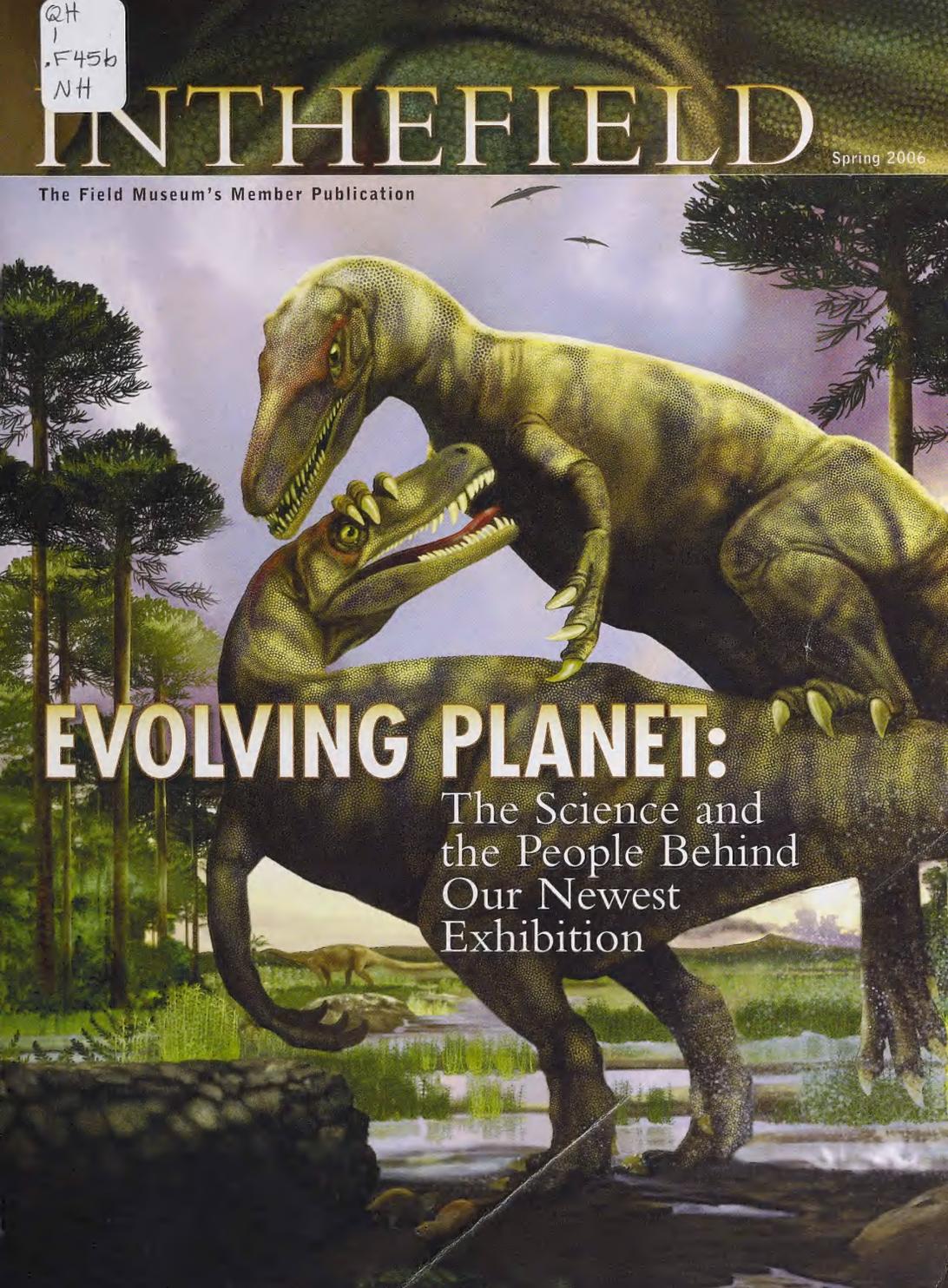


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IN THE FIELD

Spring 2006

The Field Museum's Member Publication

A detailed illustration of a prehistoric landscape. In the foreground, a large, green, scaly dinosaur with a red stripe on its head is shown in profile, facing left. It has its mouth open, revealing sharp teeth. Another similar dinosaur is positioned behind it, also facing left. The background features a lush environment with tall, thin trees, a body of water, and a small dinosaur in the distance. The sky is a mix of blue and purple, suggesting a sunset or sunrise. The overall style is that of a scientific illustration or a high-quality digital painting.

EVOLVING PLANET:

The Science and
the People Behind
Our Newest
Exhibition

Evolutionary History is at the Heart of Our Mission



JOHN WEINSTEIN/GR88119 6

The Field Museum's new permanent exhibition *Evolving Planet* opens March 10. This exhibition, which covers 27,000 square-feet, presents the history of life as it has unfolded over Earth's long history through the process of evolution.

The theory of evolution has taken center stage in recent months in the media and even in our nation's court system.

Rendering by Karen Carr

Evolution is the accumulation of inherited changes in populations of organisms over the course of generations. These changes can result either from mutation or from the recombination of genes. Over time, such changes can result in entirely new species. Evolutionary biology explains the process by which all life on Earth has come to exist and the interrelationships among species.

Since 1893, Field Museum scientists have been actively engaged in research around the world, in their laboratories, and with the Museum's collections, which

include over 23 million objects and specimens. Whether studying a fossil to gain a deeper understanding of *T. rex*, establishing the ancestry of spiders, unraveling the genetic code of mushrooms, or digging into our own human origins, our scientists use evolutionary theory every day. This continuing commitment to deepening our knowledge of evolution keeps us at the forefront of scientific research. Developing exhibitions and educational programs that address evolution, meanwhile, keeps us true to our mandate to educate and inspire

a broad public about the natural sciences.

Theories—explanations that fit the evidence at hand—are meticulously tested through trained observation, repeatable experiments, and extensive peer review before they are accepted among the scientific community. From time to time, they are revised as new evidence arises. Although there is debate in the scientific community about exactly how evolution works, the theory itself has come up against no substantial conflicting scientific evidence. It is well established as the scientific explanation for our world's rich biodiversity, and has become the cornerstone of biology. Molecular biology, population biology, comparative anatomy, and paleontology all continue to deepen our understanding of evolution and extend its power to explain life on Earth. As a scientific institution, The Field Museum embraces its obligation to present evolution to the public as the explanation for the patterns of biodiversity that we see today.

Below: Members of the Museum's Exhibitions Department who contributed to Evolving Planet.



JOHN WEINSTEIN/INGR06821 8D

John W. McCarter, Jr.
President and CEO

What do you think about In the Field?

For general membership inquiries, including address changes, call 866.312.2781. For questions about the magazine *In the Field*, call 312.665.7115, email noshea@fmnh.org, or write Nancy O'Shea, Editor, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496.

INTHEFIELD

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Editor:
Nancy O'Shea, The Field Museum

Design:
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Cover: Two *Herrerasaurus* do battle in a scene that might have taken place 230 million years ago. The Field Museum's new *Evolving Planet* exhibition takes visitors on a journey through four billion years of life on Earth. Rendering by Karen Carr.

The Field Museum salutes the people of Chicago for their long-standing, generous support of the Museum through the Chicago Park District.

The **Field**
Museum

1400 South Lake Shore Drive
Chicago, IL 60605-2496
312.922.9410
www.fieldmuseum.org



JOHN WEINSTEIN/00724/IBSD

DIANE ALEXANDER WHITE

2

Our newest permanent exhibition, *Evolving Planet*, opens to the public on March 10. It includes nearly 1,300 unique specimens and more than 100 interactive displays.

Top: Artist Karen Carr's rendering of *Dimetrodon*, one of the most ferocious carnivores of the Permian Period (290–248 million years ago).

4

Evolving Planet's project manager and content specialist discuss how the Museum's exhibitions team and academic staff worked together to create the exhibition.

Middle: *Evolving Planet* features 23 newly restored murals by Charles R. Knight.

6

The Field Museum's Education Department provides materials to help teachers and parents explain evolution. Also, Museum docents attended a series of special classes to prepare for *Evolving Planet*.

Bottom: Museum educator Mara Cosillo-Starr with materials that teach children about Earth's history.

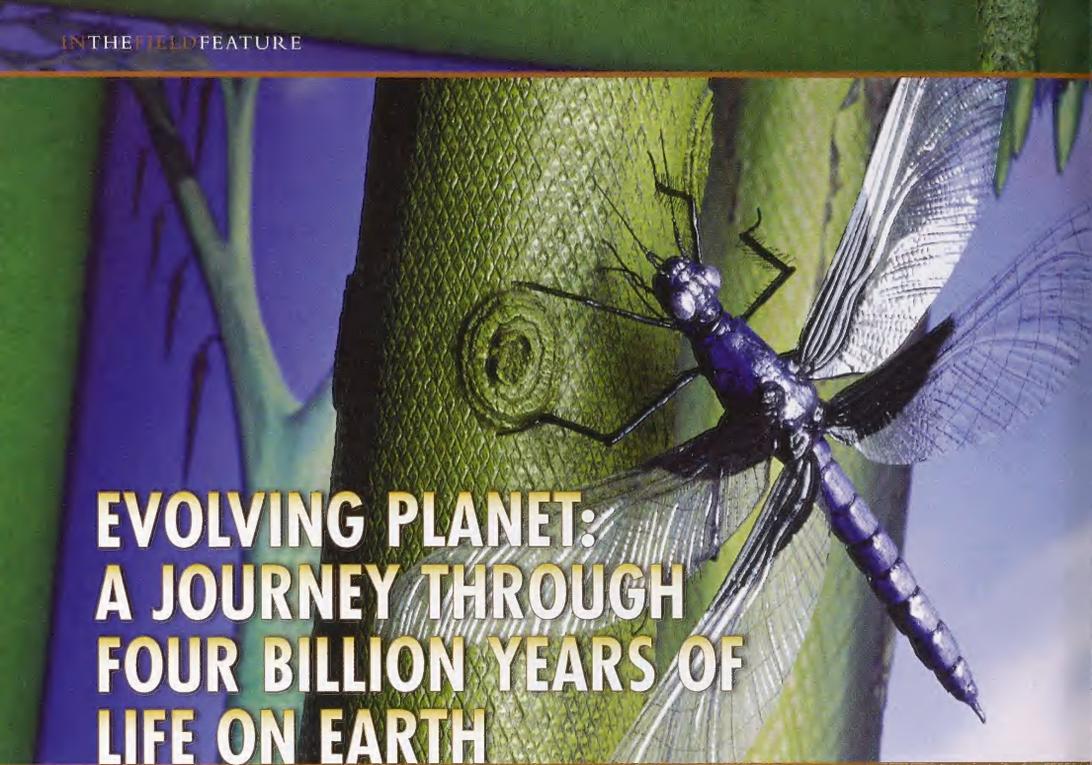
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Throughout *Evolving Planet*, video presentations allow visitors to meet nine Field Museum scientists and learn more about their research. These scientists, whose work helped shape the exhibition, are profiled in a special four-page article.

