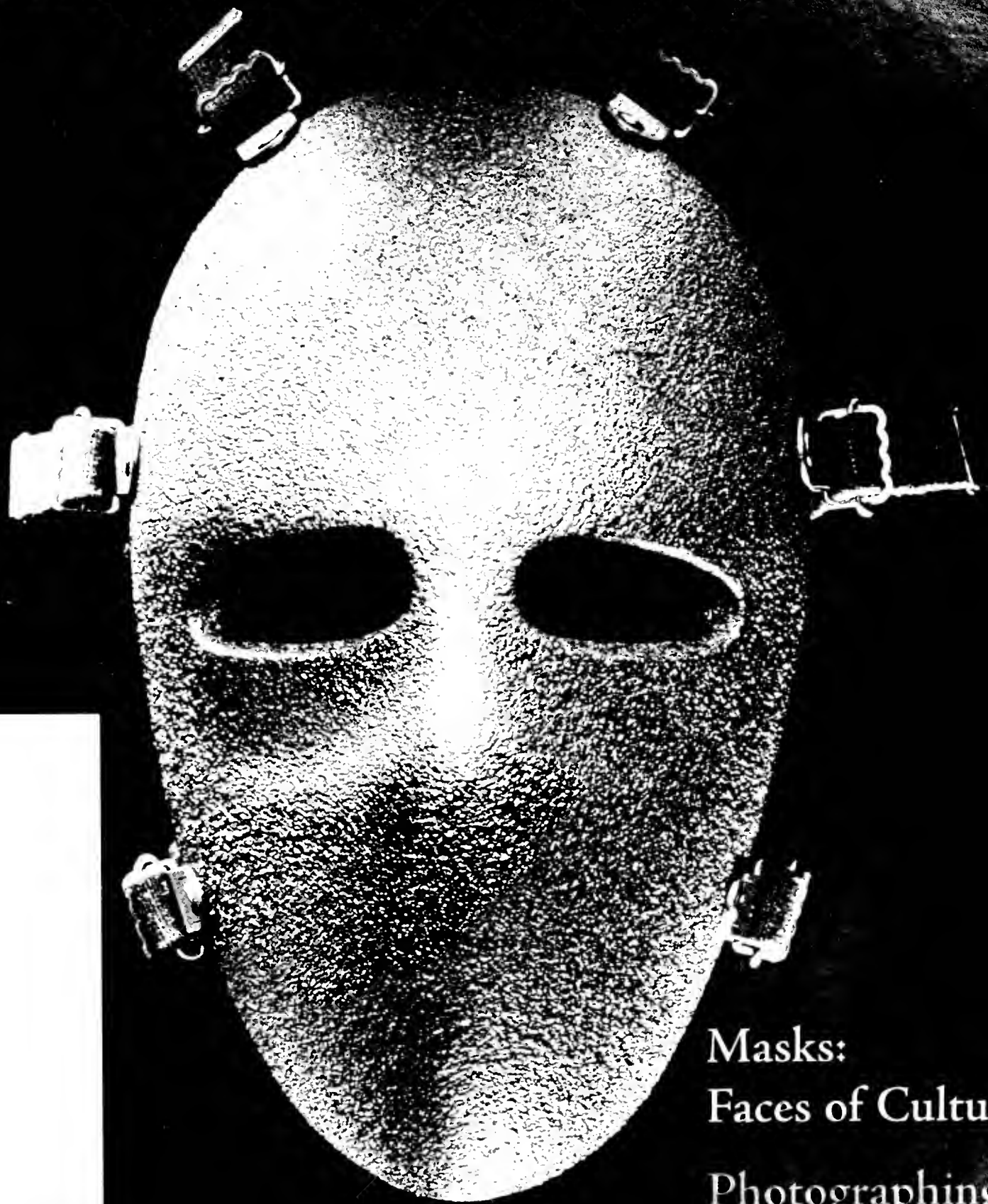


INTHEFIELD

January
February
2000

The Field Museum's Membership Publication



Masks:
Faces of Culture
Photographing the
World of Science

From the President



JOHN WEINSTEIN/GN88119 6

THE MUSEUM'S ROAD MAP TO THE NEXT CENTURY

During his appearance at The Field Museum in August, the 14th Dalai Lama warned the audience not to expect too much in the new millennium:

"Some people are a little excited about the new millennium. They believe it will bring some new things and happiness. They are wrong . . . nothing will be different; nothing will be new."

The Dalai Lama, however, does believe that the new millennium has significance. It is, as he pointed out, a bench mark in human history against which we should examine our lives and contemplate the future. But only through the process of self-evaluation and personal sacrifice, he concludes, can we effect change in our lives.

A similar message is being conveyed by our board of trustees, who recently challenged us to transform The Field Museum into the best museum in the world. During a yearlong strategic planning initiative, the trustees

evaluated all aspects of The Field Museum, from our administrative policies to our research initiatives. Upon completing their evaluation in September, they presented us with a series of recommendations.

Their plan, however, is more than just a laundry list of recommendations — it is a philosophical road map that we must follow if we are to remain competitive in the 21st century. Underpinning this road map is the trustees' conviction that we should expand our mission of accumulating and disseminating knowledge about the world in which we live to include a renewed focus on *creating* knowledge through our research programs.

For instance, they have mandated that we immediately invest more resources into maintaining and expanding our collection of 21 million cultural objects and biological specimens. These collections are the lifeblood of this institution, used by our curators, as well as scholars throughout the world. However, they are a wasted asset unless we maintain and enhance them through an integrated research and conservation program that gives our scientists the resources they need to continue searching for answers to the planet's lingering mysteries and growing environmental problems.

The trustees also want us to breathe new life into the visitor experience by bridging the gap between the research and public sides of the Museum. In June 1998, we took the first step in this direction by constructing a fossil prep lab in the public space where visitors could watch our researchers clean and prepare Sue's bones. But we can do more. Why not, for instance, allow visitors controlled access to the collections so they

can see firsthand the eclectic array of biological specimens and cultural objects housed at The Field Museum? And why not build more public labs so visitors can watch our staff examine DNA strands, for example, or conserve ancient textiles from places like Africa and Indonesia?

As we turn the Museum "inside out," we also must systematically update our permanent exhibits, especially those dealing with the earth sciences and the cultures of the Americas. In addition, we need to use the traveling exhibits that we showcase at The Field Museum to add depth to the content of our permanent displays and to shed light on our mission.

An essential component of this plan is to design a more coordinated and creative educational program, one that brings fresh insight and perspective to the artifacts and specimens on display. We also should search for technologies that allow us to broaden our outreach and to shatter the cultural barriers and geographic borders that have hindered our ability in the past to communicate with new audiences.

We already have spent the past few years developing the foundation on which to build the world-class educational and research facility that our trustees have envisioned. But as the Dalai Lama so eloquently pointed out, it takes time and much work before significant changes can be realized.

Have a great New Year and welcome to the new century.

A handwritten signature in black ink that reads "John W. McCarter Jr." The signature is written in a cursive, flowing style.

John W. McCarter Jr.
President & CEO

We would like to know what you think about "In the Field"

Please send comments or questions to Robert Vosper, publications department, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496, or via e-mail at rvosper@fmnh.org.

2

View some never-before-seen photographs shot specifically for scientific applications, and uncover the visual world of natural history.



In the new exhibit "Masks: Faces of Culture," Museum visitors can explore the role that masks play in human society. See the **Calendar Section** for details.

8

The Field Museum's 4,000-pound, 75-foot-long *Brachiosaurus* prepares for arrival at Chicago's O'Hare International Airport.



There are thousands of kinds of mushrooms. While some are edible and delicious, most can make you sick or even kill you.

9

In March, members are invited to a sneak preview of the temporary exhibit "The Dead Sea Scrolls."

11

Is the "Sounds from the Vaults" exhibit really that innovative? A Field Museum exhibit developer sounds off on the question.



Museum paleontologists have discovered a wealth of fossils in Madagascar that are filling in the holes in some long-held evolutionary theories.

Your Guide to The Field

A complete schedule of events for January/February, including programs offered in conjunction with the "Masks: Faces of Culture" exhibit.

INTHEFIELD

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This issue's cover photograph is by Lynton Gardiner of a bulletproof face mask designed in 1989 by American Body Armor and Equipment Inc. The mask is from the collections of the Saint Louis Art Museum.

The **Field**
Museum

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

ph 312.922.9410
www.fieldmuseum.org

Around Campus

Shedd Aquarium

Have you ever wondered what it's like at the Shedd Aquarium early in the morning when the animals wake up? You can find out on Saturday, February 19, or Saturday, February 26, by having **Breakfast with the Belugas**. Beginning at 8 a.m., you'll visit the Oceanarium to talk to the animal-care staff and watch the whales start their day. Afterward, you can enjoy an all-you-can-eat buffet breakfast and a tour of the Aquarium. The cost is \$28

for adults, \$25 for children ages 3 to 11 and for seniors. Admission for children 2 and under is free. Call 312.692.3333 for more information.

Adler Planetarium

Now that the Adler has reopened its renovated building to the public, it will once again showcase part of its History of Astronomy collection in **The Universe in Your Hands**. This perma-

nent exhibit explores the pretelescopic astronomy of the late Middle Ages and the Renaissance, an era marked by the rebirth of Greek and Roman culture and the growing influence of Islamic scientists and philosophers. Included in this exhibit are more than 60 sundials, 33 astro-labes and nine armillary spheres from the Adler's collection, one of the largest assemblages of astronomy-related material in the world.

PHOTOGRAPHS IN THE SERVICE OF SCIENCE



Preparators found this rare baobab skull encased in the rock matrix surrounding Sue's 67-million-year-old remains. While removing the matrix, preparators created a photographic record of each of the T. rex's 200 or so bones, as well as of the remains of the other animals buried along with her.

For the past two years, paleontologist Lance Grande has been researching the evolutionary history, comparative anatomy, and biogeographic distribution of fossil and living gars. Grande "cleans and stains" the modern fish specimens to highlight their bones (red) and cartilage (blue). This makes it easier to compare the living species to the fossil specimens.

Robert Vosper

Important scientific information is often found in the subtle details of a cultural object or biological specimen — the wear and tear on an animal's tooth, for instance, the cracks and sutures on the fossilized bones of a dinosaur, the shape of a design on an ancient pottery shard, or the texture of a leaf growing on a new species of plant. These details are like words in a book, providing scientists with a narrative of the specimen and its history. As a result, there is no substitute for being able to hold, touch and examine a specimen or artifact in person. There is one, however, that comes very close.

Each year, the Museum's photography department shoots on average 15,000 photographs, about half of which are requested by the Museum's research staff for scientific applications. Researchers use these photographs in everything from the classes they teach at universities to the records they keep on specimens gathered in the field. In addition, the department, which maintains a collection of 700,000 images, offers its services to scientists and research institutions all over the globe.

For the most part, however, scientists use these photographs as visual aids in the papers they publish in scientific journals, the main vehicle for communicating new discoveries, theories and collection techniques

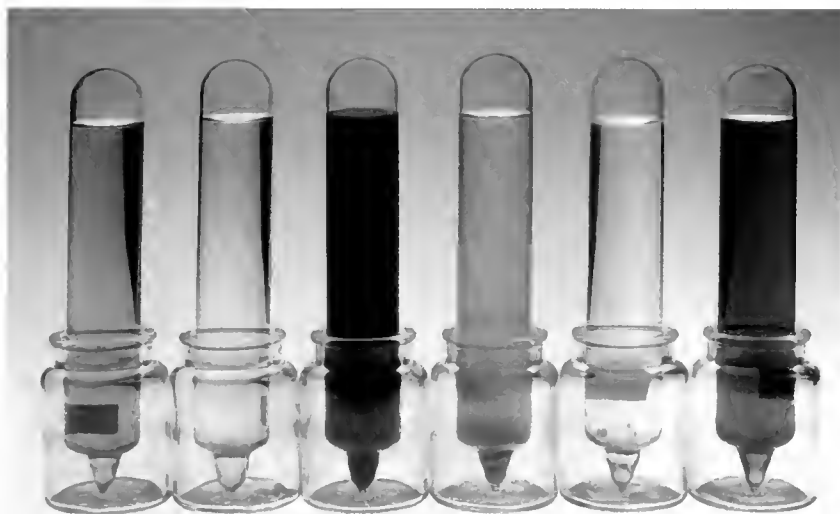
Continued on page 5



JAMES BALODIMAS /A112302 1C



JOHN WEINSTEIN /A113345C



JOHN WEINSTEIN /G69389 15C

3 Anthropologist Alfred Kroeber unearthed this piece of pottery while excavating the ancient ruins of the Nazca Valley of Peru in 1926.

Altamira Press recently published Kroeber's excavation reports from this archaeological expedition and included hundreds of photographs of the artifacts he found that are now housed in the Museum's anthropology collections.

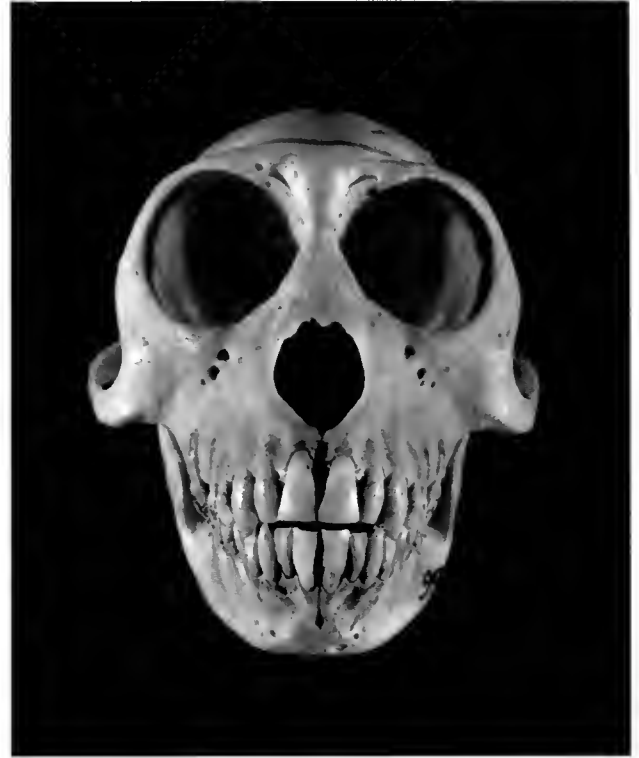
4 Robert Welsch, adjunct curator of anthropology, published this photograph of a Sulka dance mask from New Britain in his two-volume book, *An American Anthropologist in Melanesia*. In the book, Welsch used photographs to document the vast array of objects collected by Museum anthro-

pologist A.B. Lewis during his travels through the former colonies of Melanesia from 1909 to 1913.

5 Glass vials containing alcoholic beverages made in the 1930s from various botanicals, such as corn and cacao beans. This photograph is being used on an education- and research-based Web site, funded by Abbott Laboratories, that documents The Field Museum's extensive economic botany collections.



JOHN WEINSTEIN /Z94270 3BW



JOHN WEINSTEIN /Z94270 2BW



JOHN WEINSTEIN /Z94270 1BW

1 These three photographs show the different anatomical features of the skull of a female rhesus monkey (*Macaca mulatta*). Zoologist Jack Fooden will publish these images in a paper he is writing on the morphological characteristics of the genus.

2 Scientists use herbarium sheets like this one of a *Viguiera weberbaueri*, collected by botanist Michael Dillon in Peru, as reference tools when identifying plants. Since scholars from other

institutions often need to borrow these sheets for their research, the Museum will often send photographs in place of the real thing when the sheet is too fragile or important to travel.

3 In 1998, curator Lance Grande and his colleague William Bemis published this photograph of an acid-prepared, 100-million-year-old fossil of a *Calamopleurus cylindricus* in their 700-page monograph "A Comprehensive Phylogenetic Study of

amiid fishes (*Amiidae*) Based on Comparative Skeletal Anatomy: An Empirical Search for Interconnected Patterns of Natural History." This monograph was published in the Society of Vertebrate Paleontology Memoir 4.

4 A professor from the University of Indiana requested this photograph of turn-of-the-century ceremonial dance wands for use in his research of Pawnee culture.

5 A boy's coat, shirt and leggings from the Mesquakie (Fox) Indians of Tama, Iowa. In 1998, Field Museum anthropologist James VanStone published a comprehensive study of Mesquakie material culture in the Museum's scientific journal, *Fieldiana*.

6 Before 1998, most scientists believed that there was only one species of mouse lemur inhabiting Madagascar. However, field biologist Steve Goodman and a Malagasy colleague proved otherwise by finding at least seven different species. They will publish this photograph in a paper they are writing that describes the morphological characteristics of these nocturnal primates.

to the scientific community. These photographs often convey information and data that are impossible to capture in words alone.

The Field Museum, like many other museums and research institutions across the country, is constructing photographic databases of its collections, which allow the Museum to share information without having to send specimens and objects off-site. This is especially useful when an artifact or specimen is too valuable or fragile to travel or be handled. Many institutions are also converting these photographs into digital formats so that collections can be shared over the Internet.

In addition, anthropologists use photographs in the field to gather ethnographical information about specific objects in the collections. They will show these photographs to members of the cultures that crafted the objects, hoping to gain new insight or gather information not recorded by the original collector. This technique has been used successfully by Field Museum anthropologists working in Papua New Guinea and Panama.

These are just a few examples of how Field Museum scientists use photographs in their research. We thought it might be interesting to showcase a sample of these images, most of which have never been seen by the public. **ITF**

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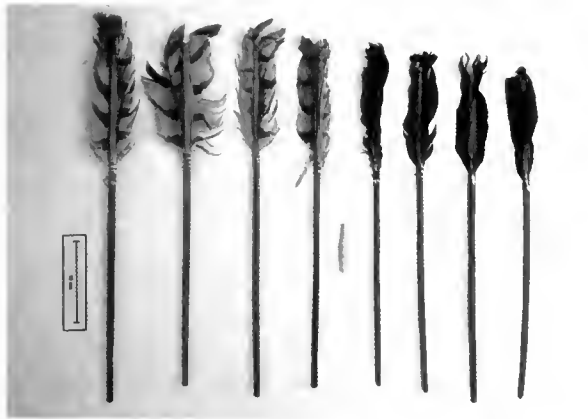
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Field Museum of Natural History
Dept: AMBULIN Prov: LILAY
ASTERACEAE
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Loma de Poliendo, ca. Km 9 between Petaruni &
Poliendo. Acid slopes near coast ca. 150 m.
Stems to 1 m; rays and disc yellow.
17 Nov 1966

683432C / THE FIELD MUSEUM



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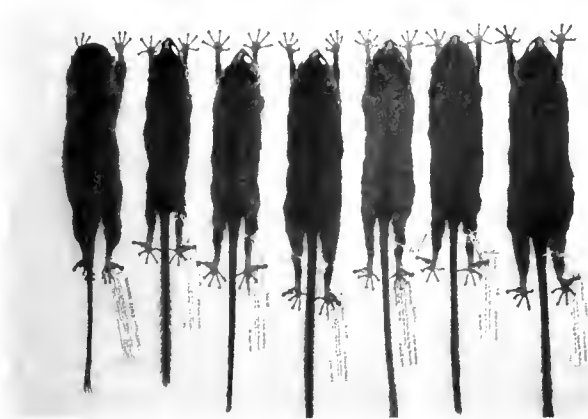
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FOSSIL DISCOVERIES IN MADAGASCAR FILL IN THE HOLES IN SOME LONG-HELD EVOLUTIONARY THEORIES



PHOTO COURTESY OF JOHN FLYNN/IGEOB6214 1C

Above: Team leader John Flynn examines a fossil embedded in the red silt of an ancient flood plain in Madagascar's Morondava Basin. The National Geographic Society and longtime Field Museum supporters John and Withrow Meeker funded the team's research.

Robert Vosper

While digging through layers of sandy sediment in two rift basins in western Madagascar, an international team of paleontologists led by John Flynn, MacArthur Curator of Fossil Mammals, uncovered two fossil sites teeming with the remains of the long-extinct animals that once ruled this island nation.

These animals, some of which have been entombed in the sediment for 230 million years, are helping the scientists gain new insight into the vast array of life forms that inhabited Madagascar during the Mesozoic Era (65 million years to 245 million years ago). And with each new animal they exhume, the scientists are filling in the holes in some long-held theories about the evolutionary history of dinosaurs and mammals.

In the fall of 1999, the team — which includes Field Museum paleontologist William Simpson and research associates André Wyss and J. Michael Parrish — published the results of their most significant discoveries in articles in the journals *Nature* (Sept. 2, 1999) and *Science* (Oct. 22, 1999). In *Nature*, they described their discovery of a new species of mammal about the same size as a shrew; and in *Science*, they reported on their discovery of a collection of cynodonts ("mammal-like reptiles") and the jawbones of two plant-eating dinosaurs. These jawbones, the team argues, might be the oldest-known dinosaur bones ever unearthed.

A Triassic Fauna from Madagascar

Toward the end of their first of four field seasons in Madagascar in 1996, the team discovered a promising fossil bed in the Morondava Basin, just east of the town of Sakaraha in southwestern Madagascar. Although they didn't have time to examine the site in detail, Flynn knew immediately that they had stumbled upon something significant.

"While we were looking around on the first day, we found the skull of a cynodont sitting on the surface with its eye socket staring up at us," he explains. "The skull was deeply weathered but still in great condition, so we immediately knew that it was a great site at that point."

The following year, the team returned to the area and unearthed the 230-million-year-old remains of a variety of cynodonts and true reptiles in the white sand and red silt of an ancient river channel and flood plain. According to Flynn, the remains of these early vertebrates, which included some partial and complete skeletons, are shedding new light on the origins of true mammals.

About 330 million years ago, he explains, primitive land vertebrates (amniotes) split into two evolutionary branches: the Reptilia (reptile line) and the Synapsida (the mammal line). During this split, some of the early synapsids were the cynodonts, a sort of physiological hybrid between warmblooded mammals and cold-blooded primitive land vertebrates.

"These cynodont fossils will help us complete the picture of that evolutionary transformation," Flynn says. "The fossils are exquisitely preserved, showing a level of detail far superior to anything else from that time."

Only a few hundred yards away from the first discovery, the scientists uncovered the 3-inch-long and 5-inch-long bleached-white jawbones of two previously unknown species of plant-eating dinosaurs. These dinosaurs, the team calculates, are about two million years older than *Herrerasaurus*, a 228-million-year-old flesh-eating dinosaur from Argentina that for the past decade has held the distinction of being the oldest dinosaur ever found.

Unlike *Herrerasaurus*, which was a ruthless 13-foot-long predator, the two dinosaurs from Madagascar were both prosauropods, gentle kangaroo-sized herbivores that had small heads, long necks and strong hindquarters that allowed them to amble on either two or four legs. Most paleontologists believe that these early dinosaurs either shared a common ancestor with, or were themselves the ancestors to, the mighty sauropod dinosaurs like *Apatosaurus* that evolved much later.

Dinosaurs are divided into two major groups: the Saurischia (the “lizard-hipped dinosaurs” like *Brachiosaurus* and *T. rex*) and the Ornithischia (the “bird-hipped dinosaurs” like *Triceratops* and *Stegosaurus*). Within Saurischia are the two evolutionary branches known as the theropods, or the meat eaters, and the Sauropodomorphs, or the plant eaters. The prosauropods found by Flynn’s team are early members of the latter group.

Although the two dinosaurs from Madagascar are fairly primitive in form, Flynn is quick to point out that they are by no means the ancestral species of all dinosaurs.

“Dinosaurs *have* to be older than this simply because of the fact that you have prosauropods, which tells you that the major dinosaur branches had already split apart. So, the fact that you have a representative of some of the sub-branches of the tree tells you that the root of the tree is deeper in time. Now, how much deeper it goes is hard to tell. But, I think we are getting close.”

A Middle Jurassic Mammal from Madagascar

A few weeks before discovering the fossil site in southern Madagascar, the team found a much younger fossil bed in the Mahajanga Basin in northwestern Madagascar. After prospecting the site, which is about 450 miles north of Sakaraha, the team scooped up a few hundred pounds of sediment and shipped it back to Chicago for analysis.

Over the next few years, Field Museum volunteers Dennis Kinzig, Ross Chisholm and Warren Valsa sifted through the sediment using high-powered microscopes. In the summer of 1998, they struck pay dirt when they uncovered a jawbone about half the size of a piece of rice, complete with three tiny teeth, each no larger than the head of a pin. The scientists have determined that this jawbone belonged to a previously unknown species of a shrew-sized mammal that lived in Madagascar 165 million years ago. In *Nature*, the team argues that this mammal, which they have named *Ambondro mahabo*, doubles the age of the oldest-known mammals from the island and shatters the widely held theory that the subgroup of mammals that encompasses most living forms (marsupials and placentals) arose first in the northern hemisphere.

“This jaw is the first mammal fossil of any kind found from the southern continents during this time interval,” Flynn says. “And it is much older than any advanced mammal from the north, even though the

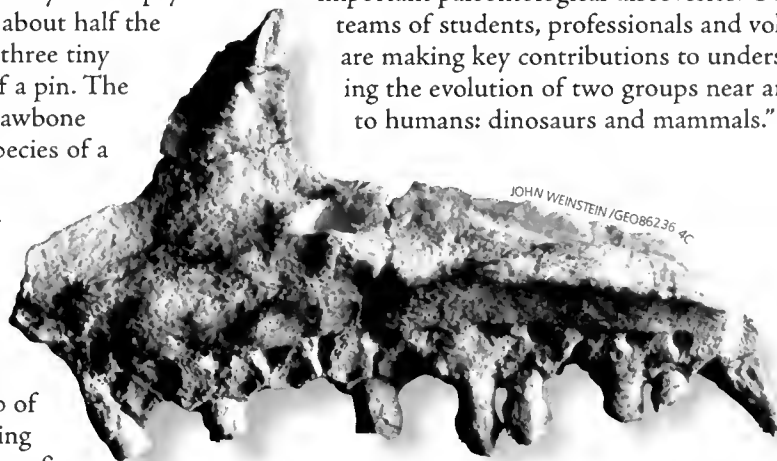
Jurassic fossil record is much better known from the northern continents.”

According to Flynn, *Ambondro mahabo* represents a group of mammals known as the Tribosphenida that had an advanced set of molars that are characteristic of most modern mammals, including humans. The more primitive forms of mammals, he explains, basically had a bunch of cusps (elevations on the chewing surface of the tooth) on their molars that formed an elongated oval pattern. As mammals evolved, however, the cusps on their upper molars formed a more triangular pattern that, in combination with basin-like platforms that developed on the back of their lower molars, allowed the animals to use a more effective “slice and grind” method of chewing.

“While the Jurassic dinosaurian giants grab most of the attention, major evolutionary advances were occurring in our mammalian ancestors during that period, but their tiny size has up until now made it hard to find and study them,” Flynn says.

Once they have finished studying the fossils, the scientists will construct cast replicas of the bones, returning a portion of the original material to scientists at Madagascar’s Université d’Antananarivo. For the past 10 years, Museum scientists have been collaborating with researchers from this university on a number of different projects.

“Our Madagascar project illustrates that modern science is a truly international and collaborative endeavor,” Flynn says. “Expeditions in remote and little-explored regions, with Malagasy and U.S. scientists working side by side, have yielded extremely important paleontological discoveries. Our teams of students, professionals and volunteers are making key contributions to understanding the evolution of two groups near and dear to humans: dinosaurs and mammals.” **ITF**



Above: One of the two dinosaur jawbones the team unearthed in the Morondava Basin in 1997. The scientists believe these jawbones might be the oldest-known dinosaur bones ever discovered.

MUSEUM DINOSAUR PREPARES FOR ARRIVAL AT CHICAGO'S O'HARE INTERNATIONAL AIRPORT

Robert Vosper

Museum President John McCarter recently announced that the 75-foot-long *Brachiosaurus* that guards the northern end of Stanley Field Hall will be moved January 17 to the United Airlines terminal at Chicago's O'Hare International Airport. The 4,000-pound fiberglass replica, which has been a fixture at the Museum for the past seven years, is being relocated to make room for the installation of Sue in May 2000.

"This represents an extraordinary opportunity for us to share our *Brachiosaurus* with a broad audience and to further establish Chicago as dinosaur central," he said.

The Museum will position the specimen, which will be unveiled to the public the morning of January 19, next to the escalator at the United Terminal that joins Concourse B with Concourse C.

"After we truck the dinosaur over to O'Hare, we will reassemble it on a special carriage with wheels," explained Richard Faron, director of exhibit development at The Field Museum. "We will probably assemble it by a freight elevator in the terminal and then wheel it into its new home in Concourse B. This gives us about a 24-hour window to put all the pieces back together."

According to Faron, the only changes the Museum will make to the *Brachiosaurus* are perhaps some slight adjustments to the angle of its tail and some minor cosmetic improvements. These include repainting the specimen's sandy-colored bones in a darker, more realistic shade of brown and replacing the specimen's 2-foot-high concrete and wooden base with a sleek, 6-

to 8-inch steel-tube frame that will accentuate the specimen's lifelike pose. In addition, the Museum will install an interactive information booth and merchandise kiosk next to the dinosaur.

"As Chicago's hometown airline, we are pleased to support The Field Museum, one of the city's pre-eminent institutions," remarked Chris Bowers, the senior vice president of United Airlines, North America. "The presence of the *Brachiosaurus* in United's terminal will be an exciting addition to our customers' travel experience and will offer them a glimpse at the world of mystery and science that can be discovered at The Field Museum."

Fortunately, Museum visitors will not have to trek out to O'Hare to see their favorite plant-eating dinosaur. During the summer, the Museum installed a clone of the specimen on the west terrace overlooking Lake Shore Drive. The only difference between the two replicas is that the one outside is made of a weatherproof fiberglass resin. In addition, the Museum had to hire engineers to design a special steel armature that could withstand the high winds and heavy snowfalls that punctuate a Chicago winter.

Although neither specimen contains real bone, both include cast replicas of the fossilized remains of a *Brachiosaurus* unearthed by Elmer Riggs in western Colorado in 1900. Riggs, the Museum's first paleontologist, discovered about 20 percent of the dinosaur, including a 10-foot-long rib bone and a 6-foot-long femur weighing 800 pounds. Because Riggs was the first to discover a *Brachiosaurus*, his specimen stands as the holotype, the standard against which scientists must compare all new *Brachiosaurus* findings.

As for the missing bones, those are sculptured from a more complete *Brachiosaurus* found by German paleontologists working in Africa in 1909. Since their specimen was smaller than the one at the Museum, designers in 1993 had to increase the scale of the sculptured bones to match those found by Riggs.

Ironically, because of the scientific importance of the real bones, Museum officials at the turn of the century refused to display Riggs' dinosaur — a decision that infuriated the paleontologist who wanted to share his discovery with the world. Sadly, Riggs, who died in 1963, never got to see his *Brachiosaurus* on display. Today, not only can thousands of Museum visitors share in Riggs' discovery each year, but so too can the 180,000 airline travelers who pass through O'Hare each day. **ITF**

Left: Engineers installing the neck of the *Brachiosaurus* in 1993. In all, the 75-foot-long dinosaur is made up of about 63 separate sections.



JOHN WEINSTEIN / GAB6810 TIC

Membership News

MEMBERS' VIEWING DAYS THE DEAD SEA SCROLLS

March 8 & 9; 10 a.m. – 10 p.m.

Join the membership department March 8 and 9 for an exclusive sneak preview of "The Dead Sea Scrolls," a temporary exhibit co-organized by The Field Museum and The Israel Antiquities Authority. In the coming weeks, members will receive an invitation to this preview that will include more details about the event.

"The Dead Sea Scrolls," which will be on display at the Museum from March 10 through June 11, features portions of 15 different parchment and papyrus scrolls, some of which represent the earliest surviving copies of the book of the Old Testament. The last time any of these 2,000-year-old scrolls were on display in Chicago was in 1949 when the Oriental Institute exhibited three scroll fragments.

The scrolls — which were written in Hebrew, Aramaic and Greek over a 300-year period beginning in 250 B.C. — were first discovered by a Bedouin shepherd in some caves in the Qumran region of the Judean desert, about 17 miles southeast of Jerusalem.

Following the shepherd's discovery, archaeologists searched the cave site for additional artifacts and discovered more than 100,000 scroll fragments, which together represent about 800 individual compositions. Although many of these ancient compositions are documents from the Hebrew Bible, some contain apocryphal books found in Christian and Greek scriptures.

"The Dead Sea Scrolls are one of the greatest manuscript discoveries in the history of archaeology," explains Field Museum President John McCarter. "They are rarely exhibited outside of Israel."

"We have worked closely with The Israel Antiquities Authority on this exhibit and we are very excited to bring a unique collection of scrolls to



Chicago, including five that have never traveled outside Israel," he adds. "The Dead Sea Scrolls are the subject of an extensive and lively academic debate and they provide a meaningful connection for many to ancient times."

In addition to the 15 scroll fragments are 80 artifacts from Qumran settlements, including coins, goblets, sandals, a scroll storage jar and a pottery inkwell. The exhibit also will contain books and manuscripts from the collections of The Field Museum and Chicago's Newberry Library, as well as a modern torah scroll from the Spertus Museum in Chicago. The Field Museum also plans to construct a laboratory inside the exhibit where conservators from The Israel Antiquities Authority will demonstrate the art of preserving ancient manuscripts. **ITF**

Above: This ancient fragment of text contains commentary on the biblical verses of Hosea 2: 8-14.

Membership Programs at a Glance

Preview — "Star Wars: The Magic of Myth"
July 14, 21 & 23

This exciting exhibit showcases original artwork, props, models, costumes and characters used to create the Star Wars trilogy, and connects the films to elements of classical mythology. "Star Wars: The Magic of Myth" was developed by the Smithsonian's National Air and Space Museum. The exhibit — which is on display at the Museum from July 15, 2000, through Jan. 7, 2001 — was organized for travel by the Smithsonian Institution Traveling Exhibition Service (SITES). All of the artifacts in this exhibit are on loan from the archives of Lucasfilm Ltd.

Members' Nights
June 8 & 9

Mark your calendars today for Members' Nights, the annual extravaganza during which the Museum throws open the doors to its research and collections areas and lifts the curtain on exhibits in the making. In addition, Museum curators and researchers will be on hand to discuss their research and to show off some of the specimens they've collected while conducting fieldwork around the world.



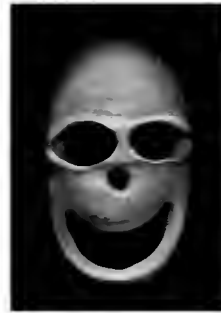
JOHN WEINSTEIN/GN89275 36

Inside

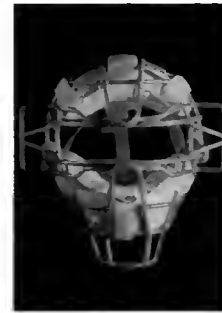
- 1 Exhibits
- 3 Calendar of Events
- 5 Get Smart
- 7 Free Visitor Programs



THE SAINT LOUIS ART MUSEUM



THE SAINT LOUIS ART MUSEUM



THE SAINT LOUIS ART MUSEUM



PRIVATE COLLECTION



MUSEO RUTH LECHUGA DE ARTE POPULAR



PRIVATE COLLECTION

MASKS: FACES OF CULTURE

Throughout recorded history, masks have been part of the human experience. In nearly every culture, age and inhabited part of the globe, they have functioned as mediums of expression and transformation. As works of art, masks embody dynamic visual energy; as cultural icons they present a rich panoply of diversities and commonalities in humankind. The human need to mask reveals a universal desire to transcend earthly limitations, to penetrate alien environments and to be reinvented, renewed, strengthened and protected.

Field Museum visitors can experience the visual power of these objects in "Masks: Faces of Culture," a new temporary exhibit



Top Row: (Left) Nonmilitary respirator, United States, 1930s; (Middle) Devil mask, Mexico, 1991; (Right) Theatrical mask, Guatemala, 1900s; Bottom Row: (Left) Lakisi initiation mask, Zaire, 1800s; (Middle) funerary mask, the Middle East, 5000 – 3000 B.C.; (Right) Baseball catcher's mask, United States, 1985.

on display at The Field Museum from February 19 through May 14. The 140 masks in this exhibit (nearly 30 of which are shown with full costumes) represent 50 countries on six continents. Ranging from prehistoric times to the present, these masks exemplify the exquisite design, provocative imagery and compelling purpose found in one of humankind's most enduring art forms.

In addition to familiar types, the exhibition introduces a number of lesser-known masks from places like rural Europe, Central America and Siberia — making this exhibit the first to explore such a comprehensive range of masks. The diversity of the selection, the visual power of their provocative imagery and the universal need they express offer visitors a rich mosaic of the many faces of culture and dramatize masking as a dynamic, living tradition throughout the world.

The exhibit is organized around six predominant themes that examine the fundamental, shared reasons why cultures mask. As visitors explore these themes —

Left: A 19th-century Brazilian storm mask from the collections of the Staatliches Museum für Völkerkunde in Germany. These bark-cloth masks are worn exclusively by men and are meant to represent animals, natural phenomena and useful plants.

which include discussions of rites of passage, aggression and protection, and theater and cinema — it will soon become evident that whether in warfare, religion or celebration, masks have always been agents of change and that the tradition of masking has been predominantly male. For instance, during Paleolithic times, hunters and shamans used masks and costumes as decoys and men performed masquerades before and after each hunt to gain the blessing of the spirits. In addition, masking has been important in the depiction of real and fictional persona in theater and film, both outgrowths of male-dominated rituals in mythology and religion.

After viewing "Masks: Faces of Culture," visitors are encouraged to explore the hundreds of masks on display in the Museum's permanent exhibits, such as *Africa*, *Pacific Spirits*, *Tibet and Eskimos* and *Northwest Coast Indians*. These masks not only open windows into the broader cultural context in which they were created, but also illustrate the extent of The Field Museum's vast anthropological collections.

"Masks: Faces of Culture," which is free with general Museum admission, was organized by Cara McCarty (the Grace L. Brumbaugh and Richard E. Brumbaugh Curator of Decorative Arts and Design), and John W. Nunley (the Morton D. May Curator of the Arts of Africa, Oceania and the Americas, at the Saint Louis Art Museum).

SOUNDS FROM THE VAULTS

For decades, more than 6,000 musical artifacts in the Museum's collections have rested in silence. They come from around the world and their voices are as diverse as the people who created them. Now, through the magic of digital technology, 50 of these artifacts will perform again — some for the first time in 100 years.

"Sounds from the Vaults" — which is on display through June 18, 2000 — features the digitally recorded sounds of 50 musical artifacts of all shapes and sizes, from finger cymbals to a 12-foot-long Tibetan trumpet. Although the artifacts themselves are displayed behind glass in traditional wooden cases, visitors can "play" them by tapping on large, touch-sensitive pads mounted in front of each case.

"This exhibit is a new direction for us . . . we wanted to do something different for the new millennium," explains Field Museum anthropologist Alaka Wali. "We're pushing the envelope here, using the latest interactive media technologies to give visitors a whole new way of interacting with our collections."

When visitors activate the touch pads below each case, they trigger a sampler that plays back the digitized sound of the instrument on display. And if a person keeps their finger on the pad, a rhythmic pattern is heard until the pad is released. If someone does the same thing at the same time with another pad, the rhythms of the two instru-



Above: In "Sounds," visitors can play 50 musical instruments, including this bass drum from Java that had been sitting on a shelf in the Museum's collections-storage facilities for nearly a century.

ments synchronize to reveal *Vault Grooves*, an original composition created by sound installation artists Bruce Odland and Sam Auinger.

"All the artifacts were recorded with a common tempo, so they can mix rhythmically in interesting ways," says Odland, the co-founder of 30/70 Productions, the New York company that spearheaded the project. "People will find themselves participating in making a new kind of world music."

In addition, the exhibit includes computer workstations where visitors can trace the stories behind each artifact on display, including how it was made, what it was used for, who collected it and how it came to the Museum. With some of the artifacts, visitors can even view original field maps, notes, movie clips and wax cylinder recordings made by the anthropologist who collected the artifact.

CARTIER 1900 – 1939

The "Cartier 1900 – 1939" exhibit, which is on display through Jan. 16, 2000, showcases more than 200 *objets d'art* designed by the House of Cartier from the turn of the century to the 1930s. Many of the most stunning pieces on display show how Cartier drew inspiration from newly discovered archaeological finds from around the world. For example, the discovery of King Tutankhamen's tomb and its ancient treasures contributed a range of highly structured motifs and inspired a new generation of Cartier designers.

