mead and had a pass to enter the Museum before regular hours.

A DIGITAL RESOURCE

Less than 3 percent of the Museum’s anthropological collection is on permanent exhibit. The rest is housed in climate-controlled storage facilities, which Museum Members can visit on occasional behind-the-scenes tours. The online collection database, which is accessible to the public, includes information and digital images of about 200,000 objects from Africa, Asia, Europe, the Pacific Islands, and the Americas.



# SAFEGUARDING EARTH'S BIODIVERSITY



**Museum research supports conservation**

**efforts around the world.**

The majestic bison in the Jill and Lewis Bernard Family Hall of North American Mammals draw visitors into a scene that was nearly erased from America's landscape.

The iconic diorama is set in the mid-1800s, when Midwestern prairies teemed with tens of millions of bison; a few decades later, when hunting decimated the species to just a few hundred individuals, the view would be much different. Today, the American bison are a success story, an early example of an endangered species saved from extinction.

This conservation story is not unique to the bison diorama. Throughout the Museum, visitors come face to face with animals that still roam the continent despite serious threats to their habitats, from the black-footed ferret in the Bernard Family Hall of North American Mammals to the egrets depicted in the Cuthbert Rookery diorama in the Leonard C. Sanford Hall of North American Birds, created by Museum ornithologist Frank M. Chapman as a way to call attention to the plight of birds that were hunted for their feathers. And exhibits such as the Endangered Species case in the Hall of Biodiversity, at left, underscore the importance of conservation around the world.

Behind the scenes, Museum scientists continue to work on research that supports conservation efforts worldwide. Dr. Melanie Stiassny, a curator in the Department of Ichthyology, focuses on freshwater biodiversity in the tropics, particularly in Africa and Madagascar. She is currently conducting fieldwork in the world's second largest river basin, the Congo River, to study the evolutionary dynamics underpinning the high diversity of fishes in the area, which is under threat.

Dr. John Sparks, a curator in the Department of Ichthyology who oversaw the 2012 special exhibition *Creatures of Light*, travels the world in search of bioluminescent and biofluorescent marine organisms. In addition to his research on the evolution and diversification of the bacteria-driven bioluminescent signaling systems in ponyfishes, Sparks also studies the biodiversity and conservation of Madagascar's highly endangered freshwater fishes—arguably the most threatened group of fishes in the world.

These curators and many other researchers work closely with the Museum's Center for Biodiversity and Conservation (CBC). The CBC aims to mitigate threats to biodiversity by strengthening the application of science to conservation practice and policy around the globe. Dr. Chris Filardi, the director of the CBC's Pacific Programs, works with indigenous people in the Solomon Islands, one of the most biologically vibrant oceanic archipelagos on the planet. With an exploding human population and little economic alternative to escalating mining and timber industries, there is great pressure on the Solomon Islands' land. To assist in the conservation of the Solomons' rich biodiversity, Filardi is developing community-based partnerships that help carve out protected areas, offering models for national legislation and other conservation efforts in the region. 🌐

For more about research at the Museum, visit [research.amnh.org](https://research.amnh.org).

Opposite: The Endangered Species case in the Hall of Biodiversity.



CBC projects stretch from British Columbia to Laos.

## A 20-Year Anniversary for CBC

This year, the Museum's Center for Biodiversity and Conservation (CBC) will celebrate 20 years dedicated to mitigating critical threats to global biodiversity. Led by Director Eleanor Sterling, Ph. D., the CBC's long-standing programs realize the full lifecycle of conservation action: identifying needs and issues, engaging partners in local communities, researching, disseminating findings, and monitoring results to track impact and identify future direction. The CBC's team of experts conduct site-specific conservation work in Palmyra Atoll, the Solomon Islands, British Columbia, The Bahamas, South America, and mainland Southeast Asia, particularly Vietnam and Laos, as well as in the New York City metropolitan area.

When approaching complex conservation challenges, the CBC builds local networks and develops community-based stewardship to create solutions that are both environmentally and culturally relevant. In addition, the CBC promotes open-access resources, such as research tools and training materials, to promote local ownership of conservation projects.

The CBC also contributes to biodiversity conservation in another crucial way: training future conservation professionals who can multiply the original impact by training many others over time. The Network of Conservation Educators and Practitioners (NCEP) is just one such effort, with programs in Bolivia, Laos, Madagascar, Mexico, Peru, Rwanda, the Solomon Islands, the United States, and Vietnam.



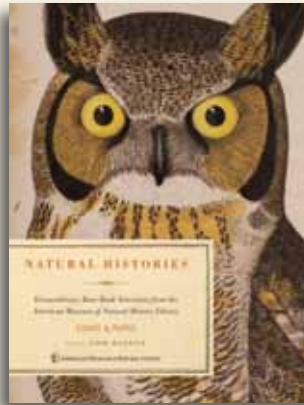
## Classifying Amphibians

Like the 18th-century German naturalist August Johann Rösel von Rosenhof, Curator **Darrel Frost** has created a comprehensive reference about amphibians.

Dr. Frost's is a decidedly 21st-century endeavor. He manages Amphibian Species of the World, an online database and classification system for about 7,000 amphibian species, of which about 6,000 are frogs. The database lists all scientific and English names, and their synonyms, for each species; it also references not only the papers in which each name was introduced, but also all the literature that has allowed scientists to construct the amphibian tree of life.

Species in the database have as many as 50 names coined by different researchers at different times. For example, the common toad, *Bufo bufo*, has 53 Latin synonyms—with references dating from 1554 to 2010—and four English names. The list of synonyms, presented in the order that they were introduced, is a “nomenclatural history” for each species, Frost says.

The database also has an important role in conservation efforts. Launched as a print publication in the 1980s, it has helped the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, which today lists 131 amphibians as regulated species. The current database serves as a dictionary for species names so that regulators of wildlife trade can “speak the same language,” says Frost.



Featuring 40 essays by Museum curators and other specialists, *Natural Histories: Extraordinary Rare Book Selections from the American Museum of Natural History Library* (Sterling Signature, 2012) showcases spectacular holdings from the Rare Book Collection and includes suitable-for-framing prints. *Natural Histories* is available from [amnhshop.com](http://amnhshop.com).

The second of a four-part series, the following excerpts highlight essential works from the 18th and 19th centuries about amphibians and reptiles.

**AUGUST JOHANN RÖSEL VON ROSENHOF STANDS OUT** among early naturalists and natural history artists for his detailed observations and highly accurate illustrations. Indeed, his *Historia naturalis ranarum nostratium* (*Natural history of the native frogs*) remains one of the most beautifully illustrated natural history books of all time.

Born in 1705 in the German principality of Arnstadt-Schwarzburg, August Johann Rösel came from a line of artists. His grandfather was a painter of animals and landscapes, as was his uncle. When August was orphaned at a young age, his godmother, seeing artistic talent in the young man, sent him for training to his uncle. Subsequently, August was apprenticed to Johan Daniel Preisler in Nuremberg for advanced artistic training. In 1726, he became a painter of portraits and miniatures to the Danish Court, in Copenhagen.