Museum Campus Neighbors

Adler Planetarium The popular sky-show *Stars of the Pharaohs* returns to the Adler May 26 and runs through Jan. 1, 2007. Visit ancient Egyptian ruins—remnants of a vibrant civilization that was the most advanced and powerful on Earth. And don't miss the Adler's *Far Out Fridays* held the first Friday of every month—March 3, April 7, and May 5. Activities include telescope viewing of the night sky, unlimited shows in the Sky and StarRider Theaters, Doane Observatory tours, and more. Explore the universe at America's first planetarium, home to two full-sized theaters. For more information, visit www.adlerplanetarium.org, or call 312.922.STAR (7827).

Shedd Aquarium Do you believe in dragons? You just might after meeting the Komodo at Shedd Aquarium. A mouth packed with sharp teeth and deadly bacteria, the ability to track its prey for miles, the hunger to devour an entire pig in 20 minutes—and those are its good qualities! Check out the Komodo, basilisks, caiman lizards, chameleons and more. From the tiny day gecko to the world's longest lizard, the crocodile monitor, they'll all be at Shedd starting April 8. For details, visit www.shedd-aquarium.org or call 312.939.2438.

A close-up photograph of a dragonfly perched on a green tree trunk. The dragonfly is positioned on the right side of the frame, facing left. Its body is dark, and its wings are transparent with visible veins. The tree trunk has a textured, greenish-brown bark. The background is a soft-focus green, suggesting a forest setting.

EVOLVING PLANET: A JOURNEY THROUGH FOUR BILLION YEARS OF LIFE ON EARTH

The Field Museum's newest permanent exhibition, *Evolving Planet*, opens March 10. It's a fascinating journey through four billion years of life on Earth, from single-celled organisms to giant dinosaurs and our extended human family. Unique fossils, animated videos, hands-on interactive displays, and recreated seascapes and landscapes help tell the compelling story of evolution—the single process that connects everything that has ever lived on Earth. “*Evolving Planet* gives visitors a new look at the evolution of life on Earth, and the scientific evidence on which that story is based,” says paleontologist Richard Kissel, the exhibition's content specialist. For example, he says, the recent discovery of dinosaurs with feathers and wishbones has all but cinched the case that birds are their direct descendents. In contrast, new scientific debates are swirling around life's origins: Did it arise near deep-sea hydrothermal vents, or were organic compounds brought to Earth on a meteorite? Meanwhile, new technologies for dating and analyzing fossils, along with DNA analysis, have cast new light on human evolution.

In video presentations throughout the exhibition, Field Museum scientists explain what we're still learning about the past, present, and future of life on Earth. (See page 16 for profiles of these scientists.) *Evolving Planet* illuminates both time-tested and emerging ideas about the evolution of life with state-of-the-art exhibition tools, including a spectacular animated screen that surrounds visitors with 500-million-year-old sea creatures.

But the real stars of the exhibition are the fossils, including hundreds never before displayed and many that are rare or exclusive to The Field

Museum. Among them are the oldest known fossil of cells whose DNA is contained within a nucleus; the “Tully monster,” an odd marine creature (and Illinois state fossil) discovered not far from Chicago; the oldest known complete skeleton of a bat, a creature that has scarcely changed in 50 million years; and several dinosaurs making their Field debut.

A highlight of many visitors' journey through *Evolving Planet* will be the Mesozoic Era—the age of dinosaurs—and dinosaur fans of all ages are in for a treat! The new Genius Hall of Dinosaurs



JOHN WENSTEN/GETTY IMAGES

by Charles R. Knight. The Museum has beautifully restored these famous and beloved paintings that depict a world populated by *T. rex*, *Triceratops* and other long-extinct animals and plants. Nine Knight murals hang in the exhibition's dinosaur hall and are sure to ignite imaginations.

The disappearance of dinosaurs made way for an astonishing diversity of mammals. There have been at least six mass extinctions since the dawn of life; each one allowed the surviving lineages to diversify as they developed new features and occupied new roles in an altered world. *Evolving Planet* explores the climate changes and environmental challenges that led to the diversification of mammals—from small rodents to the enormous short-faced bear making its first appearance in this exhibition. (See page 15 for more about the short-faced bear.)

The past 65 million years hold many fascinating stories, including how hoofed land mammals evolved into ocean-dwelling whales, and why two predators—separated by a vast sea and 25 million years—evolved the same saber-like teeth. Visitors will also learn about the origins of *Homo sapiens*, including the wide array of hominid species that comprise the many branches of our family tree.

houses a gargantuan display, with authentic fossils and detailed casts spanning the era from *Hesperosaurus*, one of the earliest dinosaurs, to the ferocious meat-eaters of the Cretaceous Period. Among the long-necked sauropods are a 72-foot-long *Apatosaurus*; original bones from the *Brachiosaurus* (a cast of which stands guard outside the Museum), and the 18-foot-long youngster of a new dinosaur, *Rapetosaurus*, discovered recently in Madagascar. The armored *Stegosaurus* is here, as well as the horned and frilled ceratopsians and a pachycephalosaur with its huge helmet of bone. Representing the plant-eating ornithomorphs is a *Panasaurolophus*, newly mounted in a life-like pose.

While Sue, the Field's premier theropod (meat-eater), holds court downstairs in Stanley Field Hall, Sue's world is represented in *Evolving Planet* by a variety of animal and plant fossils that were found along with the *T. rex* skeleton, including crocodiles, lizards, fish, and other dinosaur bones. Sue's close cousin, *Daspletosaurus*, hunches over the body of a duck-billed hadrosaur. Nearby are another, more distant cousin, *Allosaurus*; the raptor *Deinonychus*; and *Cryolophosaurus*, one of the first dinosaurs found in Antarctica.

As visitors dig deeper, they will discover what makes a dinosaur a dinosaur, what was happening to the Earth's climate and land masses during their time, and much more. There's a special activity area for junior dinosaur fans, with lots of interactive displays. *Evolving Planet* prominently features 23 huge murals painted for The Field Museum 80 years ago

'Evolving Planet gives visitors a new look at the evolution of life on Earth, and the scientific evidence on which that story is based.'

One of the most fascinating stories is that of Lucy, an early member of our family from the species *Australopithecus afarensis*. A cast of Lucy's skeleton shows why her discovery in 1974 was so significant: the shape of her pelvis and legs indicates she walked upright, like us; but her brain was small and her skull the size of a chimpanzee's. It was this discovery that convinced scientists that humans began to walk upright *before* our brains grew large, not the other way around.

Evolving Planet is made possible by a generous contribution from Anne and Kenneth Griffin. The Griffins said, "We are delighted to sponsor this amazing exhibition. We especially appreciate *Evolving Planet's* emphasis on showcasing Field Museum scientists and their discoveries. The Field Museum is an institution of international importance, providing educational experiences for millions of visitors over many generations. We are so pleased to be able to help make *Evolving Planet* possible." **TF**

For more information visit www.fieldmuseum.org/evolvingplanet.

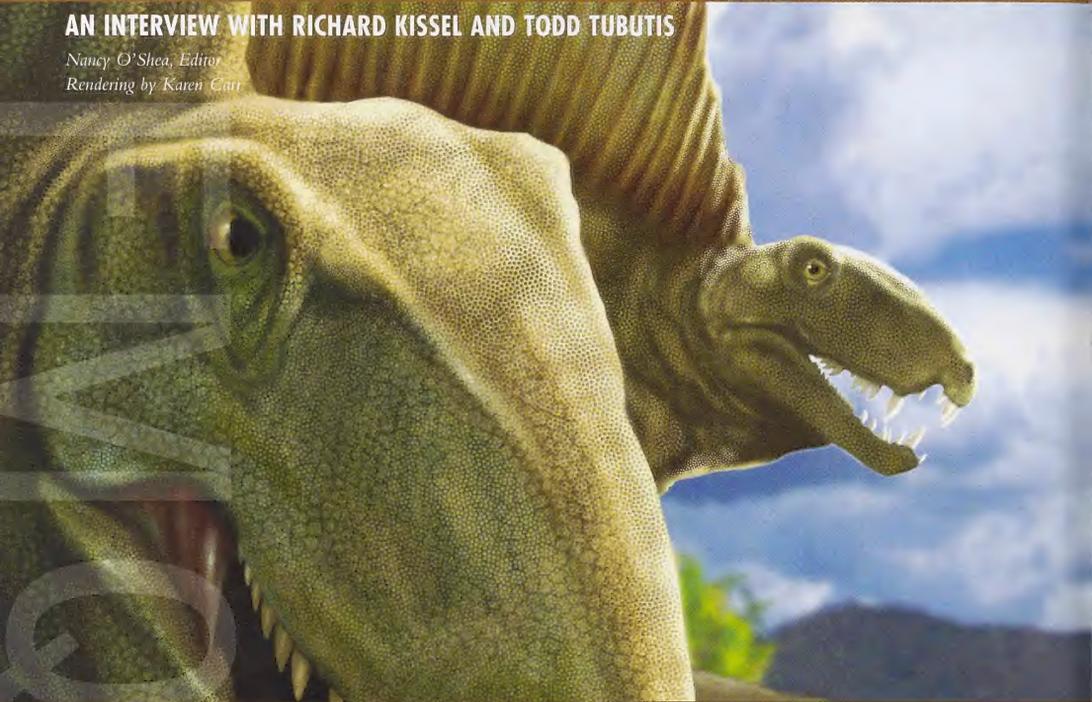
Evolving Planet is made possible by Anne and Kenneth Griffin. The Elizabeth Morse Genius Charitable Trust is the generous sponsor of *Evolving Planet's* Genius Hall of Dinosaurs.

