

# American Museum of Natural History

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## *The Secret World of Elephants* Opens at the American Museum of Natural History

New exhibition explores the 60-million-year evolution of elephants and their relatives, their astounding minds and bodies, interactions with humans and the environment, and what we can do to ensure their survival

Opens November 13

Preview Days for Members Begin November 10



Press kit available [here](#)

How do elephants “hear” with their feet, use the 16 muscles in their trunks, or reshape the forests and savannas they live in, creating an environment upon which many other species rely? [The Secret World of Elephants](#), a special exhibition opening November 13 at the American Museum of Natural History, reveals new science about both modern and ancient elephant relatives, and highlights elephants’

extraordinary minds and senses, why they're essential to the health of their ecosystems, and inspiring efforts to overcome threats to their survival.

"We are delighted to present *The Secret World of Elephants*, a comprehensive look at these intriguing and important animals and the latest scientific thinking about their abilities, environmental roles, social structure, history, and future," said Sean M. Decatur, President of the American Museum of Natural History. "This exhibition is an example of what the American Museum of Natural History does so well: by starting at a point of shared curiosity and fascination we can share larger stories about evolution, the environment, animal behavior, and the interactions between human and animals, thereby expanding understanding of the natural world and our impact on it."

Life-size models—including a scientifically accurate representation of a woolly mammoth shedding its fur—as well as fossils and casts, engaging interactives, and videos reveal the amazing story of these massive mammals.

Majestic as they are, today's elephants offer just a glimpse of their former glory. Once, animals with tusks and trunks lived on almost every continent and many islands. Today, only three elephant species survive, but their abilities remain remarkable. Elephants' trunks, for example, are strong enough to pull down a tree, yet nimble enough to pluck a single blade of grass. They communicate extensively with each other, maintaining complex emotional ties with other herd members. They shape their environment, creating habitat for countless plants and animals. And over centuries of interactions with humans, they've been trained for war and work, and are powerful religious and political symbols across cultures.

"Elephants are the world's largest land animal, but we understand surprisingly little about them," said *The Secret World of Elephants* curator Ross MacPhee, curator *emeritus* in the Museum's Department of Mammalogy. "Researchers are working toward assembling a much more complete picture of elephants and we're learning new secrets about their minds, bodies, and ecological importance every day. We also know elephants face an uncertain future. The global demand for ivory, along with climate change and habitat loss, are pushing them along the path to extinction. If we don't act quickly, elephants could be gone before we ever truly get to know them."

## EVOLUTION

According to fossil evidence, the larger group to which proboscideans (elephants and their close relatives) belong arose not long after the extinction of non-avian dinosaurs, about 60 million years ago. Since then, more than 200 species of proboscideans evolved, living on every continent except for Antarctica and Australia. During the ice ages, between 2.6 million and 11,700 years ago, more than 50 different elephant relatives still roamed the globe—including mammoths and mastodons—but by the end of that period, extinctions had wiped out most giant mammals across the world. Today, only three elephant species remain: African savanna elephants, African forest elephants, and Asian elephants.

In *The Secret World of Elephants*, visitors are introduced to the greater elephant family tree, which reveals that the elephant's closest living relatives are not, as some might assume, large mammals with thick, wrinkly skin—like hippos and rhinos—but aquatic sea cows and furry, rabbit-sized hyraxes. Visitors will encounter a **full-scale model of one of the most iconic extinct elephant relatives—a woolly mammoth, depicted in the process of shedding its winter coat**—and a **life-size model of an adult and calf pair of dwarf elephants (*Palaeoloxodon falconeri*)**, which lived in what is now Sicily and only grew to about 4 feet tall at their shoulders. Two **touchable teeth, one from a mammoth and one from a**

**mastodon-like species**, demonstrate differences in the ways these giant proboscideans chewed; and an **interactive mammoth tusk model demonstrates how scientists use isotope “fingerprints” to reveal how mammoths traveled across what is now Alaska about 17,000 years ago.**

## **BODY**

African savanna elephants are the largest living land animals, and elephants’ tusks are the largest teeth of any animal. Their trunk serves as a combination arm, hand, and hose. All three modern species are impressive not just in size, but also for their keen senses. They can detect vibrations our ears can’t hear, and their sense of smell rivals that of all other mammals.

*The Secret World of Elephants* explores these massive mammals’ incredible abilities through interactive exhibits, including

- **a station where visitors can feel the extremely low sound waves elephants use—called infrasound**—to send messages through the ground and to other elephants’ feet, which conduct vibrations up their legs and to their brains
- **a life-size African elephant model with a video projection** on one side of its body showing the skeleton of this massive mammal and providing an inside look at how it processes the huge amount of food it eats—about 300–500 pounds per day—and elephant gestation, which can last for nearly two years, longer than any other living mammal
- **a miniature elephant model that prompts visitors to turn a wheel to flap its ears**, a process that helps elephants keep cool in hot environments
- and, sure to be a crowd-pleaser, **an exploration of elephant poop—featuring replica dung**—which provides key nutrients for plants and other animals and helps expand plant ranges by transporting seeds

## **MIND**

What goes on in the mind of an elephant? Elephants can’t use words to relay what they think and feel, so scientists try to find out by observing their behavior. Studies show they form close social bonds and communicate by voice, touch and gesture. They have remarkable memories and are known to care for ill individuals and to visit the spot where a family member died. And they are mentally agile, able to adapt to new situations, solve problems, and act collectively.