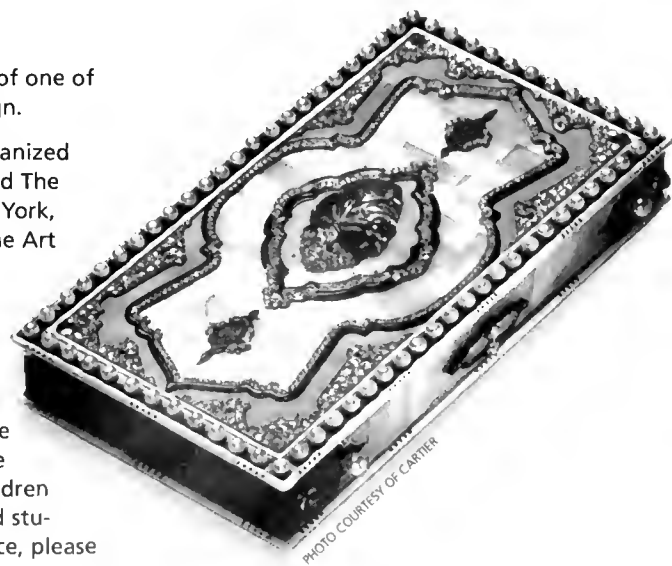
In addition to the jewelry, cigarette boxes, watches, clocks and accessories that visitors will find on display are more than 70 design drawings from Cartier's remarkable archives, as well as client order books, idea sketches and recently discovered original plaster casts that are records of early pieces that no longer exist. Together with new research, these materials offer a rare behind-the-

scenes look at the creative process of one of the world's premier houses of design.

"Cartier 1900 – 1939" has been organized by The British Museum, London, and The Metropolitan Museum of Art, New York, with generous loans drawn from the Art of Cartier Collection, Geneva.

Admission to the exhibit is \$12 for adults, \$6.50 for children ages 3 to 11 and \$8 for seniors and students with an ID (ticket prices include general admission fees). During free day every Wednesday, tickets to the exhibit are \$6 for adults, \$3 for children ages 3 to 11, and \$4 for seniors and students. To purchase tickets in advance, please call Ticketmaster at 312.902.1500.

Members can also receive their two free tickets (family members can receive four) through Ticketmaster.



Above: A turquoise and pearl vanity case made by Renault and Fourrier for Cartier Paris in 1924.



Left: A diorama depicting polar bears frolicking in the ice along the Arctic coast. In the workshop "All about Movement," visitors can learn how polar bears and other animals move in and around the places they call home.

Lecture — An Evening with Jimmy Santiago Baca

1/25, Tuesday, 6:30 p.m.

Listen to distinguished poet Jimmy Santiago Baca read selections from his new and forthcoming books of poetry. Baca, a native of New Mexico, has overcome poverty and prison to become one of America's most gifted writers. He is the author of several books of poetry, one of which, *Martin and Meditations on the South Valley*, won the 1988 American Book Award. He also has received the Hispanic Heritage Award for Literature, the Pushcart Prize and the Southwest Book Award. Among his new books are *Set This Book on Fire* and the novel *Healing Earthquakes*. He also has three movie scripts in the works, including one that Julia Roberts recently purchased about the life of Pancho Gonzales, one of the most colorful players that the tennis world has ever seen. \$15 (\$10 members; \$12 students and educators). Please call 312.665.7400 for more information or to register.

Adult Course — Nature Writing: Interesting Explanations

1/26, Wednesday, 6:30 – 8:30 p.m.

2/2, 2/16, 2/23 & 3/1, Wednesdays, 6:30 – 9 p.m.

Whether you are writing a simple two-sentence description of a tree or an extended essay about a nature preserve, you not only will need to inform the reader, but also capture their interest and challenge their imaginations. In this course, Laurie Lawler, an English professor at Columbia College in Chicago, will teach you the basics of clear, concise exposition, as well as the essential ingredients that comprise quality nature writing. This class is offered as part of the ongoing Naturalist Certificate Program (NCP), a collaboration with the Morton Arboretum and the Chicago Botanic Garden to offer beginning and advanced naturalists classes in nature study. \$125 (\$105 members). Please call 312.665.7400 for more information, to register or to obtain a complete listing of NCP classes offered this winter.

Behind-the-Scenes Evening What's so Great about Dirt?

1/14, Friday, 6 – 8 p.m.

Join Field Museum mycologist Gregory Mueller on an expedition into the Museum's newest permanent exhibit, *Underground Adventure*, to learn about the connections between soil and the food you eat and the clothes you wear. This 15,000-square-foot exhibit — which opened to the public March 27, 1999 — allows visitors to explore the living world of soil while discovering how soil affects the environment and influences cultural practices. "What's so Great about Dirt?" is designed for adults and children grades 3 and up. \$10 per participant (\$8 members). Please call 312.665.7400 for more information or to register.

Family Workshop Fielding Stories

1/15, 2/19, 3/18, 4/15 & 5/20

Saturdays, 9:30 – 10:30 a.m.

Add a new dimension to your favorite bedtime stories by participating in a five-part family workshop in which Field Museum educators will explore a host of children's books that delve into the world of culture and the environment. At the conclusion of each reading, educators will then discuss Field Museum exhibits that relate to the

books being discussed. This workshop is designed for children in second and third grade. \$20 per participant for each class (\$16 members) or \$90 per participant (\$70 members) for all five classes. Please call 312.665.7400 for more information or to register.

Family Workshop All about Movement

1/22, 2/19, 3/11, 4/8 & 5/13

Saturdays, 9:30 – 10:30 a.m.

Discover the world around you by examining animal biomechanics with the Green Light Performing Company, a Chicago-based theater group. During the workshop, families can get "down and dirty" exploring how animals — such as polar bears and mule deer — move in, around and through the different places they call home. Since this program is basically yoga with a twist, participants are encouraged to wear comfortable clothes. "All about Movement" is offered in five sessions and is designed for adults and children ages three to five. \$20 per participant for each class (\$16 members) or \$90 per participant for all five classes (\$70 members). Please call 312.665.7400 for more information or to register.

Adult Course

Exploring World Movement

1/27, 2/3, 2/10, 2/17, 2/24, 3/2, 3/9 & 3/16
Thursdays, 6 – 8 p.m.

People in different cultures have developed very unique ways of expressing themselves through dance, which they use in everything from celebrations to rituals. In this unique eight-part series hosted by Terry Crews, a dance instructor at the University of Chicago, a variety of guest instructors will explore different dance traditions from around the world, including those from Spain, West Africa, India and the Middle East. Participants are encouraged to wear comfortable clothing. \$18 per participant for each class (\$15 members) or \$110 per participant for entire series (\$93 members). Please call 312.665.7400 for a complete listing of session topics or to register.

Behind-the-Scenes Evening Discovering Sounds

1/28, Friday, 6 – 8 p.m.

Take a trip into the world of rhythm by exploring the many aspects of and the instruments used in percussion music around the globe. During this program, Chicago drummer Lenny Marsh will lead participants on a cultural and musical journey, with stops in Africa and various regions of the Pacific. This program, which will leave you tapping your feet and whistling a new tune, is for adults and children grades three and up. \$10 per participant (\$8 members). Please call 312.665.7400 for more information or to register.



278817.1 / THE FIELD MUSEUM

Above: Musicians from West Africa in 1934 playing traditional stringed drums. In the program "Discovering Sounds," visitors can learn how percussion instruments are used in African and Pacific cultures.

Lecture — An Evening with Wole Soyinka

2/3, Thursday, 6:30 p.m.

Wole Soyinka, the first Nigerian and African to win the Nobel Prize in literature (1986), has been called "an outspoken, daring public figure deeply engaged in the main political issues of his country and Africa." He is the author of a number of critically acclaimed plays and essay collections, including *A Dance of the Forests*, *Myth, Literature and the African World* and *The Burden of Memory, the Muse of Forgiveness*. In addition to his work in the arts, Soyinka has become a symbol for human rights throughout the world and has been cited for excellence by Amnesty International. He is currently the Robert W. Woodruff Professor of the Arts at Emory University in Atlanta. \$20 (\$15 members; \$18 students/educators). Please call 312.665.7400 for more information.

Left: In 1967, Nigerian author Wole Soyinka appealed for a cease-fire to the civil war that was ravaging his country and, as a result, was arrested, accused of conspiring with the rebels and held as a political prisoner for two years.



PHOTO COURTESY OF PETER BAILEY

Lecture — An Evening with Anna Quindlen

2/29, Tuesday, 6 p.m.

Winner of the Pulitzer Prize for commentary, Anna Quindlen has written for some of America's most influential newspapers and magazines. In addition, many of her novels have shot to the top of the fiction and non-fiction best-seller lists. A former columnist for *The New York Times* and, most recently, a columnist for *Newsweek*, Quindlen has written three critically acclaimed best-selling novels: *Object Lessons* (1991), *One True Thing* (1994) and *Black and Blue* (1998). Striking a delicate balance between national affairs and personal ones, Quindlen will give the audience a more realistic picture of modern life in America, and will discuss choices and changes in the 21st century. \$18 (\$12 members; \$15 students and educators). For more information or to register, call 312.665.7550.

MASKS: FACES OF CULTURE OPENING FESTIVITIES

On Feb. 19, 2000, the Museum will open "Masks: Faces of Culture," a temporary exhibit that unites the visual, cultural and historical significance of masks by presenting them not only as works of art, but also as cultural icons.

Family Field Days

Saturday & Sunday, February 19 & 20,
11 a.m. – 3 p.m.

After exploring the "Masks: Faces of Culture" exhibit, visitors are encouraged to take a self-guided tour showcasing masks from different cultures on display in the Museum's permanent exhibit halls. Once inspired, you can then design your own mask to take home as a souvenir. This program, which also includes a number of performances and activities, is free with general Museum admission. Please call 312.665.7400 for more information.

Between Dark and Daylight: Cultures of Masks Revealed

Saturday & Sunday, February 19 & 20
11 a.m., 12:30 p.m. & 1:30 p.m.

Saturday & Sunday, February 26 & 27
11 a.m. & Noon

See, hear and enjoy stories about masks and their uses in this specially commissioned puppet play by Walkabout Puppets, a Chicago-based performance group that combines puppets and actors to create a unique visual and animated theatrical experience. During these free performances, visitors will learn about the powerful and provocative imagery and role of masks throughout the world.

Curator Lecture: Behind the Masks

Sunday, February 20, 2 p.m.

Cara McCarty and John Nunley, the curators who developed the "Masks: Faces of Culture" exhibit, will discuss the central themes of the exhibit, as well as the universal human fascination with masks and the desire to wear them. Their presentation will also highlight some of the extraordinary works in the exhibit, the contexts in which the masks were used and personal anecdotes about the difficulties they had in securing these objects for display. For more information about this lecture, which is free with general Museum admission, please call 312.665.7400.

Mask and Puppet Making

Saturday, February 26
2 – 4 p.m.

This hands-on workshop presented by Walkabout Puppets is designed to complement the "Masks: Faces of Culture" exhibit, as well as to highlight masks on display in the Museum's permanent exhibits. In this workshop, participants will learn how to design and make puppets, and will hear about the techniques used to bring them alive. \$15 (\$10 members \$12 students/seniors). Please call 312.665.7400 for more information.



Above: Chinese and Tibetan masks collected on a 1908 Field Museum expedition.

Cartier 1900 – 1939 Closing Festivities

Sunday, January 16, 11 a.m. – 3 p.m.

In celebration of the successful run of the "Cartier 1900 – 1939" exhibit, The Field Museum will host a variety of free activities for visitors of all ages that highlight the connections between jewelry and the natural world. There also will be a number of hands-on programs that will allow visitors to explore different methods of jewelry making and design from around the world.

In addition, jewelry specialist Eve Reppen Rogers will give a slide presentation at 2 p.m. about the magnificent jewels sold through Sotheby's auction house. Many of these jewels were once owned by some of the most famous women in the world, including Jacqueline Kennedy Onassis and the Duchess of Windsor. Please call 312.665.7400 for more information about this festival.



AFRICAN HERITAGE FESTIVAL: TALKING ROOTS

February 5 & 6, 11 a.m. – 4 p.m.

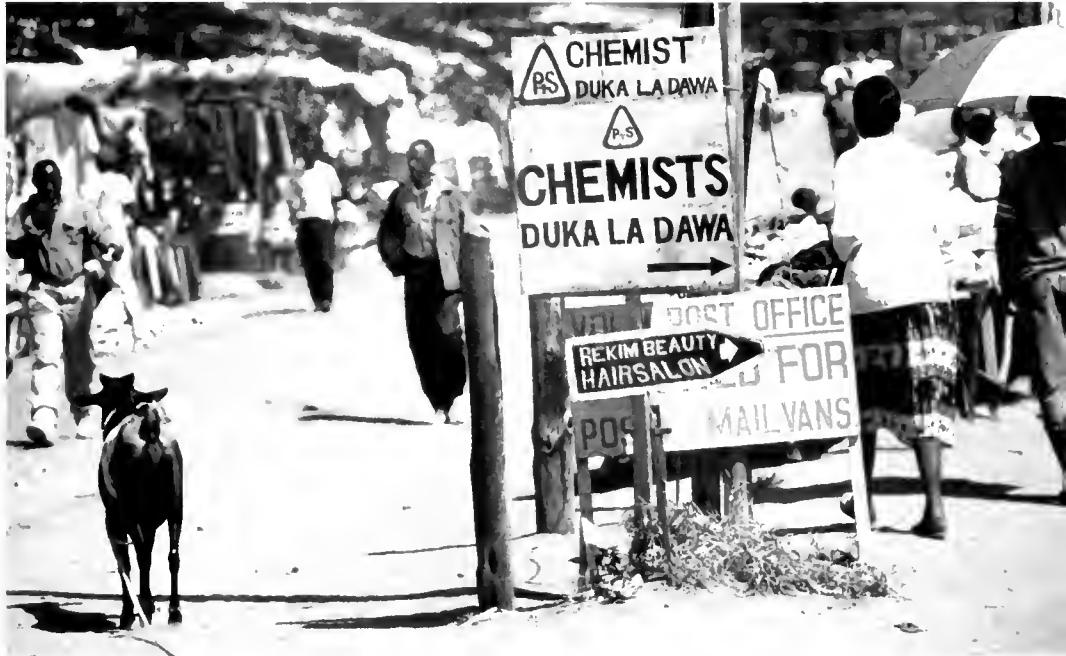
February 7 & 8, 10 a.m. – 1 p.m.

This year's African Heritage Festival explores the history of Africa through music, dance, scientific research and hands-on activities, with a special focus on the spoken and written word. Throughout this four-day festival, visitors can learn about African traditions and, in the process, find connections to their own lives by discovering how American culture is influenced by and draws inspiration from African art, music and history.

The festival will kick off on Thursday, February 3, with a 6:30 p.m. lecture by Wole Soyinka, the Robert W. Woodruff Professor of the Arts at Emory University. Soyinka is the first Nigerian and African to win the Nobel Prize in literature (1986). In 1967, Soyinka appealed for a cease-fire to the civil war that was ravaging his country and, as a result, was arrested, accused of conspiring with the rebels and held as a political prisoner for two years. Since his release, Soyinka has published about 20 works in English, ranging from novels to poetry.

On Saturday, February 5, the first official day of the festival, the council of elders from Dance Africa will inaugurate the program by offering libations in honor of past ancestors. The festival will continue with a variety of programs showcasing African stories, poetry, traditions and Field Museum research, and will include performances by S.P.I.R.I.T.S., the Kuntu Drama Players and award-winning poet Michael Warr.

During the festival, visitors also can participate in a number of interactive activities



JOHN WEINSTEIN / Z983109C

Above: An intersection in the Kenyan town of Voi just outside of Tsavo National Park. For the past year, Field Museum researchers have been studying the cause of manelessness in male lions that inhabit this park. During the African Heritage Festival, visitors can hear about this and other Field Museum research projects being conducted in Africa.

that explore the rich cultures and environments of Africa. For example, they can watch a mask-making demonstration, help write a poem, play traditional African instruments, listen as storytellers examine African culture and history, and talk to Field Museum scientists about their fieldwork on the African continent and in Madagascar.

All festival activities are free with general Museum admission, except the Wole Soyinka lecture, which is \$20 (\$15 members; \$18 student/educators). For more information about this festival or Soyinka's lecture, please call 312.665.7400.

The Field Museum's African Heritage Festival is made possible through the generosity of Abbott Laboratories.

Talking Roots: A Poetry Happening at The Field

**Saturday, February 5, 7:30 p.m.
\$7 (\$5 members)**

Explore African culture through the spoken word by participating in a number of poetry-related lectures and activities. This event also includes a special invitation to attend the official release party of Quraysh Ali Lansana's recently published collection of poems titled "southside rain." As part of this celebration, poet

Regie Gibson will join forces with some of Chicago's finest jazz musicians to create an improvisational experience that blends the spoken words of poetry with music. The evening will also include an open microphone so visitors can share their poems about Africa and African ancestry with others.

Left: Poet Quraysh Ali Lansana.



PHOTO COURTESY QURAYSH ALI LANSANA

Free Visitor Programs



JOHN WEINSTEIN / Z988225C

Above: A man relaxes with his family outside their home in a rural village in Kenya. During the African Heritage Festival, which begins February 5, visitors can learn about African traditions and family life, and, in the process, find connections to their own lives by discovering how American and African cultures are linked.

Every Saturday and Sunday

1 p.m. **Story Time: Facts, Fables and Fiction.** Learn new songs and stories, and have fun creating artwork — all in a 20-minute program sponsored by the Siragusa Foundation Early Childhood Initiative. In January and February, visitors can listen to music from around the world and hear stories about the lives of children in other cultures.

Interpretive Station Activities. Drop by hands-on stations located throughout the Museum (check informational directories for daily listings) and delve into the fascinating world of natural history.

January 8 — Saturday

2 p.m. **Performance: Teens Together Ensemble.** Watch the Teens Together Ensemble perform "Gongs, Ghosts and Ancient Anthems: Releasing the Spirits of Sound," an original musical play based on the "Sounds from the Vaults" exhibit.

January 9 — Sunday

2 p.m. **Performance: Teens Together Ensemble.** See January 8.

January 15 — Saturday

2 p.m. **Performance: Teens Together Ensemble.** See January 8.

January 16 — Sunday

11 a.m. – 3 p.m. **Cartier Family Field Day: The Nature of Jewelry.** Take part in a variety of programs designed to complement the "Cartier 1900 – 1939" exhibit.

2 p.m. **Lecture: Famous Jewels — Their Famous Owners and Designers.** Jewelry specialist Eve Reppen Rogers will give a slide presentation about some of the magnificent jewels that have been sold through Sotheby's auction house.

2 p.m. **Performance: Teens Together Ensemble.** See January 8.

January 22 — Saturday

2 p.m. **Performance: Teens Together Ensemble.** See January 8.

January 23 — Sunday

2 p.m. **Performance: Teens Together Ensemble.** See January 8.

January 29 — Saturday

11 a.m. – 2 p.m. **Scientists on the Floor.** View rarely displayed specimens from the collections and listen to Field Museum mycologist Gregory Mueller discuss his research and how it relates to the new **Underground Adventure** exhibit.

2 p.m. **Performance: Teens Together Ensemble.** See January 8.

January 30 — Sunday

2 p.m. **Performance: Teens Together Ensemble.** See January 8.

February 5 — Saturday

11 a.m. – 4 p.m. **African Heritage Festival: Talking Roots.** Explore the history of Africa through music, dance, oral traditions, scientific research and hands-on activities. See "Get Smart" page for details.

February 6 — Sunday

11 a.m. – 4 p.m. **African Heritage Festival: Talking Roots.** See February 5.

February 7 — Monday

10 a.m. – 1 p.m. **African Heritage Festival: Talking Roots.** See February 5.

February 8 — Tuesday

10 a.m. – 1 p.m. **African Heritage Festival: Talking Roots.** See February 5.

February 12 — Saturday

2 p.m. **Film: Changing our Role.** Watch a film that examines how the roles of women have changed within African society and how younger generations of women are breaking with tradition at the risk of losing their families.

2 p.m. **Performance: Teens Together Ensemble.** See January 8.

February 13 — Sunday

2 p.m. **Performance: Teens Together Ensemble.** See January 8.

Daily Highlight Tours

Take a guided tour of the exhibits that make this Museum one of the world's finest and learn about the history of these displays. Tours are offered Monday through Friday at 11 a.m. and 2 p.m. Check the informational directories for weekend tours.

Please note that programs are subject to change. Check the informational directories located throughout the Museum for daily program listings.

February 19 — Saturday

11 a.m. – 3 p.m. **Family Field Days: "Masks: Faces of Culture."** Celebrate the power of masks at The Field Museum during a day of performances and hands-on activities for all ages.

2 p.m. **Film: African Odyssey.** Watch a film that explores some of the environmental problems in Africa and documents the return to Zambia of two expelled scientists determined to continue their controversial environmental research.

2 p.m. **Performance: Teens Together Ensemble.** See January 8.

February 20 — Sunday

11 a.m. – 3 p.m. **Family Field Days: "Masks: Faces of Culture."** See February 19.

2 p.m. **Performance: Teens Together Ensemble.** See January 8.

2 p.m. **Masks Lecture.** Cara McCarty and John Nunley, the curators of "Masks: Faces of Culture," will discuss the central themes of this temporary exhibit and the universal fascination that people have with wearing and making masks.

February 26 — Saturday

11 a.m. – 2 p.m. **Scientists on the Floor.** View rarely displayed specimens from the collections and listen to Field Museum entomologist Margaret Thayer discuss her research and how it relates to the new **Underground Adventure** exhibit.

2 p.m. **Performance: Teens Together Ensemble.** See January 8.

February 27 — Sunday

2 p.m. **Performance: Teens Together Ensemble.** See January 8.

Resource Centers

Explore topics in more depth through a variety of resources, including computer programs, books, activity boxes and much more at the Africa Resource Center and the Daniel F. & Ada L. Rice Wildlife Research Station. Open daily from 10 a.m. to 4:30 p.m. See below for information on the Webber Resource Center and the Crown Family Place for Wonder.

Pawnee Earth Lodge

Visit a traditional home of the Pawnee Indians and learn about their life on the Great Plains. Open from 10 a.m. to 4:30 p.m. on weekends and at 1 p.m. during weekdays. Check the informational directories or the sign in front of the lodge for program times.

Ruatepupuke:

The Maori Meeting House

Discover the world of the Maori people of New Zealand at their treasured and sacred Maori Meeting House. Open daily from 9 a.m. to 5 p.m.

McDonald's Fossil Preparation Laboratory

Watch Field Museum preparators work on a variety of dinosaur bones. Open daily from 9 a.m. to 5 p.m.

Please Excuse our Renovations

As you plan a visit to the Museum, please note that the following resource centers and exhibits are currently closed for renovations until Memorial Day weekend: the Webber Resource Center, the Webber Gallery, the Crown Family Place for Wonder and the North American ethnographic collection (artifacts from the Native American cultures of the South, Southwest, Plains and Great Lakes regions). In addition, the Museum's North American archaeology collections, including the Hopewell materials, will be unavailable to the public until next winter, and the Reptiles Hall will be closed from the end of February until Memorial Day weekend.



Above: Sulka dance masks from New Britain, located about 100 miles off the New Guinea coast-line in the Bismarck Archipelago. On February 20, visitors can listen to the curators of the "Masks: Faces of Culture" exhibit talk about how people from different cultures use masks.

Please note that programs are subject to change. Check the informational directories located throughout the Museum for daily program listings.

MYCOLOGIST DEVELOPS A NEW WEAPON TO COMBAT DEADLY MUSHROOM POISONINGS



GREGORY MUELLER

Robert Vosper

Above: The deadly *Amanita verna* contains a toxic peptide known as amatoxin that damages the tissue and cells in the liver.

The vomiting, diarrhea and abdominal cramps kick in about eight to 12 hours after you've eaten an *Amanita verna*, or, for that matter, any of the other five deadly mushroom species found growing in Illinois that contain amatoxins. After spending hours wishing that someone would put you out of your misery, the symptoms often just disappear. Within a few days, however, the violent waves of nausea will return, at which point the toxins in your blood have caused irreversible damage to your liver and kidneys. Your only chance for survival now is a liver transplant. And without any form of treatment along the way, death will come knocking about 12 days after you took the first bite out of *Amanita verna*, more commonly known as the "destroying angel."

Fortunately, most of the hundreds of mushroom poisonings that occur each year in Illinois are the result of people eating one of the many nondeadly species of toxic mushrooms that spring up in backyards and forest preserves around the state. Although the initial symptoms of the two different types of poisonings can be similar, the nondeadly mushrooms don't contain any organ-damaging toxins. But this is little comfort to doctors who, based on symptoms alone, have no way of telling how much danger their patients are in.

This is where Field Museum mycologist and botany department chairman Gregory Mueller steps in.

Since joining the Museum in 1985, Mueller has been identifying mushrooms for physicians around the state as a nonpaid consultant for the Illinois Poison Control Center. In a few cases, Mueller can identify a

mushroom over the phone based on a doctor's description. However, because many mushroom species are similar in appearance, Mueller usually needs to examine the mushroom in person.

"There have been times when I've had the state police or a relative of a patient drive for hours to give me a mushroom to identify," Mueller says.

Since deadly mushroom poisonings require immediate treatment, doctors often can't wait this long. As a result, they have to treat the poisoning as though it was deadly, which means pumping a patient's stomach or pouring activated charcoal down their throats to absorb the toxins, rather than just waiting for the patient's body to expel the mushroom naturally.

This past summer, Mueller and Connie Fischbein, a poison information specialist at the Center, began experimenting with a system that might take some of the guesswork out of treatment. This system allows hospital staff with access to digital cameras to e-mail a photograph of the mushroom directly to Mueller. To date, Mueller and Fischbein have used the system in three cases, all of which resulted in an identification being made within an hour.

"In one case, I had a doctor who began describing a mushroom that sounded like it was one of the deadly poisonous varieties," Mueller says. "From the photograph, however, it was obvious that the mushroom was a green-spored lepiota, a nonfatal toxic mushroom that causes severe gastrointestinal problems."

As a result, the doctor was able to modify the course of treatment, saving the patient unnecessary discomfort and expense.

The obvious drawback is that the system relies on people saving enough of the mushroom they've eaten for a mycologist to identify. Based on experience, however, Mueller doesn't see this as much of a problem:

"What often happens is that if the patient is a child then their parents will catch them eating the mushroom and bring it with them to the emergency room. If it is an adult, then they usually were greedy and grabbed more mushrooms that they could eat in one sitting."

Although the new system seems to be working just fine, Fischbein is hesitant to declare victory.

"We still have to collect a lot more data before we can really evaluate it," she says. "Right now, we are developing the protocols that our staff can use to instruct doctors on the kinds of photographs we need to make an identification."

If the program is as successful as the initial data suggest, Mueller and Fischbein will write a paper instructing poison control centers around the country on how to set up similar systems. **ITF**

PLAYING THE FIELD WITH RICHARD FARON, A FIELD MUSEUM EXHIBIT DEVELOPER

For more than a year, Richard Faron, director of exhibit development at The Field Museum, and his staff worked with a team of designers, computer programmers and musicians from 30/70 Productions in New York to create "Sounds from the Vaults," a temporary exhibit currently on display through June 18. In this exhibit, visitors can interact with and play 50 musical instruments from the Museum's anthropology collections. See "Exhibit" page in the calendar section for details.

In the Field: Is "Sounds" really that much different from our other exhibits?

Richard Faron: Yeah, it's different. And thank God, because that is what we set out to do. A big part of our mission was to create something unique and to discover something new. You know, the old Star Trek thing: "To go where no one has gone before." We especially wanted to surprise, please and maybe even upset the visitor a little. Basically, we wanted to make them think. We had a suspicion that our audience might have become complacent or used to a certain routine. It was a challenge to break our own mold.

ITF: And what is that mold?

RF: It's the tradition of collecting, conserving and interpreting. This is the formula that has served us well for 100 years. It fuels the kinds of exhibits that we are so familiar and comfortable with. You know, exhibits with objects, labels and handicrafts like dioramas and models. It's how I learned to do things 15 years ago.

ITF: So, how is "Sounds" different?

RF: It's truly interactive. People use "Sounds." They touch it and toy with it and grab the person next to them and make them join in. There is conversation and play happening in "Sounds." The interactions are surprising and beyond anything I've seen in any other venue. It's truly innovative.

ITF: How so?

RF: 'Experience' is the big buzzword in museums today. In a sense, "Sounds" creates an experience. Museums have struggled to make interactive elements in exhibits deliver; however, I think "Sounds" has succeeded where the others have failed.

ITF: How does technology contribute to that experience?

RF: Technology has finally caught up with our desires and has allowed exhibit developers to turn their daydreams into reality. Without getting too caught up in the details, "Sounds" is basically driven by a customized computer network that makes the interactions immediate, elegant and seamless.

ITF: Who came up with the idea for the exhibit?

RF: It took a partnership. 30/70 supplied designers, the hardware and the software jocks. We provided content expertise, management skills, awareness of the visitor and a vision of what The Field Museum is all about. The introduction of a collaborator helped us break with tradition by introducing fresh ideas. The outsiders asked questions that we've been trained not to ask, such as "Can we touch and play these artifacts?" and "Can we record their sounds?" These were important questions that made the difference and shaped the product. To my knowledge, no one has ever played a priceless museum collection before.

ITF: You mentioned a vision. What did you mean by that?

RF: At the Museum's core there is a collection, which is the institution's soul. But how does one deliver and communicate that soul to the public? Members' Night does it, but only once a year. I think "Sounds" delivers a daily helping of that soul.

ITF: Do you think that "Sounds" is a preview of what exhibits will look like in the 21st century?

RF: I think so, but it doesn't mean the older exhibits are obsolete. This type of exhibit simply strengthens our overall program by adding to our repertoire. Exhibits that focus on objects and interpretation will last as long as real objects fascinate people and for as long as we can learn from them. In a sense, "Sounds" needed to happen. We needed to know that we could pull it off and that the public could learn from it and enjoy it.



Above: To the left of Richard Faron is one of the exhibit cases where visitors can play a selection of musical instruments from different cultures.

Field Museum Tours at a Glance



TODD NIELSEN

In August, travel throughout Peru with Field Museum anthropologist Jonathan Haas and visit some of South America's most captivating Pre-Columbian archaeological sites, including Paracas, Nazca, Cuzco, Machu Picchu and Moray. The tour also includes an optional extension to the Amazon rain forest.

British Columbia and Alaska's Inside Passage

May 18 – May 27

Duration: 10 days

Museum Leader: Gregory Mueller, chairman of the botany department
Price: Starts at \$2,340, not including airfare of \$750 from Chicago

Fire & Ice: Japan, the Kuril Islands and Kamchatka

May 21 – June 1

Duration: 12 days

Guest Leader: Explorer and oceanographer Don Walsh
Price: Starts at \$5,490, not including airfare

Archaeology and Landscapes of China

May 23 – June 10

Duration: 19 days

Museum Leader: Archaeologist Deborah Bakken
Price: \$5,695, including airfare from Chicago

Northwest Submarine Safari

Three departures: June 30 – July 4; July 3 – July 7; or July 5 – July 9

Duration: 5 days

Guest Leader: Marine biologist Joe Valencic

Price: \$3,890, not including airfare

For more information or free brochures, please call Field Museum Tours at 800.811.7244, or send them an e-mail at fmtours@sover.net.

Galápagos Island Adventure

July 19 – July 29

Duration: 11 days

Museum Leader: Conservation ecologist Doug Stotz

Price: Approximately \$3,900, including airfare from Chicago

Archaeological Treasures of Peru

August 25 – September 5

Duration: 12 days

Museum Leader: Anthropologist Jonathan Haas

Price: TBA

Wildlife of Southern Africa: Botswana and Zimbabwe

October 6 – October 19

Duration: 14 days

Museum Leader: Zoologist David Willard

Price: \$8,535, including airfare from Chicago

Egypt Revisited

October 15 – October 29

Duration: 15 days

Museum Leader: Egyptologist Frank Yurco

Price: Approximately \$5,000, including airfare from Chicago



DAVE BLANTON

In October, explore some of the finest wildlife parks of southern Africa on a safari with Field Museum zoologist David Willard. While traversing through Botswana and Zimbabwe in 4-wheel drive vehicles and small riverboats, you will see many of the region's most spectacular natural wonders, including the Okavango Delta, Victoria Falls and the Hwange National Park.

On the Drawing Board

Egyptian Odyssey

Amazon by Riverboat

Treasures of Israel

Tunisia Unveiled

Wildlife of Borneo



PHOTO COURTESY OF CLIPPER CRUISE LINES

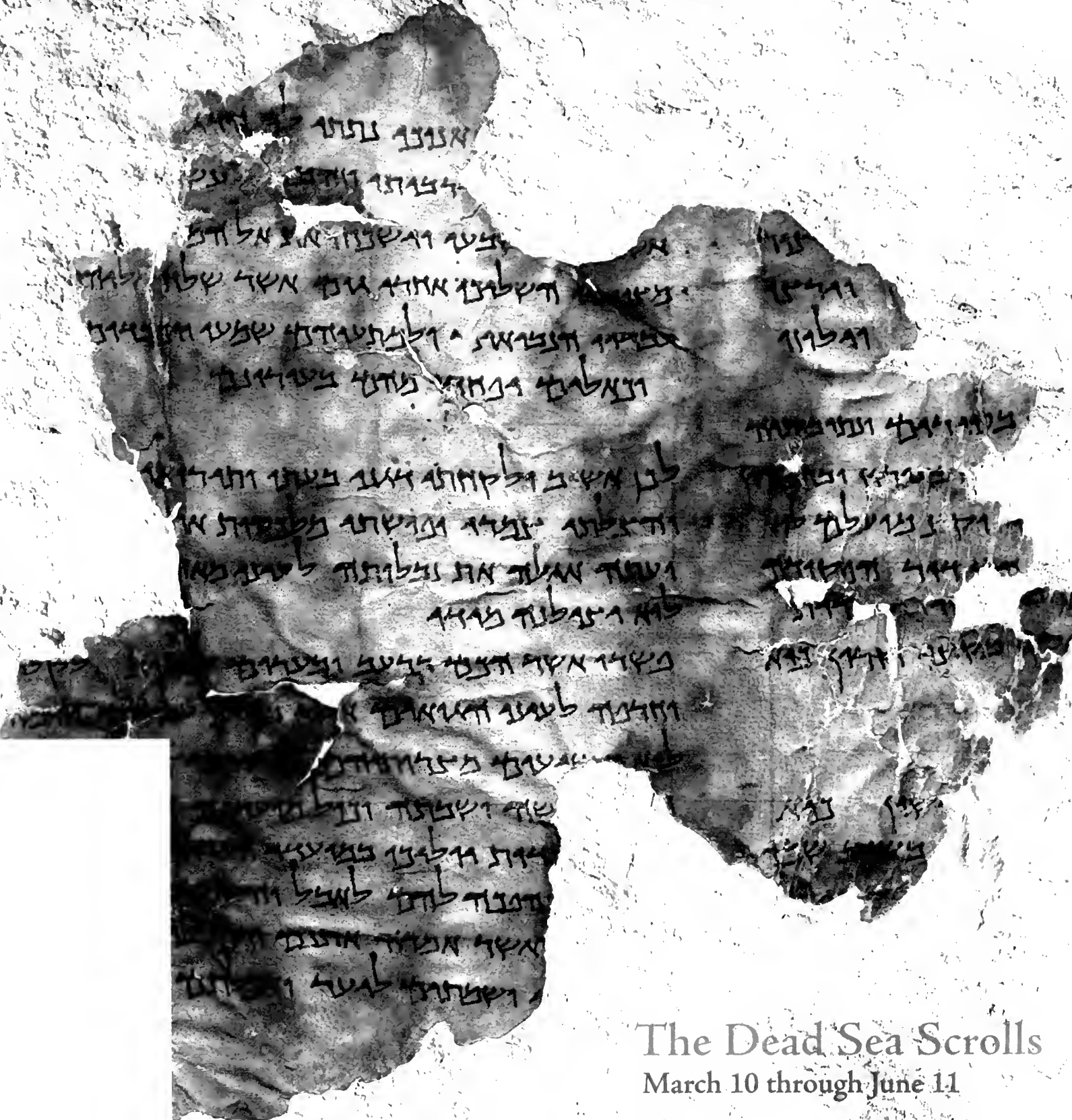
Join Field Museum botanist Gregory Mueller in May on a tour of British Columbia and Alaska's Inside Passage aboard a 69-cabin cruise ship. During this 11-night voyage, you will visit many magnificent bays, hidden fjords and vast glaciers, as well as some of the cultural sites of the indigenous peoples of the northwest coast.

IN

FIELD

March
April
2000

The Field Museum's Membership Publication



The Dead Sea Scrolls

March 10 through June 11

Keeping the Peace in Tsavo National Park



JOHN WEINSTEIN /GNBB119 6

CULTURAL DIVERSITY IN THE 21ST CENTURY

The story of evolution is like that of a mighty river slicing through the landscape of time — powerful, unpredictable and ever changing. Yet, this river would soon stagnate if it weren't for the thousands of small streams that infuse it with life and energy along the way. The same is true for human evolution, which today relies on the rich mosaic of the world's cultures to propel it forward and shape its course.

Over the past few centuries, this cultural mosaic has begun to crumble, the victim of warfare, ethnic cleansing, rapid industrial development and a global culture that is spreading rapidly to every society and community. Together, these forces have stripped many people of their knowledge systems, languages and ways of life. No longer exposed to the new ideas, creativity and knowledge that diversity fuels, the mighty river of human-cultural evolution could be in danger of running dry.

Sounds extreme, doesn't it? Well, not to those who study cultures for a living.

For years, anthropologists have been sounding the alarm that cultural diversity, which they believe is as essential to our survival as biological diversity, is under attack. To illustrate the extent of this problem, they often point out that of the 6,000 or so languages that were spoken at the turn of the 20th century, more than half have vanished, threatening the distinct cultural identities of many peoples around the world.

About six years ago, we created a department within the Academic Affairs division to address these urgent cultural issues. The mission of this department, called the Center for Cultural Understanding and Change (CCUC), is to promote understanding and respect for cultural diversity through the use of the Museum's various anthropological resources.

Recently, CCUC has been using more and more of these resources to bring the cultural crisis to the forefront of public attention and to understand the effect it is having on the international and local cultural landscape.

With the many different cultures and traditions practiced here, Chicago is really a microcosm of the diversity found around the world. At times, this diversity can lead to confusion and conflict among diverse groups— which often spills over into our schoolyards, neighborhoods and places of work. Part of the solution to this problem is to educate people about the many contributions different cultures have made to our lives and how these cultures continue to enrich them.

To that end, CCUC developed *Cultural Connections*, a yearlong program that exposes participants to local cultures through the help of

14 ethnic museums and cultural centers in the city. At these institutions, participants interact with people from different cultures, explore the collections housed at these institutions and engage in activities that shed light on the role local cultures have played in Chicago's social, political and economic development.

On the research front, CCUC and its partners have created a program called the *Urban Research Initiative* in which university students work with community organizations to learn how anthropological research methods can be used to study local diversity. So far, the graduates of this program have investigated a wide range of issues, from the effect that gentrification has had on Chicago's West Town community to how generational issues are reshaping Chicago's Korean-America community. In addition, CCUC is working with Museum ecologists to foster community conservation efforts that tap into indigenous peoples' knowledge of the environment.

Obviously, we can't resolve the cultural crisis alone. However, we are dedicated to bringing this issue to the same level of public consciousness as the environmental crisis and to lend our support to the many people around the world, as well as here at home, who are fighting to protect and preserve their cultural identities.

You can learn more about CCUC's activities and partnerships at www.fieldmuseum.org/ccuc.

A handwritten signature in black ink that reads "John McCarter". The signature is written in a cursive, flowing style.

John W. McCarter Jr.
President & CEO

We would like to know what you think about "In the Field"

Please send comments or questions to Robert Vosper, publications department, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496, or via e-mail at rvosper@fmnh.org.



Save the Date!

Friday, May 19

Celebrate Sue's unveiling at an action-packed Sue Family Festival on Friday, May 19! Start with a special 5 p.m. screening of Disney's new *Dinosaur* movie in Arie Crown Theatre on the day of its national

premiere. Then join a Dino-parade up the lakefront to The Field Museum to see Sue in person! Kid-friendly food and lots of fun activities make this a night to remember.

Tickets are limited, so call now or respond with this postcard to receive a ticket purchase form. Sue Family Festival Night Hotline: 312-665-7552.

Yes, I want ticket purchase information!

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ADDRESS _____

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From the President



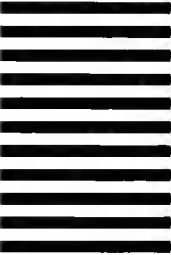
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Roland Kays reveals how the Kenya Wildlife Service keeps the peace between animals and humans in Tsavo National Park.

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What do diamonds and football helmets have in common with canoes and totem poles?