He returned to Nuremberg in 1728. It was there that he was introduced to Maria Sibylla Merian's richly illustrated book, *Metamorphosis insectorum Surinamensium* (1705), which inspired him to study German insect species and produce a similar work. This fascination with the natural world dominated the rest of his life.

In 1737, August married, and while his artistic talent provided him a comfortable living from painting, he used his remaining time to observe insects, amphibians, and reptiles. He collected eggs and larvae of insects and amphibians in order to study their development and metamorphoses. His detailed observations, made more useful by the accompanying illustrations, were published in two large multipart volumes—one on insects, the second on frogs.

In 1740, the first part of the first volume—*Der monatlich-herausgegeben Insecten-Belustigung*—appeared, with four additional parts following. The work was noted not only for the beautiful illustrations, but also for the scientific approach to describing and classifying the insects. As a result, Rösel is regarded as one of the fathers of German entomology.

In 1753—the year he added “von Rosenhof” to his name—he published the first part *Historia naturalis ranarum nostratium*, which was completed in 1758. The quality of the work, particularly its illustrations, makes it one of the most beautiful works devoted to these amphibians. Twenty-four folio plates produced by copper engravings show the habitats, reproductive behavior, anatomical preparations, individual organs, skeletons, and various stages of larval development.

The enormous amount of detailed, accurate information in this volume compares strikingly with contemporary works. Mark Catesby's 1754 volume *The natural history of Carolina, Florida, and the Bahama Islands* illustrates amphibians in ways that are unrealistic and frequently barely identifiable. Albert Seba's *Locupletissimi rerum naturalium thesauri accurata descriptio* is typical of the time for illustrating fictional organisms along with accurate depictions of those that did exist. Even the iconic 1758 catalog of life by Carl Linnaeus, *Systema naturae*, is spare. Rösel's volume represents the beginning of accurate life-history observation in amphibians.

Rösel von Rosenhof started a third volume, on lizards and salamanders—considered to be closely related at the time—but died unexpectedly, apparently of a stroke, on March 27, 1759, before he was able to complete it. ④

Darrel R. Frost is curator-in-charge in the Division of Vertebrate Zoology.

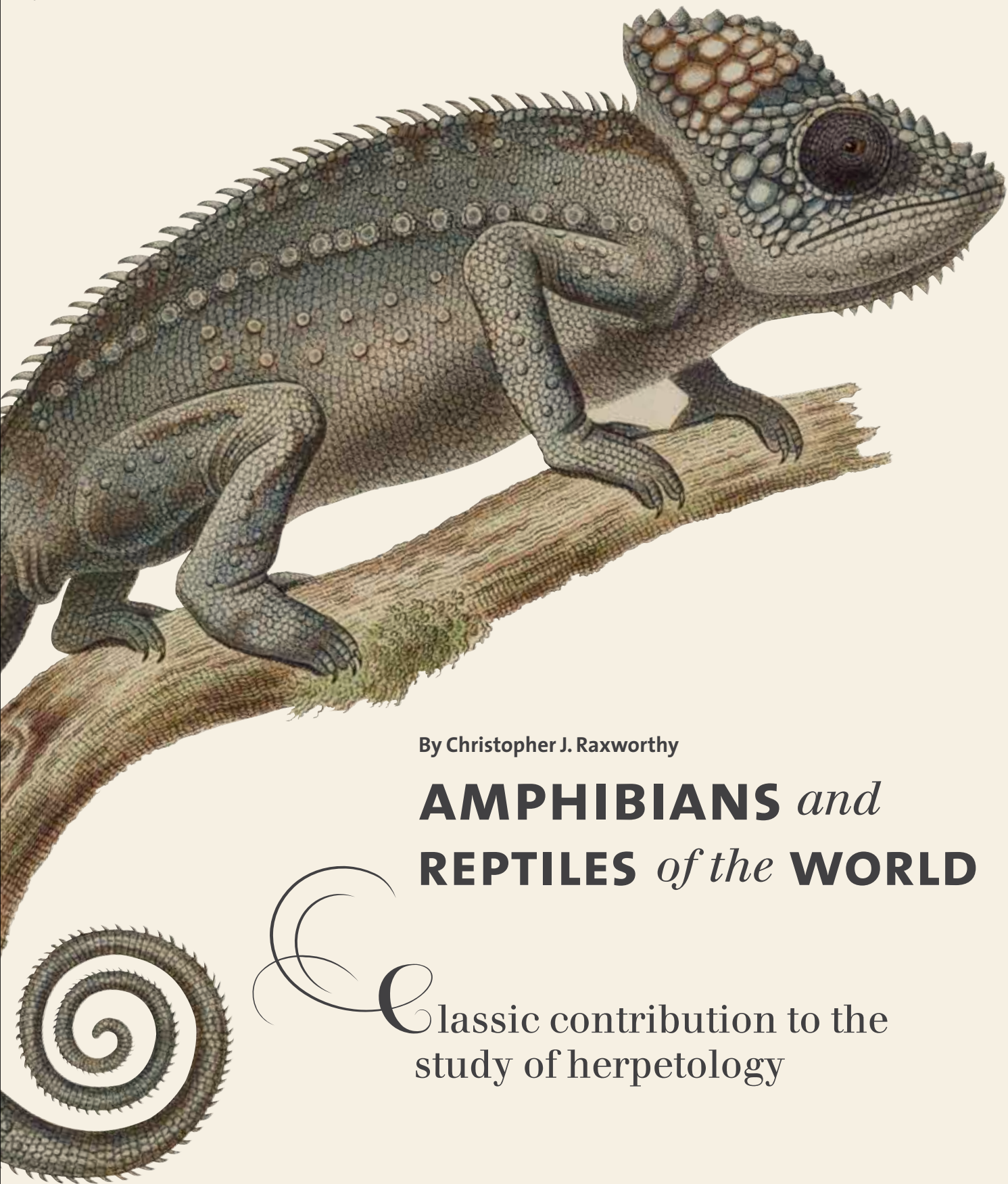
By Darrel R. Frost

# NATURAL HISTORY *of* FROGS

A beautiful work devoted to amphibians







By Christopher J. Raxworthy

# AMPHIBIANS *and* REPTILES *of the* WORLD

Classic contribution to the study of herpetology

AT THE START OF THE 18TH CENTURY, there was only a rudimentary understanding of the global diversity of amphibians and reptiles. Yet for the Muséum National d'Histoire Naturelle in Paris, this was a time of massive growth of its herpetological collections, as specimens from all over the world were being amassed as a result of France's economic and military power. During this period, André-Marie-Constant Duméril became responsible for curating the largest and most diverse herpetological collection in the world.

A physician and anatomist by training, Duméril focused his research on developing a revised higher-level taxonomic organization for all genera of amphibians and reptiles, as well as detailed descriptions of the many new species that were being discovered. For this enormous latter task, Duméril was aided by his chief assistant, Gabriel Bibron, who carefully examined and described much of the museum's collection between 1832 and 1848. In 1834, they published the first volume of the *Erpétologie générale*, with the ultimate goal of providing the first comprehensive scientific account of the amphibians and reptiles of the world.