THE MAKING OF EVOLVING PLANET

AN INTERVIEW WITH RICHARD KISSEL AND TODD TUBUTIS

Nancy O'Shea, Editor

Rendering by Karen Carr



When Todd Tubutis was a high school student in the Chicago suburb of Park Forest, he wrote The Field Museum asking for a job. He was turned down. Undeterred, Tubutis went on to earn bachelor and master's degrees in anthropology and museum studies. In 2001, he was hired by The Field Museum's Exhibitions Department, and for the past five years has served as project manager for the Museum's new *Evolving Planet* exhibition. Paleontologist Richard Kissel, whose undergraduate and master's degrees are in geology, is finishing his dissertation in zoology. Since 2003, he has worked as *Evolving Planet's* content specialist—a job that requires him to use his knowledge of science to help shape an exhibition.

While Tubutis and Kissel have different skills and educational backgrounds, both have made significant contributions to *Evolving Planet* and are proud of the impact the exhibition will have in presenting evolution to the public. *In the Field* talked to them about their work.

ITF: What role did each of you play in the making of *Evolving Planet*?

Tubutis: I led the development and design team responsible for revitalizing the former *Life Over Time* exhibition. As we progressed, it became clear that a brand new exhibition deserved a new name: *Evolving Planet*.

Kissel: I ensured that all of the science in the exhibition is correct and up-to-date. I also acted as a

liaison between the Exhibitions Department and the Geology Department.

ITF: Why did the Museum decide to “revitalize” its exhibition on evolution?

Tubutis: In 2001, we conducted a study and found that visitors were not leaving *Life Over Time* with the messages we wanted them to take away. There were elements of the exhibition that simply weren't working—some hands-on components often broke

down and as a result, weren't conveying specific messages to our visitors.

Since *Life Over Time* opened in 1994, much has happened—scientists have made many new discoveries, and movies like *Jurassic Park* and TV programs such as those on the Discovery Channel have changed the public's expectations of how this kind of material is presented. Also, when our exhibition of Sue opened in 2000, it raised the bar for the way we exhibit and explain paleontology.

ITF: How does the Museum's scientific staff work together with the Exhibitions Department?

Kissel: As an educational institution, it's the Museum's responsibility to present scientifically accurate information to our visitors, so the Exhibitions Department works closely with the scientific staff as new exhibitions are developed. Because of *Evolving Planet's* size and scope however, my position was created to lessen the burden on our already busy scientists. Thus, once the developers and I crafted label text and other elements, the curators then reviewed our work. In that sense, they were basically checking my work, and they often had great suggestions for how to explain complicated concepts and theories—it was a nice collaboration.

At the end of the day, I'm really proud of *Evolving Planet*. I've traveled to a lot of other museums around the world, and I think this exhibition is one of the, if not *the*, most comprehensive explanation of the history of life on Earth in any museum anywhere—it's one-of-a-kind.

ITF: As project manager, what were some of your biggest challenges?

Tubutis: One of the biggest challenges was protecting our unique collections. We had to build shelters for the large dinosaurs (that weren't going anywhere!) to protect them during construction. The 23 Knight murals had to be removed, cleaned, restored and reinstalled. They are very large works of art—some 25-feet long—and moving them was a challenge. Another challenge was coordinating the outside vendors and contractors who supplied us with specialized services. It was also my job to keep other Museum departments abreast of the project so that everyone could stay informed about *Evolving Planet*.

ITF: What do you hope people will learn and remember after seeing the exhibition?

Tubutis: I hope that visitors leave grasping our

main message: Evolution is a process that is ongoing—whatever has ever lived on Earth has led to the rich biodiversity we see today. At the end of the exhibition we talk about how the rate of extinction is as high today as it has ever been. Humans are in part responsible for that. We don't know what will happen next but, with or without humans, life will continue to evolve.

Kissel: For me, it is all about the fundamental question, "How did life and the Earth that it inhabits get to where it is today?" I think people should be curious about this subject—it's a very compelling story. I also hope that people leave *Evolving Planet* with a better understanding of the theory of evolution—whether they choose to accept it or not, we want them to understand what it is all about.

ITF: As scientists make new discoveries, will the exhibition change?

Kissel: Yes, because new discoveries and ideas will always continue to refine our understanding of Earth's past. A key objective of the exhibition's design was to account for

this progress. For example, text panels can be easily updated to incorporate new information, when necessary.

'...this exhibition is one of the, if not *the*, most comprehensive explanation of the history of life on Earth in any museum anywhere—it's one-of-a-kind.'

ITF: You've worked on this project for several years. Are far as your careers are concerned, what have you learned that will be helpful to you in the future?

Tubutis: I've learned that even with solid exhibition goals and messages guiding your work, a design will inevitably undergo many changes—undoubtedly for the better—over a five-year span.

Kissel: One of the greatest things a scientist can do is educate. Working so closely with the brilliant exhibition developers of *Evolving Planet* has strengthened my ability to communicate with, and therefore educate, general audiences about science.

ITF: What's next for both of you?

Tubutis: For my next project, I'm working on *Maps*, an unprecedented exhibition featuring 100 of the world's greatest maps, opening in November 2007.

Kissel: I'll concentrate on finishing that dissertation!



JOHN WEINSTEIN/NORPHI DODD

At left: Todd Tubutis (left) and Richard Kissel discuss plans for the exhibition.

Museum's Education Programs Enhance Understanding of Evolution

Eduarda Briseño, Program Administrator, Field Museum Education Department

Evolution. The word has sparked debate among school boards and legislatures across the country. The Field Museum embraces its obligation to present evolution to the public as the only scientific explanation for the origin of today's biodiversity. To help enrich this effort, the Museum's Education Department has developed a compelling slate of public and school programs designed to provide resources for families and schools on how to effectively teach evolution.



DIANE ALEXANDER WHITE

Mana Cosillo-Starr, Field Museum resource center manager, with skulls that show human evolution.

Our public programs, for visitors of all ages, include a robust series of lectures, workshops, performances, and gallery programs designed to enrich the Museum visitor experience. Our "Evolving Science" lecture series will feature Field Museum scientists exploring topics as diverse as evolutionary genetics, primate evolution, and the evolution of dinosaurs. A staged reading of *Inherit the Wind* will bring to life the Scopes Monkey Trial—the famous case in which a science teacher was accused of the "crime" of teaching evolution. An array of family programs will encourage children and their parents to discover the geologic timeline of the Earth, debate what killed the dinosaurs, and delight in a multitude of free gallery programs during opening weekend's "Dinosaur Discovery Days."

Our teacher and student division will offer an expanded program including new student classes that explore the Earth and its creatures, and educator workshops that allow teachers to preview the exhibition, discover links to Illinois Learning Standards, and develop focused activities they can use before, during, and after their field trip. In addition, a host of educational materials will provide visitors with tools for an in-depth exploration of evolution. A comprehensive, downloadable "Educator Guide to *Evolving Planet*" will introduce teachers to the various sections of the exhibition, provide information on how to plan field trips, and offer resources for further investigation of this topic. In addition, two specialized educator guides, focusing on teaching evolution and the importance of mass extinctions in Earth's history, will be available via our website and the Harris Loan Educational Loan Center. Educators and parents are encouraged to stop by Harris Loan to borrow Experience Boxes that allow for further exploration of dinosaurs, hominids, and geologic timelines in their classrooms and homes.

A full list of our education programs is available on the *Evolving Planet* website at www.fieldmuseum.org/evolvingplanet. **ITF**

Evolving Planet Docents Help Explain Exhibition

*Mary Ann Bloom, Volunteer Coordinator,
Field Museum Human Resources Department*

Volunteer docents often will be available in *Evolving Planet* to enhance visitors' understanding of the exhibition. Our dedicated docents prepared for *Evolving Planet* by attending all-day training sessions held on nine consecutive Saturdays earlier this year! As part of the docent training, several Field Museum and University of Chicago scientists lectured about their evolution-based research.

YOUR GUIDETOTHEFIELD

Calendar of Events for Spring 2006 March–May

Inside: Exhibitions Festivals Family Programs Adult Programs



Programs at a Glance

Details inside!

Family Programs

Family Overnights 3/24, 4/14 & 5/6

Two of Us Workshops starting 3/7, 4/4 & 5/2

Create a Play in One Day! 3/11

Inherit the Wind 3/18 & 19

Mazon Creek Fieldtrip 3/25 or 4/22

What Killed the Dinosaurs? 4/22

Birth of the Earth Workshop 5/5 & 5/12

Adult Programs

Evolving Science Lectures 3/11, 4/8, 4/29, & 5/13

Last Supper Lecture 3/25

Ozone Shield Lecture 3/25

Ancient Americas Course/Fieldtrip 4/5–5/10

Fossils Fieldtrip 5/6

Auschwitz Lecture 5/12

Bird Watching Workshop 5/13

Cultural Connections 3/18, 4/19, & 5/17

Tutankhamun Opening

Egyptian Hieroglyphs Course 5/18–6/22

Egypt Discovery Days 5/26–29

Create a Play in One Day! 5/27

Exhibiting a Legend Lecture 5/27

National Geographic Live! Series

Exploring Bhutan 3/14

Chasing the Tornado 3/28

Three Among the Wolves 4/25

In Search of King Tut 5/23

Final Weeks!