11

Botanist William Burger retires after 34 years of collecting plants in Costa Rica. But don't expect him to stop working.

13

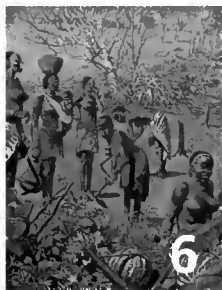
An indigenous group from the Amazon has used a Museum specimen to overturn a U.S. patent on a sacred medicinal plant.

Your Guide to The Field

A complete schedule of events for March/April, including programs offered in conjunction with "The Dead Sea Scrolls" exhibit.



On March 10, the Museum will unveil one of the greatest manuscript discoveries in the history of archaeology. See the **Calendar Section** for details.



Africa was the cradle of civilization for thousands of years. So, why do non-Africans continue to ignore the contributions Africans have made to our cultural heritage?



When things go horribly wrong in the field, Museum scientists are turning to the heavens for some assistance.

INTHEFIELD

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This issue's cover photograph is by the Israel Antiquities Authority of the Hoesa Commentary scroll.

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Museum

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

ph 312.922.9410
www.fieldmuseum.org

Around Campus

Shedd Aquarium

With so many depleted fish stocks, what's a seafood lover to eat? Find out at the Shedd Aquarium's Right Bite on Friday, Saturday and Sunday, April 21 to 23. At this program, you will learn that you can help protect the health of the oceans by avoiding depleted species, such as swordfish and orange roughy, and instead select delicious alternatives that are abundant and thriving. The Shedd will let you sample some of these "right bites," such as mahi-mahi and

Alaska salmon, during seafood tastings on Friday and Saturday. On all three days, you can win prizes, watch films and partake in some fun activities. Please call 312.939.2428 for more information.

Adler Planetarium

In the StarRider Theater™ show **Blueprint for the Red Planet**, you can take a voyage to Mars and investigate the secrets of this mysterious red

planet. After arriving on Mars, you can then play the role of pioneer by building a new community and flying through your completed settlement. If taking a journey to Mars doesn't interest you, come relax in the Sky Theater and catch **Millennium Mysteries**, a traditional Zeiss planetarium presentation that emphasizes the relationship between the cycles observed in the heavens and calendars created on Earth. Please call 312.322.0304 for more information.

KEEPING THE PEACE IN TSAVO NATIONAL PARK



JOHN WEINSTEIN/0980720C

Above: A Kenya Wildlife Service ranger escorts a group of Field Museum researchers through the thick thorn brush of Tsavo National Park. In addition to hungry lions, the park is also full of elephants and buffalo that will charge without warning when they feel threatened. As a result, tourists and scientists are not allowed to walk around the park unless accompanied by armed KWS personnel.

Roland Kays

Curator of Mammals at the New York State Museum

The tale was just too bizarre to be true — the Hair Ball of Death? Sarah Lansing, my assistant, shot me a covert skeptical glance. Surely I didn't believe this legend. I responded with my own skeptical look. After all, most legends and superstitions stem from fear of and mystery in the natural world. Lions have hunted the thick scrub of Tsavo National Park in Kenya since before the dawn of time, and humans have always been on the menu. Not surprisingly, local tribal lore is full of fearsome lion stories. The tale of the Hair Ball of Death fit the legend profile so perfectly that we assumed it was just that — a legend.

Over dinner at our camp in Manyani, Tsavo, Kisio and Chui were talking about the final seconds in the life of a Tsavo lion. Sergeant Kisio, a Wakamba tribesman employed by the Kenya Wildlife Service (KWS), and Mr. Chui of the Kikuyu tribe explained that some lions cough up a ball of hair just before dying. In the Kikuyu language this ball of hair is known as a Kio Ngero. Anyone who finds one will have great luck from that day forward. If a man walks around the village with it in his pocket, other men will instinctively respect and fear him. But the Kio Ngero is not easy to find. This mass of feline hair does not just pop out onto the ground; it rockets forth from the last breath of this king of beasts and usually disappears into the undergrowth of the African savanna.

Imagine our surprise a few days later when William Mukabane showed us his Kio Ngero. He obtained it from a large male lion he shot a few years ago. Mukabane, an expert KWS lion hunter, was helping us survey the lions in Tsavo as part of an ongoing Field Museum research project. His job is to defend civilians from the untamed wildlife in Tsavo. He is not a coldblooded lion killer, but a friendly man with great bush knowledge and a compassion for the animals he tracks, as well as the people he protects. As a sharpshooter with the Problem Animal Control (PAC) unit of the KWS, Mukabane has shot 222 lions in the past 12 years, but has found only the one Kio Ngero.

Working with Mukabane is always interesting. We were introduced over a lioness that had been horribly gored by a buffalo and had to be put down before it wandered into a tourist lodge or began attacking goats in the nearby village. While we were examining the animal at a KWS camp, Mukabane entered the scene, led by a wide smile and followed by a little boy and a herd of goats. A tall man from western Kenya, he has a friendly demeanor that offsets his large build. He and his family live in the KWS compound where the PAC unit is based. Like most of the constituency he protects, his family keeps a herd of goats. His son took the goats home while Mukabane told us about the unfortunate lion at our feet and the nature of problem animal control in Tsavo.

According to Mukabane, conflict between humans and wildlife is on the rise in the region and the KWS



JOHN WEINSTEIN 0983929C

Above: In 1898, two maneless male lions like this one stalked and killed 130 workers who were building a railroad bridge in Tsavo for the British army. Eventually, the officer in charge of the bridge killed the two lions and sold their remains to the Museum. For the past few years, Bruce Patterson, MacArthur Curator of Mammals, has been leading a comprehensive research program to determine why so many of Tsavo's male lions are maneless. Kays' surveys in 1999 were part of this program.

rangers in the Tsavo PAC unit are always busy. At stake is the safety of local herders and the survival of the threatening wildlife populations. Conflict with humans is the number one mortality factor for African lions. If problem situations are left unchecked, lions can be wiped out of an area by vigilante herdsman. Mukabane and his KWS colleagues are skilled experts who remove offending individuals before the locals take more extreme measures. The KWS rangers do not enjoy killing lions. In fact, they try to stop conflicts by scaring the animal away with blank gunshots or by relocating the animal to another region. If a lion must be killed, the rangers use their tracking skills and bush knowledge to pursue only the offending individual. When dealing with problem lions, ranchers with hungry families are not likely to be as discriminating.

The boundaries of Tsavo National Park were not drawn with the human-animal conflict in mind. The heavily populated areas of Voi Town and the Taita Hills were excluded from the park, and their human populations continue to grow. However, these areas lie virtually in the middle of 4,536 square miles of protected national park, forming a human center completely ringed by wildlife. Other areas of potential

conflict encircle the park, including Masai ranch land, the Tanzanian border and a dangerous no man's land buffering the Somali border.

Tsavo National Park is an incredible landscape of thorn scrub, grassland, rock and red dirt. A typical view from the top of a *kopje* (rock outcropping) in September shows a parched wasteland of red sandy soil barely concealed by lifeless bush twigs and thin grass. Acacia trees break up the landscape here and there, but are nowhere abundant. This is the long dry season. Vegetation and rivers are so dry that grazing animals are forced to concentrate around the few remaining water sources. This is the best time to fully appreciate the diversity and abundance of mammal life in the park. Hundreds of buffalo race for a drink on one side of a water hole while bull elephants trumpet and spar for control of the other. This is the fat season for lions. Pride members find shade near a water source and wait for dinner to come to them.

When the rains return, Tsavo is transformed — the red dirt is shaded by new leaves sprouting from the thorn bushes. Ungulates spread out across the landscape to harvest the bounty and drink from the abundant small streams and rejuvenated water holes. The lion prides no longer have it easy — they must cover much more ground to find their dispersed quarry.

In the past decade, wildlife populations within Tsavo National Park have started to recover from uncontrolled poaching in the 1970s and 1980s. The KWS anti-poaching patrols used military methods and shoot-to-kill orders to vanquish the poachers. The growing population of animals, however, regularly cross out of the unfenced park and into neighboring private lands, weaving their way around towns and through herds of livestock. It is surprising that there are not more problems with Tsavo wildlife. Millennia of conflict with humans have produced a guild of carnivores that is wary of humans and their stock, and rural inhabitants who are used to the ways of African predators. Nonetheless, conflict does occur. Goats and cows are the perfect helpless victims in comparison to the savvy buffalo and fleet gazelle within the park. Some individual lions are unusually bold; others become sick or injured and must resort to easier prey at the risk of being shot.

Field Museum scientists are studying the details of these carnivore attacks by looking for patterns in Mukabane's reports. Julian Kerbis, an associate professor at Roosevelt University and adjunct curator of mammals at the Field Museum, and Tom Gnoske, a Field Museum zoologist, predict a temporal pattern of increasing attacks during wet seasons, when lions are hungry. During the dry season, the lions have little

Right: William Mukabane is one of eight KWS rangers in Tsavo responsible for dealing with problem animals. Unlike his colleagues who use automatic weapons, Mukabane prefers the accuracy of a rifle.

reason to risk attacking livestock. Kerbis and Gnoske will also test the idea that smaller women and children are more vulnerable to deadly attack than men, and that certain areas in Tsavo are more risky than others. In the end, it is hoped that this study will help identify the most dangerous situations and help KWS rangers focus their education and prevention efforts.

Although killing livestock is the most common strife brought by rogue carnivores around Tsavo, modern man-eating lions are not unheard of. Trouble typically starts with sneak attacks on goats or cows, which can lead directly to attacks on humans when herdsmen try to ward off the lions and are themselves attacked. This has happened at least six times in the past four years. Luckily, Tsavo-area herders have learned to travel in groups, and five of these lions were chased off before they could finish the man off. Unfortunately, in the sixth case the poor man's compatriots were so scared by the lion that they ran off in terror and the victim was completely eaten. It pays to have good friends in Tsavo.

Mukabane may be the best friend of all. He and the other KWS rangers who staff the Tsavo PAC office travel all over the region in response to complaints about problem animals. Kenya does not permit



ROLAND KAYS

civilians to hunt except on certain game ranches; only trained KWS staff are allowed to kill rampaging lions. If caught early, these animals may be permanently scared off by loud blank gunshots. More determined lions are trapped and moved away from population centers to the National Park. As a last resort, the rangers stake out the area in an all-night vigil, perch in a tree above a recently killed cow, and wait for the culprit to return to the scene of the crime.

After a successful hunt, the lion is killed and its carcass is brought to park headquarters where the skull and hide are locked away to prevent black-market theft. These specimens have proved valuable to Field Museum scientists who are interested in the genetics and morphology of Tsavo lions. Bruce Patterson, The Field Museum's MacArthur Curator of Mammals, and the other Museum scientists are working with Mukabane to improve the quality of his data. Using Field Museum tags, Mukabane is now collecting more information when a lion is shot (e.g., location, date and sex), preserving the full skeleton and arranging to store the specimens at the National Museums of Kenya in Nairobi.

Carnivores are not the only problem in Tsavo National Park. In the dry season, some elephants leave the park boundaries and stream across private property in search of food and water. A group of elephants can eat and completely trample a small family farm in minutes. African elephants are rarely intimidated by farmers who try to scare them away by banging pots or machetes. The PAC crew has more success with blank gunshots and can usually scare off problem elephants without being forced to shoot them.

Problems are expected to increase, however, as the park's population of about 8,000 elephants continues to grow. During a long dry season, Mukabane is frequently called to chase elephants away from farms. In one situation a villager was trampled and gored to death as he stumbled between a mother elephant and her calf at night. Some conservationists predict that the Tsavo ecosystem can hold 40,000 elephants. When asked what his job would be like with five times more elephants, Mukabane responded, "40,000 elephants? That would be a nightmare."

On our way out of Tsavo we found Mukabane at the Voi market and stopped to say goodbye. Mukabane's friendly nature and reputation for bush knowledge are world-renowned. His tracking skills have helped many scientists and film crews locate and document the growing wildlife in Tsavo and the resulting conflict with humans. By the end of our survey, Mukabane had helped us track a number of lion prides and showed us firsthand the delicate and dangerous work of problem animal control in Tsavo.

Now, as to the Kio Ngero — the Hair Ball of Death. Tracking and killing dangerous lions requires great skill, but luck is also important. Mukabane gets his luck from his Kio Ngero, to which he credits his perfect personal safety while on the job. I was privi-



ROLAND KAYS

Above: Mukabane found his Kio Ngero about five years ago when he shot a large male lion that was wreaking havoc in the region. According to Mukabane, the lion coughed up the object just before taking its last breath.

leged to hold and photograph his prize. The ball of fur was about 2 inches in diameter and sand-colored, like the body hair of Tsavo lions. The hair was tightly packed and amazingly smooth over most of the surface. Historically, tribesmen tie these to their arms for luck, but Mukabane keeps his in his pocket or in a drawer at home. He said that the hair ball has brought him good luck in his lion encounters and with the Western film crews that have come to document his work.

So the Hair Ball of Death is a true story. We could not deny it now that we had heard from the most experienced lion hunter in Kenya and actually held the evidence in our hands. But why do lions cough it up before dying? Which lions expel hair balls? What kind of hair is in the ball? We had plenty of new questions, but these will likely remain unanswered since Kio Ngero are so rare and Mukabane is not about to give up his lucky charm for scientific dissection. Given the nature of his dangerous profession, I don't blame him. If Mukabane attributes his years of success during thousands of dangerous field experiences to the Hair Ball of Death, how can anyone argue with the power of its legend? **ITF**

During this research project, Roland Kays was a post-doctoral fellow working at The Field Museum on the Tsavo Lion Project. In January, he accepted a position as the curator of mammals at the New York State Museum in Albany, N.Y. Sarah Lansing, Kays' assistant, is a high-school senior at Phillips Academy, Andover, Mass., and a summer volunteer in The Field Museum's mammal division.

WHAT DOES AFRICA MEAN TO YOU?



Left: This 62-year-old Field Museum mural, painted by Julius Moessel, shows French merchants purchasing coffee in Yemen in 1706. Coffee was first domesticated in Africa and then introduced to Yemen during the first millennium A.D.

Chapurukha Kusimba
Curator of African Archaeology and Ethnology
and Bennet Bronson
Curator of Asian Archaeology and Ethnology

There are striking contradictions in the ways people see Africa's role in the past and present world. Few people still question that Africa was the birthplace of the modern human lineage and that it was the only home known to humans until about a million years ago. Nevertheless, non-Africans still devalue both the historical and contemporary contributions that Africans have made around the globe.

Before 10,000 B.C., Africa's greatest contribution was advanced stone-tool technologies. For instance, the invention of the stone knife and spear either occurred in Africa and spread to Eurasia or occurred in Africa at the same time as the rest of the Old World.

After 10,000 B.C., Egyptians and other north Africans began to tame animals and raise food plants, while Africans further south domesticated crops like sorghum, three species of millet, legumes, yams, coffee, oil palm and possibly watermelon. It didn't take long for Eurasians to begin growing several of these African crops, including sorghum and two species of millet, and for Africans to begin raising such Eurasian domesticates as cattle, sheep, wheat, barley and bananas. Genetic and linguistic evidence shows that people, as well as crops, were moving in and out of Africa during this period, which might explain why the Semitic (i.e., Hebrew, Assyrian and Arabic) and ancient Egyptian languages seem to have originated in central Africa.

Most people know that civilization in ancient Egypt is now thought to be as old as in the Middle East with regard to such key developments as writing, architecture, royalty, written laws and bureaucracy. But few are aware that Egypt was in close and almost constant contact with regions further south. Extremists on both sides of the "Black Cleopatra" controversy have tended to ignore the evidence that sub-Saharan Africa regularly supplied Egypt with workers, entertainers, soldiers and even ruling dynasties.

Although most direct evidence of what Egypt sent south in return has vanished, one important export has survived: the Coptic form of Christianity, which was brought to Ethiopia from Egypt more than 1,200 years ago. The ancient rock churches of Lalibela in Ethiopia bear witness to the intensity of this early cultural interchange between the Nile Valley and parts of sub-Saharan Africa.

Around 3,000 years ago, trade between the sub-Saharan region and the rest of the world became almost routine. For instance, the Egyptians and Carthaginians were conducting overland trade on a regular basis at the beginning and middle of the first millennium B.C. As early as the first century A.D., improvements in ship building and the introduction of the camel made it possible for Eurasians to trade across the Indian Ocean with East Africa and across the Sahara with West Africa. In northeast Africa, important urban centers, including the kingdoms of Kush and Axum, began emerging at this time. In eastern and southern Africa, long-distance trade stimulated urban development along the East African coast and in the interior, especially in Zimbabwe. In West Africa, the trans-Saharan caravan trade led to the birth of a series of large, highly centralized kingdoms, such as Ghana, Mali and Songhai. One sub-Saharan African group, the Almoravids of the upper Niger area, expanded northward beyond the desert in the 12th century. Conquering first Morocco and then Spain, they eventually established one of the most impressive dynasties of the Islamic Middle Ages.

So, why did a negative image of Africa emerge and persist even among people in parts of the world who had little or no direct contact with Africans? We think there are at least three reasons.

The first is slavery. Because some parts of Africa were populous, poor and militarily weak, they became

the major source and suppliers of slaves. In Christian Europe and the Americas, although not necessarily in Islamic countries, slaves were low in social status, an identification that eventually rubbed off on all Africans, whether in chains or free.

The second reason is that as European imperialism grew in the 19th and 20th centuries, Africa was forced from its role as an equal trading partner to a supplier of raw materials, such as ivory, gold, platinum, diamonds, chromium, manganese, bauxite and uranium. Because Africa was seen as producing nothing from its resources, it lost much of its prestige among Europeans as a major manufacturing and trade center. However, very few Europeans noticed that the colonial and post-colonial systems, which they themselves erected, kept Africans from building plants to convert their raw materials into finished goods.

Third, East Asians and Westerners were often "climatological chauvinists." Both groups had light skin and lived in chilly climates; so it was quite natural for them to think that partial nudity was immoral, that dark-skinned people were inferior and that warm climates encouraged laziness, messiness and undisciplined attitudes. Europeans also believed that Africans and people from other tropical regions shared another "uncivilized" trait: They bathed too much. Europeans, on the other hand, bathed infrequently and tended to regard this, along with their heavy clothes, as symbols of their civilized status.

None of these reasons, however, fully account for Africa's negative image, especially in places like the Far East where people had little historical contact with Africa. Yet, this image has persisted with some serious consequences.

One such consequence is a general lack of interest in Africa's agricultural and cattle-breeding practices. Western experts have spent more than a century trying to persuade Africans to raise European and American breeds of cattle, even though these breeds do poorly in Africa's tropical climates. Only recently have breeders realized that African cattle, once considered primitive, are the product of hundreds of generations of carefully controlled, patient and intelligent selection. One of the first results of this new attitude is the introduction of the Tuli breed to the United States. With the quality of its meat on a par with that of an Angus steer, its exceptionally docile nature and its ability to thrive in spite of extreme heat and drought, the Tuli, which originated in Zimbabwe, may replace many of the breeds that are currently popular on American cattle ranches.

Another consequence of this negative image is that much of the material culture of traditional Africa has disappeared. For several millennia, African com-

munities had earthenware industries that were well-adapted to their own functional and symbolic cultural needs. Yet today, many African nations import ceramics at the expense of the indigenous industries, harming local economies and leading to the deterioration of traditional skills among craftspeople.

In addition, this negative image has led to the loss of centuries-old knowledge about architectural and urban-planning methods that work well in the African environment. In recent years, many elegant houses constructed out of indigenous material have been allowed to decay and collapse without any effort to preserve them. Others have been remodeled without any thought about how they will fare in the African climate. Additionally, modern structures built from imported materials tend to be poorly designed, deteriorate quickly and are difficult to repair. This has led to the increased perception around the world that megaslums are overrunning African cities.

We could cite more examples of how this negative image has impacted Africa and the achievements of its people; however, the point, we think, has been made. While many communities around the world may be aware of how Africa has contributed to their cultural heritage, they seem to ignore the contributions that Africans have made to their lives today. The solution, we think, is educating people about Africa's contributions through programs developed not only by non-Africans, and Americans and Europeans of African ancestry, but, more importantly, by Africans themselves. When Africans can confidently and knowledgeably offer their heritage as solutions to the problems of other continents, Africa's historical place in the modern world will no longer be questioned. **ITF**

Below: At his excavation site in Mtwapa on the Kenyan coast, Chap Kusimba has found evidence of a sophisticated trade-orientated society that dates back to 1000 A.D.



JOHN WEINSTEIN/987334C

EXPLORING THE ANTHROPOLOGY OF DIAMONDS AND FOOTBALL HELMETS

The following was written by Gary Feinman, chairman of the anthropology department, and Bennet Bronson, curator of Asian archaeology and ethnology, in response to a letter they received from a volunteer. In the letter, the volunteer asked for their thoughts on the anthropological significance of some recent temporary exhibits showcased at the Museum, specifically "Cartier: 1900–1939," "The Art of the Motorcycle" and "The Chicago Bears: 80 Years of Gridiron Legends."

We appreciate your letter and believe it deserves an answer from both of us.

All the objects in these exhibits are every bit as relevant to understanding the diverse nature of humanity as are those on display in our permanent exhibition halls. The jewelry is an especially obvious case since designers at Cartier made so much use of non-Western shapes and motifs found in objects housed at museums like ours. Even the reasons why Cartier's clients wore that jewelry are familiar to every anthropologist. Rarely has status competition been more frenetic than it was during the rivalries among the Euro-American and colonial elite in the first four decades of the 20th century. In fact, as we look around the globe, it is unusual to find status markers that are as functionless and arbitrary as the enormous, exquisitely set Cartier gems favored by Indian maharajahs, French duchesses and American millionaires. In gen-

eral, we think the exhibit is strangely exotic, highly educational and in line with what a museum like ours should be exhibiting.

In addition, all the artifacts on display here, whether in "Cartier" or "Ancient Egypt," were made and used in a real human society. They may seem overwhelmingly exotic, but they are not fictional, which is one of the main reasons why good anthropology displays are so compelling.

You also wanted to know how we differ from art museums. Well, we think that in many ways we are very similar. "The Art of the Motorcycle," for example, meshes nicely with our traditional approach, which has always been to showcase a lot of art. After all, we have a lot of art in our collections and, judging by the size and quality of our artistic holdings, we are one of the top art museums in the Midwest. The anthropologists in our department are in agreement with the Solomon R. Guggenheim Museum (the developer of "The Art of the Motorcycle") that the symbolism of motorcycles can sometimes be as important as their uses. However, our only problem with the exhibit was that our New York colleagues chose too many pretty and unusual machines to display, whereas we probably would have picked more routine and perhaps "uglier" ones.

And this is why Chicago Bears memorabilia were worth exhibiting; not because they are ugly, but because their beauty or lack of it doesn't matter. In fact, we judge the appearance of the helmets, jerseys and trophies as surpassingly important symbols, encapsulating more emotion and cultural meaning than most other artifacts in American society. True, they are on exhibit because they are popular, but should we take them off display because of this? No, we should do a better job of educating the public about the anthropological meaning of these objects. In addition, we should spend more time putting these objects and items in their social, cultural and economic contexts.

You will be pleased to know that most of our upcoming exhibits, such as "The Dead Sea Scrolls," are more straightforward in their anthropological content and contexts, and more reflective of the anthropology department's mission. However, there are a few upcoming exhibits that are causing some debate in the department. One such show is "Star Wars: The Magic of Myth," which opens this summer. Some staff members think the exhibit is a brilliant example of the anthropology of human imagination; others view it as devoid of anthropology.

We hope that you and your friends will continue to let us know what you think and like about all of the marvelous, diverse and curious things that we plan to exhibit during the year ahead. **ITF**



MARK WIDHALM/JON89467C

Above: Some of the objects on display in the recent "Chicago Bears" exhibit included a Super Bowl trophy, jerseys worn by some of the team's greatest legends, leather helmets from the early years of the franchise and even Papa Bear's brown fedora.

Membership News

MEMBERSHIP DEPARTMENT ANNOUNCES PRICE CHANGES

On April 1, 2000, we will be increasing membership rates across all categories. These new rates will be \$60 for families; \$50 for individuals; \$40 for seniors; \$35 for students; and \$30 for national affiliates.

This rate change, only the second in 12 years, in part reflects the dramatic increase over the past few years in the value of a Field Museum membership, as well as some new benefits that we will begin offering this spring. The change also coincides with the Museum's plan to raise the general admission price for adults by \$1 on March 1, 2000.

Some of the new benefits we plan to offer you this spring includes reciprocal admission privileges to more than 225 museums around the country, such as the Exploratorium in San Francisco and the Orlando Science Center in Florida. Depending on your membership category, you can now receive up to four free passes to special exhibits that can be used at any time during the run of the exhibit (you can even pass them on to friends and family). With the upcoming special exhibition lineup to include "The Dead Sea Scrolls," "Star Wars: The Magic of Myth" and "Kremlin Gold," you will be receiving up to \$72 worth of tickets this year alone. These new benefits are in addition to some improvements we have already made to membership, such as:

Free admission to Underground Adventure, the new permanent exhibit that allows you to explore the world beneath your feet (admission for non-members is \$4 per adult and \$2 per child).

An additional day added to Members' Nights, as well as a change in policy that allows you to bring two guests for free to this annual behind-the-scenes extravaganza.

Membership Updates

Free Passes for "The Dead Sea Scrolls"

Members are eligible to receive up to four free passes to see "The Dead Sea Scrolls" exhibit, which is on display from March 10 through June 11 (family members can receive four tickets; all others can receive two). Passes are coded for timed entry every half hour from 9 a.m. to 4 p.m. Since we anticipate record attendance for this exhibit, we recommend that you reserve your free passes by coming down to the Museum and ordering tickets for a future date (no service charge) or by calling Ticketmaster at 312.902.1500 (a service charge and transaction fee will be assessed). Please remember that these free passes are in addition to those you may have already received for the Members' Preview on March 8 and 9. For more information, please call 312.665.7700.



Above: At the new membership desk at the south entrance, members can order and pick up tickets to special exhibitions, get their questions answered and even renew their membership cards.

A new and improved magazine-style *In the Field* that features more in-depth coverage of Field Museum events, exhibits and the work of our scientists.

Free members-only previews to all ticketed exhibits (this is in addition to the free passes described above).

As in the past, you will continue to receive a complimentary Field Museum calendar and a 10 percent discount in the new Corner Bakery restaurant and the vastly improved Museum Store. We appreciate the loyal support of our members and look forward to serving you in the years to come.

— The Membership Department

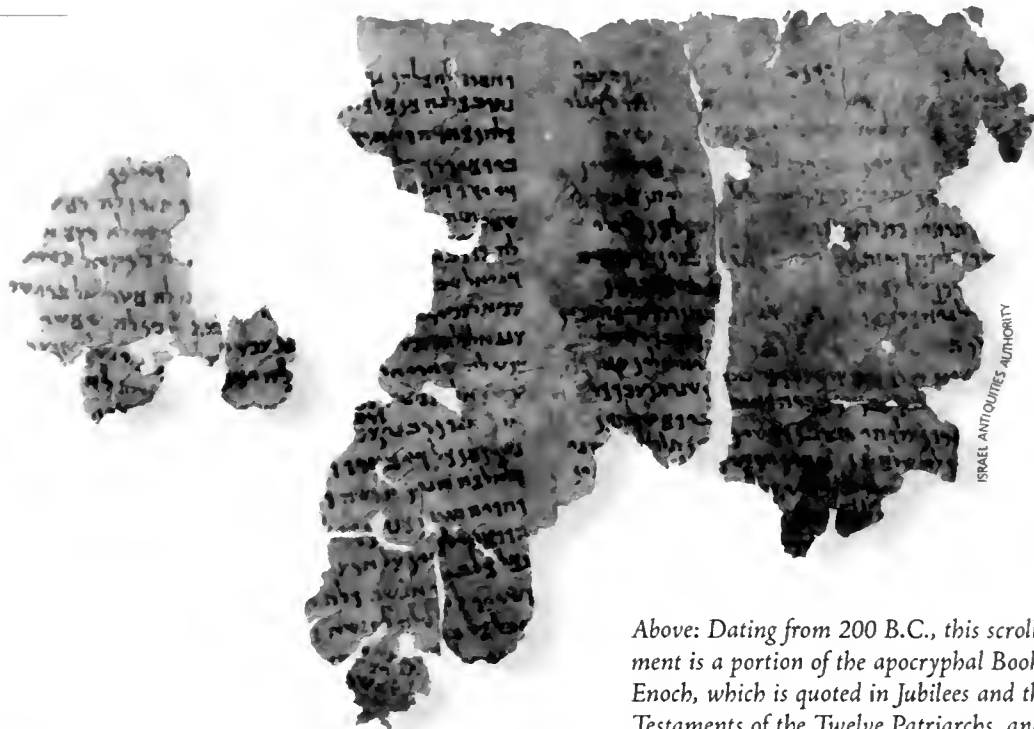
Members' Nights — June 8 & 9

Mark your calendars today for Members' Nights, the annual extravaganza during which the Museum throws open the doors to its research and collections areas and lifts the curtain on exhibits in the making. In addition, Museum scientists will be on hand to discuss their research and to show off some of the specimens they've collected while conducting fieldwork around the word. The theme of this year's Members' Nights is Sue, who will be on display in all her ferocious glory in Stanley Field Hall.



Inside

- 1 Exhibits
- 3 Calendar of Events
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- 7 Free Visitor Programs



Above: Dating from 200 B.C., this scroll fragment is a portion of the apocryphal Book of Enoch, which is quoted in Jubilees and the Testaments of the Twelve Patriarchs, and referred to in the New Testament (Jude 1:14).

THE DEAD SEA SCROLLS

For the first time in 50 years, the Dead Sea Scrolls will be on display in Chicago in a special exhibition at The Field Museum from March 10 through June 11. Written on parchment and papyrus more than 2,000 years ago, these scrolls are one of the greatest manuscript discoveries in the history of archaeology and are rarely exhibited outside Israel.

The scrolls — which were written in Hebrew, Aramaic and Greek over a 300-year period beginning in 250 B.C. — were discovered in 1947 by a Bedouin shepherd in caves in the Qumran region of the Judean desert, about 17 miles southeast of Jerusalem. Following the shepherd's discovery, archaeologists searched the area and discovered more than 100,000 scroll fragments in 11 caves. Together, these fragments represent

about 800 individual compositions. Although many of these ancient compositions are books of the Hebrew Bible, some contain apocryphal books found in Christian and Greek scriptures, while others are sectarian documents, such as community laws.

Portions of 15 different scrolls will be on display at The Field Museum, including five that have never traveled outside Israel. One of those five is a segment from the book of *Deuteronomy*, which includes the Ten Commandments. The other four contain language and concepts similar to those later found in the Gospels of the New Testament.

Many scholars believe that these scrolls were created by the Essenes, a group of sectarians who broke away from mainstream Judaism and set out to live a communal life in the desert. When the Romans invaded the region around 68 A.D., this group hid their manuscripts in nearby caves. The archaeological ruins of Qumran, located at the base of the caves, are believed by many to represent the communal homes of these people.

"Whoever was writing these documents was not in the mainstream of Judaism at the time," says James Philips, an anthropologist at the University of Illinois at Chicago and a Field Museum adjunct curator who has worked in the Sinai and Judean deserts for

more than 35 years. "We have no idea what happened to these people after the destruction of Qumran."

Despite the probable connection between Qumran and the scrolls, a few scholars believe the Essenes were not the exclusive authors of these ancient documents. They assume that at least some of the manuscripts were written in Jerusalem and later deposited or hidden in the caves at Qumran when the Romans invaded.

The exhibit, which is coorganized by The Field Museum and the Israel Antiquities Authority, also features 80 artifacts from Qumran settlements, including coins, goblets, sandals, a scroll storage jar and a pottery inkwell. It also contains books and manuscripts from the collections of The Field Museum and Chicago's Newberry Library, as well as a modern torah scroll from the Spertus Museum in Chicago.

"The Dead Sea Scrolls" is sponsored by The Church of Jesus Christ of Latter-day Saints, The Fourth Presbyterian Church of Chicago, Chicago Sinai Congregation, the Archdiocese of Chicago and the Jewish United Fund/Jewish Federation of Metropolitan Chicago. Additional support is provided by The Joseph and Bessie Feinberg Foundation, the Dorot Foundation, Claire and Gordon Prussian, Marshall and Doris Holleb and Fern and Manfred Steinfeld. This exhibition is indemnified by the Federal Council on the Arts and the Humanities.



Left: One of the many storage jars found in the caves at Qumran.

MASKS: FACES OF CULTURE

"Masks: Faces of Culture," which is currently on display through May 14, presents 139 masks from nearly 50 countries on six continents. Ranging from prehistoric times to the present, these masks, some of which are on view with full costume, exemplify the exquisite design, provocative imagery and compelling purpose found in mask-making — one of the most enduring forms of artistic expression. The largest global exhibit to explore the visual power of masks, "Masks: Faces of Culture" unites visual, cultural and historical perspectives to present these anthropological artifacts as works of art and cultural icons.

Throughout recorded history, masks have been part of the human experience. In nearly every culture, age and inhabited part of the globe, they have functioned as mediums of expression and transformation. As works of art, they embody dynamic visual energy; and as cultural icons, they present the rich panoply of diversities and commonalities in humankind. The human need to mask, so vividly emphasized in the exhibit, reveals a human desire to transcend earthly limitations, to penetrate alien environments and to be reinvented, renewed, strengthened and protected.

One highlight of the exhibit is a 230-year-old Siberian shaman's costume discovered in Göttingen, Germany, that has not been removed from its case in more than 50 years. Another remarkable piece, the oldest in the exhibit, is a 5,000-year-old funerary



MUSEO BARBIER-MUELLER DE ARTE PRECOLOMBINO



THE SAINT LOUIS ART MUSEUM

Above (from left to right): Funerary mask from Guatemala, circa 400 A.D. to 500 A.D.; Dzonoqua mask of the Kwakwaka'wakw people of Canada, 1800s.

mask from the Middle East that was made to resemble a grinning human skull. In addition to the 139 masks on display are music and video footage of masquerades, carnivals and festivals in which masks play a central role.

"Masks: Faces of Culture," which is free with general Museum admission, was curated by Cara McCarty (the Grace L. Brumbaugh and Richard E. Brumbaugh Curator of Decorative Arts and Design), and John W. Nunley (the Morton D. May Curator

of the Arts of Africa, Oceania and the Americas, at the Saint Louis Art Museum).

The exhibit was organized by the Saint Louis Art Museum. The exhibition and catalogue were made possible by a grant from AT&T. Additional generous funding was provided by the National Endowment for the Arts, a federal agency; the Jordan Charitable Foundation; the Rockefeller Foundation; the Helen Clay Frick Foundation; and Jefferson Smurfit Corporation.

SUE IS ON HER WAY

On May 17, The Field Museum will unveil Sue, the largest and most complete *T. rex* ever discovered.

When fully erected in Stanley Field Hall, Sue will stand 13 feet high at the hips and 42 feet long from head to tail. One of the only pieces of Sue that will not be mounted is her 5-foot-long skull, which is too heavy to be placed on the steel armature that will hold together her 200 or so fossilized bones. As a result, the Museum will install a cast replica of the skull on the skeleton, placing the real one on display in an exhibit on the second-floor balcony overlooking Stanley Field Hall. Here, visitors will be able to get an up-close view of the predator's massive head, as well as some insight into the mounting process and the story of how Sue ended up at The Field Museum. In addition, visitors can view animated CT scans of the



skull and touch a variety of casts of Sue's bones, including a rib, forelimb and tooth.

To celebrate Sue's unveiling, The Field Museum will be hosting a number of special dino-related programs from May 17 to May 21, including a family event featuring a special screening of Walt Disney Pictures' spectacular new animated action movie, *Dinosaur*; a theater piece written specially

for The Field Museum that offers a peek into the life and times of Sue; and a family concert featuring the Chicago Chamber Musicians.

"Sue at The Field Museum" is made possible in part by McDonald's Corporation and Walt Disney World Resort. Additional exhibition support is provided by the Elizabeth Morse Charitable Trust.

Calendar of Events



PHOTO COURTESY OF GARY FEINMAN

Above: Gary Feinman's excavation site in Oaxaca, Mexico. On March 18, Feinman, the chairman of the Museum's anthropology department, will talk about his more than 20 years of fieldwork in the Valley of Oaxaca in southeast Mexico.

Family Workshop: All About Movement

3/11, 4/8 & 5/13

Saturdays, 9:30 – 10:30 a.m.

Discover the world around you by examining animal biomechanics with the Green Light Performing Company, a Chicago-based theater group. During the workshop, families can get "down and dirty" exploring how animals — such as polar bears and mule deer — move in, around and through the different places they call home. Since this program is basically yoga with a twist, participants are encouraged to wear comfortable clothes. "All about Movement" is offered in three sessions and is designed for adults and children ages three to five. \$20 per participant for each class (\$16 members). Please call 312.665.7400 for more information or to register.

New Discoveries:

Unraveling the Economy of the Ancient Valley of Oaxaca, Mexico

3/18, Saturday, 2 p.m.

In his first public lecture at The Field Museum, Gary Feinman, the new chairman of the anthropology department, will talk about his more than 20 years of fieldwork in the Valley of Oaxaca in southeast Mexico. Specifically, Feinman, who is also the

Museum's curator of Mesoamerican archaeology, will reveal the different field procedures and techniques he has used to decipher the systems of production and exchange employed by the peoples of this region. \$12 (\$10 students/educators; \$8 members). Please call 312.665.7400 for more information or to register.

A World of Words: Literary Reading with Jhumpa Lahiri

3/21, Tuesday, 6:30 p.m.

During this evening of literary and cultural exploration, author Jhumpa Lahiri will read selections from her critically acclaimed book of short stories, *Interpreter of Maladies*. Set in the United States and India, these stories chart the emotional journeys of different characters in search of love beyond the barriers of nations and generations. Imbued with sensual details of Indian culture, the stories also speak to everyone who has ever felt like a foreigner. As one reviewer noted, the author, who was born in London and grew up in Rhode Island, is "a sensitive chronicler of the immigrant experience, and her collection is wise and sophisticated." \$15 (\$10 members; \$12 students/educators). Call 312.665.7400 for more information.

Adult Course:

Mining the Museum — Exploring Identity Through Mask-Making

3/25, 4/1 & 4/8, Saturdays,
10 a.m. – 12:30 p.m.

Join Museum educator Cyd Engel for an in-depth journey into the "Masks: Faces of Culture" exhibit, which uses 139 masks to explore the universal desire of people around the world to transcend earthly limitations, penetrate alien environments and to be reinvented, strengthened and protected. The program also will include a tour of masks from various cultures that are on display in the Museum's permanent exhibition halls. Many of these masks illustrate how people around the world have used masks to disguise their identities during celebrations, ceremonies, performances and warfare. After learning about the reasons people mask, you will retreat to a classroom to create your own mask. No prior art experience is required. \$70 (\$60 members). Call 312.665.7400 for more information.



JOHN GRAHAM

Above: On April 20, nature writer Peter Friederici will talk about the amazing wildlife that can be found in the suburbs of Chicago.

New Discoveries:

Medicine Quest — In Search of Nature's Healing

4/4, Tuesday, 6:30 p.m.

On this night of botanical exploration and adventure, ethnobotanist Mark Plotkin will reveal how scientists are harvesting nature's pharmacy in the hope of finding cures to some of the world's nastiest diseases. Plotkin — president of the Amazon Conservation Team and a research associate at the National Museum of Natural History in Washington, D.C. — has spent 15 years trying to uncover the medicinal "secrets" of the shamans of the Amazon rain forest, a sojourn made famous in his book *Tales of a Shaman's Apprentice*. With his latest book, *Medicine Quest*, Plotkin takes readers on a journey from the freezing Arctic Circle to the burning jungles of South America in search of the source of new medicines. \$12 (\$8 members; \$10 students/educators). Call 312.665.7400 for more information.

Dead Sea Scrolls Lecture:

An Evening with Elaine Pagels and Michael Eric Dyson

4/13, Thursday, 6:30 p.m.

Join scholars Elaine Pagels and Michael Eric Dyson as they explore "Issues in Christianity: From the Ancient World to the Modern Day." Pagels gained international acclaim as the author of the bestselling book *The Gnostic Gospels*, which won the National Book Critics Circle Award and the National Book Award. Dyson, an ordained Baptist minister and professor at DePaul University, has been called "one of the youngest stars in the firmament of black intellectuals." In 1993, he published *Reflecting Black: African American Cultural Criticism*, which won the Gustavus Myers Center for Human Rights Award. \$20 (\$15 members; \$18 students/educators). Call 312.665.7400 for more information.

Right: A Sulka dance mask from New Britain. On March 25, April 1 and April 8, you can explore the art of mask-making and the different reasons why people wear masks.