The *Erpétologie générale, ou histoire naturelle complète des reptiles* was published over a period of 20 years, between 1834 and 1854, as a nine-volume set with an 1854 atlas of plates. The series included detailed descriptions of 1,393 species with 108 beautifully drawn plates. The hand-painted color plates are remarkable for their life-like poses taken from dead and sometimes poorly preserved museum specimens. Their depictions required considerable skill from the artists and authors, as well as some guesswork, especially concerning coloration in life, which was impossible to preserve after death. Many new species were described in these volumes, and complete bibliographies and summaries of each group's biology were also provided.

The entire work projects a strong feeling of great confidence, authority, and understanding from the authors; reading this today, you still get the impression that this catalog is comprehensive and complete. Sadly, Duméril's chief assistant, Gabriel Bibron, died prematurely of tuberculosis in 1848, before the series was completed, which led to a hiatus in publication. However, Auguste Henri André Duméril, the son of A.-M.-C. Duméril, completed Bibron's work for Volumes 7 and 9 and the atlas. Inevitably, over the course of 20 years, the earlier volumes became incomplete, as a large quantity of new specimens continued to be catalogued in Paris and new species described. Yet Winterestingly, the authors chose not to update or supplement these earlier volumes within the *Erpétologie générale*, perhaps in recognition of the ever-expanding species diversity and of A.-M.-C. Duméril's primary interest in the higher-level taxonomic organization of amphibians and reptiles.

It is difficult to overemphasize the importance of the *Erpétologie générale* to the field of herpetology. This series set a standard for herpetological reference, with copies deposited in many of the major scientific libraries of the period, and because of the accuracy of the species descriptions, it continues to be widely used and cited today. However, the taxonomic organization that A.-M.-C. Duméril used is now considered completely unconventional by today's scientific community. For instance, in the *Erpétologie générale*, amphibians are treated as one of the four orders within Reptilia, along with turtles, snakes, and lizards (which also included crocodiles).

Our volumes were gifted to the American Museum of Natural History in 1922 from the library of Robert L. Stuart, a founder of the Museum and its second president. Due to the academic utility and longevity of the *Erpétologie générale*, the library here has bound the atlas volume's plates into each volume in order to aid in their practical use by researchers. As a testament to the ongoing significance of these volumes, complete digital versions have recently become available online at the Biodiversity Heritage Library—of which the American Museum of Natural History is a founding member—and almost half of the Museum library's volumes were on loan to staff herpetologists at the time of writing this article. Together, these rare, original library copies—and digital versions—will ensure that the *Erpétologie générale* continues to exist as a vibrant living contribution to the study of herpetology. 📖

Christopher J. Raxworthy is associate curator in the Division of Vertebrate Zoology and associate dean of science for education and exhibition.

## Studying Evolution, Preventing Extinction of Reptiles in Madagascar

In the course of his work studying the reptiles and amphibians of Madagascar, Associate Curator **Christopher Raxworthy** often refers to a classic 19th-century herpetological text: *Erpétologie générale*, by André-Marie-Constant Duméril, of the Paris Museum of Natural History. It's a work that Raxworthy says is quite important, so he jumped at the chance to highlight it as part of *Natural Histories: Extraordinary Rare Book Selections from the American Museum of Natural History Library*. "This was the first attempt to bring together a complete review of all reptile and amphibian species in the world," says Dr. Raxworthy of the book.

Like Duméril, Raxworthy studies species diversity, specifically the evolutionary history of chameleons and geckos in Madagascar, which evolve in isolation on the island country. Most of Madagascar's amphibian species exist nowhere else.

Conserving these rare species is another aspect of Raxworthy's work. By combining satellite information about terrain and climate with records about where chameleons have been found in the past, he has developed models to predict new chameleon habitats. Knowing, or at least predicting, where species live is the first step to protecting them, says Raxworthy.



#### AFTER A PAINSTAKING, YEARLONG PROCESS OF

restoration, the spectacular dioramas in the Jill and Lewis Bernard Family Hall of North American Mammals are back to doing what they were always meant to do: transporting visitors to beautiful vistas as far away as Yellowstone or Alaska.

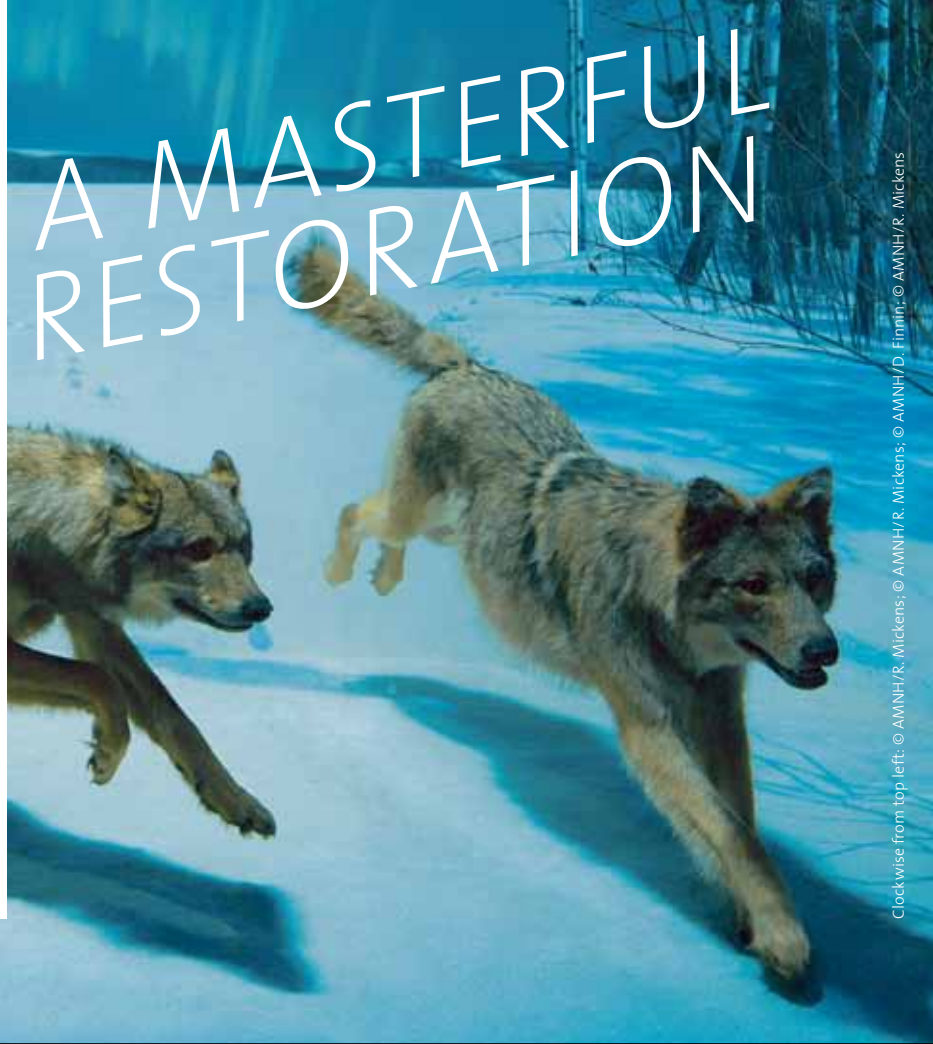
The tradition of habitat dioramas at the Museum is a storied one, beginning with ornithologist Frank Chapman's research trips to create the Hall of North American Birds. Carl Akeley perfected taxidermy methods in the Akeley Hall of African Mammals, which he imagined would provide visitors with glimpses of African landscapes as though through the windows of a moving train. At a time when nature photography and film, not to mention international travel, were still rare, the experience of standing before a carefully crafted scene—re-created with strict attention to detail from field sketches and photographs taken at the site depicted—was as close as many would get to an African safari.