Through March 26, 2006



POMPEII

STORIES FROM AN ERUPTION

Two thousand years ago a vibrant society disappeared beneath the ashes of Vesuvius. Now you can uncover its buried treasures—and its human drama—at The Field Museum.

The exhibition was organized by the Ministero per i Beni e le Attività Culturali, Soprintendenza archeologica di Pompei, Soprintendenza per i Beni Archeologici delle province di Napoli e Caserta, Regione Campania.

Presented by Harris Bank

Featured Lecture

The Restoration of Da Vinci's The Last Supper

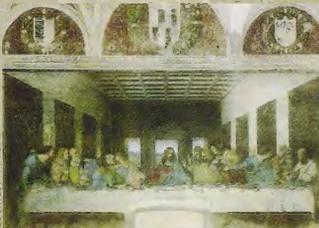
Pinin Brambilla Barillon, Chief Curator

Explore the controversial techniques employed to restore Leonardo da Vinci's *The Last Supper*. Barillon will illustrate how the restorers cleaned and restored the painting according to contemporary textual descriptions, and will address the concerns of critics of the restoration. This lecture will spark the imagination of anyone who appreciates the beauty, technical achievements, and fate of Renaissance painting. Lecture will be presented in Italian, with an interpreter.

Saturday March 25, 2pm

\$16, students/educators \$14, members \$12

Special thanks to the Consulate General of Italy in Chicago and the Italian Cultural Institute in Chicago for their valuable support of these public programs.



COURTESY WIKIMEDIA

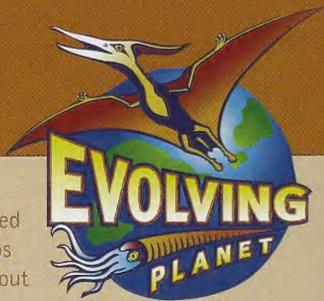
The Field
Museum

General Museum Information: 312.922.9410

Family and Adult Program Tickets and Information: 312.665.7400

Please note: Refunds will be issued by Field Museum staff, minus a \$10 processing fee, for group and family overnights only. No refunds or exchanges are permitted for any other programs. Fees for programs cancelled by The Field Museum will be refunded in full.

Explore the history and evolution of our planet



Opens March 10

To celebrate the grand opening of *Evolving Planet*, we've compiled a host of great programs, from fieldtrips to lectures to workshops for the whole family. Visit this dynamic new exhibition and find out more about the history of life on Earth!

Children's Workshop

Create a Play in One Day!

Foundation Theatre Group

Put your little one in the director's chair! Children ages 5–11 will write a short dinosaur play under the tutelage of professional actors, cast it with their new friends from the workshop, create their own costumes, and perform for the general public at the Museum that same day.

*Saturday, March 11, 10am–2pm rehearsal,
2:30 performance
\$16, members \$12*

The Birth of The Earth

Dive into Earth's history in two workshops focusing on the evolutionary and geologic timeline of the Earth and our region. You and your little ones will learn how it's possible that there were once icebergs in Illinois! For families with children ages 7–12.

*Fridays, May 5 and 12, 6–8pm
\$30, members \$24*

*One session: \$15,
members \$12*



CATHERYN C. MONTANO/AGS0291/IBC

Family Programs

Inherit The Wind

Witness a multi-media adaptation of this famed play directed by Bernie Sahlins, co-founder of Chicago's Second City. *Inherit the Wind* brings to life the "Scopes Monkey Trial" of 1925, presenting two great lawyers arguing the case for and against a science teacher accused of the "crime" of teaching evolution.

*Saturday and Sunday, March 18 and 19, 1pm
\$16, students/educators \$14, members \$12*

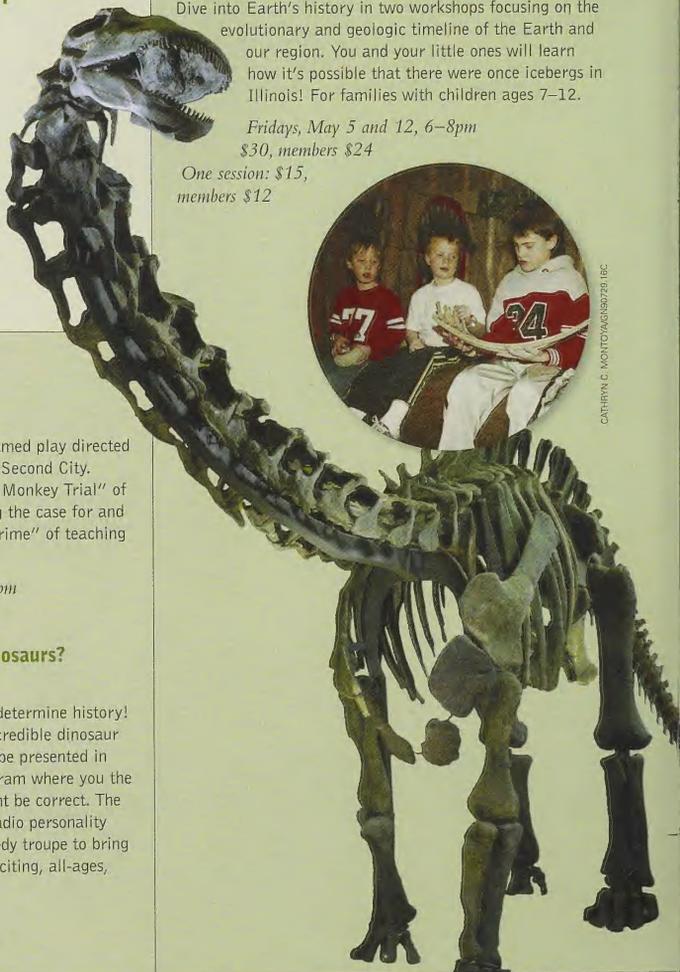


COURTESY WGN

What Killed the Dinosaurs? You decide!

Families are invited to determine history! The most scientifically credible dinosaur extinction theories will be presented in this live theatrical program where you the audience will help decide which theory might be correct. The Field Museum is collaborating with WGN radio personality John Williams and the Galileo Players comedy troupe to bring dinosaur extinction theories to life in this exciting, all-ages, interactive variety show.

*Saturday, April 22, 11am
\$16, students/educators \$14, members \$12*



Evolving Science Lectures

Can 200 Million-Year-Old Leaves Predict the Future for Plant Biodiversity?

Dr. Jennifer McElwain, FM Dept. of Geology

Take a virtual expedition to chilly Greenland to see how fossil plants are helping scientists untangle the mysteries of ancient global warming trends—and helping shape predictions about the effects of future global warming on Earth's biodiversity and ecology.

*Saturday, March 11, 1:30pm
Free with Museum admission*



MARK WITTMANN/GETTY IMAGES

Primate Evolution: From Early Origins to the Neanderthals

Dr. Robert Martin, FM Provost

Learn about the latest issues and discoveries in primate evolution from one of the world's foremost experts. Dr. Martin will trace the origins of the primate evolutionary tree and analyze new evidence that confirms Neanderthals as a species separate from modern humans.

*Saturday, April 8, 1:30pm
Free with Museum admission*

The View from the Center of the Universe

Dr. Joel Primack and Nancy Abrams, UC Santa Cruz

Get an entertaining glimpse at the new pictures of the universe that are emerging from modern cosmological research. Their latest book will also be available for purchase and signing.

*Saturday, April 29, 1pm
Free with Museum admission*

Special Artists at the Field

Dining at the Garden of Eden: Diadectids and the Evolution of the Modern Ecosystem

Richard Kissel, FM Exhibitions Dept.

Travel back 300 million years to the emergence of diadectids, Earth's first herbivores, which signaled an important step in the evolution of Earth's modern ecosystems. Dissect the herbivore's roles in the larger ecosystem, and see how paleontologists interpret the diets of these and other long-extinct creatures.

*Saturday, May 13, 1:30pm
Free with Museum admission*



MARK WITTMANN/GETTY IMAGES

Adult Field Trip

Fantastic Fossils

Dave Dolak, Columbia College

Identify and collect fossils with the help of Museum experts. You'll travel to the world-famous Ordovician outcrop near Brookville, Indiana, where geologists have found a number of well preserved fossils from 450 million years ago! Adults only please. Please register by May 1.

*Saturday, May 6,
7am–7pm
\$105, members \$95*



JOHN WILSTEN/GETTY IMAGES



MARK WITTMANN/GETTY IMAGES

Examine the work of *Evolving Planet* illustrator Karen Carr, and learn what it takes to depict scenes of life on Earth millions of years ago. Come early, visit with the artist, and sign up for a special guided tour of the exhibition with Ms. Carr (limited to 45 participants).

*Saturday, March 11, 10am–noon, Tour: 1pm
Free with Museum admission*

Evolving Planet is made possible by Anne and Kenneth Griffin. The Elizabeth Morse Genius Charitable Trust is the generous sponsor of *Evolving Planet's* Genius Hall of Dinosaurs.