Family Presentation:

Dr. Art's Environmental Show

4/15, Saturday, 1 p.m.

For the past 20 years, Art Sussman, an environmental educator and creator of the popular "Dr. Art's Planet Earth Show," has been developing fun and exciting demonstrations that teach adults and children about complex ecological and environmental concepts. Using the principles of matter, energy and life, he provides the audience with a simple, yet powerful framework to understand how the planet has been operating for more than a billion years and how



the actions of humans are threatening this delicate operating system. Members who attend this performance, which is free with general Museum admission, will receive free copies of Sussman's book *Dr. Art's Guide to Planet Earth*. Please call 312.665.7400 for more information.

1999 Chicago MVP Chess Tournament

4/19, Wednesday, 9 a.m. – 5 p.m.

To some, chess is art; to others it is science. Find out for yourself as students of all ages from 125 Chicago public schools battle it out for \$10,000 in scholarship money from the David R. MacDonald Foundation. This daylong tournament celebrates the Chicago Public Schools' innovative chess program, which teaches students about the art and science of chess through summer instruction, team and private tutoring, and organized competitions. During the tournament, Field Museum visitors can watch as the students compete at three different levels, beginning with novice matches in Stanley Field Hall and ending with the championship match in the Maori Meeting House at 4 p.m. Please call 312.665.7400 for more information about this free program.

New Discoveries:

The Suburban Wild

4/20, Thursday, 6:30 p.m.

Spend some time with author and field biologist Peter Friederici and learn about the rich and fragile environments that exist in Chicago's North Shore suburbs. During this lecture, Friederici will discuss his new book, *The Suburban Wild*, which traces the seasons from one spring to the next in the Chicago suburbs, revealing, along the way, a host of natural miracles and a landscape less tamed than you might imagine. Friederici was raised in Chicago and now lives in Arizona. His writings about the beauty of the American wilderness, the miracles of nature and the damage caused by human indifference have been widely published in magazines and journals across the nation. \$12 (\$8 members, \$10 students/educators). For more information or to register, please call 312.665.7400.

THE DEAD SEA SCROLLS OPENING FESTIVITIES

March 10 – 12, Friday to Sunday
10 – 3 p.m.

On March 10, The Field Museum will unveil "The Dead Sea Scrolls," a temporary exhibit featuring portions of 15 different papyrus and parchment scrolls written in what is now Israel more than 2,000 years ago. In celebration of the exhibit's opening, the Museum has designed a number of programs that delve into the history, significance and meaning of these ancient religious and secular manuscripts. All opening weekend activities are free with general Museum admission. Please call 312.665.7400 for a more complete and detailed list of programs.

Family Activities

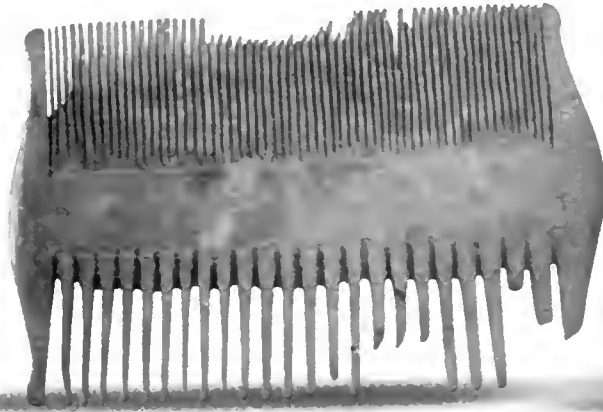
Friday, Saturday & Sunday,
March 10, 11 & 12
10 a.m. – 3 p.m.

During the family activities portion of the festival, you can learn about the science used to unmask the mysteries of the scrolls and watch as a Jewish sofer (scribe) demonstrates the art of scroll writing. Younger visitors can put together a map of the Middle East or piece together fragments of a scroll.

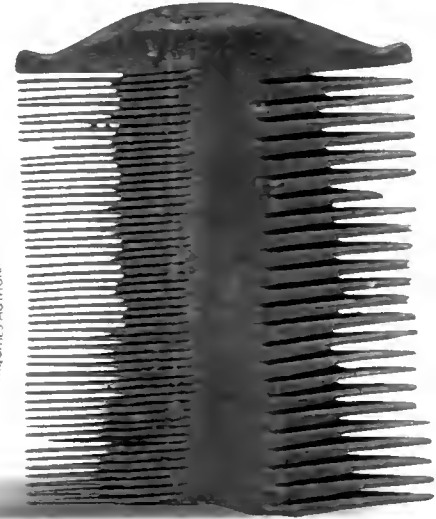
Exhibit Meet and Greet

Friday & Saturday, March 10 & 11
10:30 – 11:30 a.m.

Listen as a Field Museum scientist, designer and exhibit coordinator offer their insights into the development of the exhibit, the significance of the manuscripts and some of the controversies surrounding the scrolls.



ISRAEL ANTIQUITIES AUTHORITY



Above: In addition to the 15 scrolls that will be on display in the exhibit are more than 80 artifacts that were found in and around the Qumran caves. These objects include storage jars, coins, inkwells, baskets and these two combs, which were used for straightening hair and removing lice.

Family Presentation: Storytelling and Puppetry

Friday & Saturday, March 10 & 11
11 a.m., 1 p.m. & 2 p.m.

Watch as Marilyn Price, a storyteller and puppeteer, shows how the values espoused in the 2,000-year-old scrolls can be applied to modern life. Price also will lead a storytelling and scroll-writing family workshop on Saturday, March 25.

Sunday Symposium: Opening Lecture

Sunday, March 12, 2 p.m.

Listen to Eric Meyers of Duke University discuss the historical development of Judaism and Christianity. Meyers' appearance is part of an ongoing series of lectures in which world-renowned experts will explore the content and controversies surrounding the Dead Sea Scrolls.



PHOTO COURTESY OF BETTY LADUKE

Africa: From Eritrea with Love

On Display Through July 2, 2000

The exhibit "Africa: From Eritrea with Love" presents paintings by Betty LaDuke that capture the diverse cultures of Eritrea, one of the youngest nations in northeastern Africa. LaDuke, a painter, activist and former professor at Southern Oregon State University, first traveled to this nation on the Red Sea in 1993, just three years after it won a 30-year struggle for independence from Ethiopia. During her travels there over a four-year period, she recorded on canvas the daily life of the Eritrean people, their dependency on the region's mountainous

terrain and their agricultural and spiritual practices and beliefs.

Throughout her career, LaDuke has developed a number of exhibitions on cultural themes, such as "Impression of India," "China, an Outsider's Inside View" and "Totems and Creation Myths." She also has organized exhibits of women's art from India, Borneo, Latin America and Africa.

Left: "Saho Basket Weavers," 1997, acrylic, 54 inches by 50 inches.

IT'S WILD IN CHICAGO 2000: TAKING ACTION

April 1 & 2, 11 a.m. – 4 p.m.; April 3 & 4, 10 a.m. – 1 p.m.

April 22, 2000, marks the 30th anniversary of Earth Day, an event that many regard as the birthday of the modern environmental movement. In celebration of this anniversary, The Field Museum will host "It's Wild in Chicago," the kickoff event for Chicago's Earth Day celebrations. Together with members of the Chicago Wilderness organization and Chicago's Earth Month Coalition, the Museum will offer visitors a unique opportunity to learn about the work of some 100 organizations that are giving back to Mother Earth so that future generations will have a healthy environment in which to live.

During this four-day program, Chicago Wilderness will highlight its new *Biodiversity Recovery Plan*. This regional action plan identifies the most significant ecological communities in the greater-Chicago region, evaluates the condition of these communities and outlines recommendations for restoring and protecting them. In addition, Field Museum scientists will be on hand to discuss their environmental research programs, shed light on how humans are impacting the biological world and encourage visitors to become more involved in environmental issues in their communities.



WILLIAM BURGER

Above: Chicago Wilderness is comprised of 90 organizations, including The Field Museum, that are working together to restore the natural communities of the Chicago region. This photograph was taken in Pilcher Park, about 40 miles southwest of Chicago.

"It's Wild in Chicago" also will include a number of fun activities for visitors of all ages, including puppet shows, scientific presentations and musical performances by the likes of the Green Light Performing Company and musician Stan Slaughter, who

has written more than 30 award-winning songs and melodies about the environment.

"It's Wild in Chicago" is free with general Museum admission. Please call 312.665.7400 for more information.

The Dead Sea Scrolls Performing Arts Programs

Join the Museum for a series of musical and artistic performances that examine the cultural and historical significance of the Dead Sea Scrolls. All programs are \$15 (\$10 members; \$12 students/seniors) unless otherwise noted.

Shesh-Besh

Sunday, April 9, 7 p.m.

Shesh-Besh is an ensemble of four musicians from Israel whose sounds and melodies meld classical and jazz music with traditional elements from the Middle East and the Far East.

The Golden Age

Monday, April 10, 7 p.m.

Listen to Ofri Eliaz and the Sahar Ensemble explore the music of the Sephardic Jews, who settled in North Africa, the Balkans, Turkey, Greece and present-day Israel after being expelled from Spain in 1492.

To the Land of Sheba and Back Again

Sunday, April 16, 11 a.m. & 1:30 p.m.

Through storytelling and song, Zipporah Sibahi Greenfield will explore the role of women in the Jewish family and the fascinating culture preserved by Jews in Yemen. Free with general admission.

Live at The Field!

Body Scriptures

Saturday, June 3, 8 p.m.

Watch the world-renowned Liz Lerman Dance Exchange perform material from their ongoing project that examines the role of faith and identity in community. Call 312.665.7400 for more information.

Right: Singer Ofri Eliaz will perform the music of the Sephardic Jews with the Sahar Ensemble on April 10.



Free Visitor Programs



WILLIAM BURGER

Above: During the "It's Wild in Chicago" festival in April, visitors can learn about the rich biological diversity that surrounds Chicago. This photograph was taken in November at Hogwash Slough in Palos Hills, Ill., about 20 miles southwest of downtown Chicago.

Every Saturday and Sunday

1 p.m. **Story Time: Facts, Fables and Fiction.** Learn new songs and stories, and have fun creating artwork in the Grainger Gallery — all in a 20-minute program sponsored by The Siragusa Foundation Early Childhood Initiative. In March and April, you can hear stories about a heroine in the tundra, animals that spend their lives underground and the beauty and diversity of the wilderness that surrounds Chicago.

Interpretative Stations Activities. Drop by hands-on stations located throughout the Museum (check informational directories for daily listings) and delve into the fascinating world of natural history.

March 4 — Saturday

9 a.m. – 3:30 p.m. **Ibeji 2000 International Festival: Creation Stories and Dances of Women.** Celebrate the first Women's History Month of the new millennium by taking advantage of musical performances, craft demonstrations and storytelling. The Ibeji 2000 festival seeks to unite women of different social backgrounds and traditions in order to explore the universality of women's aims, goals and purposes.

March 10 — Friday

11 a.m. – 3 p.m. **Dead Sea Scrolls Family Field Days.** Visitors are invited to discover the mysteries surrounding the Dead Sea Scrolls, one of the greatest manuscript discoveries in the history of archaeology. Programming will include demonstrations, storytelling and highlight tours of the exhibit. See "Exhibit" page in the calendar section for more information.

March 11 — Saturday

11 a.m. – 3 p.m. **Dead Sea Scrolls Family Field Days.** See March 10.

1:30 p.m. **Tibet Today and Bhutan, Land of the Thunder Dragon.** This slide presentation takes you to places now open to tourists in Tibet and the Himalayan Buddhist country of Bhutan.

March 12 — Sunday

11 a.m. – 3 p.m. **Dead Sea Scrolls Family Field Days.** See March 10.

2 p.m. – 4 p.m. **Dead Sea Scrolls Sunday Symposia: Second Temple Judaism and the Dead Sea Scrolls.** As an introduction to the Dead Sea Scrolls Symposia, Eric Meyers, a professor at Duke University, will share his

thoughts on the religious sects that once inhabited Qumran, the site in the Judean desert where a Bedouin shepherd discovered the Dead Sea Scrolls.

March 18 — Saturday

11 a.m. – 2 p.m. **Scientists on the Floor.** Join scientists from the U.S. Department of Agriculture to learn about soil science and careers relating to agriculture. The scientists also will discuss how they work to educate the public about the importance of soil, one of the planet's most valuable resources.

April 1 — Saturday

11 a.m. — 4 p.m. **Festival: It's Wild in Chicago 2000.** To kick off the first Earth Month of the new millennium, The Field Museum will host "It's Wild in Chicago 2000," a festival comprising activities, demonstrations and performances designed to introduce families, kids, school groups and other visitors to issues of local conservation. See "Get Smart" page in the calendar section for more information.

Noon & 2 p.m. **Performance: Stan Slaughter.** Experience the amazing sounds of award-winning "eco-troubadour" Stan Slaughter, who uses his music to educate the public about sustainable environmental practices.

April 2 — Sunday

11 a.m. – 4 p.m. **Festival: It's Wild in Chicago 2000.** See April 1.

Noon & 2 p.m. **Performance: Stan Slaughter.** See April 1.

April 3 — Monday

10 a.m. – 1 p.m. **Festival: It's Wild in Chicago 2000.** The featured performers for this day of environmental celebration will include the Green Light Performing Company at noon and Hody Coyote, a puppeteer whose performance at 11 a.m. will focus on the natural wonders of prairie ecosystems. See the "Get Smart" page in the calendar section for more information.

10:30 a.m. **Performance: Stan Slaughter.** See April 1.

Daily Highlight Tours

Take a guided tour of the exhibits that make this Museum one of the world's finest and learn about the history of these displays. Tours are offered Monday through Friday at 11 a.m. and 2 p.m. Check the informational directories for weekend tours.

Please note that programs are subject to change. Check the informational directories located throughout the Museum for daily program listings.

April 4 — Tuesday

10 a.m. – 1 p.m. **Festival: It's Wild in Chicago 2000.** The featured performers for this day of environmental celebration will include the Green Light Performing Company at noon and Hody Coyote, a puppeteer whose performance at 11 a.m. will focus on the natural wonders of prairie ecosystems. See the "Get Smart" page in the calendar section for details.

April 15 — Saturday

Noon – 3 p.m. **Hall Demonstrations: Artists in the Field.** Watch student artists from The School of the Art Institute demonstrate the drawing and painting techniques they use to capture the beauty of the Museum's many dioramas and cultural artifacts.

1 p.m. Presentation & Book Signing:

Dr. Art's Environmental Show. Join Art Sussman, a world-renowned scientist and environmental educator, as he makes science come alive in this exciting show for all ages. As an added bonus, Field Museum members who attend this free program will receive a complimentary copy of Art's book, *Dr. Art's Guide to Planet Earth.*

April 16 — Sunday

11 a.m. & 1:30 p.m. **Storytelling: To the Land of Sheba and Back Again.** Storyteller

Zipporah Sibahi Greenfield will transport you back in time to a distant land filled with unfamiliar melodies. Greenfield has designed her performances to shed light on the role of women in the Jewish family.

April 19 — Wednesday

9 a.m. – 5 p.m. **The 1999 Chicago MVP Chess Tournament.** The Field Museum is proud to host the 1999 Most Valuable Player Chess Tournament, an event celebrating the Chicago Public Schools' chess program. See the "Calendar" pages for more information.

April 22 — Saturday

11 a.m. – 2 p.m. **Earth Day Festivities.** Enjoy a variety of environmental programs and activities designed to help you celebrate Earth Day.

11 a.m. – 2 p.m. **Scientists on the Floor.** See March 18.

11 a.m. – 2 p.m. **Interpretive Station: Mud Management.** Learn about soil and the work of soil scientists through activities that demonstrate soil classification techniques, the tools used to study soil and the different types of life forms that inhabit the soil.

Resource Centers

Explore topics in more depth through a variety of resources, including computer programs, books, activity boxes and much more at the Africa Resource Center and the Daniel F. & Ada L. Rice Wildlife Research Station. Open daily from 10 a.m. to 4:30 p.m. See below for information on the Webber Resource Center and the Crown Family Place for Wonder.

Pawnee Earth Lodge

Visit a traditional home of the Pawnee Indians and learn about their life on the Great Plains. Open from 10 a.m. to 4:30 p.m. on weekends and at 1 p.m. during weekdays. Check the informational directories or the sign in front of the lodge for program times.

Ruatepupuke:

The Maori Meeting House

Discover the world of the Maori people of New Zealand at their treasured and sacred Maori Meeting House. Open daily from 9 a.m. to 5 p.m.

McDonald's Fossil

Preparation Laboratory

Watch Field Museum preparators work on a variety of dinosaur bones. Open daily from 9 a.m. to 5 p.m.



Above: Join students from The School of the Art Institute on April 15 as they reveal the secrets to painting the Museum's world-renowned dioramas, such as this one of mule deer in the "Nature Walk" exhibit.

Please Excuse our Renovations

We are on the move! As you plan your next visit to The Field Museum, you should note that some of our exhibit halls and resource centers are temporarily closed for reorganization. These include the Crown Family Place for Wonder, the Webber Gallery, Webber Resource Center, and Place for Wonder — all of which will reopen this summer. Although the new "Ancient Mesoamerica and North America" hall will not be complete until mid-July, sections of it are currently available for public viewing. In addition, portions of our North American archaeology collections, including some of the Hopewell material, are currently unavailable to the public. The reinstallation of these collections will occur in stages beginning in late winter. This summer, the Museum also will be opening a Plains and Southwest Native American Gallery. For more information, please call 312.665.7400.

Please note that programs are subject to change. Check the informational directories located throughout the Museum for daily program listings.

SATELLITE PHONES KEEP FIELD MUSEUM SCIENTISTS OUT OF TROUBLE

Robert Vosper

Just about every medical emergency imaginable has befallen a Field Museum expedition at one time or another. For instance, scientists in the field have broken their legs, been bitten by deadly venomous snakes, stricken with acute appendicitis and contracted a slew of unpronounceable tropical diseases. Since most of these emergencies occur in remote locations far from civilization, the expedition team usually carries their fallen comrade out of the field on their backs. And although nobody has died in the field in recent years, the concern hangs over the head of every scientist who conducts fieldwork.

To help alleviate that concern, Motorola Inc. recently donated six satellite phones that work off the new Iridium System, a network of 66 low-orbit satellites 485 miles above the Earth's surface. This network allows you to call anyone in the world, whether you are in the Andes, the African savanna, the Amazon rain forest or the middle of the Pacific Ocean.

"If one of your researchers is in Africa, for example, and calls The Field Museum, their voice will travel from one satellite to the next and then down to a gateway (a land-based switching station) where it will travel through a land line to Chicago," says Eva Valentine, a spokeswoman for Motorola's satellite phone division. "Basically, it will help them keep in touch when they are in places where there is no communication or they've gone outside the boundaries of traditional terrestrial cellular sites."

In addition to expanding the range of wireless communication, these state-of-the-art phones are ideal for fieldwork: They weigh only 16 ounces and can run on a high-capacity battery that provides 72 hours of standby time and nearly eight hours of continuous talk time. The phones, which can be recharged with an optional solar charger, also can receive voice and written messages.

So far, Field Museum scientists have used these phones during fieldwork in North America, South America and Africa. Although no one has had to use the phones in an emergency, they have found them to be invaluable logistical tools. For example, Bruce Patterson, MacArthur Curator of Mammals; Doug Stotz, a conservation ecologist; and Sergio Solari, a research associate, used the phones to reprovision their field camp in Manu, a five-million-acre nature preserve located on the remote edge of the Amazon Basin in Peru.

For nearly nine weeks this past fall, these Field Museum scientists, joined by a small army of biologists, trekked through the rain forests of Manu conducting biological surveys along an elevation gradient of 1,320 feet to 11,550 feet above sea level.

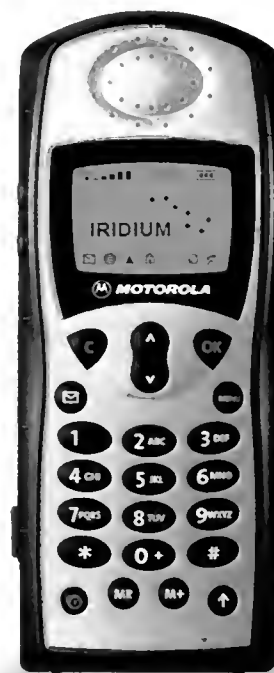
"The schedule of this fieldwork required that we head out to camp, spend three weeks sampling birds, mammals, ticks, fleas, bat flies and lice; then picking up, moving to another site along this gradient and doing it all over again," Patterson says.

With each move, the team had to resupply the camp with food and replace broken equipment. In the past, this meant someone would have to miss at least three days of fieldwork traveling to and from Cuzco, the nearest town. However, on this trip the scientists were able to use the phones to call a colleague in town who sent the needed supplies by bus.

"I really wouldn't have wanted to do this Peruvian project without these phones," Patterson says. "They are that vital to the coordination of our fieldwork. Basically, they gave us the flexibility to cope with changing needs and problems."

Patterson also found one other use for the phones: While in Manu, he called his 4-year-old son, Dan, to wish him a happy birthday.

"I spent a total of five months in the field last year, which is insane. For somebody like me, these phones make a big difference in terms of security, convenience and keeping my family supportive of my work. And it really makes the difference for my son to be able to call me when I am working on the other side of planet." **ITF**



Above: The new Motorola Satellite Series 9505 portable phone is water, shock and dust resistant, and can be used as either a satellite or cellular phone.

BOTANY CURATOR RETIRES AFTER 34 YEARS OF SERVICE

Robert Vosper

There isn't much that William Burger, curator of vascular plants, would change about his life.

"I was awfully lucky, gee, was I lucky," remarks the 65-year-old botanist, who announced on Dec. 31, 1999, that he was retiring after 34 years of service to the Museum.

"I really can't think of doing anything different. Part of that reflects my personality. I simply don't have the kind of personality that would have allowed me to succeed in business, medicine or law."

However, his personality was well-suited for botany, where he became a world-renowned expert on the flowering plants of Costa Rica.

Ironically, Burger, who grew up on the streets of Manhattan in the 1930s and 1940s, admits that botany wasn't what he really wanted to study.

"What I really wanted to do was study insects, but the premeds at Columbia University were so competitive that I couldn't score higher than a B in zoology. So, when it came to applying to graduate school, I decided that I had a better chance in botany where I had gotten an A. It worked out pretty well, don't you think?"

It did. After graduating from Columbia with a B.A. in biology in 1953, Burger was drafted by the Army and sent to Western Europe where he served as a soil analyst. After returning stateside two years later, he used the GI Bill to help pay his way through graduate school at Cornell University and earn his Ph.D. at Washington University. It was in St. Louis that his life took a dramatic change when he decided in July 1961 to enroll in a teaching program at an agricultural college in Ethiopia.

"This was an incredible experience," says Burger, who spent four years at the college teaching plant taxonomy. "Within a three-hour Jeep ride we could be in subdesert grassland, acacia thorn bush or agricultural areas that were once broadly forested. We also could trek into the mountains to explore evergreen forests and unique alpine habitats."

But his time in this botanical paradise was soon to be over. During a break from teaching in 1964, he attended a botanical conference in Scotland where he met former Field Museum botany chair Louis Williams. Williams was so impressed by the young botanist that he asked Burger on the spot to help him start a research and collecting program in Costa Rica. Knowing that this was a chance of a lifetime, Burger agreed to relocate to the urban, mountain-starved landscape of Chicago.

For the next three decades, Burger immersed himself in the botanical world of Costa Rica, spending on average one month each year in the field collecting plants for the Museum's herbarium, studying the



T. ANTONIO

Above: William Burger taking some photographs of coconut palms at Punta Cahuita, Costa Rica, in 1981.

region's plant diversity and developing a comprehensive survey of all the flowering plants of Costa Rica.

"His work in Costa Rica is really seminal," says Gregory Mueller, chair of the botany department. "His plant treatments are so elucidating that everyone wants to use them. The other thing that makes his work so important is that he chose the most difficult flowering-plant families to study. He also has been a valuable member of the department, serving eight years as the botany chair and six years as editor of the Museum's scientific journal."

His sense of service, however, was not just reserved for his department. Throughout his career, he has gone out of his way to provide assistance to the education, fund-raising and exhibition departments. But to Burger, this is only part of the story. What he is most proud of are his "nonscientific" accomplishments.

"My daughters and my wife have been the most wonderful aspects of my life," he says. "The business of watching little human beings grow up has got to be one of the most satisfying things in life."

As for the future, Burger plans to continue studying and collecting the plants of Costa Rica, as well as leading Museum tours to Central America.

"My other plan is to enjoy the beauty of nature for as long as I can," he adds. **ITF**



FROM THE PHOTO ARCHIVES

Around noon on March 22, 1922, Museum botanist James MacBride, pictured here with an unidentified child outside a bar along the Higaris River in Peru, boarded the SS *Teresa* in New York Harbor on what became the most grueling eight months of his life.

MacBride, a 29-year-old newcomer to fieldwork, had been assigned the daunting task of collecting the plants of the Peruvian Andes — a challenge that thrilled this native of Rock Valley, Iowa.

“We stood astern until we could no longer see the Statue of Liberty; then I seemed to have started my adventure, to me, a great adventure,” he wrote in his field diary.

However, after a few months of trekking across the cold, rugged terrain of the Andes, dodging roving bands of thieves and trying to ignore the dysentery that was ravaging his system, MacBride had lost much of his initial enthusiasm.

“Today, about 15 miles further . . . very tired, no alfalfa — a grain country entirely and the people either too lazy or stupid to have hay. Slept in a field and little indeed because of taking turns watching lest robbers or cutthroats attack us,” he wrote on Aug. 18.

The Peruvians weren’t the only ones on whom MacBride took out his frustrations. As the months dragged on, he began to lash out at the W.R. Grace Company for constantly misplacing money wired to him from Chicago, the American Consul General for refusing to help him get his collections through customs and even the Catholic Church, which he blamed

for his difficulties in finding a blacksmith to shoe his horse on Good Friday.

“May God damn the Catholic Church — I do my part in this regard,” he fumed.

Although MacBride may not have been the most culturally sensitive Field Museum employee, he proved to be a competent botanist, amassing a huge collection of specimens during his expedition. These collections, along with another he made in Peru the following year, served as the foundation of what would become the most comprehensive collection of Peruvian flora in North America. He also became an accomplished author, writing a series of journal articles about the flora of Peru that together stand as one of the most complete surveys of Peruvian plants ever published.

However, these journal articles may have been MacBride’s undoing.

As the years passed by, MacBride became increasingly obsessed with finishing this survey, often at the cost of his other curatorial duties. Facing increasing pressure from his superiors to perform, MacBride, who was rumored to be independently wealthy, left the Museum in the 1940s to finish his work in the peace and quiet of Northern California. What became of MacBride at this point is unclear. According to one account, he was “swindled” out of his fortune and became destitute.

In the early 1970s, he entered a convalescent home in California, where he died from pneumonia on June 15, 1976, at the age of 85. **TF**

You can learn more about James MacBride at www.sacha.org

ASK A SCIENTIST

Do you have a question for one of our scientists? If so, please send it to the Publications Department, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605, or via e-mail to rvosper@fmnh.org. Only questions published in the magazine will be answered. An archive of questions and answers that have appeared in past issues can be found at www.fieldmuseum.org/askascientist.htm.

Did you kill the animals that are on display?

Nearly all the mammals featured in our exhibits have been on display for at least 50 years, and some for more than 100 years. At the time they were collected, mammal populations were large and people were accustomed to hunting animals for food. Consequently, very few people were concerned at the time about killing a

few animals to put on display at the Museum, and perhaps even less concerned when they knew that these animals were helping to educate millions of people. However, because so many of these animals today are endangered from overhunting and habitat loss, we could not nor would we want to kill more. And because we have been able to reuse the old taxidermy mounts very effectively, we only have had to create a few new ones in recent years. The animals in these contemporary displays have come from zoos, nature centers, state wildlife agencies or similar organizations. Since The Field Museum remains one of the nation's primary centers for both education and basic research on biological diversity and environmental conservation, we feel these new displays, as well as the older ones, are a great way to educate our visitors about the

natural world and illustrate how we must change our attitudes and activities if we are to preserve the biological diversity that remains.

— Lawrence Heaney
Associate Curator and Head
Division of Mammals

Why were the arms of *T. rex* so short?

We really don't know why. What we do know is that their arms, which were about the same length as those of a human, were robust and extremely powerful. Muscle scarring on the arm bones of Sue indicate that her forelimb muscles were very well developed. So, whatever these dinosaurs were doing with their arms, they were doing it with force.

— William Simpson
Chief Preparator and Collections
Manager, Geology Department

FIELD MUSEUM SPECIMEN OVERTURNS U.S. PATENT

An indigenous group from the Amazon rain forest has used a 20-year-old Field Museum herbarium specimen (right) to overturn a U.S. patent on *Banisteriopsis caapi*, an hallucinogenic plant used by shamans in a ceremonial drink known as "yagé."

In 1986, the U.S. Patent and Trademark Office (PTO) granted the patent to American researcher Loren Miller because he had proved to their satisfaction that the plant was cultivated from a domesticated variety (Miller said he found the plant growing in a "garden" in the Amazon). More importantly, he had proved that his cultivated plant was unique (it had flowers that were "rose colored, fading to white with age," whereas all published material about *B. caapi* at the time described the flowers as "pale pink, fading to pale yellow").

Naturally, the indigenous group was infuriated that a foreigner could own the rights to a plant that they had been using for centuries. Eventually, the Center for International Environmental Law (CIEL) in Washington, D.C., stepped in on their behalf by filing a Request for Reexamination in March 1999. In their petition, CIEL attorneys argued that Miller's plant wasn't unique because a specimen of *B. caapi* with rose-colored flowers had existed in The Field Museum's herbarium about 13 months before Miller filed his original application on May 21, 1981. The PTO agreed with CIEL's assessment, and revoked the patent.



JOHN WEINSTEIN /BB3491C

"If it (the plant) had been accessioned 364 days before the application, it wouldn't have qualified under the PTO statute and we wouldn't have been able to use it in our petition," says CIEL attorney Glenn Wiser. "And all the testimony in the world would not have convinced the PTO to reopen the case." **ITF**

Field Museum Tours at a Glance



DAVE BLANTON

In October, explore some of the finest wildlife parks of southern Africa on a safari with Field Museum zoologist David Willard. While traversing through Botswana and Zimbabwe in 4-wheel drive vehicles and small riverboats, you will see many of the region's most spectacular natural wonders, including the Okavango Delta, Victoria Falls and the Hwange National Park.

Fire & Ice: Japan, the Kuril Islands and Kamchatka

May 21 – June 1

Duration: 12 days

Guest Leader: Explorer and oceanographer Don Walsh

Price: Starts at \$5,490, not including airfare

Archaeology and Landscapes of China

May 23 – June 10

Duration: 19 days

Museum Leader: Archaeologist Deborah Bakken

Price: \$5,695, including airfare from Chicago

Pacific Northwest Submarine Safari

June 30 – July 4, or July 5 – July 9

Duration: 5 days

Guest Leader: Marine biologist Joe Valencic

Price: \$3,890, not including airfare



TODD NIELSEN

In August, travel throughout Peru with Field Museum anthropologist Jonathan Haas and visit some of South America's most captivating Pre-Columbian archaeological sites, including Paracas, Nazca, Cuzco, Machu Picchu and Moray. The tour also includes an optional extension to the Amazon rain forest.

For more information or free brochures, please call Field Museum Tours at 800.811.7244, or send them an e-mail at fmtours@sover.net.

Galápagos Island Adventure

July 19 – July 29

Duration: 11 days

Museum Leader: Conservation ecologist Doug Stotz

Price: \$5,725, including airfare from Chicago

Archaeological Treasures of Peru

August 25 – September 6

Duration: 12 days

Museum Leader: Anthropologist Jonathan Haas

Price: \$5,995, including airfare from Chicago



TODD NIELSEN

Join conservation ecologist Doug Stotz in July on a 22-passenger ship as he explores the different islands and habitats that comprise the world-famous Galápagos archipelago. Along the way, you will get to snorkel with sea lions and penguins in a world where the wildlife shows virtually no fear of humans.

Wildlife of Southern Africa: Botswana and Zimbabwe

October 6 – October 19

Duration: 14 days

Museum Leader: Zoologist David Willard

Price: \$8,535, including airfare from Chicago

Egypt Revisited

October 15 – October 29

Duration: 15 days

Museum Leader: Egyptologist Frank Yurco

Price: Approximately \$4,445, including airfare from Chicago

Tunisia Unveiled

November 2 – November 16

Duration: 15 days

Guest Leader: Willard White, former V.P. for Institutional Advancement

Price: \$5,880, including airfare from Chicago

On the Drawing Board

Egyptian Odyssey

Amazon by Riverboat

Central America Under Sail

INTHEFIELD

May
June
2000

The Field Museum's Membership Publication



Sue

On display May 17

**The Natural Jewels
of the Amazon**

From the President



JOHN WEINSTEIN / GN88119 6

UNMASKING THE SECRETS AND MYSTERIES OF SUE

It was a long and nerve-racking eight minutes.

Here we were bidding on the world's most famous fossil at Sotheby's in New York City on Oct. 4, 1997. Fortunately, my close friend Richard Gray, president of the Art Dealers Association of America, was doing the bidding for the Museum and Peter Crane, the former vice president of our Academic Affairs division and now director of the Royal Botanic Gardens in Kew, England, was taking copious notes. The only thing left for me to do was fidget.

As the price of Sue skyrocketed from \$500,000 to \$6 million in a matter of minutes, I started to think that there was no way that the Museum could compete in this race. It seemed inevitable that Sue would be snatched up by a private collector, forever shielded from the inquisitive eyes of the public and scientific community.

After about five minutes, the auction suddenly slowed to a crawl. As it turned out, we were

one of only a few bidders left in the running at this point. When the auctioneer reluctantly slammed down his hammer on our bid of \$7.6 million, it took me a few seconds to realize that Sue would be spending the rest of her life at The Field Museum.

On May 17, we will unveil Sue after two and a half years of cleaning, restoring and preserving her more than 250 fossilized bones. For months to come, she will be the focus of intense media attention, educational programming, scientific reporting, dinner galas and even a "Cretaceous Concerto." During this time of celebration, let's not forget why we set our sights on Sue more than two years ago.

When we competed for Sue that autumn day in New York, we knew that her prehistoric bones harbored a fountain of information about a species of dinosaur that is still a relative mystery to scientists. Before Susan Hendrickson unearthed Sue's remains in the high plains of western South Dakota on Aug. 12, 1990, only about 20 *T. rex* skeletons had ever been found — almost all less than 60 percent complete. Sue is not only 90 percent complete, but also is larger and significantly better preserved than these other specimens. As a result, Museum scientists are gradually uncovering some long-held secrets of *T. rex*, such as how the animal moved, whether or not it was a skilled hunter or an opportunistic scavenger, and whether its evolutionary path led to modern-day birds.

From CT scans of Sue's skull, we now have a better idea of the size of an adult *T. rex* brain and how developed this animal's senses were. For instance, we recently dis-

covered that Sue has a pair of massive olfactory bulbs (a part of the brain that receives scent signals from the nose), suggesting that Sue may have "sniffed" her way through life. We also have determined that the scars on her lower jaws, once thought to have been teeth marks, were actually caused by an infection.

While gleaning these scientific data from Sue's remains, we also realized that Sue is an extraordinary tool for teaching visitors about paleontology, the geologic forces that shape our planet, the extensive collections of vertebrate fossils housed here and the important scientific work of our research staff. Right after purchasing Sue, for example, thousands of people flocked to the Museum to watch our researchers clean and preserve Sue's bones in the specially designed McDonald's fossil preparation lab. During the two-year-long preparation process, we also created a number of small exhibits about Sue that touched on everything from fossilization to the theory that dinosaurs evolved into the birds that grace our skies.

Sue has only just started to reveal her educational potential and will no doubt continue to yield new information about the life and times of the dinosaur known as the Tyrant Lizard King. I believe she will soon become Chicago's star attraction, helping us introduce millions of new people to the many other important and fascinating stories housed in our building.

A handwritten signature in black ink that reads "John McCarter". The signature is written in a cursive, flowing style.

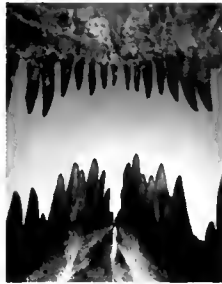
John W. McCarter Jr.
President & CEO

**We would like to know what you think about
"In the Field"**

Please send comments or questions to Robert Vosper, publications department, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496, or via e-mail at rvosper@fmnh.org.

2

Jaime Raduenzel reveals why some South American indigenous groups decorate their bodies with animal and insect parts.



After more than two years of being cleaned, preserved and restored, Sue is ready to reveal herself to the world. See the **Calendar Section** for details.

8

For the price of a luxury sedan, you can be one of 10 people to own a bronze replica of Sue's 5-foot-long skull.



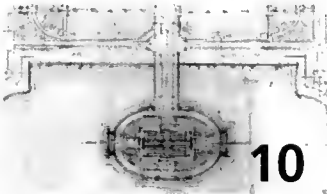
What do Field Museum scientists really mean when they say that Sue is the most complete and best-preserved *T. rex* fossil ever unearthed?

9

It's time again for the Museum to unlock its doors and let members explore areas of the building usually off-limits to the public.

11

A new book by botanist Michael Dillon offers readers a peek at the botanical beauty and diversity of northern Peru.



Find out why Daniel Burnham pleaded with state legislators to let him build The Field Museum on a man-made island in Lake Michigan.

Your Guide to The Field

A complete schedule of events for May/June, including programs offered in conjunction with the Sue exhibit.

Around Campus

Adler Planetarium

From June 3 through September 5, the Adler will host the world premiere of *New Views of the Universe: The Hubble Space Telescope*. Organized by the Smithsonian Institution and the Space Telescope Science Institute, the exhibit offers a rare and breathtaking view of the cosmos as offered by the world's best-known observatory — the Hubble Space Telescope. It features videos and interactive components that take visitors on a tour of the universe and provides in-depth background information about the history of the telescope. A spe-

cial sky show in the Adler's original planetarium theater will accompany this exhibit. Call 312.322.0304 for more information.

The Field Museum

See the **Calendar Section** for a list of programs and exhibitions offered in May and June.

Shedd Aquarium

The flooding starts this summer when Shedd Aquarium opens *Amazon Rising: Seasons of the River*. This permanent

exhibit takes you on a journey through a year in the Amazon River floodplain forest, from low water to floods to receding waters. Along the way, you will discover the enormous diversity of animals that inhabit this ever-changing ecosystem. **Amazon Rising** features more than 250 kinds of fishes, reptiles, amphibians, insects, birds and mammals in dramatic multispecies habitats. Throughout, the exhibit explores the connections among animals, plants and people — all of which benefit from the seasonal cycles of the great river. Please call 312.939.2438 for more information.

INTHEFIELD

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This issue's cover photograph (GE086278.2C) is by John Weinstein of a cast replica of Sue's 5-foot-long skull.