By the time the Hall of North American Mammals opened to the public in 1943, initially with 10 dioramas, images of wildlands and wildlife were much more readily available. And yet, the visceral experience of standing just several feet away from a towering brown bear could hardly be replicated, outside an (ill-advised) encounter in the wild.

That is still the case today. While there are many ways to see beautiful images of North American wildlife—including in the new Hall of North American Mammals app released by the Museum for iOS and Android—the Museum's expert restoration of the hall's dioramas has brought back color to fur, sheen to leaves, and crispness to grass, giving the scenes an immediacy and power unique to the medium.

"Here in the Bernard Family Hall of North American Mammals, you can walk the Great Plains of 150 years ago in company with a magnificent herd of bison, or share a narrow ledge with some white sheep high above the waters of an Alaskan fjord, or peer into the setting sun as a jaguar stands right next to you," says Ross D. E. MacPhee, curator in the Department of Mammalogy, who served as supervising curator of the restoration. "You cannot see a better show featuring this kind of wildlife art informed by up-to-the-minute science anywhere else on the planet." 📖

Hear Museum conservators who were part of the team that restored the Bernard Family Hall of North American Mammals at the January 16 lecture for Members. See page 14 for details.



Clockwise from top left: © AMNH/R. Mickens; © AMNH/R. Mickens; © AMNH/D. Finnini; © AMNH/R. Mickens

#### LENDING VIVID SCARLET, GREEN, AND UMBER

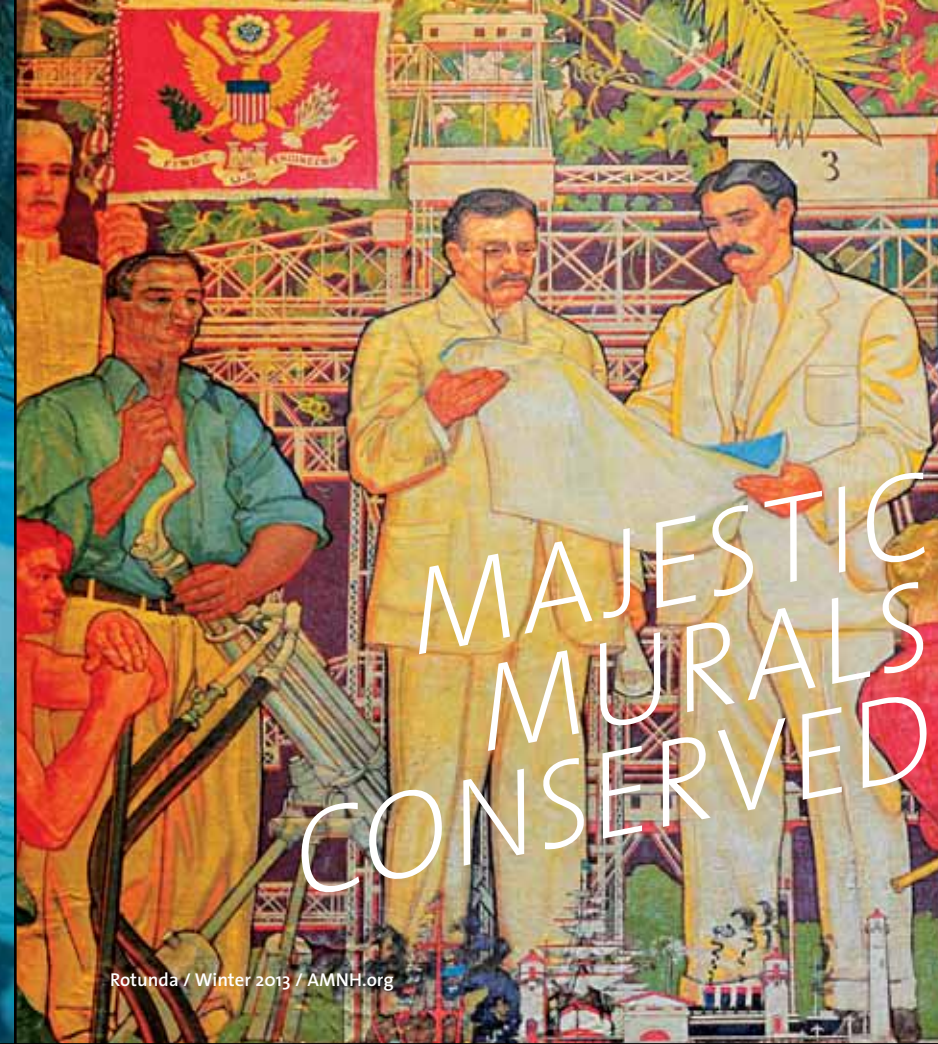
tones to the Theodore Roosevelt Rotunda, the expertly restored monumental murals depicting moments in the public life of Theodore Roosevelt are back on view in the Museum's grand entrance hall.

The mural conservation was part of the three-year renovation of the Theodore Roosevelt Memorial at the American Museum of Natural History, New York State's official memorial to its 33rd governor and the nation's 26th president—and a tribute to the enduring legacy of the man known as the Conservation President for his unprecedented efforts in placing some 250 million acres under federal protection.

Completed in 1935 by artist William MacKay, the three murals are some of the largest indoor murals in New York City, measuring 34 feet high and 62 feet wide. They are rich in symbolic imagery and celebrate three moments in Roosevelt's public life. The south mural depicts Roosevelt's role in the signing of the Treaty of Portsmouth, which ended the Russo-Japanese War; for his role in resolving the conflict, Roosevelt was awarded the Nobel Peace Prize in 1906. The west mural portrays Roosevelt's post-presidential African expeditions in 1909 and 1910. On the northern hall of the wall, the mural illustrates the building of the Panama Canal. Here, Roosevelt is shown conferring with Chief Engineer John F. Stevens, but on your next visit look for an army medical officer holding a test tube—an emblem of scientific research and a reference to the fact that Roosevelt drew on research to make a decision that ultimately saved thousands of lives. As yellow fever swept Panama, Roosevelt lent his support to then-controversial findings that a mosquito, and not poor sanitation, spread the disease. Destroying mosquitos' breeding places helped eliminate yellow fever in Panama within months. The same mural includes a depiction of Roosevelt's arduous expedition to map Brazil's River of Doubt in 1914, on which he was accompanied by naturalists from the Museum.