Elephants do express themselves with a remarkable variety of sounds: gentle, low-pitched rumbles, high-pitched squeaks, vibrant trumpets, barks, and roars. By observing elephants making and responding to different calls, and by listening to recordings and playing them back for elephants to hear, scientists have begun to recognize patterns and to understand their meaning. Visitors to *The Secret World of Elephants* can **hear five different elephant vocalizations** and will also be encouraged to **“speak elephant” by observing videos of various social behaviors in elephants—including greetings, courtship, play, and mourning—and answer questions about the underlying meanings.** Visitors also will be able to **make their own elephant herd with a selection of large magnets** representing the matriarch—the leader—as well as other female adults and calves.

## **HABITAT**

The forests and savannas where elephants live are radically reshaped by their presence. By eating, bulldozing, and trampling plants ranging from grasses to full-grown trees as well as by digging water holes and transporting seeds, elephants act as ecosystem engineers for hundreds of other species.

African savanna elephants, for example, graze on grass and browse on tree leaves and bark, helping to preserve open grasslands for plants, insects, and other animals that thrive in the Sun. They also make water holes that are essential to life ranging from dragonflies and plants to birds, lions, and warthogs. Unlike African savanna elephants, which live in open spaces, African forest elephants and Asian elephants eat vegetation as they travel through dense rainforests, making clearings that help sunlight reach the forest floor and creating well-worn walkways that are used by many other animals, including people. Asian elephants help extend plant ranges by carrying undigested seeds in their poop up to 30 miles away. And by thinning forests of smaller trees, elephants enable the remaining trees to grow larger and store more carbon, slowing global climate change. In *The Secret World of Elephants*, **a large projection screen will show some of the many ways that elephants alter their environment.**

## **ELEPHANTS AND US**

For thousands of years, humans and elephants have lived together—often uneasily—in the same forests and savannas, sometimes competing for the same resources. Although never fully domesticated by humans, these intelligent animals have long been trained for war and work, historical and contemporary examples of which are explored in the exhibition.

Elephants remain powerful religious and political symbols across cultures today. Cultural artifacts on display in *The Secret World of Elephants* include **puppets from Vietnam depicting the Tru'ng sisters**, national heroes who, according to local history, rode elephants into battle some 2,000 years ago against an invading Chinese army, and a **large figure of the Hindu god Ganesh**, known as the remover of obstacles, with an elephant's head and a human-like body.

**Conservation-themed interactive exhibits** throughout the exhibition examine the impact of killing elephants for ivory, how climate change is affecting elephants, and ways that humans and elephants can share the planet and reduce human and elephant conflict. The exhibition features **a documentary film about an elephant sanctuary in northern Kenya called Reteti, which is owned by the local Samburu community and takes in orphaned and abandoned elephant calves** with the aim of releasing them back into wild herds. The video tells the story of Shaba, a 15-month old orphaned female who grew to become the sanctuary's first matriarch.

## **EXHIBITION ORGANIZATION**

*The Secret World of Elephants* is curated by Ross MacPhee, curator *emeritus* in the Museum's Department of Mammalogy, with consultation by Raman Sukumar, honorary professor at the Centre for Ecological Sciences, Indian Institute of Science; and Alexandra van der Geer, a researcher at the University of Leiden, Netherlands.

MacPhee is a paleomammalogist known for his research on island extinctions, with a more recent focus on extinctions that have occurred during the last 50,000 years. He also has collaborated with geneticists and molecular biologists to develop new ways of using ancient DNA and proteins to study Pleistocene extinctions. He previously curated *Race to the End of the Earth* (2010), *The Horse* (2008), *The Endurance: Shackleton's Legendary Antarctic Expedition* (1999), and *Endangered!* (1995). He was the supervising curator of the restoration of the Jill and Lewis Bernard Family Hall of North American Mammals, which reopened in 2012.

The exhibition is designed and produced by the American Museum of Natural History's award-winning Exhibition Department under the direction of Lauri Halderman, senior vice president for exhibition.

*The Secret World of Elephants* will open to the public on Monday, November 13, 2023. Museum Members will be able to preview the exhibition from Friday, November 10, through Sunday, November 12.

### **ABOUT THE AMERICAN MUSEUM OF NATURAL HISTORY (AMNH)**

The American Museum of Natural History, founded in 1869 with a dual mission of scientific research and science education, is one of the world's preeminent scientific, educational, and cultural institutions. The Museum encompasses more than 40 permanent exhibition halls, galleries for temporary exhibitions, the Rose Center for Earth and Space including the Hayden Planetarium, and the Richard Gilder Center for Science, Education, and Innovation. The Museum's scientists draw on a world-class permanent collection of more than 34 million specimens and artifacts, some of which are billions of years old, and on one of the largest natural history libraries in the world. Through its Richard Gilder Graduate School, the Museum offers two of the only free-standing, degree-granting programs of their kind at any museum in the U.S.: the Ph.D. program in Comparative Biology and the Master of Arts in Teaching (MAT) Earth Science residency program. Visit [amnh.org](http://amnh.org) for more information.

### **Hours**

The Museum is open daily, 10 am–5:30 pm. The Museum is closed on Thanksgiving and Christmas.

### **Admission**

Tickets that include admission to *The Secret World of Elephants* start at \$28 for adults, \$16.50 for children (ages 3-12), and \$22.50 for seniors and students. Timed-entry tickets must be reserved in advance at [amnh.org/tickets](http://amnh.org/tickets).

### **Public Information**

For additional information, call 212-769-5100 or visit the Museum's website at [amnh.org](http://amnh.org).

### **Photo:**

*The Secret World of Elephants* features a life-size model of an African elephant—the largest living land animal. A video projection on one side of the African elephant model shows the skeleton of this massive mammal and provides an inside look at how it processes the huge amount of food it eats—about 300–500 pounds per day—and elephant gestation, which can last for nearly two years, longer than any other living mammal.

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