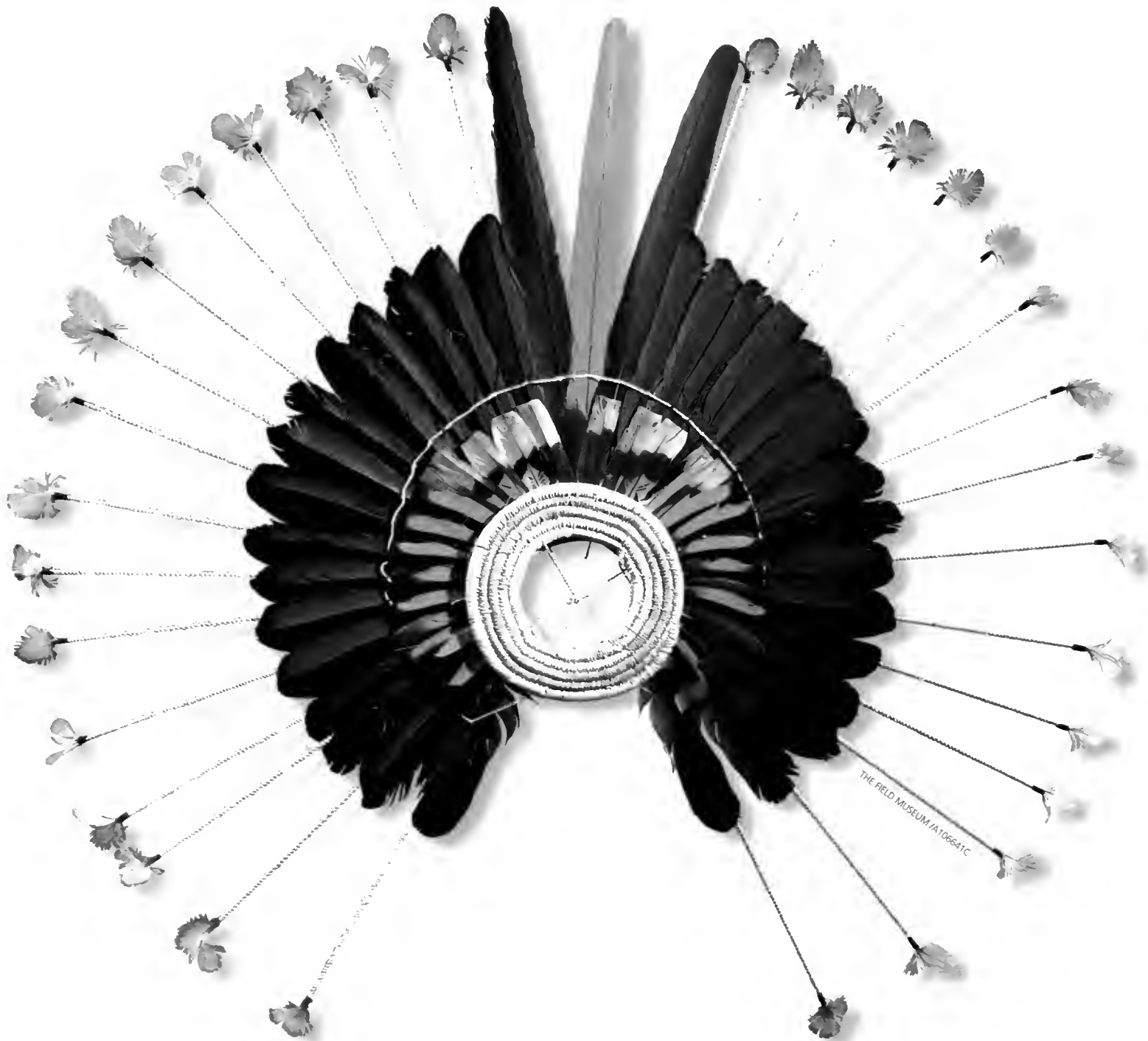
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THE NATURAL JEWELS OF THE AMAZON: DISCOVERING THEIR MYSTICISM AND MEANING



Above: Adult males of the Karajá, an indigenous group that lives in Brazil, created feathered headdresses like this one for boys who had reached puberty. When a boy wore this object it gave the impression that spiritual energy was radiating from his head.

Jaime Raduenzel
Collections Management Assistant
Anthropology Department

Most Americans, especially those living in urban areas, are detached from the animal world. For example, we no longer have to hunt for survival; we view the byproducts of the animals we eat as garbage; we would rather fumigate our homes with noxious chemicals than share them with insects; and when designing jewelry, we tend to shy away from organic material, preferring instead the luster of metal and the brilliance of precious stones. In fact, just about the only thing we wear these days that is derived from an animal is leather, which has been tanned, processed and treated to the point where we no longer have a clue as to its origin.

For many indigenous peoples in South America the opposite is true. In general, these people consider themselves an integral part of nature, equal to all the creatures with which they share their environment. While working on the more than 9,000 objects in the Museum's South American ethnographic collections, I discovered that this belief is deeply rooted in the items with which indigenous people adorn their bodies.

As an assistant collections manager in the anthropology department, each day I handle and organize hundreds of items that have been collected from around the world by Field Museum scientists. Unfortunately, when surrounded by so many artifacts, a million or more to be exact, it is easy to become blind to their beauty and the stories they can tell. However, while organizing the South American material, I was captivated by a collection of artifacts comprised of hundreds of necklaces, armbands, headdresses and jewelry made from different animal products, including bone, teeth, jaguar and monkey skins, beetle wings and feathers.

At first I was floored by their beauty — the rich reds, greens, yellows and blues of macaw feathers carefully woven into headdresses; the glistening metallic greens of insect wings delicately attached to necklaces and armbands; the rows of sandy-colored jaguar claws, each about the length of a human pinkie finger, threaded through a thin strip of leather. The more I worked with these objects, the more intrigued I became. Did the people who created them use animal material because they found it beautiful? Or did this material also hold important meaning in their lives?

In posing these questions to Museum anthropologists and scouring through the library after work, I learned that just as in Western culture — in which something like a crucifix hanging from someone's neck is more than just a piece of jewelry — the animal-based ornaments of indigenous groups harbor a wealth of sociocultural information. While there are hundreds of distinct indigenous groups living in South America that use animal material to create decorative objects, the Shuar and Desana of the northwest



MARK WIDHALM/A113892C

Amazon, and the Bororo of central Brazil offer striking and diverse lessons in how these animals are used, valued and honored.

The Desana

In the northwest Amazon, as well as in other parts of the tropical forests of South America, animals such as birds and jaguars have important roles in the complex ideology and methodology of shamanism, a practice in which religious and herbal leaders communicate with the spirit world through rituals and ceremonies. At the heart of this practice is the belief that evil spirits, especially those sent by an enemy, are as responsible for pain, sickness and death as are natural forces such as disease. It is the role of the shaman to combat these evil spirits. Often this means turning to the animal world for help.

One of the many South American cultures that practices shamanism is the Desana, a hunter-gatherer society that lives along the Vaupes River in the center of Colombian northwest Amazon. Brazilian anthropologist Gerardo Reichel-Dolmatoff has discovered that the Desana people believe that animals are the shaman's allies, assisting him in his role as mediator between human and nonhuman realms. For example, they believe that the red feathers of the scarlet macaw are transformations of the Sun, possessing mystical and medicinal powers. So, when somebody in the village becomes ill, the shaman will often rub the patient's body with an ornament made from macaw feathers. This practice helps the shaman transmit his

Above: Shuar earrings made from beetle wings and red, yellow and orange toucan feathers. The armband in the center also contains monkey teeth, seeds and bird bones.

own therapeutic powers and helps him call on the spirits for assistance. Conversely, the shaman might use these feathers to send a spirit to kill an enemy.

Anthropologists also have witnessed shamans in the Desana culture using jaguar body parts in rituals and ceremonies. According to the origin myth of these people, the early shamans had the power to transform themselves into jaguars by simply wearing a costume made from the bones, skin, teeth and claws of the animal. These clothes were not only meant to disguise the shaman, but also to help him shift his shape from human to animal. Some shamans didn't even need an entire costume to transform. They could "become" jaguar, for instance, by hanging the fang or claw of a jaguar around their necks, wearing a belt of jaguar skin around their waists or even imitating a jaguar's growl.

The Bororo

Unlike the Desana, who inhabit forested areas, the Bororo live on a central plateau in the state of Mato Grosso in central Brazil. This lowland environment generally consists of tropical savanna and flat fields, a stark contrast to the densely forested areas of the Amazon Basin. Although it is somewhat barren in comparison to the Amazon rain forest, it is still home to a wide variety of animals, many of which hold symbolic value in Bororo culture.

Before the Spanish colonized South America in the 1500s, the Bororo were mainly hunters and gatherers. According to anthropologist Elizabeth Netto Calil Zarur, however, today they survive by growing cassava, maize and rice. They also are a matrilineal society, which means that at birth an individual becomes a member of a certain clan based on the mother's lineage. Within Bororo society, there are

about eight different clans — all of which have names drawn from different immortal spirits. Often this immortal spirit is an animal, claimed by an ancestor of the clan who first came in contact with the animal. For example, the founder of one clan, the *Kie*, claimed the right to use the great tapir as his symbol. Thereafter, all members of his clan were given names that reflect the physical, behavioral and spiritual characteristics of this creature. To identify themselves as *Kie*, clan members wear ornaments made from material gleaned from the tapir. Another clan, the *Bokodori Exerea* (which means "animal with carapace like a great basket") took its clan name, personal names and ornamentation from the spiritual and physical traits of the giant armadillo.

Although these clans have claimed the exclusive right to use these animals, they do not own them. Anyone in the community can hunt or eat a tapir, for instance, but only the *Kie* can wear the animal's body parts.

There is, however, one animal that belongs to all the Bororo: the macaw. This brightly colored bird is significant because it inhabits areas of the environment that provide the Bororo with the foods and materials they need to survive. It also builds nests in caves along rocky outcrops — the same places the Bororo believe their ancestors once lived and were buried. As a result, the Bororo never kill or eat macaws, especially those with red feathers. They use these feathers to create objects for healing ceremonies.

Anthropologists don't really know why the Bororo hold red macaw feathers in such high esteem. Some have suggested that the Bororo believe that their ancestors visit the human world as these majestic, colorful birds.

The Shuar

Perhaps one of the best-known indigenous groups of South America is the Shuar, who live in a section of the Amazonian rain forest that straddles the border between Ecuador and Peru near the eastern slope of the Andes. Because narrow, rocky rivers slice through Shuar territory, the Spanish were unable to conquer these people for centuries. When they did finally manage to penetrate the region, the Spanish were quickly forced back by Shuar warriors, which might explain why they were once called the *Jivaro*, the Spanish word for "uncivilized." The combination of their military prowess and the rugged terrain of their homeland allowed the Shuar to maintain their autonomy long after the Spanish subjugated neighboring groups. However, this part of their history and culture has since been overshadowed in popular lore by their now-



THE FIELD MUSEUM/CSA59346

Left: Taken in 1925 on the border of Colombia and Brazil, this photograph shows men from an unidentified indigenous group wearing traditional ceremonial attire, including necklaces made from bone or teeth and feathered headdresses.

abandoned custom of shrinking and preserving human heads. This emphasis is unfortunate because head-hunting was just a small part of a very complex religious belief system — a system that is reflected in the way the Shuar dress and decorate their bodies. Much of this belief system is beautifully described by anthropologist Michael Harner in his book *The Jivaro: People of the Sacred Waterfalls*.

As with most cultures, the Shuar believe that dress and ornamentation can enhance an individual's power, protect against sickness and injury, and reaffirm status in the community. Among the most interesting and unique materials the Shuar use to create body decorations are the iridescent greenish-purple wing covers of *Euchroma gigantea*, the largest wood-boring beetle in the New World. The wings of these nearly 3-inch-long "jewel beetles" have a seemingly magical appearance and have been used as decorative elements for centuries in places like Amazonia, northern Thailand, Australia, New Guinea, the West Indies and Victorian England. For the Shuar, however, these beetles are more than just decorative objects — they symbolize wealth, well-being and power, and are incorporated by the Shuar in everything from armbands and earrings to headdresses and skirts.

The beetle is not the only significant creature in Shuar culture. For example, they also believe that toucans possess power in the spirit world. In some ceremonies men attach stuffed toucans to their waists or breast ornaments as a way to ward off evil spirits. They also use femur bones from the tayu bird (*Steatornis caripensis*) to advertise to their peers, as well as to young women, that they are brave and skilled hunters. One reason these bones have so much meaning is because the tayu, a small reddish-brown nocturnal bird, likes to live in caves that are inhabited by jaguars, making the task of collecting the bones quite dangerous. In addition, many of these animal parts are often found on objects that contain beetle wings and human hair. When combined, these items probably take on additional symbolic meaning or mystical powers for the Shuar.

Preserving Material Culture

One of the difficulties in writing about indigenous groups like the Desana, Bororo and Shuar is deciding whether to use the past or present tense when describing their cultural practices. While some of their traditional belief systems are still alive and well, others have been transformed or completely destroyed. Some of the greatest obstacles these groups face in trying to preserve their cultural practices are deforestation, habitat destruction and unchecked development — all of which have made it difficult for them to maintain their connection to nature and find the materials essential to their ceremonies and rituals. The other problem is that the indigenous populations have been greatly reduced by disease, economic pressures and the influx of nonindigenous groups into



MARK VIDHALM / A113893C

their traditional homelands. For example, the population of the Bororo, which once numbered in the thousands, is today estimated to be no larger than 800. Yet indigenous peoples today persist in holding on to their traditional way of life because they believe it is the only way they can safeguard the forest for future generations.

Museums are an important resource for some traditional cultural practices. We, and people of indigenous cultures, can learn from the objects and artifacts that are preserved in museums. But, because these artifacts often are made from fragile material, they will deteriorate over time unless money and time are spent to conserve them. With funding from the National Endowment for the Humanities, The Field Museum is addressing this issue by moving its South American collections into greatly improved storage facilities. As part of this process, the Museum's collections management staff has packaged these objects in archival material and reorganized them to facilitate research. Thousands of feather items and other delicate ornaments, which at one time were stored in overcrowded drawers and shelves, are now housed in airtight cabinets and mounted on supportive structures to protect them.

In describing museum collections, anthropologist Ruben Reina once wrote, "These objects are the books of non-literate people. Museums are their libraries." The collections management staff and conservators in the anthropology department have taken this statement to heart, priding themselves on helping to preserve the knowledge of indigenous cultures around the world. As the artifacts created by the Desana, Bororo and Shuar illustrate, these collections provide a vivid introduction into the lives of the people who helped shape and continue to shape the diverse cultural landscape of South America. **ITF**

Above: Once on display at the 1893 World's Columbian Exposition, this jaguar necklace was worn by men of the Guato, an indigenous group that lived in the same area of Brazil as the Bororo.

SUE IS MORE THAN A PRETTY FACE



Above: This 3-D image of Sue's skull is made up of 748 individual CT or X-ray "slices."

Ever since dinosaur hunter Barnum Brown unearthed the first *Tyrannosaurus rex* fossil in Wyoming in 1900, *T. rex* has become one of the best-known pop-culture icons in history. From silent films to *Jurassic Park*, in comic books and novels, at toy stores and theme parks, the menacing creature with the powerful jaws and tiny arms is king to dinosaur enthusiasts of all ages.

Although it is the most popular dinosaur in the world, very little is known about *T. rex*. Was it a predator, a scavenger or both? Was it warmblooded like a bird or coldblooded like a crocodile? How did it stand, move, eat or live? How much did it rely on its eyesight, hearing and sense of smell to survive? Most importantly, how is *T. rex* related to other dinosaurs of its time and to species that lived before and after it?

Nobody really knows the answers to these questions. However, Sue, who will be unveiled May 17 in Stanley Field Hall (see calendar section for details), may contain some of these answers.

"*T. rex* may be familiar to virtually everyone, but what we don't know about this creature would fill volumes," says Chris Brochu, a research scientist in the geology department and the lead researcher on Sue. "Look at the literature on ancient crocodiles — it's huge. It fills shelf, after shelf, after shelf. By comparison, the literature on tyrannosaurids, the dinosaur family that Sue belongs to, makes a very small stack, maybe a couple of feet high."

Brochu will add a major volume to that stack when he completes the monograph on Sue. This treatise

will be a full scientific description of the specimen, complete with detailed measurements and images of all her bones and anatomical features. Basically, it will serve as a reference for all future work on *T. rex*.

"You can't do anything with a fossil until you know what's there," Brochu explains. "Sue's completeness is letting us do that to a far greater extent and with far greater confidence than it has ever been done before."

Only four other *T. rex* specimens are even as much as 60 percent complete; Sue's skeleton, in contrast, is about 90 percent complete and possesses one of only two existing *T. rex* forelimbs. Her completeness, combined with the exquisite preservation of her bones, makes Sue an invaluable resource for those studying the species.

"Because we have all the important pieces from a single animal," says Brochu, "we're beginning to draw conclusions about its motion, its growth and the relationship of *T. rex* to other species."

These relationships are especially important to Brochu, whose main interest is studying evolutionary family trees. By looking at the key features that an animal shares with other species — such as the shape of its foot bones or the holes in its skull — scientists like Brochu can determine a creature's place in the evolutionary tree. This in turn allows them to study and test theories about evolutionary processes, ancient ecosystems and even plate tectonics.

"This skeleton is just filled with scientific information," adds Barbara Ceiga, a senior exhibit developer at the Museum. "With the right people looking at it in the right ways, the stories will come tumbling out."

Sue, Her Life and Times

Among the stories hidden in Sue's bones are clues as to what life is like at the extreme.

More than 40 feet long, Sue is one of the largest creatures ever to walk on two legs. Even as dinosaurs go, she is huge (Museum scientists estimate that in life she weighed 7 tons). Unlike mammals, but like most reptiles, dinosaurs continued to grow even after reaching adulthood. The longer they lived, the bigger they grew. But what happens to bones and muscles when something gets as big as a *T. rex*? Because Sue is so well preserved, it is still possible to see fine surface details showing where muscles, tendons and other soft tissue attached to bone. These details allow scientists to reconstruct what Sue may have looked like in life, her range of motion, how she was able to stand and move and how she rested.

Some of these details also reveal more extraordinary events in her life. A number of her bones show

THE FIELD MUSEUM / GEOB6195 ZC

pathologies, such as misshapen teeth and scars. Initially, some researchers believed that these pathologies were bite marks and battle scars. Brochu, however, disagrees. He thinks most of these lesions were probably caused by infections.

"What's interesting," Brochu points out, "is that Sue didn't die from any of these wounds. They all show extensive healing, a sign of good health. At this point it looks like Sue lived a good, long life and then just died."

Brochu also is interested in other ways in which Sue interacted with the world — especially through her senses. Because soft tissue doesn't fossilize, it's difficult to say just how this prehistoric creature saw or heard, smelled or tasted.

"We do know that Sue could see and hear because we can tell from the bone structure and nerve openings that these systems were well built," he says.

One of Brochu's most significant finds to date is that Sue had enormous olfactory bulbs, twin structures located at the front end of the brain that were developed to detect smells. According to Brochu, these bulbs are nearly as large as the brain itself, suggesting that sense of smell played a vital role in the life of a *T. rex*.

"When Sue explored the world," he says, "it was nose first."

The Age of Dinosaurs Meets the Age of Computers

The spaces that held Sue's olfactory bulbs — as well as openings for nerves and blood vessels, and bony structures surrounding the delicate semicircular canals of her inner ear — were uncovered by CT scanning technology. That extraordinary procedure was a breakthrough in its own right.

In August 1998, Sue's 5-foot-long skull was carefully wrapped and crated, then trucked to Boeing Company's Rocketdyne lab in Ventura County, Calif. It was then hoisted up by a crane and bolted to an industrial-strength CT scanner normally used for examining jet engines. There it underwent more than 500 hours of X-ray scanning, subjecting it, according to the tongue-in-cheek calculation of one Boeing technician, to "more radiation than Godzilla received when the French A-bomb was detonated in Polynesia."

Because this was the first time scientists had used an industrial CT technology to examine a *T. rex*, it allowed them to go where no paleontologist has gone before: inside the head of a *T. rex*.

The 748 images — each an X-ray "slice" of the skull — fill eight CD-ROMs. Brochu can view these

images individually or stack them to create a 3-D image of Sue's skull and snout. With the help of a computer program, he also can take a virtual journey through Sue's head, traveling down narrow passages, looking behind bony walls and even slipping inside the bone itself. Because much of this is uncharted territory, it is opening up entire new areas of study for scientists, as well as new possibilities for examining other fossils.

Sue's Future as a Scientific Specimen

Although Sue will soon be taking her place among the fighting elephants and Haida totem poles that adorn Stanley Field Hall, it doesn't mean that her days as a scientific specimen are over. The steel framework that supports her more than 250 separate bones for display is designed so that researchers can easily remove individual bones without disrupting the mount. As a result, scientists can continue searching for the secrets hidden in her bones, while Sue introduces a whole new generation to the lore of the dinosaur known as the Tyrant Lizard King. **ITF**

Below: Chris Brochu examining one of the CT scans on his computer. Brochu is using these scans to study the internal detail of Sue's skull.



JOHN WEINSTEIN/IGNB238.6C

Your Guide to The Field

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EXHIBITS AT A GLANCE

The Dead Sea Scrolls

On display through June 11, 2000

Discovered by a Bedouin shepherd in caves in the Qumran region of the Judean Desert in 1947, the Dead Sea Scrolls comprise 800 compositions written in Hebrew, Aramaic and Greek more than 2,000 years ago. Although many of these scrolls represent books of the Hebrew Bible, some contain apocryphal works found in Christian and Greek scriptures, while others are sectarian documents, such as community laws. Portions of 15 different scrolls are on display at The Field Museum, including five that have never traveled outside Israel. The exhibit, which is coorganized by The Field Museum and the Israel Antiquities Authority, also features 80 artifacts from the Qumran settlement and books and manuscripts on loan from the Newberry Library and the Spertus Museum. Tickets for "The Dead Sea Scrolls" are \$3 for adults, \$2 for children ages 3 to 11, seniors and students with ID. Tickets can be ordered in advance by calling Ticketmaster at 312.902.1500.

"The Dead Sea Scrolls" is sponsored by Lilly Endowment Inc., The Church of Jesus Christ of Latter-day Saints, The Fourth Presbyterian Church of Chicago, Chicago Sinai Congregation, the Archdiocese of Chicago and the Jewish United Fund/Jewish Federation of Metropolitan Chicago.

Masks: Faces of Culture

On display through May 14, 2000

"Masks: Faces of Culture" presents 139 masks from nearly 50 countries on six continents. Ranging in age from the prehistoric times to the present, these masks, some of which are on display with full costume, exemplify the exquisite design, provocative imagery and compelling purpose found in mask-making — one of the most enduring forms of artistic expression. In addition to the masks that are on exhibit are music and



Above: Cartonnage mummy mask from Egypt, circa 1325 – 1224 B.C.

Above: The "Psalms Tehillim" scroll is a liturgical collection of songs and hymns comprising parts of 41 biblical psalms.

video footage of masquerades, carnivals and festivals in which masks play a central role. The exhibit was curated by Cara McCarty (the Grace L. Brumbaugh and Richard E. Brumbaugh Curator of Decorative Arts and Design), and John W. Nunley (the Morton D. May Curator of the Arts of Africa, Oceania and the Americas), both from the Saint Louis Art Museum. "Masks: Faces of Culture" is free with general Museum admission.

Africa: From Eritrea with Love

On display through July 4, 2000

The exhibit "Africa: From Eritrea with Love" features paintings by Betty LaDuke that capture the diverse cultures of Eritrea, one of the youngest nations in northeastern Africa. LaDuke, a painter, activist and former professor at Southern Oregon State University, first traveled to this nation on the Red Sea in 1993, just three years after it won a 30-year struggle for independence from Ethiopia. During her travels there over a four-year period, she recorded on canvas the daily life of the Eritrean people, their dependency on the region's mountainous terrain and their spiritual practices and beliefs. The exhibit is free with general Museum admission.

Sue Exhibit

SUE AT THE FIELD MUSEUM

Opens May 17

Sixty-seven million years ago, Sue and her species, *Tyrannosaurus rex*, were the undisputed rulers of their world. The biggest, fiercest meat-eaters to ever roam the North American landscape, they faced no rival to their domination.

Sue lived a long life and when she died the fine silt of an ancient river covered her massive bones. For millions of years, while continents shifted around her and countless species came and went, Sue lay buried deep within the high plains of western South Dakota. There she waited, slowly fossilizing, until Aug. 12, 1990, when fossil hunter Susan Hendrickson encountered the sleeping giant.

Seven years later, The Field Museum purchased Sue for \$7.6 million at a Sotheby's auction in New York City. For the past two and a half years, Field Museum preparators have been carefully removing the rocky matrix that has entombed her skeleton since the late Cretaceous period.

Now Sue, her magnificent bones carefully restored, rules a new domain: The Field Museum's Stanley Field Hall.

On May 17, 2000, she will take her throne, presiding over her kingdom from the north end of the hall where visitors can examine her bird-like feet, massive legs, pelvis, razor-sharp teeth and powerful jaws, and, if they

continued next page



Sue Over Time

67 million years ago

Sue is born, lives and dies in what is now South Dakota.

1990

August 12 — While working with fossil hunters from the Black Hills Institute of Geological Research Inc. (BHI), Susan Hendrickson discovers Sue on the property of Maurice Williams near Faith, S.D. BHI pays Williams \$5,000 for the fossil.

1992

May — The federal government seizes Sue, arguing that BHI didn't have the necessary permits to excavate the fossil from Williams' property.

1994

February — A federal appeals court rules that Williams is still the rightful owner of the fossil. Williams decides to place the dinosaur on the auction block.

1997

October 4 — With the help of McDonald's Corporation and Walt Disney World Resort, the Museum purchases Sue at Sotheby's for \$7.6 million.

November 18 — Visitors get their first peek at the famous fossil in the exhibit "Sue Uncrated."

1998

June 10 — The Museum opens the McDonald's Fossil Preparation Laboratory, allowing visitors to watch as Museum researchers clean, preserve and restore Sue's bones.

August to September — Boeing technicians perform CT scans on Sue's skull. Museum researchers use these scans to reconstruct the anatomy of the skull.

1999

April — Museum scientists begin the first step in creating cast replicas of Sue by making molds of her prepared bones.

May 29 — The Museum opens the exhibit "Sue: The Inside Story," which features some of the discoveries that were made about T. rex based on new research and the CT scans.

2000

May 17 — Sue will be unveiled.



Sue Exhibit



Above: Fossil hunter Susan Hendrickson standing next to Sue's right foot. She discovered Sue near Faith, S.D., on Aug. 12, 1990, after the truck in which she was riding broke down.

Upper Right: Field Museum preparator Paul Brinkman removing the matrix from one of Sue's more than 250 fossilized bones.

Right: Sue's razor-sharp teeth ranged in length from 7.5 inches to 12 inches. During her life, Sue's teeth would have continually shed and regrown.

have the courage, stare into her dark, bottomless eye sockets.

Unlike most museums, which display cast replicas of dinosaur skeletons, The Field Museum has strengthened its commitment to authenticity. This is Sue — not a plastic model or a plaster cast, nor a patchwork or composite of bones from different species. The bones on display are the real fossilized remains of the single largest, most complete and best-preserved *T. rex* fossil ever unearthed.

Each of Sue's approximately 250 fossilized bones is cradled in a hand-forged iron bracket on which the bones rest like a diamond in the setting of a ring. However, these brackets are hinged and locked, allowing scientists to remove the bones for research.

One of the few pieces of Sue that will not be mounted is her 5-foot-long skull, which is too heavy to be placed on the steel armature that will support Sue's skeleton. Instead, the Museum will install a cast replica of the skull on the skeleton, placing the real one on display in an exhibit on the second-floor balcony overlooking Stanley Field Hall. There, you can get an up-close view of the predator's massive head, as well as learn about the mounting process and the story of how Sue ended up at The Field Museum. In addition, you can view animated CT scans of the skull and touch a variety of casts of Sue's bones, including a rib, forelimb and a 12-inch-long tooth.

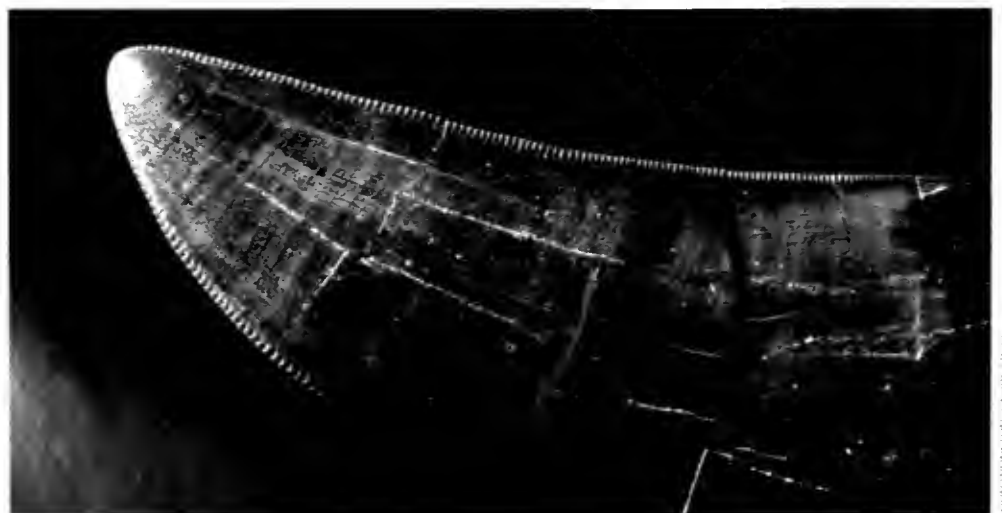
Just around the corner, the Museum will install additional displays that focus on the ongoing scientific study of *T. rex* and Sue. In this section, you also will learn how fact, theory and speculation have all played a

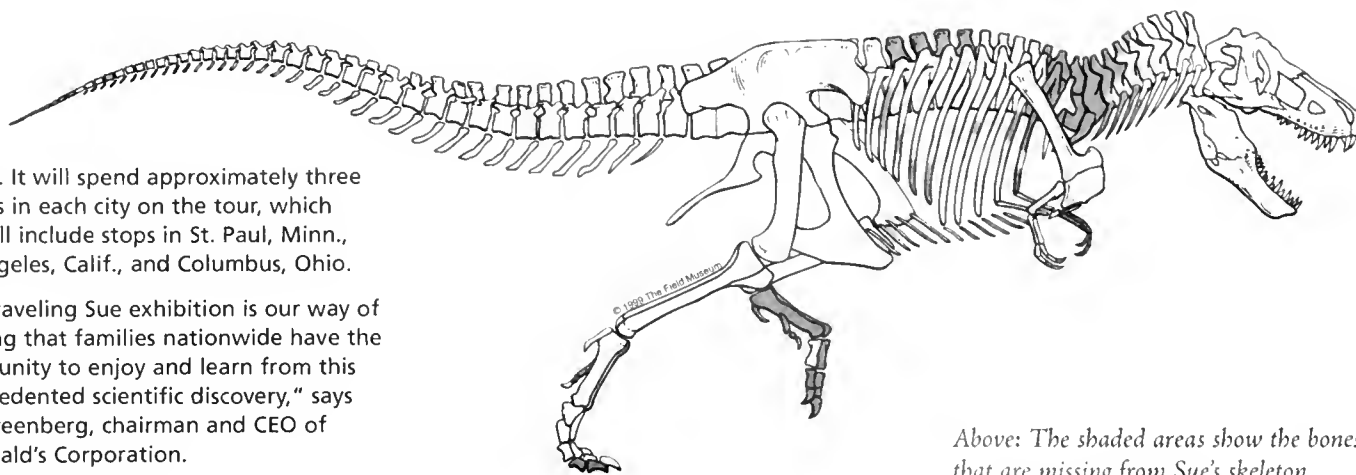


role in solving the mysteries of *T. rex*; why scientific and popular views of *T. rex* have changed and will continue to change over time; and how Sue's bones may hold the clues to understanding how a *T. rex* lived.

To celebrate Sue's unveiling, the Museum will be hosting a number of special dinosaur-related programs from May 17 to May 21, including a day of family entertainment on May 17, a family festival on May 19, a lecture by the lead researcher on Sue on May 20, and a concert performance about the life and times of Sue on May 21 (see "Get Smart" page in the calendar section for more information).

If you can't make it to Chicago to see Sue, don't despair. A life-sized cast replica of the dinosaur is being installed at DinoLand U.S.A. in Disney's Animal Kingdom at Walt Disney World Resort in Florida. In addition, two other cast replicas will be traversing the country as part of a traveling exhibit sponsored by McDonald's Corporation. This exhibit will be on display at Boston's Museum of Science on June 23, followed by Honolulu's Bishop Museum on





July 14. It will spend approximately three months in each city on the tour, which also will include stops in St. Paul, Minn., Los Angeles, Calif., and Columbus, Ohio.

"The traveling Sue exhibition is our way of ensuring that families nationwide have the opportunity to enjoy and learn from this unprecedented scientific discovery," says Jack Greenberg, chairman and CEO of McDonald's Corporation.

These two McDonald's exhibits will include a 42-foot articulated cast skeleton of Sue, touchable casts of bones, video footage and interactive anatomical models that allow visitors to control the movements of a *T. rex* jaw, tail, neck and forelimb.

You can also access information about Sue on the Web at www.fieldmuseum.org/Sue/. There you will find details about Sue and the world in which she lived, photographs of her bones and even a live Web cam that allows you to watch preparators clean and restore fossilized bones uncovered by Museum scientists. **ITF**

Sue at The Field Museum, which is free with general Museum admission, is made possible by McDonald's Corporation. A major sponsor of Sue is Walt Disney World Resort. The Elizabeth Morse Charitable Trust is the generous sponsor of this exhibition.

Above: The shaded areas show the bones that are missing from Sue's skeleton.

Some Fun Sue Facts

It took six fossil hunters 17 days to get Sue out of the ground; it took 12 Museum preparators two years (30,000 hours of total preparation time) to clean and repair her bones.

*A *T. rex* skeleton is made up of approximately 321 bones. Sue was found with most of these bones. Among the bones she is missing are a foot, one arm and a few ribs and vertebrae.*

**T. rex* lived closer in time to the first humans (about 60 million years apart) than it did to the first dinosaurs (about 160 million years apart).*

*Only two complete *T. rex* forelimbs have ever been found — and Sue has one of them.*

*Sue's legs are enormous, but her arms are the size of a human's — so short that they couldn't even reach her mouth. Nobody knows how *T. rex* used these tiny forelimbs.*

Sue's razor-sharp teeth were continually shed and regrown during her lifetime.

*The first *T. rex* was unearthed in Wyoming by Barnum Brown in 1900.*

PICTURING *T. REX*: SELECTIONS FROM THE LANZENDORF COLLECTION

While visiting The Field Museum as a child in the 1950s, Chicago resident John Lanzendorf purchased a small brass *T. rex* figurine. For Lanzendorf, this purchase was the beginning of a lifelong fascination with dinosaurs and dinosaur collectibles. Today, that figurine is just one of hundreds of pieces that comprise one of the most comprehensive private collections of dinosaur art in the world.

From May 17 through November 13, The Field Museum will present a portion of Lanzendorf's extraordinary collection in the new exhibit "Picturing *T. rex*: Selections from the Lanzendorf Collection." Free with general Museum admission, the exhibit features more than 70 original paintings, drawings, sculptures and toys — most depicting *Tyrannosaurus rex*, the largest carnivore to walk the Earth.

The objects on display range from carefully modeled bronzes based on the latest scientific research to whimsical *T. rex*

salt-and-pepper shakers. Some reflect the changing theories about the anatomy and behavior of *T. rex*. For instance, a couple of his sculptures depict *T. rex* as upright and lumbering, while others portray it as a more agile creature. Lanzendorf's collection also reveals the range of solutions that artists have come up with to add color and skin texture to a creature known only by its bones. For example, some have depicted *T. rex* as a darkly camouflaged animal, whereas others have opted for lizard green or even orange and white like a spotted giraffe.

Some of the more fascinating objects on display were created by artists involved in films in which *T. rex* played the starring role. For instance, one *T. rex* in Lanzendorf's collection was created by Michael Trcic for the first *Jurassic Park* movie.

Right: John Lanzendorf surrounded by his collection of *T. rex* paintings and sculptures.





Left: This Black-crowned Night Heron (*Nycticorax nycticorax*) is one of the many species of birds that you might encounter on the "Weekend Birding at Black Swamp" field trip.

Adult Field Trip Weekend Birding at Black Swamp, Ottawa City, Ohio

5/19 – 5/21, Friday to Sunday

Join The Field Museum and The Chicago Audubon Society for a birding trip to the Ottawa National Wildlife Refuge, Magee Marsh and Navarre Marsh along the shores of Lake Erie. The bus will depart from The Field Museum Friday evening, arriving in Port Clinton, Ohio, later that night. The next morning, you will trek through Magee Marsh and then hike the roads around the wetlands of the Ottawa National Wildlife Refuge. After dinner, Julie Shieldcastle from the Black Swamp Bird Observatory will discuss the vast array of wildlife that inhabits the region's marshes and swamps. On Sunday morning, she will then introduce you to the art and science of bird banding. Afterward, you will have a few hours to explore the Navarre Marsh before boarding the bus back to Chicago. \$185 (\$170, members). Please call 312.665.7400 for more information or to register.

FRED K. TRUSLOW/COURTESY OF THE CORNELL LABORATORY OF ORNITHOLOGY

Literary Reading with Kathleen Norris

5/1, Monday, 6:30 p.m.

Greet the Day with Kathleen Norris

5/2, Tuesday, 7 – 8 a.m.

In her novels — which include *Dakota: A Spiritual Geography* and *The Cloister Walk* — Kathleen Norris examines issues of contemporary spirituality and offers illuminating perspectives on difficult theological concepts. In addition to her novels, Norris also has published personal narratives, essays and poetry in a variety of magazines, including *The New Yorker* and *The New York Times Magazine*. She also has written several popular essays on monasticism that have appeared in *The Gettysburg Review*, *Hungry Mind Review* and *North Dakota Quarterly*. On May 1, Norris will read a selection of her short essays; presenting them the following day with a morning of meditation along the lakeshore. Tickets for the "Literary Reading" are \$15 (\$10 members; \$12 students and educators) and for "Greet the Day" are \$42 (\$35 members; \$38 students and educators). Please call 312.665.7400 for more information or to register.

Sunday Symposia Series: The Scrolls and Millenarianism

5/7, 2 – 4 p.m., Sunday

The State of the Continuing Publication of the Dead Sea Scrolls

5/14, 2 – 4 p.m., Sunday

As part of its Sunday Symposia Series that delves into the history and controversy surrounding the Dead Sea Scrolls, The Field Museum will present "The Scrolls and Millenarianism" in which four prominent scholars will debate the apocalyptic references found in the scrolls, including one that mentions a final battle that will be waged between the Sons of Light and the Sons of Darkness. Then on May 14, Emanuel Tov, editor in chief of the Israel Antiquities Authority's Dead Sea Scrolls Publication Project, will close out the series by talking about his organization's ongoing effort to publish and transcribe these ancient manuscripts. Tickets to the "Scrolls and Millenarianism" are \$12 (\$8 members; \$10 students and educators). Tov's lecture is free with Museum admission on a first-come, first-served basis. Please call 312.665.7400 for more information or to register for the paid program.

Body Scriptures: Praise, Prophets and Possibilities Liz Lerman Dance Exchange

6/3, Saturday, 8 p.m.

In celebration of "The Dead Sea Scrolls" exhibit, the internationally renowned Liz Lerman Dance Exchange has created a special performance based on material from its national tour of *Hallelujah!* — a series of dances that shed light on the question, "What are we in praise of?" Over the past 20 years, the Liz Lerman Dance Exchange has produced a number of award-winning works, including *The Good Jew?*, which took an unflinching look at issues of faith, ethnicity and identity. Most of Dance Director Liz Lerman's original pieces are defined by the spoken word drawn from literature, personal experience, philosophy and political and social commentary. \$15 (\$10 members; \$12 students and educators). Please call 312.665.7400 for more information or to register.

Field Trips

Chicago Jewish Roots

6/4, Sunday, Noon – 5 p.m.

African-American Chicago, 1936

6/11, Sunday, 10 a.m. – 5 p.m.

Throughout the summer, the Spertus Museum in Chicago will be showcasing "The Nazi Olympics: Berlin 1936," an extraordinary exhibit that highlights the stories of athletes who boycotted, participated or were barred from participating in the most controversial games in modern Olympic history. In conjunction with "The Nazi Olympics," The Field Museum is hosting two bus tours in June that explore some of the themes examined in the exhibit. The first tour, on June 4, will be led by Irvin Cutler, a professor emeritus in Chicago State University's geography department, who will take participants on a journey to areas in Chicago in which Jewish culture once flourished. The June 11 field trip will be led by author and historian Timuel D. Black Jr. who will take you on a tour of neighborhoods in Chicago that were the center of African-American life in the 1930s. Both trips will depart from the Spertus Museum. Tickets for "Chicago Jewish Roots" are \$50 (\$43 members) and for "African-American Chicago" are \$60 (\$50 members). Please call 312.665.7400 for more information.

Lecture

The Sacred Depths of Nature

6/6, Tuesday, 6:30 p.m.

Ursula Goodenough, one of America's leading cell biologists, will offer insight into the connection between modern science and spiritual meaning, a connection that is the focus of her acclaimed book, *The Sacred Depths of Nature*. Goodenough's book is a celebration of molecular biology combined with meditations on the spiritual and religious meaning that can be found at the heart of science. During her lecture, Goodenough will explain this connection while covering such topics as gene expression, embryology, evolution and biodiversity. \$12 (\$8 members; \$10 students and educators). Please call 312.665.7400 for more information or to register.

Right: A photograph from the Spertus Museum's new summer exhibit, "The Nazi Olympics: Berlin 1936." On June 4 and June 11, you can explore some of the themes examined in this exhibit by taking bus tours into areas of Chicago that were once the center of Jewish and African-American culture.

The State of the Art

The National New Plays Network

6/24, Saturday, 2 – 3:30 p.m.

Join The Field Museum and The National New Play Network as they host "The State of the Art," a lively exchange on contemporary theater moderated by local theater critic Jonathan Abarbanel. The National New Play Network is an alliance of non-profit theater companies dedicated to helping its members develop and produce new works and strengthen relationships within their communities. "The State of the Art" is sponsored by the Prop Theater Group, The Field Museum and the City of Chicago's Department of Cultural Affairs. For more information about this free program, please call 773.486.PROP.