The conservation treatment, the first comprehensive effort since the murals were completed *in situ* more than 70 years ago, required conservators to remove portions of the canvases to repair them off-site as well as careful work to remount and restore the murals to their brilliant original appearance. 📖

Explore connections to the Conservation President throughout the Museum with the Theodore Roosevelt Tour on the AMNH Explorer app or online at [amnh.org](http://amnh.org).



## MAJESTIC MURALS CONSERVED



Programs and Events

For more programs and to purchase tickets, visit [amnh.org/calendar](http://amnh.org/calendar).

For updates and reminders, sign up for monthly eNotes for Members by sending your membership number and request to subscribe to [members@amnh.org](mailto:members@amnh.org). The Museum does not trade, rent, or sell this information.

Tickets

Tickets are available by phone at 212-769-5200, Monday–Friday, 9 am–5 pm, or by visiting [amnh.org](http://amnh.org). Please have your Membership number ready.

Availability may be limited. Please purchase tickets in advance.

Please be aware that ticket sales are final for all Member programs. All programs go ahead rain or shine. There are no refunds unless the program is cancelled by the Museum.

JANUARY

**Walk on the Wild Side**  
Wednesdays, January 2–March 27  
8–9:30 am  
Free for Adventurer-level Members and above (Registration required; call 212-769-5606)  
Join a fitness walk through the Museum’s halls, then enjoy breakfast in the Akeley Hall of African Mammals. Ages 18 and up.

**Wild, Wild World: Wolves**  
Saturday, January 5  
11 am (for children 5 and under), 1 pm, or 2:30 pm  
Member tickets are \$10  
Meet an Arctic gray wolf from the Wolf Conservation Center.

**How To Feed a Growing Planet**  
Thursday, January 10  
7 pm  
Member tickets are \$13.50  
This exciting round-table discussion with best-selling author **Raj Patel**, former USDA Deputy Under Secretary **Molly Jahn**, and chef and UNICEF Ambassador **Marcus Samuelsson** will focus on global food security.

**Theodore Roosevelt Tour of the Museum**  
Sunday, January 13 or Sunday, February 10  
3–4:30 pm  
Free for Members  
Join a Museum tour highlighting connections to Theodore Roosevelt, the Conservation President.

**Near-Earth Objects**  
Monday, January 14  
7:30 pm  
Member tickets are \$13.50  
NASA’s **Donald Yeomans** discusses the science of asteroids and other near-Earth objects. Book signing to follow.

**Lecture: The Restoration of the Bernard Family Hall of North American Mammals**  
Wednesday, January 16  
6:30–8:30 pm  
Member tickets are \$12  
Get an intimate view of the restoration of the iconic dioramas of the Bernard Family Hall of North American Mammals from Museum conservators.

**Members-only Highlights Tours**  
Saturday, January 19 or Saturday, February 16  
3–4:30 pm  
Free for Members  
Join an insiders’ tour of the Museum’s most splendid dioramas and spaces.

**Adventures in the Global Kitchen: American Foods, Indian Flavors**  
Tuesday, January 22  
6:30 pm  
\$30 per person  
Investigate Indian flavors with **Chef Floyd Cardoz** of Bravo’s Season 3 “Top Chef Masters.”

**Behind the Scenes Tour: Earth and Planetary Sciences (Making Planets)**  
Tuesday, January 22  
6:30–7:30 pm (family-friendly tour), 7–8 pm, 7:30–8:30 pm  
\$35 per person  
Go behind the scenes to find out how geologists use rocks from planetary bodies, lunar bodies, and asteroids to understand planet formation. Ages 10 and up.

Exhibitions

Admission is by timed entry only.

**Our Global Kitchen: Food, Nature, Culture**  
Free for Members  
Celebrate culture and cooking, historic meals and markets, and moments in our lives that we mark with food—as well as the ingredients that we have discovered and shaped over the course of thousands of years.

**The Butterfly Conservatory**  
Member tickets are \$12.50 adults, \$8 children  
See up to 500 live, free-flying tropical butterflies in a vivarium that approximates their natural habitat.

**Winged Tapestries: Moths at Large**  
Free for Members  
Witness the arresting beauty of night-flying moths in more than 30 large-format prints.

**Picturing Science: Museum Scientists and Imaging Technologies**  
Free for Members  
More than 20 sets of spectacular large-format images showcase the wide range of Museum research being conducted with cutting-edge imaging technologies.

**IMAX Movie Flight of the Butterflies**  
Member tickets are \$12.50 adults, \$8 children  
Accompany half a billion monarch butterflies on the 3,000-mile journey they undertake each fall through the United States to Mexico—Earth’s longest and most amazing insect migration.

**Global Weekends: Festival Luna**  
Friday, January 25 or Saturday, January 26  
Noon–5 pm  
Free for Members  
This family-friendly program explores traditions celebrating the Moon.

**King Corn and Filmmaker Discussion**  
Tuesday, January 29  
6:30–8:30 pm  
Member tickets are \$12  
Enjoy a screening of *King Corn* and discussion with the filmmakers.

**Astronomical Calendar**  
Tuesday, January 29  
6:30 pm  
Member tickets are \$13.50  
Learn to find seasonal constellations.

FEBRUARY

**Sackler Brain Bench One-Day University: Your Food, Your Future**  
Saturday, February 2  
9:30 am–4 pm  
\$95 per person  
Join a special all-day event devoted to studying the future of food.

**Hayden Planetarium Space Show: Journey to the Stars**  
Member tickets are \$12.50 adults, \$8 children  
*Journey to the Stars* launches viewers through time and space to experience the life and death of the stars in our night sky.

**Inspired by Nature: Creative Writing with Hannah Tinti**  
Tuesdays starting February 5  
6–8:30 pm  
Member price is \$295  
Writer **Hannah Tinti** teaches this five-session creative writing class, with each session held in a different Museum gallery.

**SciCafe: Modeling Origins of Planets, Stars, and Galaxies**  
Wednesday, February 6  
7 pm  
Free with cash bar; 21+ with ID  
Curator **Mordecai-Mark Mac Low** will discuss his research on the formation and evolution of planets, stars, and galaxies.

**Winter Lunchtime Bird Walks in Central Park**  
Four Thursdays, starting February 7  
Noon–1:30 pm  
\$50 for the series  
Ornithologist **Paul Sweet** leads this walk in Central Park.

**Observe and Collect: Diorama Drama**  
Saturday, February 9  
11 am, 1 pm, or 2:30 pm  
Member tickets are \$10  
Join exhibition specialist **Tom Doncourt** for a behind-the-scenes look at dioramas.

*Credits*  
The exclusive corporate sponsor for Our Global Kitchen is **J.P. Morgan**.

*Additional support for*  
Our Global Kitchen and its related educational and online resources has been provided by **GRACE Communications Foundation**.

*The Kitchen Experience in*  
Our Global Kitchen is presented by **Whole Foods Market**.