Family Workshops

Two of Us

Join us in one of these four-week excursions through the wonders of The Field Museum! You and your little one will travel the Museum's exhibition halls, sing songs, hear stories, touch objects, make art projects, and enjoy snacks. Choose from one of the following sessions:

Dinosaurs and Fossils

Tuesdays, March 7–28, 10–11am

Insects and Soil

Tuesdays, April 4–25, 10–11am

Native American Cultures

Tuesdays, May 2–23, 10–11am

Each four-week session:

\$32, members \$27

For each 3–5 year old child with paid attendance, one adult chaperone attends free.



Summers on the Museum Campus

Summer World's Tour is right around the corner! Children ages 5–10 are invited to unearth the mysteries of King Tut at the Field, explore the

universe at the Adler Planetarium, and dive into the Great Lakes at Shedd Aquarium. Choose one of four sessions, beginning July 10. Call the Adler Planetarium at 312.322.0329 for registration information.

Too old for summer camp? Teens can get involved with the Field's **Summer Teen Volunteer Program**. Fulfill community service requirements while getting an inside look at the Museum, talking with visitors, and exploring natural history. To be considered, complete the on-line volunteer application by April 15 or call 312.665.7503 for more information.



Adult Lecture

Is Earth's Ozone Shield Recovering?

Dr. Paul A. Newman, NASA Goddard Space Flight Center, Dr. Stephen Andersen and Dr. Druzilla Hufford, Environmental Protection Agency

Despite ongoing expectations that the ozone hole will recover, we have yet to see evidence that a recovery is underway. Explore the important issues that have resulted from climate change during this timely lecture, the second in a series of forums organized by the Adler Planetarium. This forum will inspect the history of the ozone hole, examine its potential effects on humanity, and lay out plans for present and future recovery events.

Saturday, March 25, 10am–noon

Free with Museum admission

To register or for more information visit www.adlerplanetarium.org/climatechange.

Adult Course/Fieldtrip

Discover the Ancient Americas II

Dr. Maxine McBrimm, FM Anthropology Dept.

Delve into the fascinating world of the ancient Americas, and visit surviving relics. Building on the fall 2005 class (not a prerequisite), this multi-part adult course will explore the history of the people of the Americas, and give you a preview of the new *Ancient Americas* exhibition opening in 2007. You'll finish the course by traveling to Cahokia Mounds State Park, center of the Mississippian world and the largest center of population in prehistoric native America north of Mexico City.

Wednesdays, April 5–May 10, 6–8:30pm

Course and Fieldtrip: \$145, members \$130

Field trip only: Saturday, June 3, 6am–8pm
\$85, members \$75



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Below is a calendar of current and upcoming temporary exhibitions. Some dates may change. Visit our website at www.fieldmuseum.org or call 312.922.9410 as the date of your visit nears.

Tutankhamun and the Golden Age of the Pharaohs

May 26, 2006–January 1, 2007

Jungles

Through March 5

Family Overnight

Dozin' With The Dinos

See the *T. rex* is having a sleepover! Join us for a night of family workshops, tours and performances. Explore ancient Egypt by flashlight, prowl an African savannah with man-eating lions and take a stroll through the Royal Palace in Bamun, Africa. Then spread your sleeping bag amidst some of our most popular exhibitions. The event includes an evening snack and breakfast.

Fridays, March 24, April 14, and Saturday May 6
5:45pm until 9am the following day
\$47, members \$40



CATHRYN C. MONTOYA/IGN00733.6AC

Family Field Trips

Fossil Hunt at Mazon Creek

Dave Dolak, Columbia College

Do you like to hunt fossils? Come with us to the world-famous Mazon Creek site, and discover what Illinois was like more than 300 million years ago! Plan on a one-quarter mile walk to fossil locations. For families with children ages 8–17.

Choose one Saturday: March 25 or April 22, 8am–3pm
\$40, members \$30



Adult Workshop

Bird Watching on the Museum Campus

Dr. Dave Willard, FM Division of Birds

Focus a stroll through the beautiful Museum Campus by looking for birds with a Museum bird expert. See a small snapshot of the more than 100 different bird species that migrate through the wooded and grassy areas of Chicago during the month of May.

Saturday, May 13, 8–10am
\$15, members \$12



JOHN WEINSTEIN/954884.1C

Cultural Connections

Join an intercultural dialogue among cultural centers and museums around the Chicago region. Programs include a one-hour presentation focusing on this year's theme, *The Language of Looks*, followed by lively discussion over a meal about the role that appearance plays in communicating identity and values. For more information, call 312.665.7474, or visit www.fieldmuseum.org/ccuc.

March 18: Mirror, Mirror On The Wall...How Am I Perceived By All?

April 19: Traditional Yet Contemporary

May 17: Beauty In Action



MERRYL VAZ/AMPH0659207.0B5D

Cultural Connections has received generous support from The Institute of Museum and Library Services, Kraft Foods, Polk Bros. Foundation, Chase Chicago Public Schools' Office of Language and Cultural Education, Richard H. Driehaus Foundation, Illinois Humanities Council, and Charles and M.R. Shapiro Foundation.

Pompeii: Stories from an Eruption

Through March 26

Dinosaur Dynasty: Discoveries from China

Through April 23

TUTANKHAMUN

AND THE GOLDEN AGE OF THE PHARAOHS

May 26, 2006 – January 1, 2007

Take part in the first of many education programs designed to help you further explore this exciting exhibition.

Adult Course

Egyptian Hieroglyphs for Museum Goers

Emily Teeter, Egyptologist

Take a crash course in Egyptian hieroglyphs! You'll get an introduction to the texts that commonly appear on objects like sculptures of royalty and everyday artifacts. Learn to translate the meaning of these texts, using the collections of the Oriental Institute and The Field Museum as your guides. The course includes a "pop quiz" on the inscriptions found in the Tutankhamun exhibition.

Thursdays, May 18, 25, and June 1 at OI, 7–8:30pm

Thursdays, June 8 and 22, 7–8:30pm, and Saturday, June 24, 10:30am–noon at FM

Six session course: \$214, OI and FM members \$184 (Note: There will be a small materials fee for a packet of handouts and readings to be provided by the instructor.)

To register, please contact Oriental Institute Museum Education at 773.702.9507, or register online at the Oriental Institute website: www.oi.uchicago.edu.

Egypt Discovery Days

Get some hands-on experience with ancient Egypt! Participate in special Interpretive Station activities—families can play the giant Senet Game, see their name in hieroglyphs, or help construct a giant pyramid.

Friday–Monday, May 26–29, 10am–2pm
Free with Museum admission



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© ANDREAS F. VOEGELIN

Create a Play in One Day!

Foundation Theatre Group

Put your little one in the director's chair! Children ages 5–11 will write a short Egypt-themed play under the tutelage of professional actors, cast it with their new friends from the workshop, create their own costumes, and perform for the general public at the Museum that same day.

Saturday, May 27, 10am–2pm rehearsal,
2:30 performance
\$16, members \$12

Adult Lecture

Tutankhamun: Exhibiting a Legend

David Silverman, Exhibition Curator

Follow the legend of King Tutankhamun back nearly 100 years, from the discovery of his extraordinary tomb to the treasures of the current exhibition. The curator of both exhibitions (1977 and today) will talk about the excavation of the tomb and the subsequent exhibitions that sparked Egyptomania in the US. Regain a sense of nostalgia about the 1977 exhibition and discover the new technologies that have made this new gathering of artifacts all the more important.

Saturday, May 27, 2pm
\$16, students/educators \$14, members \$12



ELIZABETH WALKER AND JENNIFER WEGNER

An exhibition from National Geographic. Organized by Arts and Exhibitions International and AEG Exhibitions in association with The Supreme Council of Antiquities of Egypt and The Field Museum.

Tour Sponsor: Northern Trust
Chicago Sponsor: Exelon, Proud Parent of ComEd

The Auschwitz Album: The Story of a Transport
Through June 4

Transforming Tradition: Pottery from Mata Ortiz
Through May 31

NATIONAL GEOGRAPHIC *LIVE!*

Chase a tornado, observe wolves in the Arctic, and explore ancient Egypt in our fifth year of National Geographic Live! presentations. Get your tickets early to see the best photographers, explorers, and conservationists bring their dramatic adventures to The Field Museum.

Exploring Bhutan

Michael Hawley, Computer Scientist and Explorer

Jump into the mind of one of the world's most visionary thinkers who is changing the way we think about sharing and utilizing information. A real renaissance man, Hawley will take you on a



COURTESY MICHAEL HAWLEY

visual odyssey across Bhutan with vibrant photographs from his recently published book on the Himalayan kingdom. After the presentation, take a closer look at the book—the largest ever published—for yourself!

Tuesday, March 14, 7:30pm

Chasing the Tornado

Tim Samaras, Severe-Storm Researcher

Follow the winding path of some of Earth's most destructive natural phenomena. You'll hear some of Samaras' harrowing stories of storm chasing in tornado country, and how he is carefully engineering probes that will teach us more about the dynamics of twisters.

Tuesday, March 28, 7:30pm



© JIMMYE B



BILL TRAVER

Three Among the Wolves

Helen Thayer, Explorer

Walk in the way of the wolf with Helen Thayer and Charlie, her half-dog, half-wolf companion. Thayer will recount the extraordinary education she and her husband received living among packs of wolves in the Canadian Yukon and Arctic, using Charlie as an interpreter between wolf and man.

Tuesday, April 25, 7:30pm

In Search of King Tut

Zahi Hawass, Egyptologist

Get a first-hand look at the CT scans and other investigations being performed on Tutankhamun and other ancient mummies of Egypt. Dr. Hawass is leading an international team of scientists in this provocative look at one of antiquity's most enduring mysteries.

Tuesday, May 23, 7:30pm

Note: Tickets for this presentation in James Simpson Theatre are sold out, but additional tickets are now on sale for guests who would like to watch a live video feed of Dr. Hawass's presentation in nearby Montgomery Ward Lecture Hall. These tickets are \$16, members \$12, students/educators \$10, and are only available by phone, at 312.665.7400.