Summer Camp

2000 Summer Worlds Tour:

Extreme Environments

7/10 – 7/14; 7/17 – 7/21;
7/24 – 7/28; or 7/31 – 8/4

Are you looking for a summer day camp for your kids that is both fun and educational? Well, you might want to consider the "2000 Summer Worlds Tour," a summer camp coorganized by the Adler Planetarium and Astronomy Museum, The Field Museum and the Shedd Aquarium. During these

camp, participants will get to explore environments that are unique and extreme, such as Mars, the so-called red planet; the mysterious Mesozoic habitat that was home to dinosaurs like Sue; and the delicate and mystical rain forests of the Amazon. Parents can sign up their children for one of the four one-week sessions (see above). \$200 per participant, per session (\$180 members). Please call 312.665.7400 for more information or to register.

Downtown Thursday Nights at The Field

June 22 – August 17

Beginning June 22 and continuing through the summer, The Field Museum will be open until 9 p.m. on Thursday evenings. During these late summer nights, you can come in and explore the Museum's exhibits (which will close at 8 p.m.), enjoy some lively performances and outdoor celebrations and take a walk around campus to take in the beauty of the city's skyline. Please call 312.665.7400 for more information.



PHOTO COURTESY OF UPI/CORBIS-BETTMANN AND THE USHMM PHOTO ARCHIVES

SUE AT THE FIELD MUSEUM OPENING FESTIVITIES

On May 17, Sue will stand fully erected for the first time in nearly 70 million years. In celebration of her unveiling, The Field Museum has organized a number of programs designed to help you explore the world of Sue and to uncover the secrets hidden in her prehistoric bones.

Family Activities

Wednesday, May 17

Saturday & Sunday, May 20 – 21

Saturday, Sunday & Monday, May 27 – 29
10 a.m. – 3 p.m.

During the family activities portion of the celebration, you can delve into the world of Sue by creating a dinosaur from foam and wire; uncovering hidden fossils embedded in the Museum's limestone floors; and watching dinosaurs come to life through the magic of puppetry. On May 20 and May 21, you also can meet some children's authors who have written about Sue. All activities are free with general Museum admission. Please call 312.665.7400 for more information.

Sue Family Festival

Friday, May 19

5:30 – 10 p.m.

Celebrate Sue's unveiling at the "Sue Family Festival," a fun evening for all ages. Highlights of the evening will include an opportunity to meet and get an autograph from Susan Hendrickson, the discoverer of Sue; a dino parade around the Museum led by massive dinosaur puppets; a picnic-style dinner; and a number of dino-related theatrical performances and hands-on activities. Tickets are \$15 for children and \$20 for adults (\$12 member children and \$18 for member adults). To order tickets, please call Ticketmaster at 312.902.1500.

The Science of Sue

Saturday, May 20

3:30 p.m.

Chris Brochu, a research scientist in the geology department and lead researcher on Sue, will reveal what he has learned about Sue from studying her fossilized bones for the past two years. He also will discuss his soon-to-be-published monograph, which contains the full scientific description of Sue. \$12 (\$8 members; \$10 students and educators). Please call 312.665.7400 for more information or to order tickets.



Above: A view from inside Sue's mouth. Sue would have used her teeth, which were serrated like the blade of a steak knife, to tear apart the flesh of her prey and keep her victims from escaping her powerful jaws.

A Family Dinosaur Concert: A Celebration of a *T. rex* Named Sue

Sunday, May 21

11 a.m. & 1 p.m.

Join the Chicago Chamber Musicians and The Field Museum as they present "A Family Dinosaur Concert: A Celebration of a *T. rex* Named Sue." Designed for families with children ages 3 and above and sponsored by Ronald McDonald House Charities, the concert will feature the world premiere performance of "Tyrannosaurus Sue: A Cretaceous Concerto," with music by Bruce Adolphe, poems by Kevin Crotty and illustrations by Kurt Vargo. It also will feature a reading of Jan Wahl's book, *The Field Mouse and the Dinosaur Named Sue*. Call 312.225.5226 to reserve your tickets (\$10). For more information, please call 312.665.7418

7th Annual Silver Images Film Festival

Sunday, May 4

11 a.m. to 5 p.m.

During The Silver Images Film Festival, which celebrates the opportunities that come with aging, visitors can watch a variety of international films and video shorts that depict the elderly as active, productive and empowered members of society. Festival director Sheila Malkind will hold discussions about the films after each screening. Organized by the Terra Nova Films Inc., a nonprofit organization, the festival is free with general Museum admission (the Museum will waive admission for those with senior-citizen cards). Call 312.881.6940 for more information.

AN EVENING WITH JULIE TAYMOR

Thursday, May 4

6:30 p.m.

As part of its ongoing exploration of the "Masks: Faces of Culture" exhibit, the Museum is proud to present an evening with Julie Taymor, a theatrical designer and director who has choreographed, directed and created costumes for a variety of plays and operas that incorporate masks and mask-like outfits.

During the course of her career, Taymor has made a significant impact on contemporary popular theater through her use of unconventional stagecraft, including masks, puppets and experimental staging techniques. For instance, she recently designed large-scale puppet masks for the Broadway adaptation of *The Lion King* that allowed the actors to mimic the movements of the creatures they were portraying.

In addition to *The Lion King*, Taymor has worked on *The Flying Dutchman*, *The Tempest* and Shakespeare's *Titus Andronicus*, which she recently adapted into a feature film. Her "braiding together of global stage forms," as theater historian Eileen Blumenthal has described her work, has earned Taymor a number of awards, including the MacArthur "Genius Grant" and a Guggenheim Fellowship. \$20 (\$15 members; \$18 students and educators). Call 312.665.7400 for more information.



© DISNEY / PHOTO BY JOAN MARCUS AND MARC BRYAN BROWN

Above: Tsidii Le Loka wearing one of Taymor's costumes in the Broadway production of "The Lion King." After graduating college, Taymor was awarded a fellowship to study Javanese shadow puppetry in Indonesia. While on the island of Bali, she formed her own theater troupe, whose first work was called "Way of Snow," based on an Inuit legend.

COLLECTING DINOSAUR ART WITH JOHN LANZENDORF

Friday, July 7

6 to 8 p.m.

On display from May 17 through Nov. 13, the exhibit "Picturing *T. rex*: Selections from the Lanzendorf Collection" features original art and popular representations of *Tyrannosaurus rex*. These objects, which range from sophisticated bronzes to salt-and-pepper shakers, were all collected by Chicago resident John Lanzendorf over the past 50 years.

On July 7, you can meet Lanzendorf, who will explain why he began collecting dinosaur art and how he has transformed his first piece, a brass *T. rex* figurine he bought as a child while visiting The Field Museum, into one of the most comprehensive private collections of dinosaur art in the

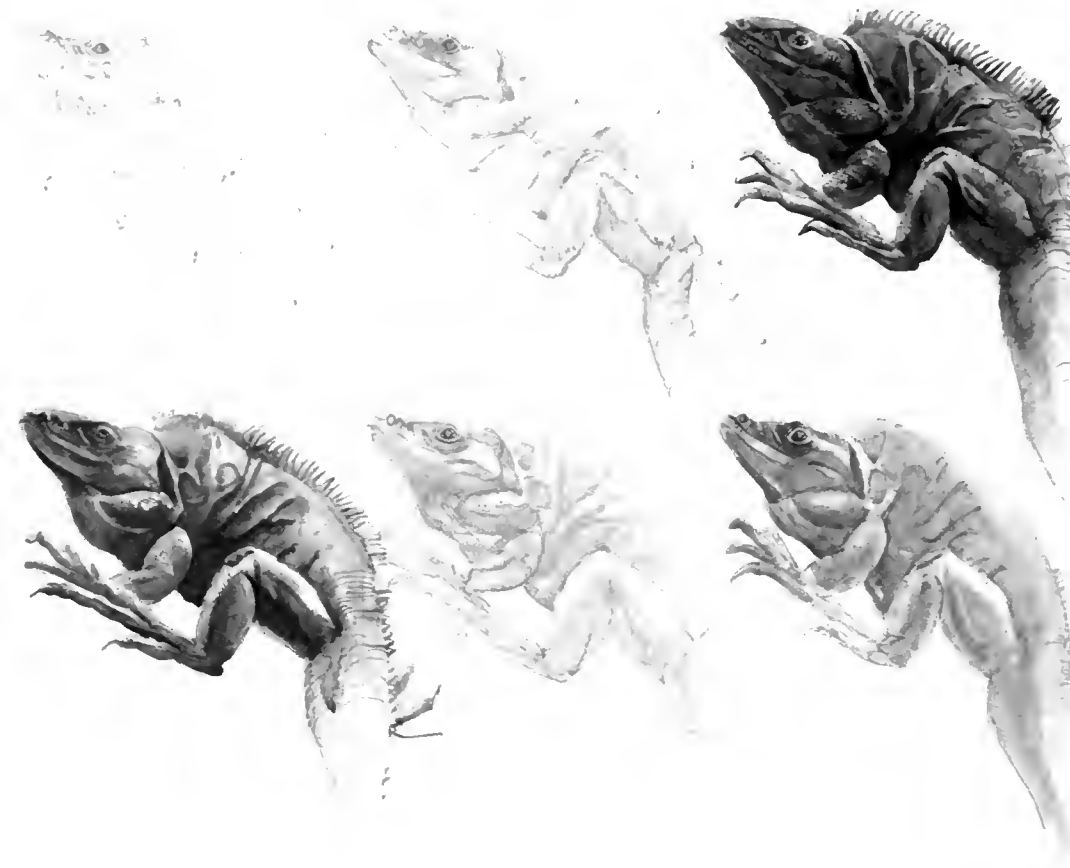
world. Participants are encouraged to bring along selections from their own dinosaur collections to share with others. \$12 (\$10 members). Please call 312.665.7400 for more information.

Right: Any good collection of dinosaur art usually includes at least one of these \$1 "Molda-Rama" plastic *T. rex* miniatures. For more than 10 years, the Museum has been selling these dinosaur figurines in coin-operated vending machines on the ground floor.



MARK VIDHALM / IONB9625 1C

Free Visitor Programs



Left: A watercolor illustration by Peggy Macnamara, the Museum's resident artist, of a spiny-tailed iguana (*Ctenosaura similis*). On May 13, visitors can learn how to paint and draw the thousands of biological and cultural specimens on display at the Museum.

2 – 4 p.m. **Dead Sea Scrolls Sunday Symposia: The State of the Continuing Publication of the Dead Sea Scrolls.** For the closing lecture in the Museum's Symposia Series, professor Emanuel Tov from the Hebrew University of Jerusalem will talk about the future of the Israel Antiquities Authority's Dead Sea Scrolls publication project. Started in 1950 by a small team of scholars, this project is an attempt to publish all 800 compositions that comprise the Dead Sea Scrolls.

May 17 — Wednesday

10 a.m. – 3 p.m. **Opening Day: Unveiling of Sue.** See the "Get Smart" page in the calendar section for a full description of opening festivities.

10 a.m. & 1 p.m. **Tour: Inside Ancient Egypt.** See May 3.

May 20 — Saturday

10 a.m. – 3 p.m. **Family Programs for Opening Weekend of Sue.** Opening-weekend activities for Sue will continue with a variety of family programs designed to encourage visitors to explore the world of dinosaurs. See the "Get Smart" page in the calendar section for details.

May 21 — Sunday

10 a.m. – 3 p.m. **Family Programs for Opening Weekend of Sue.** See May 20.

May 24 — Wednesday

10 a.m. & 1 p.m. **Tour: Inside Ancient Egypt.** See May 3.

Daily Highlight Tours

Take a guided tour of the exhibits that make this Museum one of the world's finest and learn about the history of these displays. Tours are offered Monday through Friday at 11 a.m. and 2 p.m. Check the informational directories for weekend tours.

Every Saturday and Sunday

1 p.m. **Preschoolers Alert! Story Time — Facts, Fables and Fiction.** Learn new songs and stories, and have fun creating artwork in the Grainger Gallery — all in a 20-minute program sponsored by The Siragusa Foundation Early Childhood Initiative. In May and June, you can hear stories about dinosaurs, music and life in the woods, as well as design a *T. rex*, forest habitat, dream tree or dazzling drum. One adult for every three children, please.

Interpretive Station Activities: Drop by hands-on stations located throughout the Museum (check informational directories for a daily listing) and delve into the fascinating world of natural history.

May 3 — Wednesday

10 a.m. & 1 p.m. **Tour: Inside Ancient Egypt.** Explore the lives and afterlife of the ancient Egyptians.

May 10 — Wednesday

10 a.m. & 1 p.m. **Tour: Inside Ancient Egypt.** See May 3.

May 11 — Thursday

11 a.m. – 2 p.m. **Scientists on the Floor.** Extend your journey into the **Underground Adventure** exhibit by listening to scientists from the U.S. Department of Agriculture talk about the process of soil formation in Illinois and around the world. Opened March 27, 1999, **Underground Adventure** allows visitors to explore the hidden world beneath their feet.

May 13 — Saturday

Noon – 3 p.m. **Hall Demonstrations: Artists in the Field.** Watch student artists from the School of the Art Institute demonstrate the drawing and painting techniques they use to capture the beauty of The Field Museum's many dioramas and cultural and biological collections.

May 14 — Sunday

11 a.m. – 4 p.m. **7th Annual Silver Images Film Festival.** Come watch films and videos produced from around the world that celebrate long life and the latter stages of adulthood. Sheila Malkind, the director of the festival, will lead discussions about the films after each screening. Please call 312.665.7400 for information about film titles and screening times.

Please note that programs are subject to change. Check the informational directories located throughout the Museum for daily program listings.

May 27 — Saturday

10 a.m. – 3 p.m. **Family Programs for Sue.** Both educational and entertaining, these family activities are designed to enhance your enjoyment of Sue, the largest and most complete *T. rex* ever unearthed.

During this program, you can create your own dinosaur from foam and wire, and view artwork created by dinosaur artists. You can even search the Museum's limestone floor for evidence of buried fossils.

1:30 p.m. **Tibet Today and a Faith in Exile.** This slide presentation takes you to Tibetan refugee sites around the world and to places in Tibet now open to tourists.

May 28 — Sunday

10 a.m. – 3 p.m. **Family Programs for Sue.** See May 27.

May 29 — Monday

10 a.m. – 3 p.m. **Family Programs for Sue.** See May 27.

May 31 — Wednesday

10 a.m. & 1 p.m. **Tour: Inside Ancient Egypt.** See May 3.

June 3 — Saturday

Noon – 5 p.m. **Meet John Lanzendorf.** Dinosaur art collector John Lanzendorf will be on hand to speak to visitors about the exhibit "Picturing *T. rex*: Selections from the Lanzendorf Collection." Visitors are encouraged to bring along pieces from their own dinosaur collections to share with others. Please call 312.665.7550 for a list of additional dates.

June 7 — Wednesday

10 a.m. & 1 p.m. **Tour: Inside Ancient Egypt.** See May 3.

June 8 — Thursday

11 a.m. – 2 p.m. **Scientists on the Floor.** Join scientists from the U.S. Department of Agriculture to learn about soil science, soil conservation and careers relating to agricul-

ture. The scientists also will discuss how they strive to educate the public about the importance of soil, one of the planet's most valuable resources.

June 14 — Wednesday

10 a.m. & 1 p.m. **Tour: Inside Ancient Egypt.** See May 3.

June 21 — Wednesday

10 a.m. & 1 p.m. **Tour: Inside Ancient Egypt.** See May 3.

June 28 — Wednesday

10 a.m. & 1 p.m. **Tour: Inside Ancient Egypt.** See May 3.

Resource Centers

Explore topics in more depth through a variety of resources, including computer programs, books, activity boxes and much more at the Africa Resource Center and the Daniel F. & Ada L. Rice Wildlife Research Station. Open daily from 10 a.m. to 4:30 p.m. See next column for information on the Webber Resource Center and the Crown Family Place for Wonder.

Pawnee Earth Lodge

Visit a traditional home of the Pawnee Indians and learn about their life on the Great Plains. Open from 10 a.m. to 4:30 p.m. on weekends and at 1 p.m. during weekdays.

Ruatepupuke:

The Maori Meeting House

Discover the world of the Maori people of New Zealand at their treasured and sacred Maori Meeting House. Open daily from 9 a.m. to 5 p.m.

McDonald's Fossil

Preparation Laboratory

Watch Field Museum preparators work on a variety of dinosaur bones. Open daily from 9 a.m. to 5 p.m.

Please Excuse our Renovations

We are on the move! As you plan your next visit to The Field Museum, you should note that some of our exhibit halls and resource centers are temporarily closed for reorganization. These include the Crown Family Place for Wonder, the Webber Gallery, Webber Resource Center and Place for Wonder — all of which will reopen this summer. Although the new "Ancient Mesoamerica and North America" hall will not be complete until mid-July, the majority of it is currently available for public viewing. This summer, the Museum also will be opening a Plains and Southwest Native American Gallery. For more information, please call 312.665.7400.

Right: This Egyptian woman died more than 5,500 years ago during the Naqada I period. It is one of the many mummified remains you will discover while on the Museum's free "Inside Ancient Egypt" tour that is offered throughout May and June.

JAMES BALDWIN/ICM66473 3C



Please note that programs are subject to change. Check the informational directories located throughout the Museum for daily program listings.

CANADIAN SCULPTOR COMBINES ART WITH SCIENCE TO RE-CREATE SUE'S SKULL



JOHN WEINSTEIN / GN09246 Z2C

Robert Vosper

Above: Brian Cooley working on his Sue sculpture in one of the geology department's preparation labs.

Are you looking for a collector's item that is a little more upscale than baseball cards, Pokémon toys or Beanie Babies? Are you going insane trying to find a gift for that special someone who has everything? Or perhaps you are in the market for some artwork that will make your dinner guests' heads spin with curiosity? If your answer is yes, then we have something right up your alley.

Beginning May 17, Brian Cooley, a 43-year-old sculptor from Calgary, will begin selling 10 limited-edition, one-third-scale bronze replicas of Sue's 5-foot-long skull. Cooley will sell the first five sculptures for \$34,000 each; then will increase the price in increments of 5 percent for the remaining pieces. As part of his licensing agreement with The Field Museum, Cooley will donate the first sculpture to the Museum and will share 50 percent of the total sales.

Since 1983, Cooley has been creating life-sized and scale models of dinosaurs for museums and theme parks around the world. In the past couple of years, he also has created a number of models for *National Geographic* magazine, which has used them as illustrations in articles about major dinosaur discoveries. The magazine even published a photograph of one of his pieces, a fleshed-out recreation of the flightless feathered dinosaur *Caudipteryx zoui*, on the cover of its July 1998 issue. Not long after this issue hit the newsstands, the magazine commissioned Cooley to create a model of another important flightless dinosaur: Sue.

For its June 1999 feature about the Museum's famous fossil, *National Geographic* asked Cooley to create two models of Sue, one showing how facial muscles would have attached to its jaws and the other depicting Sue as she may have looked when alive. To design these models, Cooley first had to create an exact replica of the skull in polyester. Working closely with Museum preparators and paleontologists, Cooley studied and measured the skull for months. Since the Museum hadn't removed all the rocky matrix encasing the fossil at this point, Cooley had to fill in some of the missing pieces by studying *T. rex* fossils at other institutions.

"It was a lot like taking different pieces of a jigsaw puzzle and putting them together," he says.

After completing the piece, Cooley approached the Museum about the possibility of selling the replica of the skull as a limited-edition bronze. Once Museum lawyers gave him the green light, he returned to Chicago late last year to resculpt the sections that were based on other specimens.

"I was impressed by how accurate his sculpture looks," says William Simpson, chief preparator in the geology department. "He was genuinely interested in getting it right. There were several times when I would say to him, 'That just doesn't look right, Brian.' He would immediately get out his calipers and measure it. On the rare occasion it was off, he would tear apart that section and rebuild it."

This type of detailed work was new to Cooley, who in his 17 years of creating dinosaur models has never had to capture every crack, fissure and defect of an individual fossil.

"This was the first time I've created a portrait of a specific dinosaur," Cooley says. "Usually, I create generic models based on many different fossil remains. Working on Sue was certainly one of the most enjoyable pieces I've ever created because you learn so much from studying something that closely."

Because the sculpture is a facsimile of Sue's skull (it doesn't, however, reflect the distortions to much of the fossil skull that were caused by geologic forces), Cooley hopes it will appeal to more than just collectors of dinosaur art.

"As far as I know, there has never been a situation where a fossil has been as famous as Sue and there has never been a sculpture of a fossil created with this much detail," he explains. "These sculptures represent something unique in both the art world and paleontology."

For Sue's unveiling May 17, the Museum will place one of the sculptures on public display. For information about purchasing Cooley's bronze replicas, please call 312.665.7651. **ITF**

Membership News

MEMBERS' NIGHTS 2000

Thursday, June 8 and Friday, June 9
5 – 10 p.m.

Join us for Members' Nights, our annual behind-the-scenes extravaganza during which you can meet our scientific staff and explore the areas of the Museum usually closed to the public.

During these two nights of discovery and exploration, we will take you on a journey into the collections areas, through the exhibition department and to the research labs where our scientists will show you how they are uncovering the cultural and biological secrets of the planet. You also will get to see Sue, who will be on display in all her frightful glory at the north end of Stanley Field Hall.

While the focus of Members' Nights is science and research, you can also explore our classic dioramas, permanent exhibits and temporary displays, such as "The Dead Sea Scrolls," which will be open for viewing on a first-come, first-served basis.

After you've completed your behind-the-scenes journey, you can



KIMBERLY MAZANEK / GN89278.30



JOHN WEINSTEIN / GE086129.49C



JOHN WEINSTEIN / GN89270.36A

kick back and enjoy some musical and theatrical performances in Stanley Field Hall, grab some food at Corner Bakery or McDonald's, and visit our store, which will be offering members a 20-percent discount on most merchandise.

Admission to "Members' Nights 2000" requires advance tickets. Members will receive an invitation by mail and an order form for tickets. Each member household will be able to request two free guest passes for friends and family. **ITF**

Members' Nights Highlights

Afterlife in Ancient Egypt

Find out what ancient Ushabti statues unearthed in Egyptian tombs can tell us about the Egyptian belief in life after death.

Venomous Arthropods

Examine some of nature's scariest animals, such as scorpions, black-widow spiders and foot-long centipedes.

In the Shadow of Sue

Come see some of the fossil animals and plants (right) that were found buried alongside Sue in the high plains of western South Dakota. This is the first time these fossils have been on public display.

Sue in the Laboratory

Examine some of the tools that Museum preparators used to remove the rock from Sue's bones and discover how a team of preparators managed to remove this rock in just two years.



JOHN WEINSTEIN / GE086250.3C

Hidden Anthropology

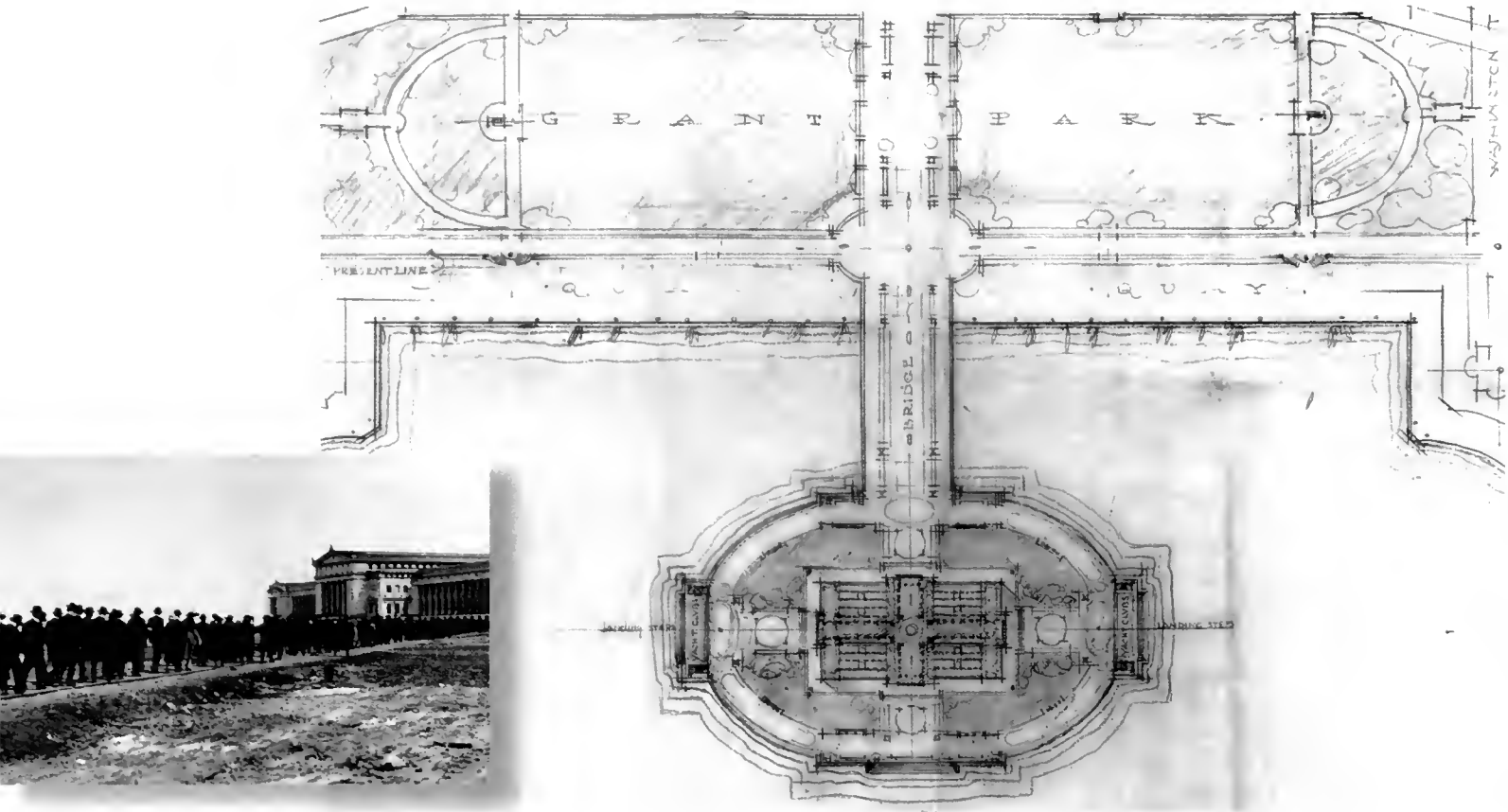
See some of the Museum's newest acquisitions from New Guinea and existing collections of featherwork from South America.

What's in all These Cases?

Find out how the Museum's collection of 2.5 million botanical specimens has helped scientists uncover some of nature's lingering mysteries.

Mammals: The Inside Story

Watch Field Museum preparators remove the flesh and skin from a mammal and learn how scientists use these prepared specimens in their research.



JOHN WEINSTEIN / GN89617.2, INSET: THE FIELD MUSEUM / CS44679

When architect Daniel Burnham began searching for a site to build a permanent home for The Field Museum in 1906, he ran into a powerful roadblock by the name of A. Montgomery Ward.

After making millions from his mail-order business, Ward became the self-appointed protector of Chicago's lakefront, which had become overrun by railroad tracks, garbage and squatters' shacks. Ward not only wanted the city to clean up the mess, but also to protect the area from development.

"I fought for the poor people of Chicago, not for the millionaires," he once said. "Here is a park frontage on the lake . . . which city officials would crowd with buildings, transforming this breathing spot for the poor into a show ground for the educated rich."

So, it was no surprise that Ward took Burnham to court after the architect announced his grand plan to create a cultural metropolis in Grant Park filled with marble-clad museums. At the center of this metropolis, Burnham revealed, would be The Field Museum. Although the public was on Burnham's side, the courts were not. Burnham, however, was not ready to give up. He immediately drafted a plan (above) that called for building the Museum on a 2,000-foot-long, 950-foot-wide man-made island about 200 feet from the shoreline. This time he sent his plan for Isle Marshall, as he called it, to the state legislature for consideration as a bill.

While debating Burnham's proposal, the legislators kept receiving letters signed by "Mr. Nobody"

with advice on how to handle Ward's lawyers. Although no one has been able to confirm the author's identity, some historians have suggested that Mr. Nobody was actually Burnham himself.

"If Isle Marshall . . . is a part of Grant Park, the Montgomery Ward lawyers think they must win on the same grounds as before," wrote Mr. Nobody on Dec. 8, 1909. "Why not make it strictly an island, cutting the ground from under the objectors . . . Let Isle Marshall be truly an island, and the bill for it so drawn will leave the Ward lawyers no leg to stand on."

The legislators were not swayed by Mr. Nobody's arguments and summarily rejected the plan. At this point, Burnham realized that the only option left was to build his masterpiece in Jackson Park next to the crumbling Palace of Fine Arts Building, which had served as the Museum's temporary home since the close of the 1893 World's Columbian Exposition. However, just as construction was to begin, the Illinois Central Railroad offered Museum officials use of some landfill they owned on the shores of Lake Michigan, just south of Grant Park.

On May 3, 1921, the Museum opened its doors (inset) in this new location and within a few years was joined by the Shedd Aquarium, the Alder Planetarium and Soldier Field.

Ironically, neither Ward nor Burnham ever got to see the fruits of their labor. Burnham died June 1, 1912, of complications associated with colitis and Ward a year later from a pulmonary edema. **TF**

ASK A SCIENTIST

Do you have a question for one of our scientists? If so, please send it to the Publications Department, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605, or via e-mail to rvosper@fmnh.org. Only questions published in the magazine will be answered. An archive of questions and answers that have appeared in past issues can be found at www.fieldmuseum.org/askascientist.

Did *T. rex* have any predators?

No it didn't. Although a juvenile Tyrannosaurus might have been vulnerable, a healthy, full-grown adult was not. We know of no other meat-eaters even close to *T. rex* in size at the end of the Cretaceous period.

— William Simpson
Chief Preparator and Collection Manager, Geology Department

Why don't ants or other small insects drown in the rain?

Ants that live underground generally abandon their homes when they flood, often bringing their pupa and larvae along with them. Once they find dry refuge, the colony will wait until the ground dries out before attempting to build a new home. Most ants, however, try to find areas that offer some drainage so they don't have to move during heavy rainfalls. Other small insects have their own unique ways of coping with floods. The 17-year cicada, for instance, will encase itself in a waterproof capsule of soil during floods. And lion ants avoid the problem altogether by restricting themselves to sandy areas under hanging cliffs and logs before each rainy season.

— Daniel Summers
Collection Manager of Insects Zoology Department

What is the difference between a chimpanzee and a gorilla?

Chimpanzees and gorillas are both members of the primate group, which includes mammals such as lemurs, monkeys and humans. All primates have relatively large braincases (in comparison to other mammalian groups) and possess agile limbs and fingers. Chimps generally differ from gorillas several ways. For example, chimps are smaller than gorillas and have larger and more conspicuous ears. In addition, female chimps are almost the same size as males, whereas female gorillas are much smaller than their male counterparts. Using collections like those housed at the Museum, scientists continue to debate the exact relationships among primates and often ask themselves questions similar to yours.

— William Stanley
Collection Manager of Mammals Zoology Department

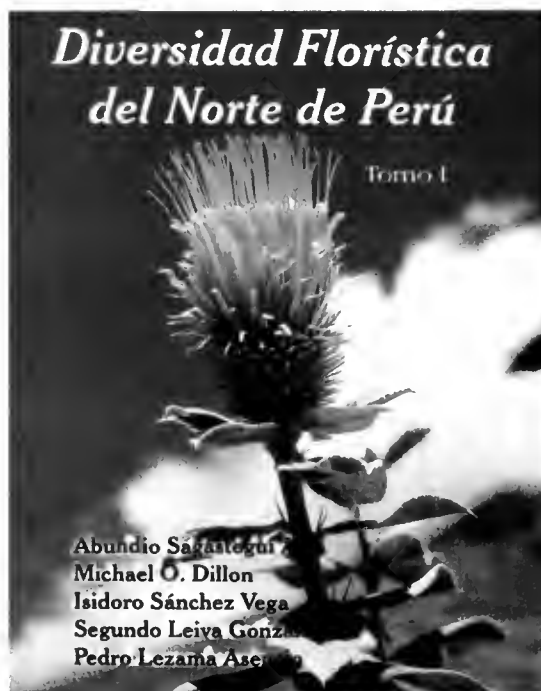
THE FLORISTIC DIVERSITY OF NORTHERN PERU

In the course of conducting fieldwork in Peru over the past 28 years, Field Museum botanist Michael Dillon has taken thousands of photographs of just about every plant he has ever set eyes on. Last year, Dillon and some of his Peruvian colleagues decided to put this encyclopedic collection to use by publishing a Spanish-language book that provides a descriptive and visual overview of 185 of the most stunning examples of the plant species found in northern Peru.

Along with basic taxonomic information that accompanies each photograph, the book, *Diversidad Florística del Norte de Perú*, also contains a 15-page introduction that explains why the region is blessed with so much botanical diversity and endemism. Although the book contains very detailed color photographs and taxonomic identifications, it is not meant to serve as a field guide, says Dillon.

"It's a book that we hope will stimulate Peruvians, especially kids, to go out and look around and learn about the wealth of diversity that exists in their backyards," he explains. "In general, there is a real lack of information available to the public in Peru about the botanical treasures that exist in their country."

The authors will use all the proceeds from the book, which was funded in part by the World Wildlife Fund and the Universidad Privada Antenor Orrego in



Trujillo, Peru, to publish future volumes that examine the flora of northern Peru's distinct habitats, such as rain forests and coastal deserts. **ITF**

Diversidad Florística del Norte de Perú is available for \$30 through Dillon's Web site at www.nolana.com or by contacting him directly at dillon@nolana.com.

Field Museum Tours at a Glance



ZEBRAHIM EXPEDITIONS

Spend 16 days aboard a 138-passenger sailing yacht with Field Museum botanist William Burger as he explores five Central American countries and two oceans. Participants also can take a pre-extension trip to the Tikal ruins in Guatemala and a post-extension tour to Costa Rica.

Pacific Northwest Submarine Safari

June 30 – July 4, or July 5 – July 9
Duration: 5 days
Guest Leader: Marine biologist Joe Valencic
Price: \$3,890, not including airfare

Galápagos Island Adventure

July 19 – July 29
Duration: 11 days
Museum Leader: Conservation ecologist Doug Stotz
Price: \$5,725, including airfare from Chicago

On the Drawing Board

Egyptian Odyssey: A Comprehensive Production
Ancient Monuments of Southeast Asia
The Natural and Cultural History of Tsavo: A Tented Safari Through the Land of the Man-eaters

For more information or free brochures, please call Field Museum Tours at 800.811.7244, or send them an e-mail at fmtours@sover.net. Please note that rates, prices and itineraries are subject to change and that prices are per person, double occupancy.

Archaeological Treasures of Peru

August 25 – September 6
Duration: 12 days
Museum Leader: Anthropologist Jonathan Haas
Price: \$6,290, including airfare from Chicago

Wildlife of Southern Africa: Botswana and Zimbabwe

October 6 – October 19
Duration: 14 days
Museum Leader: Zoologist David Willard
Price: \$8,535, including airfare from Chicago

Egypt Revisited

October 15 – October 29
Duration: 15 days
Museum Leader: Egyptologist Frank Yurco
Price: Approximately \$4,445, including airfare from Chicago



FRANK YURCO

Accompany Field Museum Egyptologist Frank Yurco on a tour next October to some of the most spectacular tourist destinations in Egypt, including Abusir, Dashur Maidum, Abydos, Dendara, Lake Nasser, Abu Simbel and Amada. You also will get to see some lesser-known sites in Cairo, Luxor and Aswan.

Tunisia Unveiled

November 2 – November 16
Duration: 15 days
Guest Leader: Willard White, former V.P. for Institutional Advancement
Price: \$5,880, including airfare from Chicago

Amazon by Riverboat

December 9 – December 17
Duration: 9 days
Museum Leader: Botanist William Burger
Price: \$3,498, including airfare from Chicago

Central America Under Sail

February 10 – February 25, 2001
Duration: 16 days
Museum Leader: Botanist William Burger
Price: Starts at \$7,990, not including airfare



TRAVEL PLANS INTERNATIONAL

In November, travel with Willard White to Tunisia and visit World Heritage sites, such as Carthage, Kairouan and ancient Thysdrus (above). You also will get to see Bulla Regia and Dougga, two extraordinary archaeological sites from the Roman occupation. This tour is limited to 14 participants, so make your reservations early.

IN THE FIELD

July
2011
\$6.00

The Field Museum's Membership Publication

Star Wars

The Magic of Myth

Cave Lions

The Truth Behind
Biblical Myths

From the President



JOHN WEINSTEIN / GIN88119 6

SEEING THE FOREST THROUGH THE TREES

Envision yourself approaching the Museum from Grant Park with Chicago's skyline at your back. You pass through a shady grove of linden trees, planted there last year to honor retired Congressman Sidney R. Yates, a long-time champion of the arts, humanities, environment and the people of Illinois.

As you ascend the north steps, you see the monstrous silhouette of a *Tyrannosaurus-rex* skeleton stretched out along the tall columns of the Museum on a gigantic banner. Once inside, you are swept into the whirlwind of excitement around Sue. You gaze in wonder at the fossil's miraculous visage as hundreds of thousands of others have since we unveiled it on May 17. The scene seems dominated by this new star attraction.

But if you were to look away you would see the Museum in a larger context that is alive and ever-changing. As you set out over the myriad footpaths and hallways that branch out in every direction, the Museum

appears as a vast forest of scientific and cultural knowledge, under whose sprawling canopy you can explore the whole world.

Through corridors brimming with materials about the planet's peoples and wildlife, you encounter thousands of biological specimens and cultural objects from the Museum's outstanding collections of more than 21 million items. You also see a changing marquee of temporary exhibitions, such as *Cartier 1900-1939*, *Sounds From the Vaults* and *The Dead Sea Scrolls*.

On the ground floor, you discover a special exhibitions hall that recently mounted *Masks: Faces of Culture* and where later this month, *Star Wars: The Magic of Myth* will debut. Just past the exit to our newest permanent exhibition, *Underground Adventure*, you notice an intimate new gallery that features items from our insect collections.

This floor is home to educational facilities such as the Harris Loan Center, the new Siragusa Center and the soon-to-be refurbished James Simpson Theatre, which recently played host to oceanologist and archeologist Robert Ballard and his JASON Project and a presentation by theatrical director and designer Julie Taymor.

Under the watchful glares of Bushman and the new man-eating Lion of Mfuwe, you board the elevator for the second floor, where you travel the Pacific to learn about the geological, cultural and evolutionary forces that shape our world and the ways in which we depend upon nature for our survival.

If you explored the third floor and other research areas as thousands of others did during last month's Members' Nights, you will see why Sue isn't the only big news at the Museum these days. Scientific accomplishments include the discovery in Madagascar of the world's two oldest dinosaurs; the naming and description of a fossil snake with well-developed hind legs that offers new clues about snake evolution; and a long list of publications by Field scientists, including works on the rise and fall of Swahili states, on flowers that bloom during El Niño in Peru, and on tree-ring dating techniques.

Our efforts on behalf of the environment remain vigorous, and the conservation staff works to document biodiversity in places as far away as Pando, Bolivia, and as close to home as the Lake Calumet region with profound impact on threatened ecosystems.

Visitors to the fourth floor would see the imaginative work of exhibits architects, designers and set builders as they prepare to bring you *Americanos* in August and *Kremlin Gold* and *The Endurance: Shackleton's Legendary Expedition*, both in October.

I can't begin to do justice to all of the remarkable things happening at The Field Museum. Sue is not the least of these. But as thrilled as we are about Sue, we need to think of this institution as the sum total of its many parts. Floor by floor, day after day, year in and year out, The Field Museum brings the whole world to Chicago.

A handwritten signature in black ink that reads "John W. McCarter Jr." The signature is fluid and cursive.

John W. McCarter Jr.
President & CEO

We would like to know what you think about "In the Field". . . .

Please send comments or questions to Steve Hines, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496, or via e-mail at shines@fmnh.org.

2

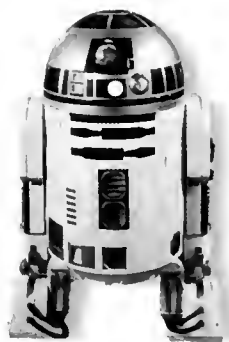
Thomas Gnoske and Julian Kerbis Peterhans go in search of lion dens in Western Uganda.



Lion researchers are convinced two distinct forms of lions live in Africa. See page 2 for full details.