**Heart of Darkness**  
Monday, February 11  
7:30 pm  
Member tickets are \$13.50  
Astrophysicist **Jeremiah Ostriker** discusses dark energy. Book signing to follow.

**Discovery Night**  
Monday, February 11  
6–8:30 pm  
Free for Members (Registration required; call 212-769-5606).  
Roam the Museum after hours. Take part in self-guided tours, and enjoy our special exhibitions during this evening especially for Members.

**Behind the Scenes Tour: Museum Library**  
Wednesday, February 13  
6:30–7:30 pm (family-friendly tour), 7:30–8:30 pm  
\$35 per person  
Museum Library Director **Tom Baione** and Director of Darwin Manuscripts Project **David Kohn** show items from our Rare Book collections and more. Ages 10 and up.

*Lord & Taylor is the proud sponsor of*  
The Butterfly Conservatory.

*Winged Tapestries: Moths at Large, featuring the art of Jim des Rivières, is produced by the Canadian Museum of Nature, Ottawa, Canada.*

*The presentation of* Winged Tapestries *at the American Museum of Natural History is made possible by the generosity of the* Arthur Ross Foundation.

**Romance Under the Stars**  
Thursday, February 14  
6:30–9 pm  
\$85 (includes open bar and appetizers)  
Celebrate the holiday at the Hayden Planetarium with a cocktail party, the music of the Josh Rutner Quartet, and a romantic view of the night sky in the dome.

**Stories We Tell**  
Saturday, February 23  
Noon–6 pm  
Free for Members  
With special guests and performers, the Museum honors African-American History Month in this festival for the whole family.

**Star Party**  
Thursday, February 28  
6:30–9:30 pm  
Free for Voyager-level Members and above (Registration required; call 212-769-5606)  
Enjoy star gazing, cocktails, special presentations in the Hayden Planetarium, activities for children, and more.

*The presentation of* Picturing Science *at the American Museum of Natural History is made possible by the generosity of the* Arthur Ross Foundation.

*Credits continue on page 16*



MARCH

**SciCafe: Using Genetic Research to Study Malaria**  
**Wednesday, March 6**  
**7 pm**  
Free with cash bar; 21+ with ID  
Associate Curator **Susan Perkins** discusses malaria research.

**Members-only Highlights Tour**  
**Sunday, March 10**  
**10:30 am–noon**  
Free for Members  
Join an insiders’ tour of the Museum’s most splendid dioramas and spaces.

**Milstein Science Sunday Ocean Eats**  
**Sunday, March 10**  
**11 am–4 pm**  
Free for Members  
Explore humans’ relationship with oceans in this family-friendly program.

**Shark: A Visual History Lecture with Richard Ellis**  
**Tuesday, March 12**  
**6:30 pm–8:30 pm**  
\$12 per person  
Author and environmentalist **Richard Ellis** brings together art and science in an exploration of sharks.

**Forest Unseen: A Year’s Watch in Nature**  
**Wednesday, March 13**  
**6:30 pm**  
Member tickets are \$13.50  
Author **David Haskell** describes his close study of one square meter of old growth forest, a journey to the edge of biological knowledge.

**Animal Drawing**  
**Eight Thursdays, starting March 14**  
**7–9 pm**  
\$160 for the series  
Artist **Patricia Wynne** leads this unique drawing course with Museum as setting.

**Isaac Asimov Memorial Debate: The Existence of Nothing**  
**Wednesday, March 20**  
**7:30 pm**  
Member tickets are \$13.50  
Join Hayden Planetarium Director **Neil DeGrasse Tyson** at the annual Isaac Asimov Memorial Debate. Tickets are on sale now at [amnh.org](http://amnh.org). This event sells out each year!

**Adventures in the Global Kitchen: Foraging**  
**Thursday, March 21**  
**6:30 pm**  
\$30 per person  
**Tama Matsuoka Wong** discusses foraging for wild foods.

**Member Preview: Whales**  
**Thursday, March 21**  
**4–8 pm**  
Free for Members (Registration required; call 212-769-5606)  
View this exciting new exhibition, then enjoy a glass of wine at a reception with other Members.

THIS SUMMER

**Summer Natural History Courses in Arizona**  
Explore summer natural history courses in animal behavior, Lepidoptera, and much more at the Museum’s Southwestern Research Station in the rural mountains of southeastern Arizona. Visit [research.amnh.org/swrs/education](http://research.amnh.org/swrs/education) to sign up.

*Program credits: The Presenting Sponsor of the Museum’s cultural public programming is **MetLife Foundation**.*

*SciCafe is proudly sponsored by **Judy and Josh Weston**.*

*Human Health SciCafes are supported by the **National Center for Research Resources and the Division of Program Coordination, Planning, and Strategic Initiatives of the National Institutes of Health through Grant Number R25 OD011093**.*

*Hayden Planetarium Programs are proudly supported by **Con Edison**.*

*The Museum greatly acknowledges **The Mortimer D. Sackler Foundation, Inc.** for its support to establish the **Sackler Brain Bench**, part of the Museum’s **Sackler Educational Laboratory for Comparative Genomics and Human Origins**, in the **Spitzer Hall of Human Origins**.*

*The **Milstein Science Series** is proudly sponsored by the **Paul and Irma Milstein Family**.*

*Credits continue from page 15*

*Journey to the Stars was produced by the American Museum of Natural History, the Rose Center for Earth and Space, and the Hayden Planetarium.*

*Developed by the American Museum of Natural History, New York (amnh.org), in collaboration with the California Academy of Sciences, San Francisco; GOTO INC, Tokyo, Japan; Papalote • Museo del Niño, Mexico City, Mexico; and Smithsonian National Air and Space Museum, Washington, D.C.*

*Journey to the Stars was created by the American Museum of Natural History, with the major support and partnership of **NASA**, Science Mission Directorate, Heliophysics Division.*

*Made possible through the generous sponsorship of **Lockheed Martin Corporation**.*

*And proudly sponsored by **Accenture**.*

*Supercomputing resources provided by the Texas Advanced Computing Center (TACC) at The University of Texas at Austin, through the TeraGrid, a project of the National Science Foundation.*

JANUARY

**2**  
**Wednesday**  
Walk on the Wild Side begins

**5**  
**Saturday**  
Wild, Wild World: Wolves

**10**  
**Thursday**  
How to Feed a Growing Planet

**13**  
**Sunday**  
Theodore Roosevelt Tour of the Museum

**14**  
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Near-Earth Objects

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Behind the Scenes Tour: Earth and Planetary Sciences (Making Planets)

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*King Corn* and Filmmaker Discussion

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Sackler Brain Bench One-Day University: Your Food, Your Future

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Observe and Collect: Diorama Drama

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Heart of Darkness

Discovery Night for Members

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MARCH

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**12**  
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**13**  
**Wednesday**  
Forest Unseen

**14**  
**Thursday**  
Animal Drawing begins

**20**  
**Wednesday**  
Isaac Asimov Memorial Debate

**21**  
**Thursday**  
Adventures in the Global Kitchen: Foraging

*Whales: Giants of the Deep* Member Preview

**23**  
**Saturday**  
*Whales: Giants of the Deep* opens



# Moths in the Limelight

Clockwise from top left: scarlet-winged lichen moth; sagebrush girdle moth; luna moth; great tiger moth; cecropia moth; io moth

By far the largest and oldest group in the order Lepidoptera, moths are usually overshadowed by their flashier cousins, the butterflies. But they are finally getting their due in *Winged Tapestries: Moths at Large*, a photo exhibition now open at the Museum.