KENNETH GARRETT

Ticket Information

Call 312.665.7400 or visit www.nationalgeographic.com/nglive to purchase tickets. A limited number will be available onsite the day of the event starting at 5:30pm, but we recommend reserving tickets in advance since this series sells out.

Also, a series subscription makes a great gift! We'll send the tickets along with a personalized gift card at your request.

Individual Events

Patron (reserved seating) \$30; TFM, NG and Geographic Society of Chicago members \$28.

General admission: \$24; TFM, NG and Geographic Society of Chicago members \$22; students \$15.

Educators—Student programs, teacher workshops, and online lesson plans are provided in conjunction with the series. For more information, go to nationalgeographic.com/nglive or call 312.665.7500.

National Geographic Live! educational programs are made possible by the generous support of PNC's Great Outdoors Company.

Investigate historic tragedies and ancient fossils

The Auschwitz Album: The Story of a Transport

Through June 4

Striking black-and-white photographs taken by Nazi S.S. officers provide the only visual record of the arrival and imprisonment of Hungarian Jews in the Auschwitz Birkenau concentration camp.

Free Lecture: Auschwitz: The Making and Unmaking of Hell

Dr. Robert Jan van Pelt, School of Architecture, University of Waterloo

Find out more about the history of this infamous camp. Dr. van Pelt will use the exhibition photographs—and more—to describe a day in the life of Auschwitz, situating the human experience within the camp's larger history and purpose.

Friday, May 12, 1pm

Free with Museum admission

This exhibition was created by Yad Vashem, The Holocaust Martyrs' and Heroes' Remembrance Authority in Israel. The Field Museum presentation is made possible by the American Society for Yad Vashem.

Generous support has been provided by the Crown Family.



Final Weeks!

Dinosaur Dynasty: Discoveries from China

Don't miss your chance to see these remarkable dinosaurs before they make their way back to China!

This exhibition was produced by DinoDon Inc., in cooperation with Beringia Ltd. and the Inner Mongolian Museum.

Visitor Information



Getting Here: Field Museum visitors can park in Soldier Field's parking garage.

Visit www.fieldmuseum.org for information on parking lots/rates, free trolleys and public transit.

Hours: 9am–5pm daily. Last admission at 4pm. Please note the Museum closes at 5pm even when an evening event is scheduled. Event participants will be asked to leave the building until 30 minutes before their event begins.

Admission and Tickets: Member passes can be reserved through the membership department (312.665.7705) or picked up at the membership services desk. For non-members, The Field Museum's gold pass, which includes general admission plus one special exhibition, ranges in price from \$8 to \$19, depending on your age category and whether you are a Chicago resident. Please bring your ID to receive the appropriate ticket price.

Tickets are available at the Museum's admission desks, or in advance via www.fieldmuseum.org or 866.FIELD.03. For all admission and ticket details, visit www.fieldmuseum.org.

Accessibility: Visitors using wheelchairs or strollers may be dropped off at the new east entrance. Handicapped parking and wheelchairs are available on a first-come, first-served basis. Call 312.665.7400 to check on the accessibility of programs that take place outside of the Museum.

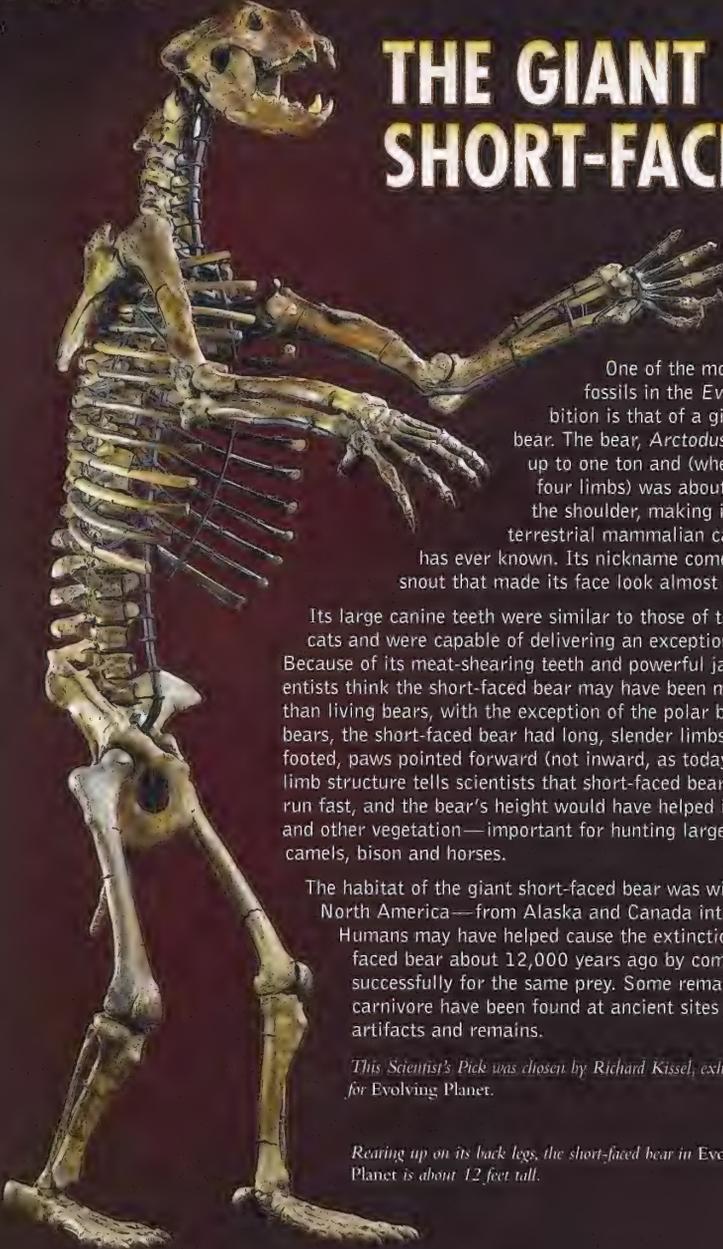
Information: 312.922.9410 or www.fieldmuseum.org



MIKE SPOCK

Rendering by Karen Carr

THE GIANT SHORT-FACED BEAR



One of the most spectacular fossils in the *Evolving Planet* exhibition is that of a giant "short-faced" bear. The bear, *Arctodus simus*, weighed up to one ton and (when standing on all four limbs) was about five feet tall at the shoulder, making it one of the largest terrestrial mammalian carnivores the world has ever known. Its nickname comes from the short snout that made its face look almost cat-like.

Its large canine teeth were similar to those of today's living cats and were capable of delivering an exceptionally strong bite. Because of its meat-shearing teeth and powerful jaw muscles, scientists think the short-faced bear may have been more carnivorous than living bears, with the exception of the polar bear. Unlike today's bears, the short-faced bear had long, slender limbs and walked flat-footed, paws pointed forward (not inward, as today's bears walk). The limb structure tells scientists that short-faced bears could probably run fast, and the bear's height would have helped it see over tall grass and other vegetation—important for hunting large herbivores such as camels, bison and horses.

The habitat of the giant short-faced bear was widespread over North America—from Alaska and Canada into central Mexico. Humans may have helped cause the extinction of the short-faced bear about 12,000 years ago by competing more successfully for the same prey. Some remains of this powerful carnivore have been found at ancient sites containing human artifacts and remains.

This Scientist's Pick was chosen by Richard Kissel, exhibition content specialist for Evolving Planet.

Rearing up on its back legs, the short-faced bear in Evolving Planet is about 12 feet tall.

EVOLVING PLANET FEATURES THE WORK OF THESE FIELD MUSEUM SCIENTISTS

Greg Borzo, Media Manager, Scientific Affairs

Robert D. Martin, PhD, Anthropology Department Curator,
Biological Anthropology and Provost, Academic Affairs

Dr. Martin has devoted his career to exploring the evolutionary tree of primates. In addition to our own species, *Homo sapiens*, the order Primates contains about 350 other living species, from lemurs to monkeys to apes. In his quest to achieve a reliable reconstruction of primate evolutionary history, Dr. Martin has studied an array of characteristics of living primates, including anatomy, physiology, chromosomes and DNA. He has been particularly interested in the brain and reproductive biology, as these systems have been of special importance in primate evolution. Additionally, there are almost 500 primate fossil species dating back 55 million years. For skeletal features, it is possible to include the fossil evidence, and thus geological time, in the picture. By studying living primates in the forests of Africa, Madagascar, Brazil, and Panama, Dr. Martin has also been able to include behavior and ecology in an overall synthesis.

In his own words: *Understanding primate evolution is an essential basis for interpreting the special case of human evolution. Without this secure foundation, it is exceedingly difficult to produce convincing explanations for the evolution of our many special features. If we only compare humans and our closest relatives, the great apes, any conclusions that we draw have no generality and are not testable.*

One good illustration of the need for broad comparisons is provided by investigations of the timescale for primate evolution. Although the earliest known primate fossils are 55 million years old, our statistical analysis allowing for gaps in the fossil record indicates that primates actually diverged from other mammals about 90 million years ago. When this result is applied to human evolution higher up in the tree, it emerges that our lineage probably branched away at least eight million years ago, earlier than previously thought.