7

The Field Museum acquires the Vida Chenoweth Collection, an exquisite assemblage of nearly 600 artifacts from highland New Guinea.



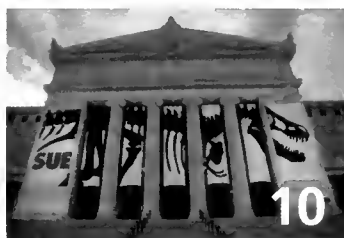
Star Wars: The Magic of Myth is one of the most visited Smithsonian exhibits of all time and now it is at The Field Museum. See **Calendar Section** for family program details.

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Outreach luncheon held by Field Museum Women's Board donates \$40,000 to Dr. Robert Ballard's Jason Project.

Your Guide to The Field

A complete schedule of events for July/August, including programs in conjunction with **Star Wars: The Magic of Myth** exhibit.



Sue's Debut 2000! A photomontage of the exciting events surrounding the largest and most complete *T. rex* on display.

INTHEFIELD

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This issue's cover photograph: Chewbacca, 1997 Eric Long and Mark Avino *Star Wars: The Magic of Myth*, Star Wars™ and ©1997 by Lucasfilm Ltd.

The **Field**
Museum

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

ph 312.922.9410
www.fieldmuseum.org

Around Campus

Shedd Aquarium

The Shedd Aquarium's popular Thursday-night event, **Jazzin' at the Shedd**, offers guests a special opportunity to see the new exhibit, **Amazon Rising: Seasons of the River**, and spend a year on the Amazon floodplain in one evening. If that's not enough, visitors can take free dance lessons to the sizzling sounds of Latin jazz. **Jazzin'** happens every Thursday night through Sept. 28. The Oceanarium, Seahorse Symphony and **Amazon Rising** stay open until 8 p.m., while the Aquarium and **Jazzin'** keep going until 10 p.m. After

5 p.m. on **Jazzin'** night, admission is \$8 for adults, \$6 for children (ages 3-1) and seniors. Call 312.939.2438 or visit Shedd's Web site at www.sheddaquarium.org for more information.

Adler Planetarium

The Adler Planetarium & Astronomy Museum will premiere a new sky show, **Spirits from the Sky, Thunder on the Land** on July 28. Developed at the Adler in partnership with members of the Skidi Band of the Pawnee Nation, this landmark pro-

duction will involve audiences in exploring cross-cultural principles of directional and cyclical astronomy, making very rich use of ethnographic data and visual representations of artifacts from Pawnee star and sky lore rituals along with authentic historic and modern recordings of Pawnee music. Call 312.322.0304 for more information.

The Field Museum

See the **Calendar Section** for a list of programs and exhibitions offered in July and August.

CAVE LIONS

THE TRUTH BEHIND BIBLICAL MYTHS

Thomas Gnoske

Field Museum Assistant Collection Manager, Bird Division/and Chief Preparator, Zoology

Julian Kerbis Peterhans

Field Museum Adjunct Curator, Mammals and Associate Professor, Roosevelt University, Chicago



The lion of the bible. Within historical times, large Asiatic lions once roamed along rivers and associated gallery forests throughout Eurasia, from the Jordan River depression east to Bihar India and west to the Lev and Greece, hunting large prey, especially wild cattle.

Despite numerous biblical references to the “lion’s den,” lion researchers had consistently found that modern lions did not use dens or caves, and had dismissed the early references to cave-dwelling lions as mythical. In fact, renowned lion researcher George Schaller summarized years of extensive behavioral observations of African savannah lions in his classic monograph *The Serengeti Lion*, which was published in 1972. Schaller never found lions using caves. Over the next 25 years, no other researchers recorded evidence of cave-dwelling lions. However, recent Field Museum research has shed new light on this subject. Scientists may have discovered the existence of cave lions, and are rethinking the evolution of all lions.

In 1996, the late George Bwere of the Uganda Wildlife Authority was surveying potential hiking trails along the Kyambura River (a tributary of the Nile River) in a gorge by the same name. Thick tropical vegetation lines the valley, which bisects the savannahs of the Albertine Rift Valley in western Uganda. While pushing through the dense vegetation, Bwere was attacked by a furious lioness at the same time a large male lion retreated into a nearby cave with young cubs. Bwere narrowly escaped with his life. Over the next few years, there were numerous reports of two male lions attacking people and vehicles in the vicinity of this cave. When we learned of this in early January 1998, we were immediately interested. Could this cave be an example of a modern lion living in a den?

Despite the reports of cave-dwelling lions in Uganda and observations shared by our Kenyan colleague Anthony Russel that certain lions do in fact use caves, we still had our doubts. In the spring

of the previous year, we along with our Kenyan colleagues re-discovered the alleged den of the infamous Man-eating Lions of Tsavo (see July/August 1998 *In The Field*). We found no evidence to support the theory that bones found in the cave at the time of its original discovery in 1898 indicated a lion’s den. Even so, Bwere’s story and Russel’s observations were convincing enough to compel us to investigate the Kyambura River area report.

Because these Nile River lions were considered extremely dangerous, we experienced difficulty gaining access to the gorge. In October 1998, we were finally given clearance to enter. Our goal was to establish whether the cave that Bwere had found was actually the first known lion cave of modern times.

Cave Exploration

Accompanied by a single ranger armed with an AK-47, we entered the gorge and descended a steep embankment until we reached the river. We felt as if we had stepped into an enchanted sanctuary, the lush vegetation contrasting with the dry surrounding savannahs, the silence broken by the whoops of chimpanzees and exotic calls of rainforest birds. Surely this was typical leopard habitat, not lion territory.

We approached the mouth of the cave, hoping there were no lions currently inside. While we were concerned for our own safety, we were also worried that an attack might lead to injury or death of one of these lions. Nervously, we crawled through the mouth of the cave on our hands and knees. We were relieved that no lions greeted us. With hearts pounding hard and flashlights in hand, we explored the interior of the cave. It was decorated with numerous stalactites



TOM GNOSKE/JULIAN KERBIS PETERHANS

The Kyambura Lions’ Den is the first scientific documentation of a cave used by living lions.



TOM GNOSKE

Kyambura Gorge in the Albertine Rift Valley, western Uganda. It was here that George Bwere first encountered the cave-dwelling lions of Kyambura in the mid 1990s.

and an internal waterfall. A perfectly preserved iron smelting platform indicated past human use. But most importantly to us, we found the floor littered with buffalo bones and blond hairs from the mane of a lion.

Tempted to continue the exploration, we noticed the rising sun. Typically, lions hunt at night and seek shelter from the extreme heat of the day. If lions occupied the gorge and returned to the cave after the night's hunt, we could find ourselves trapped with no way to escape. Even an armed ranger is no match for two 600 pound male lions and an angry mother lioness. We all felt fortunate to leave that place without incident.

Our excitement that this cave might represent the first modern documentation of a lion den was tempered by our knowledge that bone accumulations in a cave can have numerous explanations. Humans can bring food to a cave that they are using as a shelter, and hyenas routinely drag bones containing marrow into caves to eat in seclusion. Bone assemblages in caves throughout the world have confused paleontologists and archaeologists because of the difficulty of reconstructing the circumstances of their origins. Explaining the source of these bone accumulations requires research known as "taphonomy," which is akin to the work of a forensic detective.

In our Kyambura River cave, the taphonomic mystery was easily solved. The iron smelter was the only evidence of previous use by humans, and there were no other indications of recent human use. The buffalo bones found lacked the heavy gnawing "fingerprint"

from hyena predation or scavenging. The abundance of intact buffalo bones and the lion's mane hair, along with confirmed eyewitness accounts of two buffalo being dragged down the steep bank of the gorge by male lions convinced us that this cave was an actual lion's den.

Discovering Lion Lineage

So why should these lions along the Kyambura River and other Nile River tributaries use caves, when the more familiar lions of the savannahs of eastern and southern Africa do not? The answer may lie in the very different social systems of lions living in different habitats.

The lions of the savannahs live in large prides, which are usually groups of related lionesses and their young of various ages, with one or two accompanying adult males. In the prey-rich savannahs, the females hunt and care for their cubs cooperatively, while the males enjoy the meals the females provide. Their primary prey is zebra and wildebeest.

In contrast, the lions along the Nile River typically live in small family groups. In these families, the males are the active hunters, and they frequently hunt large prey, especially mature buffalo. Without the safety that large prides provide, Nile River lion cubs are much more vulnerable to predation, particularly by hyenas, so acting aggressively toward intruders and rearing young in caves may give them protection that is not required by the savannah lion cubs.

Now, a whole new suite of questions arose. Are the differences in social systems simply a result of the circumstances in which the lions find themselves, or are the lions that behave so differently distinct in other ways as well? In 1913, the legendary zoologist Edmund Heller (Field Museum Assistant Curator of Mammals, 1921-1927) described a new subspecies of lion, *Panthera leo nyanzae*, from near the source of the Victoria Nile. Heller was very familiar with the pride lion *Panthera leo massaicus* from his field work on the Athi and Serengeti plains. He noticed that this new animal had a disproportionately small head relative to its body size. In 1924, J.A. Allen of the American Museum of Natural History in New York described yet another new subspecies (*Panthera leo azandicus*) from near the source of the White Nile. Allen gave this lion the distinction of being the largest living subspecies.

For various reasons, many modern lion taxonomists no longer recognize subspecific differences between African lions, separating only the rare Asiatic lion as a distinct subspecies. The forms described by Heller and Allen are treated as identical to the lions of the Kenyan and Tanzanian plains. Our discovery of the lion den, along with the differences we noted in lion behavior, started us on a line of inquiry to see whether these early taxonomists were on to something real. This research has taken us to museums around



DAVID FEATHERBE

Left: South African Buffalo Lion (*Panthera leo vernayi*—Roberts 1948). While mature Buffalo Lions frequently exhibit short manes, they are variable. In fact, manelessness is a relative term, all mature male lions as well as tigers possess some version of a mane.

Europe, Africa and North America to compare living and extinct lions throughout Africa and Eurasia.

Our findings suggest that there are two distinct forms of lions living in Africa. The lions described by Heller and Allen as well as our cave lions in the Kyambura River gorge appear to be identical to one another. They represent something quite distinct from the Pride Lions. We also found that Nile River lions share more features with the last remaining Asian lions in the Gir Forest of India than they do with the Pride Lions of Africa. Although widely separated geographically, the Nile lions and the Asian lions both have thick tail tufts, a thick flap of loose skin on their bellies, generally small but variable manes, and small skulls relative to their body sizes. Behaviorally, both specialize in large prey and the males in both groups hunt regularly. Pride lions share none of these features.

The cave lions of the Nile also seem to share characteristics with the extinct lions of Europe, the same lions that fascinated Paleolithic artists. There are numerous depictions of these prehistoric lions in 30,000-year-old cave art. Associated species in these same scenes include woolly rhinos, mammoths and primitive cattle. The prehistoric lion depictions bear a remarkable similarity to the living Nile lions, particularly with their restricted manes, belly folds and scenes portraying the hunting of large wild cattle. According to some authorities, these animals (*Panthera leo spelaea*), became extinct sometime between 25,000 and 8,000 years ago. They are the only lions known to have inhabited caves, and they were remarkable for their large size, which paleontologists estimate as 25 percent greater than the size of modern (Pride) lions. The Nile lions share the habit of cave dwelling with this extinct form. They also share similar body proportions and very large size.

From our comparisons of skeletons, we now believe that our Nile lions, the Asian lion, and several other described subspecies, including *Panthera leo vernayi* from South Africa and *Panthera leo senegalensis* from West Africa, are all the same lion and may represent a living lineage of the now extinct European cave lions.

Migrating to Africa

So how did lions get from central Asia into Africa? The Asiatic lion was once much more widespread than it is today, living throughout western Asia and southern Europe, including sites near the Dead Sea with strongholds along the Tigris/Euphrates and Indus River drainages. In fact the Jordan River depression links the Euphrates River to the Nile River, creating a corridor for lions of this type to invade Africa from the Middle East. Because these lions dispersed along the associated riverine gallery forests by following migrations of large prey, such as wild oxen and buffalo that never wander far from permanent water, these semi-nomadic lions became established along



Large Buffalo Lion from Northern Congo (*Panthera leo anzandicus* — Allen 1924). This lion 'type' was described as the largest living subspecies of lion. However, equally large specimens of Buffalo Lions from east, west and south Africa and India, have been examined by the authors.

many of the major African river systems. We have combined the Nile and other river lions of Africa with the Asian lion under the name "Buffalo Lions" to distinguish them from "Pride Lions" because of their preferred prey.

Buffalo Lions are restricted to the major rivers, their tributaries and associated lakes with their attendant buffalo herds. Unlike Pride Lions, Buffalo Lions rarely take small prey, and sometimes even attack young elephants and hippos that congregate near rivers. Family groups rarely exceed a single breeding pair with cubs of various ages, and males do the hunting. Pride Lions presumably evolved from Buffalo Lions that ventured into the savannahs and encountered new challenges in the hunting of plains wildlife. In the savannahs, lions encountered swiftly running, wary prey, necessitating new cooperative hunting strategies and changes in group size. With multiple females in a group, breeding access for the males became limited and male-male competition for mating opportunities became intense; the disproportionately large heads of the pride males may have evolved primarily for the battles they have between each other, and their aggressiveness toward rivals may prevent Buffalo Lion males from any access to female Pride Lions.

We are now convinced that there are two socially and physically distinct forms of lions living in Africa. One is the big-headed and relatively small but stout-bodied Pride Lion that has been the subject

of countless documentaries over the years. These lions live in large groups or 'prides' of related females who hunt cooperatively. Males, once they have taken over a pride, do little hunting. Male Pride Lions, which must compete with large numbers of other males for limited access to females who are concentrated in large groups, have evolved specialized tools for winning fights with rival males. These include bodies with a lower center of gravity, thick manes to protect their necks and extremely powerful jaws that can produce a bone crushing and mutilating bite.

The second is the small-headed, large-bodied Buffalo Lion that lives in small groups with the males serving as the primary hunters. Their much more massive and powerful bodies probably reflect their specialization on large and dangerous prey. This type of lion occupied the den that stimulated us to look more closely at the legend of lions' dens and to review lion taxonomy from a new perspective. We believe that Buffalo Lions are closer to the ancestral form, having descended from primitive lions that followed large prey into Africa (south) down the Nile River. From there they dispersed along other major river systems that converge with the Nile River, eventually dispersing throughout the entire African continent.

So as it turns out, the biblical references to the lion's den are not mythical as many modern researchers have thought. Instead they probably

refer to the caves of Buffalo Lions. With so much modern research focused on the intricacies of Pride Lion social behavior, the existence of the second type of lion has been overlooked. If the "lion's den" were not such a pervasive image, we might well have thought that George Bwere's observations of the Kyambura lion cave were an anomaly. But the many early references to these dens spurred us to look more carefully, with results that may shed light on many unsolved mysteries regarding lions. Daniel may well have been thrown into a lion's den in ancient Babylon. However, had he been a wild ox instead of a human, the lions might well have dismembered and devoured him. **TF**

Authors note:

We will continue to study differences in lion behavior with our international colleagues, and pursue leads on the occupation of additional caves by lions and hyenas. Because most reports of serious conflict between lions and humans, including preying upon humans, point to Buffalo Lions, we will focus on their behavior in order to answer what makes them more prone to aggression.

This article is dedicated to the late George Bwere — educator, protector of wildlife, discoverer of the first modern lion's den, and friend.

Copyright Tom Gnoske and Julian Kerbis Peterhans.



DAVID WILLARD



SARAH LANSING

Above left: Classic "Pride Lion" (*Panthera leo massaica/krugeri* — Neuman 1900/Roberts 1929) from the savannas of East and South Africa. Males vary in size between 36-38 inches at the shoulder and weigh 385-410 lbs.

Above right: Typical Buffalo Lion with single female. Males reach a shoulder height between 42-43 inches and weigh 460-520 lbs.

Left: Skulls of two mature male Sergenti lions. Left is a typical "Buffalo Lion" and Right is a classic "Pride Lion."

JOHN WEINSTEIN/294327C

BOAR'S TUSKS AND CASSOWARY TOES: THE VIDA CHENOWETH COLLECTION FROM HIGHLAND NEW GUINEA

Stephen E. Nash, Rob Welsch, Jon Rogers,
Nadia Kahn and Jack MacDonald,
Department of Anthropology

The Department of Anthropology curates one of the world's finest collections of material culture from Papua New Guinea. It contains tens of thousands of spears, arrows, masks, ritual paraphernalia, statues, paddles, canoes and other objects, a sample of which can be seen in the beautiful and permanent *Traveling the Pacific* and *Pacific Spirits* exhibits on the balcony level of the Museum. In December 1999, the Department of Anthropology made a significant addition to this collection by acquiring the Chenoweth Collection, an exquisite assemblage of nearly 600 artifacts from highland New Guinea. Assembled between 1959 and 1975 by ethnomusicologist Vida Chenoweth, the collection comes from the remote mountain community of Usarufa in the Eastern Highlands of Papua New Guinea and is now one of the best-documented ethnographic collections in the Museum.

Museum visitors often wonder how artifact collections are acquired. Are collections purchased? Are they donated? Do curators still conduct collecting trips? How does the Museum decide what to collect? Does the Museum ever reject donation offers and, if so, what criteria lead to rejection? The answers to these questions are surprisingly complex; if this were a multiple-choice examination, the answers would be "all and yet none of the above." We use the Chenoweth Collection as a case study to explore the complexity and wonder of Anthropology collections management.

The Department of Anthropology was formed in 1894 as one of the original academic departments at the Field Museum, along with botany, zoology, geology and mineralogy, the latter of which were ultimately combined. These departments were established to organize and manage the extensive collections that resulted from the World's Columbian Exposition held in Chicago in 1892-93.

Anthropological research in the Pacific Islands has a long history at The Field Museum although work in New Guinea essentially ceased between 1930 and about 1950 due to political unrest in the area. The Chenoweth Collection is particularly important because it constitutes one of the few well-documented collections of material culture to be acquired by any Museum from highland New Guinea in the past 50 years.

The Chenoweth Collection contains a stunning array of musical instruments, toys, tools, objects of personal adornment and ritual paraphernalia. These include 230 arrows, 32 whistling tops, 20 mouth harps,



Chenoweth Collection mask approximately 8 inches high.

11 flutes, two drums, 12 wooden bowls, 37 adzes, four bark beaters, 15 tusk ornaments, 26 needles, seven string bags and a host of other objects. More importantly, Chenoweth's detailed and painstaking notes, numbering more than 1,000 pages; a dozen albums containing hundreds of photographs; and sound recordings allow Museum researchers to know in detail who made the objects, where, when, why and how. In the absence of such documentation, the Chenoweth Collection holds only aesthetic value. With these data, the Chenoweth Collection will provide researchers with the information they need to truly understand these objects in their cultural context. By extension, they will allow us to better understand our existing and preeminent collection from New Guinea.

Chenoweth is a graduate of Northwestern University and spent a number of years in the Chicagoland area as a Professor of Ethnomusicology at Wheaton

Field Updates

College from 1975 until her retirement several years ago. An accomplished musician, Chenoweth was the first classical marimbist to appear as a guest soloist at Carnegie Hall, is a member of the Percussive Arts Society Hall of Fame and has appeared with symphony orchestras all over the world. A hand injury in the late 1950s precipitated a career change, and in 1959 Chenoweth joined the Summer Institute of Linguistics as a bible translator in highland New Guinea, where the Oklahoma native found the rain forest to be "as thick as broccoli!" With her colleague and fellow linguist Darlene Bee, Chenoweth lived with the Usarufa for many years between 1959 and 1975, and continued to visit her friends in New Guinea until just a few years ago. Bee died tragically in a plane crash several years ago, and it is believed that Chenoweth is the last fluent Anglo speaker of Usarufa in the world.

The remote Usarufa live in four small hamlets in the eastern highlands and constitute one of the smallest language groups in New Guinea, a linguistically complex island characterized by 1,000 languages, some of which contain differences as wide as those between Chinese, Bantu and English. The Usarufa first became aware of Western people in 1930 when government patrols and prospectors first explored the upper Ramu river area, but these patrols did not reach Usarufa until the late 1940s. When Chenoweth started working in New Guinea in 1959, very few outsiders had encountered the Usarufa, and few or none had any detailed knowledge of their customs, rituals, traditions, subsistence practices or social organization.

Recognizing the research potential of the Chenoweth Collection nearly a decade ago, Curator of Pacific Archaeology and Ethnology John Terrell and Adjunct Curator Rob Welsch began discussing the prospect of purchasing the collection. Because the Department of Anthropology has no dedicated acquisitions budget,

the project was on hold until Charles Benton became chair of the Museum's Cultural Collections Committee (CCC) several years ago. Field Museum President John McCarter generously offered half the purchase price of the Chenoweth Collection if CCC could raise the rest. In October 1999, CCC hosted a luau for more than 100 members of the Pacific Arts Association, with representatives of 16 countries, including Papua New Guinea and other Pacific Island nations, present. At the luau, the CCC announced that they had raised the necessary funds and that the Department of Anthropology could begin to make arrangements to transport the collection from Chenoweth's home in Enid, Oklahoma, to the Field Museum.

Just before Christmas 1999, Head of Anthropology Collections Steve Nash and Collections Manager Jon Rogers rented a truck and headed for Oklahoma. There they met Diane Harbison, a free-lance conservator from Oklahoma City, and spent four 10-hour days gently wrapping each object for transport.

In January 2000, Chenoweth was reunited with her collection in Chicago. For four days, she and Welsch catalogued the collection, after which Nadia Kahn and Jack MacDonald joined the research team to pack the collection in archive quality materials, and transcribe notes, climate-controlled storage locations.

The acquisitions process for the Chenoweth Collection stands as a classic example of efficient collaboration in anthropological and Museum practice. Chenoweth collaborated originally with the Usarufa and Darlene Bee in compiling the collection; Field Museum curators collaborated with Chenoweth to evaluate the research potential of the Collection; Museum administration and the Cultural Collections Committee collaborated to raise necessary funds; Anthropology collections staff collaborated with everyone; and volunteers, interns and free-lance conservators helped guarantee that the Collection received the careful attention it deserved.

The Chenoweth Collection also stands in testimony to ethical Museum collection acquisition practices. It complements nicely the Field Museum's existing collection from the Eastern Highlands of New Guinea, which previously consisted of material from only two other groups, the Tairora and Agarabi, which were visited by James B. Watson in the 1950s. In the face of increasing contact with people of other cultures, and the culture change that comes as a result, the Usarufa are losing some of their understanding of the form, function and meaning of these objects. Chenoweth once dreamed of creating a Museum specifically for the Usarufa near their homeland in New Guinea. In the absence of such a facility, the Department of Anthropology at The Field Museum is proud to provide a caring home for this unique collection and the intellectual legacy it represents. **ITF**



Dr. Chenoweth works with Taaqi Yaa.

Membership News

STAR WARS: THE MAGIC OF MYTH

Members will be among the first to welcome the exhibition *Star Wars: The Magic of Myth* to The Field Museum. The exhibition is a tribute to the power and timeless appeal of *Star Wars*, the ultimate space epic that explores the struggle between good and evil, and technology and humanity. *Star Wars: The Magic of Myth* showcases original artwork, props, models, costumes and characters used to create the *Star Wars* saga, and connects the films to elements of classical mythology. Visitors will see Princess Leia's gown, the droids C-3PO and R2-D2, Chewbacca and other artifacts from these classic films.

Member Passes for *Star Wars: The Magic of Myth*

Field Museum members are eligible to receive up to four free member passes to see the *Star Wars: The Magic of Myth* exhibition which is on display from July 15, 2000 through January 7, 2001. Family members can receive four passes; Senior, Student, Individual and National Affiliate Members can receive two passes. Passes are coded for timed entry every half hour.

Passes are available by calling Ticketmaster at 312.902.1500 (a discounted service charge and transaction fee will be assessed). Members may be able to obtain passes for same day viewing if available at the Museum. No service charge will be incurred. For more information, please call 312.665.7700.

Please remember that Member passes are in addition to those you may have already received and used for the Viewing days on July 13, 14, 21 and 23. For more information, please call 312.665.7700. **ITF**



ERIC LONG AND MARK AVIHO STAR WARS: THE MAGIC OF MYTH, © 1997 LUCASFILM LTD.

The original costumes for Han Solo and the character Chewbacca the Wookiee.

Star Wars: The Magic of Myth was developed by the Smithsonian's National Air and Space Museum. The exhibition was organized for travel by the Smithsonian Institution Traveling Exhibition Service. All of the artifacts in this exhibition are on loan from the archives of LucasFilm Ltd.

RECORD BREAKING MEMBERS' NIGHTS 2000

The Field Museum boasts the largest Members' Nights attendance in recent history. More than 21,000 members, and their families and friends, came out for the Museum's unique behind-the-scenes event that highlights the institution's research activities. Highlights of the event were "Sue," standing in her full glory in Stanley Field Hall, and a slide lecture about how she was mounted. As in years past, much of the focus was on the third floor where curators and researchers were available to talk with members about their latest projects. Attendance this year broke all recent records, due to the tremendous increase in Museum members. In future years, the Museum will consider adding more days to preserve the character of this wonderful event. **ITF**



KIMBERLY MAZANEK/GN8976416C

"Behind-the-scene" at Field Museum Members' Nights.

Your Guide to The Field

Inside

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- 3 Calendar of Events
- 5 Get Smart
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Yoda, a wise, long-lived Jedi Master, has trained Jedi Knights in the ways of the force.

STAR WARS: THE MAGIC OF MYTH

Star Wars: The Magic of Myth, one of the most visited Smithsonian exhibitions of all time will be on view at The Field Museum from July 15, 2000 to January 7, 2001. Developed by the Smithsonian Institution in cooperation with LucasFilm Ltd, this exhibition showcases more than 250 original artworks, props, models, costumes, and characters used to create the four *Star Wars* films. The exhibition opens a window onto the creative process of filmmaking by giving Field Museum visitors a chance to examine more than 75 original artworks, including concept drawings and paintings, as well as storyboards with production notes. These works highlight changes in the *Star Wars* personalities and places as they evolved from early ideas to their final realization on the screen.

George Lucas explained, "Filmmaking is a collaborative effort, and the creation of the artwork, costumes and creatures play a major role in my movies. I'm thrilled that the public now has the opportunity to examine their artistry in a museum setting. And, I hope the exhibit will inspire young people who are interested in art, science and computer technology to use their skills and imagination to create new worlds and pursue their dreams."

Upon entering the gallery, visitors will see objects from *Star Wars: A New Hope* (1977), including an 11-foot production model of the Imperial Star Destroyer and the white gown worn by Princess Leia, the droids C-3PO and R2-D2, Chewbacca the Wookiee, a Stormtrooper, a Jawa and a Tusken Raider. Artifacts from *The Empire Strikes Back* (1980) include the Jedi Master Yoda and costumes such as Luke Skywalker's ice planet Hoth gear. This section also includes an Imperial AT-AT Walker and Rebel Snowspeeder, which are examples of the props and production models used in the making of the film, as well as the Wampa Ice Creature costume developed for the Special Edition *The Empire Strikes Back* (1997).



C-3PO and R2-D2.

From *Return of The Jedi* (1983) visitors will find Jabba the Hutt, bounty hunter Boba Fett, skiff guard Weequay, Salacious B. Crumb and Han Solo frozen in carbonite. This section of the exhibition features Darth Vader and Luke Skywalker's Jedi costume—each with their lightsaber weapons—as well as photo murals of the Emperor Palpatine's throne room and the Death Star.

The exhibition ends with *Star Wars: Episode I—The Phantom Menace* (1999). Artifacts featured focus on Anakin Skywalker (the future Darth Vader), and include Anakin's slave costume and a detailed model of his pod racer. Also featured is concept artwork for Tatooine and the Mos Espa Pod Race Arena.

Visitors can view a short documentary film, which examines the influences of popular culture, folklore and myth on the development of the *Star Wars* films. The film includes interviews with George Lucas, and actors Harrison Ford, Carrie Fisher and Mark Hamill, as well as sound effects director Ben Burtt, composer John Williams and others. Visitors may purchase an audio tour, narrated by James Earl Jones, which contains interviews and sound effects, and was created especially for the exhibition by Antenna Audio.

Star Wars: The Magic of Myth, was developed by the Smithsonian's National Air and Space Museum. The exhibition was organized for travel by the Smithsonian Institution Traveling Exhibition Service. All of the artifacts in this exhibition are on loan from the archives of Lucasfilm, Ltd.

CHICAGO'S OLDEST DEBUTANTE REIGNS SUPREME

With fanfare surpassing that of the most elite Chicago debutante, Sue now reigns in the Field Museum's Stanley Field Hall where she greets visitors with a menacing grin. Weighing in at nearly 1 ton (7 tons if she were living), Sue is 42 feet in length with her skull just shy of 5 feet in length. She is the single largest, most complete and best-preserved *T. rex* fossil ever unearthed.

Unlike many museums, which display cast replicas of dinosaur skeletons, The Field Museum has strengthened its commitment to authenticity. The bones on display are the real thing—not a plastic model or composite of bones from different specimens.

Each of Sue's fossilized bones is cradled in a hand-forged iron bracket on which the bones rest, similar to a diamond in the setting of a ring. However, these brackets are hinged and locked, allowing scientists to remove the bones for research. The number of bones that show pathologies intrigues scientists; there are holes, scars, calluses and two misshapen teeth. Paleontologist Chris Brochu, a research associate at The Field Museum and lead researcher on Sue,



An up-close look at Sue's massive head.

believes Sue's wounds were probably caused by infections and are not battle scars.

One of the few pieces of Sue that will not be mounted with the rest of her skeleton is her massive skull, which is too heavy to be placed on the steel armature that supports Sue's skeleton. The Museum installed a cast replica of the skull on the skeleton and displays the real skull on the second floor balcony overlooking Stanley Field Hall. Here you can get an up-close and personal view of the most-feared predator's massive head. In addition, visitors can view animated CT scans of the skull and touch a variety of

casts of Sue's bones, including a rib, forelimb and 12-inch-long tooth.

Check the 'Calendar of Events Section' to see the ongoing fun and educational events surrounding Sue or visit the Museum's web page at www.fieldmuseum.org/Sue/.

Sue At The Field Museum, which is free with general Museum admission, is made possible by McDonald's Corporation. A major sponsor of Sue is Walt Disney World Resort. The Elizabeth Morse Charitable Trust is another generous sponsor of this exhibition.

TOYS TO MASTERPIECES: 'THE PICTURING T-REX' COLLECTION



John Lanzendorf with his first *T. rex* from The Field Museum.

As a student during the late 1950s, Chicago resident John Lanzendorf visited The Field Museum to view the dinosaur exhibits. During this trip he purchased a small brass *T. rex* figurine from the Museum's store. It was the first dinosaur sculpture he purchased and the beginning of a collection that would grow to more than 70 original paintings, drawings, sculptures and toys—all depicting *Tyrannosaurus rex*, the largest carnivore to walk the earth.

Lanzendorf's lifelong fascination with dinosaurs has led him to build one of the most comprehensive private collections of dinosaur art in the world. *Picturing T. rex: Selections from the Lanzendorf Collection* will be on display until November 12, 2000. The exhibition is free with regular Museum admission.

Some objects in the collection reflect the changing theories about *T. rex* anatomy and behavior, including a pair of 200-pound bronze sculptures—one depicting an early consensus of how the dinosaur might have

looked (upright and lumbering) and another depicting the current scientific view (a much more agile animal). Other objects come from artists involved with film productions featuring *T. rex* in a starring role. *Jurassic Park's T. rex*, made by Michael Tric for Stan Winston Studios, is one of several bronze maquettes created for the first *Jurassic Park* movie. On the more whimsical side of the collection is the *T. rex* toy display, which includes the humorous *T. rex* "Santa Claws."

When you come to the Museum to meet Sue, don't forget to visit the fascinating array of *T. rex* images from Lanzendorf's extensive private collection.

The Field Museum wishes to thank John Lanzendorf for the generous loan of works from his collection.

Correction: The Field Museum incorrectly credited the photo of John Lanzendorf in the May/June issue. The correct credit is Barbara Brenner 1999. We regret the error.

Calendar of Events



THE FIELD MUSEUM

Storytime: Facts, Fables and Fiction lets children explore, relax and learn.



THE FIELD MUSEUM

The Two of Us family program provides hands-on activities.

Adult Course: Field Ecology: Summer

7/6, 7/9, 7/16 & 7/23 (see times below)

Join Naturalist Tom Hintz as you investigate the many arenas in which populations interact with each other. The questions of competition and altruism will be addressed for inter- and intra-population levels. Look at some basic equations used to determine the fitness of populations, including the effects of genetics on individuals and populations. Be prepared to be outdoors most of the time. The recommended text, *Ecology and Field Biology* by R. L. Smith, will be for sale the first class session. Naturalist Certificate Requirement, both tracks. Meets at The Field Museum: **Thursday, July 6; 6 – 9 p.m.** Meets at the Site: **Sundays, July 9, 16, and 23; 9 a.m. – Noon (4 sessions) \$125; Members \$105** Call 312.665.7400 for more information or to register.

Family Evening: Behind the Scenes with John Lanzendorf

Selections From Your Collections
7/7, Friday, 6 – 8 p.m.

Whether it is matchbooks, monster trucks or paper dolls, everyone has some type of collection. Collecting objects that interest us helps to define who we are. John Lanzendorf, owner of many amazing dinosaurs, 72 of which comprise the temporary exhibition *Picturing T. rex*, will share how and why he began his now enormous collection of dinosaur images. Participants are invited to bring along important or special selections from their collections at home to share. For families with children in grades 1 and up. \$12 (\$10 per member participant). Please call 312.665.7400 for more information or to register.

Family Program: Scientist on The Floor

7/13, Thursday, 11 a.m. – 2 p.m.

Extend your *Underground Adventure* deeper into the earth by discussing with a U.S. Department of Agriculture soil scientist the processes of soil formation. Learn how soil in Illinois is different from various soils throughout the world! Free with Museum admission. For more information call 312.665.7400.

Family Program: The Two of Us

7/18 & 7/25, Tuesdays, 1:30 – 3 p.m.

Preschoolers (ages 3 – 5) and their adult companions are invited to join our instructor for a 2-week mini-course exploring birds and their habitats. Using galleries and in-class activities, and going behind the scenes to meet with our scientists, this program

will include fun facts, stories, songs and a snack. We will also use many hands-on materials and make an art project to take home. Learning experiences include feeling the difference in bone weight between flying and non-flying birds, studying some unusual nests and much, much more. Cost is \$24 per child; \$20 per member child. For each child, one adult attends at no charge. Call 312.665.7400 for more information or to register.

**Adult Course:
A Focus on Composites**

7/29 & 7/30, 9 a.m. – Noon

Learn how to identify sunflowers, asters, goldenrods and many other groups of our native composite flora in a workshop with Field Museum Instructor Rich Hyerczyk. Naturalist Certificate Enrichment. Meets at the Site. \$65 (\$55 members.) Call 312.665.7400 for more information or to register.

**Adult Course:
Introduction to Natural
Areas Management**

8/3, 8/5, 8/6, 8/19 (see times below)

Today's prairies, savannas, woodlands and wetlands are disturbed, fragmented and isolated. The role of the land manager is to return them to biologically diverse and healthy natural ecosystems. Take a trip with Jim Anderson, Natural Resource Manager at Lake County Forest Preserve District, for a visit to a variety of natural areas to meet with local professionals and learn about the issues and techniques of managing natural areas. Naturalist Certificate Requirement, Natural Areas track. Meets at The Field Museum: Thursday, August 3; 6 – 9 p.m. Meets at the Site: Saturday, August 5; 9 a.m. – Noon. Sunday, August 6; 1 – 4 p.m. Saturday, August 19; 9 a.m. – Noon. \$125 (\$105 members.) Call 312.665.7400 for more information or to register.

**Family Program:
Story Time: Facts, Fables and Fiction**

Daily at 1 p.m.

Learn new songs and stories and have fun creating artwork—all in a 20-minute program in *Living Together*. In July and August, hear stories about dinosaurs,

life in the woods, animal camouflage, *Underground Adventure*, animals in winter and outer space adventures. Design your own special *T. rex*, forest habitat, underground environment, winter wonderland or space ship. This program, designed especially for young children and their families, offers an opportunity to relax and learn. The songs are fun to learn and easily could become family favorites. This program is sponsored by The Siragusa Foundation Early Childhood Initiative. One adult for every three children, please. For more information call 312.665.7400.

Pawnee Earth Lodge

Weekday: Programs at 11 a.m., 11:30 a.m., 1 p.m. & 1:30 p.m.

Weekends: Open House 10 a.m. – 4:30 p.m.

Visitors can experience a way of life as the Pawnee Indians lived more than a century ago out on the Great Plains. In this hands-on exhibit, people are invited to sit on buffalo hides around the cooking fire and try to use buffalo horn spoons. Then they

can examine tools and toys made of buffalo as they listen to stories of what it was like to go on a buffalo hunt. Free with Museum admission. Call 312.665.7400 for more information.

**Citywide program spotlights "Sue"
Tyrannosaurus reads at Chicago
Public Library**

Continuing through August 5

All children and teens, ages 5-14, are invited to celebrate the arrival of Sue, the largest and most complete *T. rex* ever found, by participating in the Chicago Public Library's 2000 Summer Reading Program, Tyrannosaurus Reads. All 78 libraries will highlight specially chosen books about dinosaurs. Neighborhood branch libraries will host programs throughout the summer including storytellers, interactive dinosaur programs by Timestep Players, Jabberwocky Marionettes and Green Light Performing Company. It's fun and it's free! Call 312.747.4780.



Interior of the Pawnee Earth Lodge.



ERIC LONG AND MARK AVINO STAR WARS: THE MAGIC OF MYTH. © 1997 LUCASFILM LTD.

STAR WARS: THE MAGIC OF MYTH

July 15 – 18, Daily at 1 p.m.

Preschoolers Alert!

Story Time: Facts, Fables and Fiction
Imagine what it's like to travel through space! Join us in *Living Together* during the opening week of *Star Wars: The Magic of Myth* for special readings of *I Want to Be An Astronaut*, a story in words and pictures about what it might be like to go on a real space mission. Then create your own spaceship to take home—all in this 20-minute program sponsored by The Siragusa Foundation Early Childhood Initiative. One adult for every three children, please. Free with Museum admission. Call 312.665.7400 for more information.

Left: Han Solo's Millennium Falcon in front of the Death Star. Constant modifications turned this old battered looking spacecraft into a ship capable of going up against the Empire's most fearsome weapons.

Dancing with Dinosaurs: The Story of Sue

Mondays – Fridays, July 5 – August 5
11:30 a.m. & 1:30 p.m.

The Field Museum and Music Theatre Workshop present the Teens Together Ensemble in *Dancing with Dinosaurs: The Story of Sue*, a 30-minute musical featuring two colossal puppets created especially for The Field Museum. *Dancing with Dinosaurs* presents the story of Sue through the eyes of a multi-generational, diverse group of people who have traveled to the museum specifically to see Sue the *T. rex*. Before they can meet Sue, they are approached by a Troodon dinosaur that claims to be a smarter, more interesting dinosaur. He offers to take the group through the exhibit hall to a place where they can hear the story of Sue. Anticipating this vision, the characters learn about the evolution of dinosaurs as they sing and dance out their own dreams. Both adults and children will be charmed by this unique, tuneful journey. Free with Museum admission. Call 312.665.7400 for more information.

Dancing with Dinosaurs: The Story of Sue is generously sponsored by ComEd and LaSalle Bank.

Fun On the Floor: Family Hall Activities

From July 15. Schedule varies; please call 312.665.7400 for updates

See a *T. rex* run and make the X-wing starfighter fly with your own filmmaking flip book, or test your *Star Wars* trivia knowledge with a special Field Museum quiz! What do museums and films have in common? They both take us on journeys of the imagination—whether to a fictional galaxy far, far away, or to the very real Earth of millions of years ago. Join us this summer for family hall activities exploring the connections between the art of *Star Wars* and the science all around you in The Field Museum.

Top right: Family activities include crafts that spark children's creativity.

Bottom right: Dancing with Dinosaurs, The Story of Sue.



JOHN WEINSTEIN/GN89736 35C



JOHN WEINSTEIN/GN89739 16AC

FIELD NIGHTS: SUMMER CELEBRATION AT THE FIELD MUSEUM

July 6 – August 17, Every Thursday, 5:30 p.m. – 9 p.m.

As part of Chicago's Downtown Thursday Nights program, The Field Museum continues to bring together great music, spectacular views, food and drink, and a *T. rex* named Sue for Field Nights.

The outdoor celebration takes place on the northwest terrace, where visitors are treated to a stunning view of downtown Chicago at sunset. There they can dance to the rhythm of a different world music band each Thursday. Throughout the summer, Field Nights acts scheduled to appear include the return of the popular interdisciplinary performance group MASS Ensemble, and world music artists Funkadesi.