“Few people realize that butterflies are moths,” says David Grimaldi, curator in the Division of Invertebrate Zoology, who oversaw the exhibition. “It is very important to dispel the artificial and unnatural distinction between butterflies and moths. Butterflies are merely a small, recently evolved line of day-flying moths. Saying there are two categories of Lepidoptera is like saying there are trees and there are maples.”

Primitive moths appeared about 195 million years ago, whereas the oldest butterfly fossil is about 55 million years old. Today, moths outnumber butterflies 15 to 1, with approximately 150,000 described species of moths worldwide, compared to 10,000 butterfly species.

Accompanying the photo exhibition, which originated at the Canadian Museum of Nature in Ottawa, are specimens from the Museum’s collection. With some 3.5 million specimens, the Museum’s collection of moths and butterflies is among the five largest in the world.

In *Winged Tapestries*, 34 large-format images, scanned at a very high resolution by Ottawa-based photographer Jim des Rivières, reveal moths to be striking in their diversity and eye-catching detail. While moths tend to be less brightly colored, they often exhibit more complex patterns, intricate paisleys and tweeds.

“Although people can still see plenty of lovely live species in *The Butterfly Conservatory*,” says Dr. Grimaldi, who is also the curator of *The Butterfly Conservatory: Tropical Butterflies Alive in Winter*, “in this photo show, we have macro or relatively large moths. They’re gorgeous and fairly common species in North America.”

In contrast to diurnal butterflies, which are thought to warn off predators or attract mates with their brilliance, moths are camouflaged to function at night.

“Butterflies are conspicuous,” Grimaldi says. “They advertise themselves. Moths don’t.”

*Winged Tapestries: Moths at Large*, featuring the art of Jim des Rivières, is produced by the Canadian Museum of Nature, Ottawa, Canada.

The presentation of *Winged Tapestries: Moths at Large* at the American Museum of Natural History is made possible by the generosity of the Arthur Ross Foundation.



# Members-Only Sleepover a Hit



Book ahead for the next Members-only sleepover on August 10, and check out other dates this winter and spring.

After word went out that, on a certain date last summer, Members would have exclusive access to the Museum’s highly popular sleepover program, *Night at the Museum*, more than 300 Member children and their chaperones arrived at the appointed hour with their sleeping bags, flashlights, and other gear for an overnight like no other.

“The response was fantastic,” says Leslie Martinez, manager of the sleepover program. “And 95 percent had never been to a sleepover before!”

**We wanted Members to feel a deeper connection to the Museum, and found that sleepovers are a great tool for doing that.**

— LOUISE ADLER,  
Director of Membership

As for Members who had been to previous sleepovers, this one was special. “The Members-only sleepover was more intimate,” says Susan Sterikoff of Kenil, New Jersey, mother of 9-year-old Jessica, who has slept over at the Museum three times in the past two years.

At the Members-only sleepover, the agenda was amended to include more science than usual. Museum scientists joined the festivities to give presentations and interact with the children. At the end of the evening, astronomer Ted Williams gave a special presentation on viewing the night sky in the Hayden Planetarium Space Theater. The latter was not lost on Jessica.

“She was fascinated by the astronomy talk,” says Sterikoff. “And we have gone star-watching a few times since the sleepover.”

“We wanted Members to feel a deeper connection to the Museum, and we found that sleepovers are a great tool for doing that through the enhanced science-related programs, not to mention after-hours access to the halls,” says Louise Adler, director of Membership.

“It was completely magical,” wrote another parent in a follow-up survey. Or, as one boy told his mother the next morning, “I will remember this for the rest of my life.” In fact, the Museum’s first-ever Members-only sleepover was such a success, a second one is planned for August 10, 2013.

Visit [amnh.org/sleepovers](http://amnh.org/sleepovers) for additional information.

## Best Birthday Party Ever!

What parent or grandparent doesn’t dream of giving his or her little girl or boy the most memorable experience? And what fits that bill better than a birthday party at the American Museum of Natural History?

Open to Members at the Family level or above, birthday parties at the Museum, coordinated by Linda Kaye’s Birthdaybakers Partymakers, are available at various times, seven days a week. Choose from four themes—Underwater Treasure, Safari Adventure, Cosmic Blast-Off, and Dinosaur Discovery—for two hours of fun-filled activities for up to 25 children ages 4 and up.

Party fees include admission to the Museum for each guest, use of the Birthday Café for the party—including table covers, cake plates, and napkins—and a crown for the birthday boy or girl. Food is provided by the Museum’s in-house caterer, Restaurant Associates, and kosher options are available upon request. Ask too about custom goody bags and custom cakes or having the children decorate the cake or cookies as part of the fun.

Party coordinators, leaders, and assistants will help make your event run smoothly. Theme-related characters, entertainers, photographers, and videographers are another party extra available on request.



For more information, contact Linda Kaye’s Birthdaybakers Partymakers at 212-288-7112 or call the Museum’s Membership office at 212-769-5606.

Photo © AMNH/D. Finnin

# Summer Interns Offer Fresh Approach To Hall Tours

To walk through the Museum with a Museum Education and Employment Program (MEEP) intern is to see it in a whole new way. These college students, who in summer lead tours for camp groups, bring a unique perspective to the Museum’s halls and exhibits. While all of the MEEPers, as interns are known, use the Museum’s resources to structure their tours, some also draw on their college courses and life experiences.

## Drawing on Dance

Anthony “Andy” Rosado, 21, is a senior theater-dance major at Trinity College in Hartford, Connecticut. In his energetic presentation on animal life throughout various halls, he used fundamentals of dance as a way to encourage his young charges to understand that “movement is based on the environment one is in.”

On encountering chimpanzees in the Spitzer Hall of Human Origins, he suggested campers walk on all fours to see how difficult that is for us bipedal humans. In the Milstein Hall of Ocean of Life, he pointed out the difference between how the blue whale, a mammal, has a horizontal tail that undulates up and down while fish, like the shark, have vertical tails that move from side to side. He asked the children to clasp their hands behind their backs, thumbs entwining as if they have a horizontal whale tail, and imagine pushing their way through water. “Listen to your bodies,” he told them.

Sometimes Rosado’s dance analogies were more direct. The chimpanzees, for example, were “in a perpetual pli  .” He especially enjoyed telling the kids to notice how a jellyfish pulses to move in a video in the recent exhibition *Creatures of Light: Nature’s Bioluminescence*.

“It’s as if they have a muscle tutu!” he said.

## Looking at Cycles

Stivaly Paulino, 19, is an environmental engineering major entering her sophomore year at the City College of New York, Harlem campus. Her main interest is water.