Lance Grande, PhD, Geology Department Curator, Fossil Fishes
and Vice President and Head of Collections and Research

Dr. Grande is trained as a biologist and a geologist. He studies the comparative osteology (structure and function of bones), ontogeny (developmental history) and biogeography (geographic distribution through time) of fossil and living fishes. His work, largely funded by the National Science Foundation, has focused on the ray-finned fishes (*Actinopterygii*), a group containing half of all known vertebrate animals. Dr. Grande is also interested in the philosophy and application of methods used to interpret evolutionary relationships and Earth history. Some of the fish groups on which he has conducted major studies include the *Siluriformes* (catfishes), *Clupeomorpha* (herring and herring-like fishes), *Osteoglossomorpha* (bony-tongues) and several more primitive groups (gars, bowfins, sturgeons, and paddlefishes). Dr. Grande is also interested in the origin and evolution of the modern North American freshwater fish fauna as well as in developing new techniques for preparing fish fossils so their skeletons can be more productively used for detailed comparisons with living fishes. Every year he conducts fieldwork in the famous Green River Formation in Wyoming, where he works in some of the world's most productive fossil beds and often teaches a field course called *Stones and Bones* through the Graham School at the University of Chicago. The Green River Formation contains a rich fossil bonanza comprised of a beautifully preserved, extinct, 52-million-year-old tropical lake community containing millions of fossil organisms, from microscopic bacteria and insects to 13-foot-long crocodiles and palm trees.

In his own words: *It is both an honor and a terrific opportunity to oversee the largest, most diverse fossil fish collection in North America, containing more than 35,000 specimens—from single fish skeletons to large slabs of rock with more than 200 individual fish. As a biologist, I also work extensively with living fishes. In addition to our huge fossil fish collection in the Geology Department, The Field Museum has the good fortune of having over two million recent fishes in the Zoology Department, and of being located near the Shedd Aquarium with all its wonderful resources. Today there is no better place in the world to study the evolution and biodiversity of fishes than The Field Museum.*



JOHN WIESENBERG/ISTOCK



JOHN WIESENBERG/ISTOCK

Olivier Rieppel, PhD, *Geology Department Curator, Fossil Amphibians and Reptiles*

During the Mesozoic, also called the "Age of Reptiles," a number of reptile lineages secondarily adapted to a life in the sea. Over the past few years, Dr. Rieppel has pursued the global revision of Triassic stem-group Sauropterygia, marine reptiles that later gave rise to the more widely known plesiosaurs, pliosaurs and elasmosaurs of the Jurassic and Cretaceous. This work provided the basis for the ongoing collaborative research program with faculty and students of the Institute of Vertebrate Paleontology and Paleoanthropology in Beijing, focusing on new collections of Triassic marine reptiles from southern China. These new collections require taxonomic work not only on sauropterygians, but also on other marine reptiles such as protosauropsids. The Triassic record of marine reptiles is rich and diverse, and allows the study of broad evolutionary patterns as originally terrestrial lineages adapted to marine habitats.

More recently, Dr. Rieppel became involved with research on the origin of snakes. This collaborative research seeks to integrate paleontology, comparative morphology and molecular systematics. The origin of snakes is a longstanding problem in the evolution of reptiles that still awaits a satisfactory resolution. It is now embedded in a broad-scale investigation of the evolutionary history and relationships of squamate reptiles (snakes, worm lizards and other lizards) as part of the Tree of Life program sponsored by the National Science Foundation.

In his own words: *Researching the evolution of various reptile lineages and reconstructing their phylogenetic past raises a number of theoretical and methodological issues that require philosophical analysis. I take an active interest in the history and philosophy of comparative biology.*



MARK W. DHAL/WGN0204/55D

Peter Makovicky, PhD, *Geology Department Curator, Dinosaurs*

Dr. Makovicky studies the evolutionary history of dinosaurs. His research is particularly focused on small theropods (carnivorous dinosaurs) and how they evolved into living birds. The theropods closely related to birds had wing feathers, brooded their nests, and were small animals that were virtually indistinguishable from the earliest bird, *Archaeopteryx*, in all but a few features. Dr. Makovicky also focuses on the horned dinosaur group Ceratopsia, which includes animals such as *Triceratops* and *Protoceratops*. He has conducted fieldwork in Wyoming, China, India, and Argentina, and has described six new dinosaur species with colleagues from various parts of the world.

In his own words: *In 1995, we had strong evidence that birds evolved from small, carnivorous dinosaurs like Velociraptor. Nevertheless, there was still a gap between the anatomy of birds and non-avian theropods. There was also much debate regarding how many of the traits that characterize birds, such as feathers, flight ability, and nest care, may have evolved. In the intervening decade, new theropod discoveries from around the world have provided amazing answers to many of these questions.*

Below: Painting of Sue by John Gurche.



MARK W. DHAL/WGN0204/55D



ENR8807C

Meenakshi Wadhwa, PhD, *Geology Department Curator, Meteorites*

Meteorites are rocks that have fallen to the surface of the Earth from interplanetary space. They are “space probes” that allow us to explore other worlds. While most meteorites originated from asteroids, scientists believe a few were ejected by large impacts on the surfaces of the moon and Mars. Dr. Wadhwa studies the chemistry of these “rocks from space” to understand how and when our solar system and the planets within it were formed.

To do this work, she has established a state-of-the-art geochemistry and geochronology laboratory at The Field Museum. Dr. Wadhwa is a team member of Genesis, the NASA spacecraft mission that brought back samples of solar wind (streams of particles flowing outwards from the sun). She will be studying these samples to understand the chemical composition of the sun, which makes up more than 99 percent of the mass of the solar system. She is also involved in future NASA missions to send rovers to Mars that will help us to understand the history of water on that planet and whether life ever evolved there.



MARCO VENTURA/ISTOCKPHOTO.COM

In her own words: *What most people don't realize is that much of what we know about the origin of the solar system and the Earth, and the atoms that make up everything around us, comes from studying meteorites. Meteorites and other samples brought back from spacecraft offer us a unique opportunity to understand the inner workings of the physical universe around us.*

Top: A Charles R. Knight mural in Evolving Planet.

John R. Bolt, PhD, *Geology Department Curator, Fossil Amphibians and Reptiles*

The origin and early evolution of tetrapods is one of Dr. Bolt's main research interests. Tetrapods are four-limbed vertebrates, a category that includes humans. The earliest known tetrapods are from the Late Devonian, about 380 million years ago. Devonian tetrapods are found in fewer than a dozen localities worldwide. Tetrapod localities from the Mississippian (359 to 318 million years ago) are also rare, with only about two dozen localities worldwide. Dr. Bolt is currently studying Mississippian tetrapods that he collected from a locality in southeastern Iowa.

Preservation of many of these specimens is very good, and in some cases exceptional. Preservation quality is particularly important in the case of the earliest tetrapods. These specimens have turned out to show many unexpected features which would have been difficult to interpret from poorly preserved material. Taken together, the increasing numbers of specimens from the Devonian and Mississippian are finally beginning to give scientists a look at the first tetrapods.

In his own words: *The earliest tetrapods would have been expected to be primitive, and this has turned out to be the case. Nevertheless, something that has impressed me about Mississippian and Devonian tetrapods is just how primitive they were. It is often helpful to think of them as highly evolved sarcopterygian fish. But whether you view them from a fish perspective or a tetrapod perspective, one of the best things about studying early tetrapods is the way it forces you to change your expectations.*



JOHN R. BOLT/ISTOCKPHOTO.COM

Peter Wagner, PhD, *Geology Department Associate Curator, Fossil Invertebrates*

Snails (gastropods) are one of the most successful and diverse animal groups. Because of their hard shells, they have left a dense fossil record. Dr. Wagner studies shells of gastropods and related mollusks from about 500 to 350 million years ago in order to test ideas about what caused different long-term evolutionary patterns. For example, he studies the long-term diversification and/or elimination of some shell types, how rapidly new shell forms and/or new species appear, and which survive or die over mass extinction events.

Dr. Wagner has shown that snail shells changed more frequently and more drastically early in gastropod history and particular types of shells evolved far more frequently than expected given the range of possible shell types. In addition, he has shown that many now-extinct shell types once were common and evolved frequently. Wagner's research is funded by the National Science Foundation and has included fieldwork in the Australian outback as well as visits to museums across the globe.

In his own words: *Gastropods have a much denser fossil record than other animal groups do. My work involves combining the data I collect with computer programs I write in order to separate the hypotheses that might work from those that clearly do not.*



JOHN WELSH/ISTOCKPHOTO.COM



Jennifer McElwain, PhD, *Geology Department, Associate Curator, Paleobotany*

Dr. McElwain is interested in the interactions between plant biodiversity and climate change in the geological past. Specifically, she studies how changes in greenhouse gases, such as carbon dioxide, can directly and indirectly influence the relative abundances and diversity of different plants and the functioning and ecology of ancient ecosystems. She studies three important intervals in Earth history: the Triassic-Jurassic boundary (200 million years ago); the Early Toarcian (178 million years ago); and the Cenomanian-Turonian boundary (90 million years ago). Each of these intervals is characterized by major extinctions which reshaped ecosystems. Understanding how global warming in the past influenced the ecology and biodiversity of ancient ecosystems may help us in our quest to conserve biodiversity in the future by elucidating the types of plants that are most sensitive to changes in the climate system.

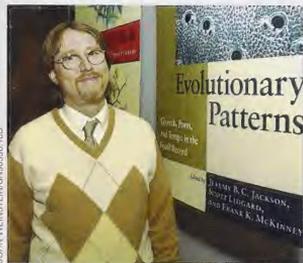
In her own words: *Analyses of the fossil record enable us to track the ecological dominance of different plant groups through time and assess how climatic changes and changes in atmospheric composition affected these patterns.*



MIHAI POPA



JOHN WEINSTEIN/GEOR656378



JOHN WEINSTEIN/GEOR656378

Scott Lidgard, PhD, *Geology Department Associate Curator, Fossil Invertebrates*

Dr. Lidgard is a paleoecologist, a scientist who studies interactions between ancient organisms and their environments. He is currently studying ecological forces such as predation as possible drivers of large-scale trends in the history of life. His work focuses on bryozoans, marine invertebrates that live on the bottom of the sea. They form colonies in an enormous variety of shapes, with as few as two or as many as two million individuals. The complexity, colonial nature, and excellent fossil record of bryozoans make them ideal subjects for studying general patterns of ecology and evolution. Dr. Lidgard looks at the precise timing and co-occurrences of predators and prey in the fossil record, the appearance and spread of skeletal armament among fossil bryozoans, and the mechanisms of attack and dietary specialization of bryozoan consumers alive today. By combining these different perspectives, he tests different hypotheses about the role of predation in the evolutionary process.

Above: The coal forest in Evolving Planet.

In his own words: *We know from countless field studies and experiments that predation is an important force molding the bodies and life histories of organisms. There is also a wealth of evidence that predation is one factor structuring the distribution and abundance of organisms, and for some species causing extinction in ecological time. Yet scientists continue to debate how predation correlates with large-scale trends in the diversity and forms of organisms over millions of years on a global scale.*

Benjamin Dann Walsh— Darwin's Prairie Correspondent

Paul Brinkman, PhD, Field Museum Library Associate

Foremost among the treasures of the Mary W. Runnells Rare Book Room in The Field Museum's Library is a set of letters written by Charles Darwin to Benjamin Dann Walsh, a self-trained entomologist and long-time resident of Rock Island, Illinois. The letters were part of a gift to the library from the family of Charles Valentine Riley, a protégé of Walsh.

Born in England in 1808, Walsh studied at Cambridge, where he first made Darwin's acquaintance. He was favorably impressed by the young naturalist's "noble" collection of beetles. At 30, Walsh moved with his wife to western Illinois. He worked a meager farm in Henry County for 12 years and then relocated to Rock Island, where he opened a successful lumberyard. In 1857, Walsh

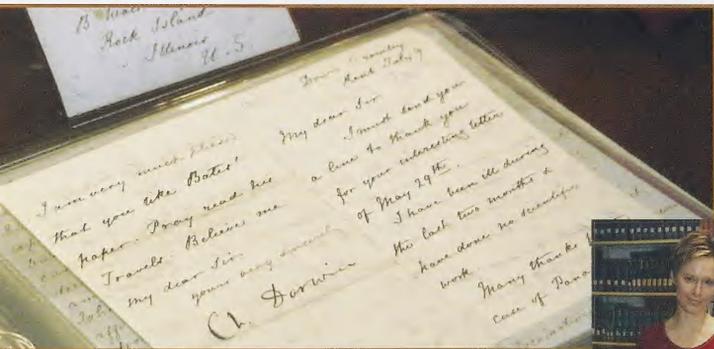
Walsh was a wag and an eccentric. His correspondence was peppered with jokes and humorous rebukes of his colleagues, although he showed a little more respect to Darwin. He frequented the pastures and woods of Rock Island, catching insects. A companionable bug hunter, he often had a band of local youths in tow. He cut a conspicuous figure with his staff, his butterfly net, and a long, flowing cloak. On his head he donned a cork-lined dunce cap to which he pinned his captures.

On Nov. 12, 1869, Walsh was walking leisurely along the Chicago & Rock Island Railroad tracks, reading a letter from England and examining an exquisite insect that it contained. Behind him, he heard a whistle, and absent-mindedly stepped into the path of a Chicago-bound train.

Realizing his error, Walsh leaped for safety. But the speeding train crushed his left foot, which had to be amputated. "Don't you see what an advantage a cork leg will be to me...?" he joked with his doctors. He survived the surgery, but succumbed a week later to internal injuries sustained in the accident. He is buried in Rock Island's historic Chippianock Cemetery.

When Riley learned about Walsh's tragic end, he raced to Rock Island to secure his mentor's invaluable collections.

But the Walsh family intervened, giving Riley just a few professional papers. The insect collection was later sold to the State of Illinois, which deposited it in the Chicago Academy of Sciences. Mrs. Walsh visited Chicago in early October 1871, to look after the safety of her late husband's insects. The following day, as she sped west for home, the Great Chicago Fire consumed the academy and all that it contained. **ITF**



DIANE ALEXANDER WHITE

'Darwin... was dependent on a network of collaborators. He praised Walsh's letters as a "mine of wealth" on insects.'

Above: A sample of Charles Darwin's correspondence with entomologist Benjamin Dann Walsh.

Right: Christine Giannoni, Field Museum reference librarian, with the collection of Darwin's letters.

retired from business to devote himself to science and authored a swarm of articles on agricultural entomology and pest control. After reading *Origin of Species*, he became a staunch supporter of Darwin's evolutionary views and, in 1864, sent Darwin a letter heaping praise on his work. Darwin responded in kind. Working on the frontier of science, and lacking access to a library or museum, Walsh relied on his correspondence to exchange data and ideas with other naturalists. Darwin, too, was dependent on a network of collaborators. He praised Walsh's letters as a "mine of wealth" on insects.



DIANE ALEXANDER WHITE

Two Exciting Events Coming Up: Members' Nights and Tut

Join us for the 55th Annual Members' Nights on March 30 and 31—it's our biggest member event of the year and a great way to celebrate the opening of *Evolving Planet!*

Go behind the scenes and explore our vast collections, meet our staff, and talk one-on-one with Museum scientists. Reservations are required. Please RSVP between Feb. 15 and March 24 by calling 312.665.7705 or visiting www.fieldmuseum.org/membersnight.

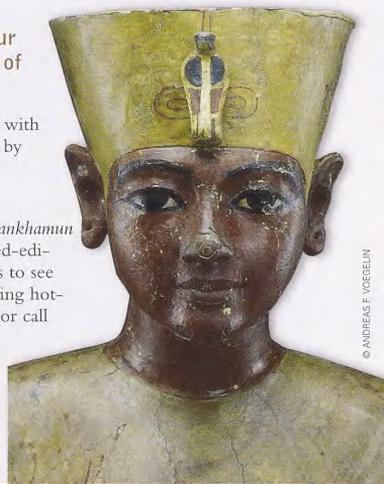
Members' Night is sponsored by Sears Holdings Corporation.

And while you are here for Members' Nights, don't forget to obtain your tickets for *Tutankhamun and the Golden Age of the Pharaohs*, opening May 26. Consider upgrading to our new, limited-edition Tut memberships—Royal Tut (\$125) or Tut at Twilight (\$250)—and enjoy four tickets to see the exhibition (a \$100 value), exclusive concierge services including a members-only ticketing hotline, priority admission lines, and so much more! Visit www.fieldmuseum.org/membership or call 312.665.7700 for more information.

An exhibition from National Geographic. Organized by Arts and Exhibitions International and AEG Exhibitions in association with The Supreme Council of Antiquities of Egypt and The Field Museum.

Tour Sponsor: Northern Trust

Chicago Sponsor: Exelon, Proud Parent of ComEd



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Founders' Council and Annual Fund News

Thank you to all of our Founders' Council and Annual Fund donors for helping make 2005 a successful year for The Field Museum. We are looking forward to another exciting year!

Founders' Council members should mark their calendars for these upcoming events: The 2006 Award of Merit will be held on May 11 and will honor Dr. Niles Eldredge of The American Museum of Natural History. The Founders' Council preview event for *Tutankhamun and the Golden Age of the Pharaohs* will be held on May 24. For more information on these programs or on becoming a member of The Founders' Council, please call Monica Cawvey at 312.665.7773.

As we gear up for an exciting 2006, Annual Fund members should note the following dates for the private preview events preceding the opening of *Tutankhamun and the Golden Age of the Pharaohs*. The preview event for Field Naturalists and Field Explorers will be held on May 21 and the preview event for Field Contributors and Field Adventurers will be held on May 23. Invitations detailing how to reserve a spot will be sent in the coming months. For more information on these events or on becoming a member of The Annual Fund, please call 312.665.7777 or email annualfund@fieldmuseum.org.

This nearly life-sized wooden model of the head and torso of King Tut will be featured in the exhibition, Tutankhamun and the Golden Age of the Pharaohs.

A Special Recognition

The Field Museum's Institutional Advancement Department wishes to give special recognition to Jim Otis, one of the friends of the Museum working on the \$176 million *Campaign for The Field Museum: Understand the Past, Shape the Future*. Jim uses tenacity, good humor, and a passion for the Museum to inspire others to get involved. He calls it "just being a believer." Jim and his wife Diane are both active members of the Museum's Founders' Council and Diane also belongs to The Women's Board.

Microsoft Awards Technology Grant

The Field Museum has received a gift of a full software upgrade from Microsoft worth \$1.4 million. The gift launches the Museum into a new phase of technologically advanced program and research support. Museum staff members have already begun to use the software which allows them to collaborate more efficiently.

Michael Gorriarán, general manager for Microsoft's U.S. Enterprise Sales Operations, said, "The Field Museum works tirelessly to help educate and inspire citizens throughout Chicago, helping them to more fully realize their potential in life."

"We are delighted to have an ongoing partnership with The Field," added Janet Kennedy, general manager for Microsoft's Midwest District-Enterprise Sector.

"The Field Museum is extremely grateful to Microsoft for their generous donation," said Field Museum Vice President of Institutional Advancement and Chief Financial Officer, Jim Croft. "Not-for-profit organizations typically cannot afford the most recent top-of-the-line software," Croft added. "Microsoft's donation allows us to be at the forefront of technology. This gift means a great deal to The Field Museum."

Above: Michael Gorriarán (left), and Jim Croft stand in front of the Museum's main computer server.

Sue Store Features Evolving Planet Items

Complement your visit to *Evolving Planet* with a stop at the newly renovated Sue Store. New products include Dinosoles—kids' sneakers with fun dinosaur designs and a dino footprint. Walk in snow or sand and leave dino tracks! The new product collection for *Evolving Planet* features a Triassic terrestrial scene and a quartet of dinosaurs by artist Karen Carr. And always available in the Sue Store is merchandise for the whole family featuring the world's most famous T. rex, as well as books, games, plush dinos and toys.



Dinosoles with fun dinosaur designs and a dino footprint.