“In my senior year in high school in an environmental science class we took a trip to a sewage treatment plant,” she explained. “It smelled really bad but then I realized how important it was for us here. New York City uses so much water.”

She sees herself eventually working at a sewage treatment facility. “It’s not a typical career choice,” she allows. “Maybe I’ll travel the world helping build water systems for underprivileged communities.”

Paulino used the dioramas in the Hall of North American Forests and the Warburg Hall of New York State Environment to convey basic natural processes to the children—the water cycle of evaporation, condensation, and precipitation, for example, or the food chain. At the Forest Community display, where the scene includes the lifeless body of an owl, one of the children inevitably calls out, “But the owl died!”

Paulino is prepared. “I explain that life itself is a cycle,” she says. “Even if something passes away and you don’t see it anymore, it’s still going to be part of the Earth and continue on.”

  AMNH / R. Mickens

## Reading Body Language

Lydia Aponte, 21, is in her senior year at Marymount Manhattan College. A communication-arts major, she used concepts of nonverbal communication to enliven her tour. In the Hall of Plains Indians, for example, Aponte directed her group to the Blackfoot Bull Child, whose body is painted bright yellow and is covered with a variety of painted shapes and lines. He offers the starting point for a discussion of symbolism. What is a symbol? What do each of these painted shapes mean? The group learns that blue dots on his body represent stars, the half-crescent shape on his chin, the Moon, and the lines on his arms and legs, rainbows. Together, they convey the message that he is a shaman specializing in weather control.

Aponte didn’t just focus on human cultures, however. She also urged her students to consider the signals sent by animals in the Hall of Asian Mammals through various postures and positions. Look at the aggressive “body language” of the tigers and leopards, she told her tour group. Or how a pack of wild dogs, baring their teeth, surrounds an Indian deer called a sambar, while the sambar stares them down, maintaining intense eye contact. “Who do you think will win?” she asked. (Spoiler alert: one wild dog already lies dead behind the sambar’s hind hooves.)

Aponte’s own communication skills paid off. After one year as a summer MEEPer, she returned this past summer as a supervisor for the program.

Applications for Summer 2013 Museum Education and Employment Program (MEEP) paid internships are available in January. For more information about the program, visit [amnh.org](http://amnh.org).

The Museum’s Youth Initiatives are proudly sponsored by the leadership contribution of the New York Life Foundation.



Andy Rosado, a 2012 MEEPer, used dance to design his Museum tour.





**1.** The reopening of the Theodore Roosevelt Memorial on October 27 included many opportunities to pose with the new sculpture of Theodore Roosevelt.  
**2.** The new exhibition *Our Global Kitchen: Food, Nature, Culture* opened on November 17, with Members enjoying an exclusive preview on November 14.

**3.** Singers of the IMPACT Repertory Theatre choir blow out the candles on a cake marking TR's 154th birthday on October 27, the reopening of the Theodore Roosevelt Memorial at the Museum.

**4.** Festivities to celebrate the reopening of the Theodore Roosevelt Memorial on October 27 included live-animal programs.  
**5.** The new exhibition *Our Global Kitchen* features an interactive cooking table where visitors can try their virtual hand at making four dishes.

Photos 1, 3, and 4 © AMNH/R. Mickens; photos 2 and 5 © AMNH/D. Finnin

© AMNH / D. Finnin



**1.** Tina Fey, who was Master of Ceremonies at the annual Museum Gala on November 15, pictured with Gala Chairman and Museum Trustee Lorne Michaels.  
**2.** Karen and Charles Phillips, a Museum Trustee, were among the guests at the glittering Gala.

**3.** President Ellen V. Futter and Museum Trustee Steve Denning pictured in the Milstein Hall of Ocean Life during the Museum Gala.  
**4.** Daniel and Leslie Ziff in the Theodore Roosevelt Rotunda during the Museum Gala.

## Save the Date! Upcoming Events at the Museum



**MARCH**  
3/10 Join us for **Milstein Science Sunday**, the first in this season's series of family-friendly programs featuring scientists, hands-on activities, and more.



3/20 Mark your calendar for the **Isaac Asimov Memorial Debate**, moderated by Hayden Planetarium Director **Neil deGrasse Tyson** and featuring top experts in astrophysics debating pressing questions on the frontier of scientific discovery.

3/21 Members will have a chance to see the new special exhibition *Whales: Giants of the Deep*, at an **exclusive preview**.

3/23 *Whales: Giants of the Deep* opens to the public.

**APRIL**  
4/18 Dance the night away at the annual **Museum Dance**, the social event of the season. This year's theme is "Under the Sea." Please call 212-313-7161 for information and tickets.

4/22 Celebrate **Earth Day** by joining the Museum's project, New York is Wild!, on iNaturalist.org.

4/24 The annual **Environmental Lecture and Luncheon** will feature a panel discussion. Please call 212-313-7161 for more information and to purchase tickets.



**MAY**  
5/11 Bring your shells, rocks, feathers, bones, and artifacts to the annual **Identification Day**. Museum scientists will attempt to identify mysterious finds.

5/19 Join us for a special **Milstein Science Sunday** all about whales—under the blue whale.



Central Park West at 79th Street  
New York, New York 10024-5192  
[amnh.org](http://amnh.org)



© AMNH/D. Finnin



The iconic American bison and pronghorn diorama in the Bernard Family Hall of North American Mammals is set in the mid-1800s, when the prairies teemed with tens of millions of bison. A few decades later, fewer than a thousand remained, the species having been hunted to near extinction. Find out how conservation efforts by Theodore Roosevelt and others helped restore the bison population by visiting the Theodore Roosevelt Video Gallery on [amnh.org/roosevelt](http://amnh.org/roosevelt).

## General Information

### HOURS

Museum: Open daily, 10 am–5:45 pm;  
closed on Thanksgiving and Christmas.

### ENTRANCES

During Museum hours, Members may  
enter at Central Park West at 79th Street  
(second floor), the Rose Center/81st Street,  
and through the subway (lower level).

### RESTAURANTS

Museum Food Court, Café on One,  
Starlight Café, and Café on 4 offer  
Members a 15% discount. Hours are  
subject to change.




### MUSEUM SHOPS

The Museum Shop, DinoStore,  
Shop for Earth and Space,  
Cosmic Shop,  
Our Global Kitchen Shop,  
and Online Shop ([amnhshop.com](http://amnhshop.com))  
offer Members a 10% discount.

### PHONE NUMBERS

Central Reservations 212-769-5200  
Membership Office 212-769-5606  
Museum Information 212-769-5100  
Development 212-769-5151

### TRANSPORTATION AND PARKING

Subway:  (weekdays) or  to 81st Street;  
 to 79th Street, walk east to Museum  
Bus: M7, M10, M11, or M104 to 79th Street;  
M79 to Central Park West  
Parking Garage: Open daily, 8 am–11 pm;  
enter from West 81st Street. Members can park  
for a flat fee of \$10 if entering after 4 pm.  
To receive this rate, show your membership card  
or event ticket when exiting the garage.