Field Nights visitors are also invited to venture inside the Museum where they can explore the exhibitions after hours and come snout to snout with Sue, the largest and most complete *T. rex* ever found. And to commence each evening, everyone is encouraged to join in a group-drumming circle at sunset, led weekly by Chicago's own Rhythm Revolution (percussion instruments provided). Food and drink are available for purchase throughout the evening. Admission is \$12 for Members and Non-members.



MASS Ensemble.

THE FIELD MUSEUM

EGYPT IN CHICAGO: FESTIVAL OF THE SUN SUMMER 2000

Music and Drama in Ancient Egypt
July 20, 6:30 – 8:30 p.m., for all ages

Egypt in Chicago: Festival of the Sun Summer 2000 is a magnificent citywide collaboration of Chicago arts and cultural institutions sponsoring exhibitions, lectures and workshops with a focus on ancient Egypt during the Summer of 2000. The Field Museum is participating in the collaboration by spotlighting *Inside Ancient Egypt* the Museum's extraordinary permanent exhibition and by hosting a **Music and Drama in Ancient Egypt** multi-media discussion led by composer Douglas Irvine. Irvine will speak about music and drama at the time of Akhnaten's reign and what distinguishes this period when arts flourished in ancient Egypt. For tickets and information call 312.665.7400.

Other *Egypt In Chicago: Festival of the Sun Summer 2000* participating organizations include the Chicago Opera Theater, the Art Institute of Chicago, University of Chicago Graham School of General Studies, the Oriental Institute Museum, The Museum of Science and Industry, the Chicago Department of Cultural Affairs and the Chicago Park District's Gallery 37 Neighborhoods Program.

Right: This elaborately painted and gilded cartonnage mask made of linen and coated with plaster was placed over a mummified child.



RON TESTA AND D. A. WHITE/AT 10661C

Free Visitor Programs



Dancing with Dinosaurs: The Story of Sue.

Daily

Preschoolers Alert!

1 p.m. **Story Time: Facts, Fables and Fiction.** Learn new songs and stories and have fun creating artwork—all in a 20-minute program sponsored by The Siragusa Foundation Early Childhood Initiative—in *Living Together*. See “Calendar of Events” page for a more complete description.

Interpretive Station activities: Drop by hands-on stations located throughout the Museum (check informational directories for daily listing) and delve into the fascinating world of natural history.

Weekends & Mondays

Through the end of August*

Noon - 5 p.m. **Meet John Lanzendorf.** Mr. Lanzendorf will be in the gallery to meet visitors and speak with them informally about the temporary exhibition, *Picturing T. rex: Selections from the Lanzendorf Collection*. Visitors are encouraged to bring in pieces from their own dinosaur collections.

*Schedule dependent on Mr. Lanzendorf's availability. Please call ahead to The Field Museum Education Department at 312.665.7550 for a complete listing of dates. See the “Calendar of Events” page for more information on the *Behind the Scenes evening with Mr. Lanzendorf*.

July 1—Saturday

11:30 a.m. & 1:30 p.m. Performance: **Dancing with Dinosaurs: The Story of Sue.** The Field Museum and Music Theatre Workshop present the Teens Together Ensemble in a 30-minute musical about

Sue, the largest, most complete and best preserved *T. rex* ever found. See the “Get Smart” page for a more complete description. Call 312.665.7400 for specific times.

July 2—Sunday

11:30 a.m. & 1:30 p.m. Performance: **Dancing with Dinosaurs: The Story of Sue.** See July 1.

July 5—Wednesday

11:30 a.m. & 1:30 p.m. Performance: **Dancing with Dinosaurs: The Story of Sue.** See July 1.

1 p.m. **Tour: Ancient Egypt Hall.** Tour 4,000 years of ancient Egyptian history, from a predynastic burial site to the Egypt of the Greek and Roman conquest.

July 6—Thursday

11:30 a.m. & 1:30 p.m. Performance: **Dancing with Dinosaurs: The Story of Sue.** See July 1.

July 7—Friday

11:30 a.m. & 1:30 p.m. Performance: **Dancing with Dinosaurs: The Story of Sue.** See July 1.

July 10—Monday

11:30 a.m. & 1:30 p.m. Performance: **Dancing with Dinosaurs: The Story of Sue.** See July 1.

July 11—Tuesday

11:30 a.m. & 1:30 p.m. Performance: **Dancing with Dinosaurs: The Story of Sue.** See July 1.

July 12—Wednesday

11:30 a.m. & 1:30 p.m. Performance: **Dancing with Dinosaurs: The Story of Sue.** See July 1.

1 p.m. **Tour: Ancient Egypt Hall.** See July 5.

July 13—Thursday

11 a.m.-2 p.m. **Scientists on the Floor.** Join scientists from the U.S. Department of Agriculture as they discuss how they help educate the community to conserve the soil—one of our most valuable resources. Visitors will also learn about soil science and about careers related to agriculture.

11:30 a.m. & 1:30 p.m. Performance: **Dancing with Dinosaurs: The Story of Sue.** See July 1.

July 14—Friday

11:30 a.m. & 1:30 p.m. Performance: **Dancing with Dinosaurs: The Story of Sue.** See July 1.

July 17—Monday

11:30 a.m. & 1:30 p.m. Performance: **Dancing with Dinosaurs: The Story of Sue.** See July 1.

July 18—Tuesday

11:30 a.m. & 1:30 p.m. Performance: **Dancing with Dinosaurs: The Story of Sue.** See July 1.

July 19—Wednesday

11:30 a.m. & 1:30 p.m. Performance: **Dancing with Dinosaurs: The Story of Sue.** See July 1.

1 p.m. **Tour: Ancient Egypt Hall.** See July 5.

July 20—Thursday

11:30 a.m. & 1:30 p.m. Performance: **Dancing with Dinosaurs: The Story of Sue.** See July 1.

11 a.m. - 2 p.m. **Scientists on the Floor.** See July 13.

Daily Highlight Tours

Take a guided tour of the exhibits that make this Museum one of the world's finest and learn about the history of these displays. Tours are offered Monday through Friday at 11 a.m. and 2 p.m. Check the informational directories for weekend tours.

Due to an editorial change of *In The Field*, we apologize for the late publication of dates, feel free to call 312.665.7400 for program updates.

July 21—Friday

11:30 a.m. & 1:30 p.m Performance:
Dancing with Dinosaurs: The Story of Sue. See July 1.

July 24—Monday

11:30 a.m. & 1:30 p.m Performance:
Dancing with Dinosaurs: The Story of Sue. See July 1.

July 25—Tuesday

11:30 a.m. & 1:30 p.m Performance:
Dancing with Dinosaurs: The Story of Sue. See July 1.

July 26—Wednesday

11:30 a.m. & 1:30 p.m Performance:
Dancing with Dinosaurs: The Story of Sue. See July 1.

1:00 p.m. Tour: **Ancient Egypt Hall.**
 See July 5.

July 27—Thursday

11:30 a.m. & 1:30 p.m Performance:
Dancing with Dinosaurs: The Story of Sue. See July 1.

July 28—Friday

11:30 a.m. & 1:30 p.m Performance:
Dancing with Dinosaurs: The Story of Sue. See July 1.

Please Excuse Our Renovations

We are on the move! As you make your plans for visiting the Museum over the 2000-2001 school year, you will need to be aware of the temporary closings and reorganization of some of the exhibition halls and resource centers. The Webber Resource Center and The Webber Gallery are closed for renovations and will reopen September 2, 2000 in Hall M-8E. Portions of our North American ethnographic collection, are currently off display. Artifacts from the Native American cultures of the South, Southwest, Plains and Great Lakes regions will be available for viewing in Hall M-8E beginning September 2, 2000. Our North American archaeology collections, including the Hopewell materials, will also be unavailable to the public. The reinstatement of these collections will occur in stages beginning in late Winter 2000.

July 31—Monday

11:30 a.m. & 1:30 p.m Performance:
Dancing with Dinosaurs: The Story of Sue. See July 1.

August 1—Tuesday

11:30 a.m. & 1:30 p.m Performance:
Dancing with Dinosaurs: The Story of Sue. See July 1.

August 2—Wednesday

11:30 a.m. & 1:30 p.m Performance:
Dancing with Dinosaurs: The Story of Sue. See July 1.

1 p.m. Tour: **Ancient Egypt Hall.** See July 5.

August 3—Thursday

11:30 a.m. & 1:30 p.m Performance:
Dancing with Dinosaurs: The Story of Sue. See July 1.

August 4—Friday

11:30 a.m. & 1:30 p.m Performance:
Dancing with Dinosaurs: The Story of Sue. See July 1.

August 9—Wednesday

1 p.m. Tour: **Ancient Egypt Hall.** See July 5.

August 10—Thursday

11 a.m. – 2 p.m. **Scientists on the Floor.**
 See July 13.

August 12—Saturday

1:30 p.m. **Tibet Today and a Faith in Exile.**
 View a slide presentation that takes you to places now open to tourists in Tibet, and refugee sites around the world.

August 16—Wednesday

1 p.m. Tour: **Ancient Egypt Hall.** See July 5.

August 17—Thursday

11 a.m. – 2 p.m. **Scientists on the Floor.**
 See July 13.

August 23—Wednesday

1 p.m. Tour: **Ancient Egypt Hall.** See July 5.

August 24—Thursday

11 a.m. – 2 p.m. **Scientists on the Floor.**
 See July 13.

August 30—Wednesday

1 p.m. Tour: **Ancient Egypt Hall.** See July 5.

Resource Centers

Explore topics in more depth through a variety of resources, including computer programs, books, activity boxes and much more at the Africa Resource Center and the Daniel F. & Ada L. Rice Wildlife Research Station. Open daily from 10 a.m. to 4:30 p.m.

Pawnee Earth Lodge

Visit a traditional home of the Pawnee Indians and learn about their life on the Great Plains. See "Calendar of Events" page for a more complete description.

Ruatepupuke:**The Maori Meeting House**

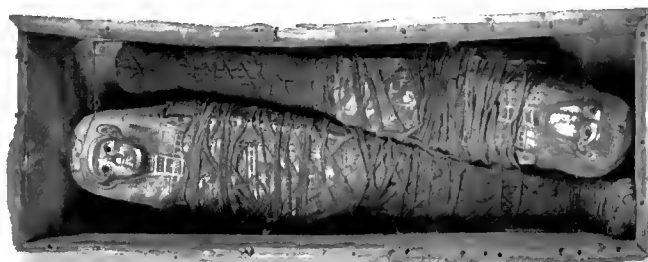
Discover the world of the Maori people of New Zealand at the treasured and sacred Maori Meeting House. Open daily from 9 a.m. to 5 p.m.

McDonald's Fossil**Preparation Laboratory**

Watch Field Museum preparators work on Sue, the largest and most complete *T. rex* ever found. Open daily from 9 a.m. to 5 p.m.

Daily Highlight Tours

Visit the exhibits that make this museum one of the world's finest and hear the stories behind these displays. Tours are offered Monday through Friday at 11 a.m. and 2 p.m. Check the informational directories for weekend tours.



THE FIELD MUSEUM/110660

The Demotic description on the coffin of these two mummies reads "Children of Myron," indicating they were quite young when they died and were probably related.

Please note that programs are subject to change. Check the informational directories located throughout the Museum for daily program listings.

Field Updates

SUE'S DEBUT 2000





JOHN WEINSTEING89738 35C



JOHN WEINSTEING89686 06AC



JOHN WEINSTEING89708 30C



JOHN WEINSTEING89752 02AC

1 Sue displays her splendor as visitors look on in awe.

2 More primping and priming before her big night.

3 Banner announcing Sue's arrival.

4 Face painting at Sue Family Night.

5 Sue Hendrickson signs autographs.

6 Local and national media broadcast Sue's debut.

7 The President of the United States, Bill Clinton, and six U.S. senators visit to see Sue. (Left to right, front row) Senator Tom Harkin (D-IA), Senator Carl Levin (D-MI), Senator Evan Bayh (D-IN), Senator Robert Torricelli (D-NJ), John McCarter, Sue Hendrickson, President Bill Clinton, and Senator Richard Durbin (D-IL). Not pictured but present: Senator Tom Daschle (D-SD)

8 Busiest day at Sue exhibit.

9 Children hold a Dinosaur Party banner in celebration of the exhibit's opening.



JOHN WEINSTEING89737 22AC



THE FIELD MUSEUM/CSA33663A

FROM THE PHOTO ARCHIVES

In its annual report to the Board of Trustees in 1909, The Field Museum announced that Assistant Curator S.C. Simms secured the notes and materials the late anthropologist William Jones collected during his expedition to the Philippines. Out of respect, Simms erected a monument to mark Jones' burial place in Echague (above). Jones was murdered, for reasons that may never be known, by a group of men from the Ilongot tribe on the island of Luzon.

While the inscription may be viewed as a snapshot of western attitudes during his era, Jones' diary and letters depict in vivid detail the daily lives of the people with whom he lived for more than a year, the incredible biodiversity of the Philippines and the risks and rewards of scientific exploration.

Jones' passion for anthropology was born during his childhood on the Great Plains of the United States, where his Fox Indian grandmother, Katiqua, told him of the legends and customs of

her people. Jones entered Harvard in 1896 and studied under the famous anthropologist F.W. Putnam and later under Franz Boas at Columbia, where he became the first Native American PhD in Anthropology.

With no positions available to study Native American ethnology at the Field Museum, Jones agreed to come to Chicago in 1907 to begin preparations for an expedition to the Philippines. Landing at Manila in 1907, Jones sailed to the northern part of the island to the mouth of the Cagayan River that would take him into the heart of the Ilongot territories. His diary describes the difficulties in moving his growing collections back toward Manila so that they could be shipped back to Chicago. The river was the only avenue available through most of the rough country, and warring among the various groups in the region impeded travels. Furthermore, moving his ethnological freight required that his hosts supply him with the bamboo poles to construct balsas, or rafts. Frequent delays in complying with his request led to an increasing number of heated exchanges between Jones and some Ilongot men.

A disparity exists over the precise date, but one afternoon in March or April 1909, Jones' party came to a remote beach near some rapids on the Cagayan to await the arrival of more rafts. As they talked and ate along the shore, one of the Ilongot men tapped Jones on the shoulder and said, "We shall bring more balsas tomorrow." At that same moment, the man struck at Jones with a large knife, catching him on the forehead. Twenty men quickly descended upon him, and he was speared beneath his heart. Two of Jones' servants, who described the incident later, came to his rescue and managed to fight off the attack long enough to jump into a boat that was whisked away to safety by the rapids. Jones died hours later, still lying in the boat. In one of his last letters, he wrote: "I was born out of doors, now it looks as if I shall keep on under the open sky, and at the end, lie down out of doors, which of course, is as it should be." **ITF**

Field Tidbits

ASK A SCIENTIST

Do you have a question for one of our scientists? If so, please send it to the Publications Department, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605, or via e-mail to shines@fmnh.org. Only questions published in the magazine will be answered. An archive of questions and answers that have appeared in past issues can be found at www.fieldmuseum.org/askascientist.htm.

Where would you most likely find dinosaur footprints?

If the right types of rocks are present, dinosaur footprints can be found almost anywhere. The right types of rocks include those that

are sedimentary in origin, come from continental (not marine) environments, and are from the Mesozoic Era (the time when dinosaurs lived, 250 to 65 million years ago). Specifically, tracks are usually preserved in areas where the water table was at or near the surface when the tracks were made. Your best chances of finding dinosaur tracks are in areas where significant erosion or mining activities have exposed large portions of these rocks.

Darin A. Croft
Program Developer and
Post-Doctoral Research Associate
Department of Geology and
Department of Education



Dinosaur footprints, one of the few clues that mark their existence.

CHRIS BROCHU

WOMEN'S BOARD LUNCHEON DONATES \$40,000 TO JASON PROJECT

Reaching for the Limits was the theme of the 2000 Outreach Luncheon held by the Women's Board of the Field Museum. More than 500 guests attended the luncheon and lecture with Dr. Robert Ballard, deep-sea explorer and Titanic discoverer. The \$40,000 raised from the event was donated to Ballard's educational "outreach," The Jason Project, at The Field Museum.

The Jason Project, created by Ballard, is designed to excite and involve middle-school students (fifth through eighth grades) in science and technology and promises to spark the imagination of students and change the way teachers are teaching. The Field Museum participated in the Jason Project and has brought this award-winning program to more than 12,000 Chicago public school students as well as five YMCA youth centers.

Student and teachers gathered at the Field Museum for live, on location, satellite broadcasts with Ballard and a team of researchers at NASA's International Space station and NOAA's Aquarius Underwater Laboratory. During the telecasts students interacted with the research teams.

Reaching for the Limits is the second in an ongoing Outreach Program sponsored by the Women's Board. The Board is comprised of 300 of Chicago's most

civic-minded citizens with a shared interest in promoting awareness of The Field Museum's collections, research and public programs. The Women's Board thanks Merrill Lynch for their generous sponsorship of the entire luncheon. **ITF**



Dr. Robert Ballard (center) and Chicago Public School students who participated in the Jason Project.

MARK WIDHALM/85634.2AC

Field Museum Tours at a Glance

Light of Southern Africa: Botswana and Zimbabwe

October 6 – 19

Duration: 14 days

Museum Leader: Zoologist

David Willard

Price: \$8,535, including airfare
from Chicago

Egypt Revisited

October 15 – 29

Duration: 15 days

Museum Leader: Egyptologist

Frank Yurco

Price: Approximately \$4,895,
including airfare from Chicago

The Natural and Cultural History of Tsavo: A Tented Safari Through the Land of the Man-eaters

March 3 – 17, 2001

Duration: 15 days

Museum Leaders: Zoologist

Bruce Patterson, archaeologists

Chap and Sibel Kusimba, and

ecologist Barbara Harney

Price: \$7,345, not including airfare
from Chicago.



JOHN WEINSTEIN/Z9839Z9C

Three outstanding African safaris are scheduled. In October, explore southern Africa and the vast wilderness of the Okavango Delta, Hwange National Park and Victoria Falls. In February 2001 tour Tanzania's national parks — timed to witness the unforgettable wildebeest migration. In March 2001, join four Field Museum scientists for a tented safari focusing on Kenya's Tsavo National Park, home of the legendary man-eating lion.

Special Note: These tours are still available for the Galapagos Islands Adventure, the Galapagos Stotz and our August tour of the Ancient Wonders of Peru led by Jonathan Haas. Call FM Tours for the latest information.

For more information or free brochures, please call Field Museum Tours at 800.811.7244, or send them an e-mail at fmtours@sover.net. Please note that rates, prices and itineraries are subject to change and that prices are per person, double occupancy.



DAVE BLANTON

In early February 2001, sail on a 16-day odyssey with Field Museum botanist William Burger that encompasses five Central American countries and two oceans, aboard the 138-passenger yacht, *Wind Song*. Or, in late February 2001, travel exclusively on land and explore Costa Rica's jungle river channels of Tortuguero, Poas Volcano, cloud forests of Monte Verde, and Palo Verde's wildlife areas on the Pacific.

Amazon by Riverboat

December 9 – 17

Duration: 9 days

Museum Leader: Botanist

William Burger

Price: \$3,598, including airfare
from Chicago

Classic Tanzania Safari: Wildebeest Migration

January 22 – February 4, 2001

Duration: 14 days

Museum Leaders: Zoologists William

Stanley and Mary Ann Rogers

Price: \$7,940, including airfare
from Chicago

Egyptian Odyssey

January 21 – February 4, 2001

Duration: 15 days

Museum Leaders: Frank Yurco,

Egyptologist and Research

Associate at The Field Museum

Price: \$5,550, including airfare
from Chicago

Central America Under Sail

February 10 – 25, 2001

Duration: 16 days

Museum Leader: Botanist

William Burger

Price: Starts at \$7,990, not
including airfare

Baja: Among the Great Whales

March 9 – 17, 2001

Duration: 9 days

Museum Leader: Zoologist

Janet Voight

Price: Starts at \$2,990,
not including airfare

Costa Rica Adventure

February 25 – March 6, 2001

Duration: 10 days

Museum Leader: Botanist

William Burger

Price: \$3,995, including airfare
from Chicago



TODD NIELSEN

Unravel the mysterious world of the Egyptians with Field Museum Egyptologist Frank Yurco. In October, Egyptian Odyssey offers a comprehensive introduction to the many major archaeological sites. In January, Egypt Revisited is designed for those who want an indepth, second visit. One highlight of this tour is a visit to Abu Simbel that is timed to witness the sun shining straight down the axis of the temple to illuminate the statues of the gods in the sanctuary!

On the Drawing Board

Natural Wonders of Hawaii 2/01

Ancient Wonders of Israel 3/01

Treasures of Oaxaca 4/01

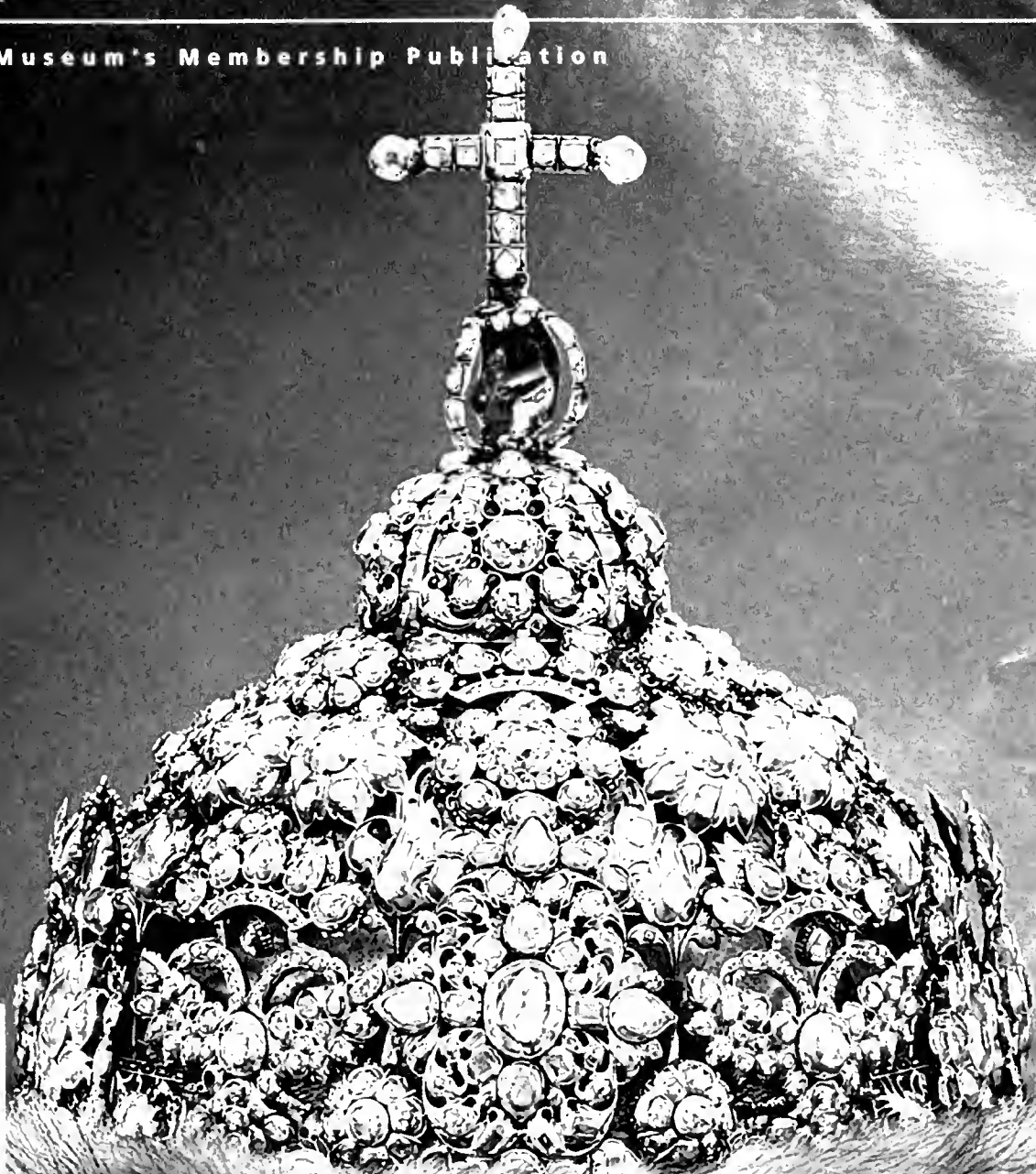
Archaeology of Southwest USA 5/01

Circumnavigation of Crete 4/01

IN THE FIELD

September
October
2000

The Field Museum's Membership Publication



Kremlin Gold

1000 Years of Russian
Gems and Jewels

Mapping Evolution:
The Sea Level Change
Phenomenon

From the President



JOHN WEINSTEIN / GNB81196

LOCAL ADDRESS, GLOBAL DOMAIN

Anthropologist Frederick Ward Putnam stood before Chicago's leadership on November 29, 1891 and outlined a plan for a permanent museum to house the cultural and biological collections being assembled for the World's Columbian Exposition. The fair, scheduled to open in 1893, would bring together thousands of examples of human achievement and natural diversity from around the globe. Putnam argued that by building a museum, Chicago could retain these treasures for the education and improvement of the community. These collections formed the nucleus of this institution, which would become a centralizing force for the burgeoning city on the prairie.

Since then, humanity has suffered two world wars, unfathomable atrocities, wide-spread extinctions and the destruction of natural habitats. Humankind has developed technologies that can connect the entire planet in a single instant, and technologies that can destroy it in the same space of time. The events of the museum's first full century underscore our obligation to understand the earth's cultures and environ-

ments in all their abundant diversity. The accomplishments of The Field Museum during this time underscore its ever-increasing global relevance.

The collections have grown both in number and in the diversity of geographic areas they represent. Thanks to gifts, purchases, and collecting expeditions to nearly every part of the globe, The Field Museum today stewards internationally-significant collections of cultural objects and biological specimens numbering over 21 million. Whether in Papua New Guinea or Peru, Madagascar or Lake Michigan, the world is our workplace. Whether they are working out in the field or in our on site laboratories and collections facilities, independently or in close collaboration with staff from other institutions, our scientists are creating critical information that contributes to humanity's understanding of the planet's cultural and biological diversity.

The Museum's commitment to exploring diversity around the world actually begins at home, here in Chicago. It can be seen in our work force and in our adherence to the belief that we are a more productive and progressive institution when our employees represent all ages, communities, ethnic groups, beliefs, disciplines and skills. We strive to be a workplace that celebrates differences and encourages diverse points of view. Similarly, our leadership reflects the value of diversity. As only one example, among our board of trustees, 20% are women and 20% are members of minority groups.

Our exhibition programming is consistent with a tradition of celebrating the world's peoples, with permanent exhibitions on Africa, Asia, the Pacific and the Americas and an exhibition specifically about diversity called *Living Together*. Earlier this year nearly 298,000 people came to view *The Dead Sea*

Scrolls, and last month, in a unique partnership with The Mexican Fine Arts Center in Chicago, we opened *Americanos: Latino Life in the United States*, a photographic celebration of Latino cultures in this country. And in October, as this issue features on its cover, we will present the treasures of the State Museums of The Moscow Kremlin.

The Museum hosts festivals celebrating the world's cultures, such as the upcoming *Celebración* on October 5 and 6, the African Heritage Festival and other community-wide events. In addition, we conduct community outreach programs such as *The Two of Us*, which focuses on early childhood education, and the *Field Ambassadors*, through which we reach out to the Chicago public schools.

And then, of course, there is you, the member and visitor. In recent weeks, because of the large crowds we have been enjoying, I have spent many hours out on the public floors of the Museum greeting visitors, answering questions and giving directions. I am thrilled by the tremendous diversity I have been seeing first hand. This museum draws people from every part of our vast metropolitan area, from the inner city to the farthest suburbs. In addition, travelers from across the Midwest, throughout the country and around the world visit The Field Museum. They represent every age, income and education level.

Just as it did in that summer of 1893, the world continues to come to Chicago. In The Field Museum's time-honored tradition of diversity, and our never-ending pursuit of knowledge about the earth and its peoples, we continue to bring the world to our audiences.

A handwritten signature in black ink that reads "John W. McCarter Jr." The signature is written in a cursive, flowing style.

John W. McCarter Jr.
President & CEO

We would like to know what you think about "In The Field". . . .

Please send comments or questions to Steve Hines, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496, or via e-mail at shines@fmnh.org.

2

Marine zoologist Harold Voris investigates sea level changes and its impact on evolution.



Presence of extremely deep water between the islands is why the mammals of the East Indian Archipelago differ from the Western side. See page 2 for the full story.

7

Audubon's journal is on display in the Museum's library and *Journal of Voyage* describes Audubon's long and tedious trip to England and his acceptance into British society.

10

Carl Akeley was the Field Museum's Chief Taxidermist from 1896 to 1909. During his time at the Museum he not only created fabulous dioramas but also created a motion picture camera that changed the film industry.



Kremlin Gold: 1000 Years of Russian Gems and Jewels brings Russian history and culture to Chicago. See *Your Guide to The Field* for more information.

Your Guide to The Field

A complete schedule of events for September/October.



Americanos: Latino Life in the United States explores the impact of Latino culture in our country.

INTHEFIELD

September/October 2000, Vol. 71, No. 5

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This issue's cover photograph: Diamond Crown of Tsar Ivan Alexeivich, Courtesy of State Museum, Moscow Kremlin, © 2000.

The **Field**
Museum

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

ph 312.922.9410
www.fieldmuseum.org

Around Campus

Shedd Aquarium

In conjunction with its new exhibit, **Amazon Rising: Seasons of the River**, Shedd Aquarium presents a three-lecture series, *Treasures and Terrors: Three Tales of Working in the Amazon*. On September 27, ethnobotanist Mark Plotkin will take guests into the realm of *Witchdoctors and Biotechnology* to examine the synergy of natural pharmaceuticals, indigenous knowledge and high-tech research methods to treat "incurable" diseases. On October 25, Michael Goulding of the Rainforest Alliance talks candidly about *The Conservation Flow of the Amazon*, and how the world's richest river valley is an arena for ecological, social and economic agendas. On November 29, *National Geographic* photographer Joel

Sartore shares his harrowing experiences amid caimans, wild pigs and flesh-eating parasites in Madidi National Park, Bolivia. Each program begins at 6 p.m. and includes viewing of *Amazon Rising*, cocktails and buffet, the presentation and a reception. Tickets are \$45 per lecture, or \$120 for the series. Call 312.692.3333 to register.

Adler Planetarium

The Adler Planetarium will present *The Remarkable Work of Copernicus, Hevelius and Other Historic Polish Astronomers* from October 6, 2000 through January 28, 2001. The exhibition is an awe-inspiring display of rare antique books by pioneering Polish astronomers, presented by the Adler in

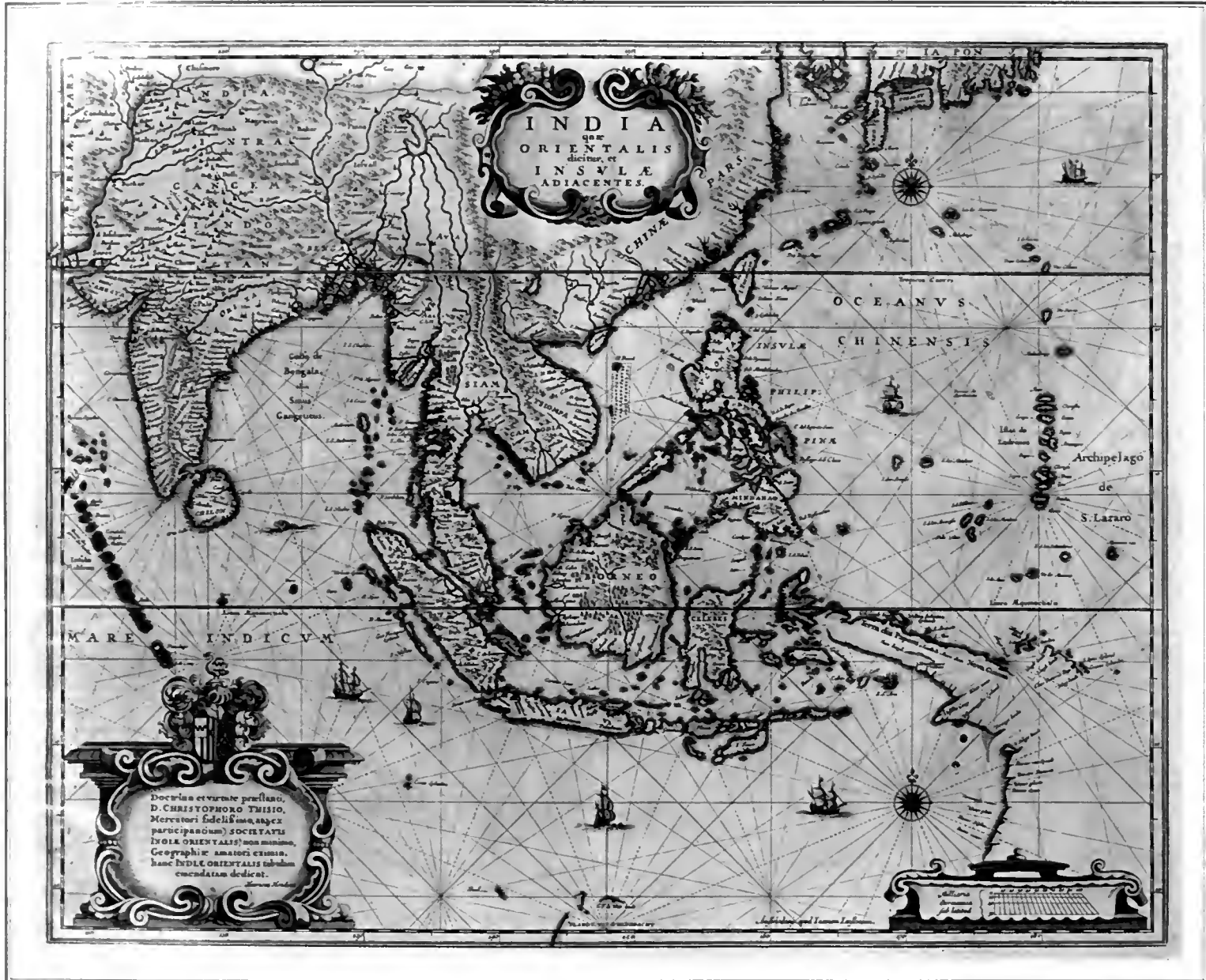
partnership with the Polish American Congress—Illinois Division and the Consulate General of the Republic of Poland in Chicago. Also on October 27, the StarRider Theater Show Premier is **Black Holes: Into the Dark Abyss**. In this interactive show the audience will explore the force of gravity and the regions surrounding Black Holes which exhibit strange effects that help scientists better understand the nature of extreme gravity.

The Field Museum

See the **Calendar Section** for a list of programs and exhibitions offered in September and October.

MAPPING EVOLUTION: THE SEA LEVEL CHANGE PHENOMENON

Karen Sandrick, Volunteer, Division of Amphibians and Reptiles



Map of Southeast Asia, dated 1653, from the Boone Collection in The Field Museum Library's Mary W. Runnells Rare Book Room. Commander Gilbert E. Boone and Katharine Phelps Boone built extensive collections of Japanese cultural artifacts while Commander Boone was stationed in Japan in the late 1950's as a naval intelligence officer. The Boones gave those collections to The Field Museum, in addition to their impressive library which demonstrated a broad range of interests. This map is one of a group of 65 sheets from a 17th century Dutch atlas.

When Charles Darwin (1809-1882) was formulating the theory of evolution, he struggled to make sense of obvious conundrums in the biological world: If organisms evolve from common ancestors and adapt to their surroundings, how can distant parts of the world, such as Europe, Asia and Africa, harbor the same animal or plant families? How can wildly different plants and animals exist on strings of the same island chain? In particular, how can Southeast Asia and Australia, which have the same rainfall patterns, temperature and other physical conditions, have such widely diverse animal and plant populations?

It wasn't until Darwin began drawing maps to plot the distribution of some types of flora and fauna that he was able to identify critical barriers that interfered with the movement and ultimate evolution of species. In fact, Darwin's maps, in combination with nautical charts and descriptions of the locations of species, led him to the realization that the presence of extremely deep water between major islands was the reason mammals on the eastern end of the East Indian Archipelago bore little resemblance to those on the western side.

Another forefather of evolutionary theory, Alfred Russel Wallace (1823-1913), also turned to maps to support his views. Although Wallace is not as well known as Darwin, he made many important contributions to the theory of evolution, and is considered to be the father of animal geography.

Wallace's 1855 paper proposing that new species evolve from pre-existing ones was based on his observations of birds on the islands of Southeast Asia. For 8 years during the mid-1800s, Wallace traveled throughout Southeast Asia, observing and collecting wildlife specimens from Singapore to New Guinea. He was struck in particular by the huge difference in bird species on two islands only 20 miles away from each other. Birds on Bali were similar to those on islands to the west—Java and Sumatra—as well as Malaysia. Birds on Lombok, however, were more closely related to species on New Guinea and in Australia to the east.

After further study on other islands in the region, Wallace concluded that there was a distinct boundary that separated animals and plants into Asian and Australian geographic regions. On a map of the Malaysian Archipelago, Wallace marked this boundary between the Philippines, Borneo and Sumatra on the west and Sulawesi, New Guinea and Australia on the east.

According to historian Jane R. Camerini, author of *Evolution, Biogeography, and Maps. An Early History of Wallace's Line*, ever since Wallace drew what has come to be known as Wallace's Line (1863), scientists have been using maps not only to guide travel but to organize and communicate information about animal and plant populations, predict the range of biological distribution and explore evolutionary theories.

Present-day maps can only go so far in helping to explain the genetic relationships among species, however, because they depict the natural physical barriers between geographic regions as they currently exist.



JACK FODDEN

Pleistocene sea level maps may provide clues to understanding why the Taiwanese macaque differs genetically from macaques on the Asian mainland.

Yet the barriers that influenced the origins of species in Southeast Asia occurred over millions of years as a result of massive shifts in tectonic plates that caused mountains and valleys to emerge, eruptions of lava from volcanoes on the ocean floor that created new land masses, and fluctuations in sea level that transformed shallow seas between islands into continuous stretches of land and vice versa. Of particular interest are events of the past 2 million years, the Pleistocene Epoch, when great sheets of ice advanced and retreated and in the process significantly changed sea levels. So scientists interested in understanding the pattern of evolution of specific animals or plants need maps that reliably reconstruct changes in land and sea configurations during this time.

Although some maps in the scientific literature depict land bridges and river systems during the Pleistocene age, the maps typically focus on only one factor—the extent to which the continental shelf in Southeast Asia was exposed when the sea level was 100 meters below the present level. The maps do not reflect shorelines during a specific portion of the Pleistocene period. Nor do they estimate the effects of different sea levels (10 to 120 meters below present level), the length of time a particular sea level persisted or the number of times sea levels rose and fell. These time frames are particularly important, because the longer a physical barrier existed between geographic areas, the more likely species in each area developed independently.

The gaps in knowledge about sea level and its effects on land bridges in Southeast Asia led Harold Voris, Field Museum Curator of Amphibians and Reptiles, on a series of data-mining journeys of his own.

Voris has been studying a group of Asian snakes known as the homalopsines that are making a transition from the terrestrial to an aquatic way of life. One species of homalopsine, *Cerberus*, lives in coastal areas from India to Australia.

Voris began examining the phenomenon of changing sea levels to gain a better understanding of the origin of observed genetic differences between populations of *Cerberus* in various locales. His theory was that if sea levels drop, there would be greater expanses of land between bodies of water, which essentially would form a barrier for the dispersal of marine and coastal species, like *Cerberus*. "What's important for dispersal of *Cerberus* is continuous habitat along shorelines. So if a drop in sea level produces more land between Sumatra and the Malay Peninsula, it creates a sea barrier between snake populations in the Andaman Sea and the South China Sea. If this sea barrier stays in place for an extended period of time, you can get speciation. The *Cerberus* populations would be genetically separated long enough for them to evolve into different species," he explains.

Yet when Voris searched for maps that traced the rise and fall of sea level over the past 250,000 years, he could find only scattered examples in scientific papers and texts. And descriptions about the characteristics in sea floor topography of Southeast Asia often were sketchy or dated; some sea level maps had been created as far back as the 1700s.

Once he learned that most of the data on estimating past sea levels came from ocean depth contours, Voris scanned the most detailed and up-to-date resources on sea floor mapping, including U.S. government, international and private data bases that have accumulated more than 7 million soundings of ocean topography. He also used findings from side scanning radar, which has been used by petroleum companies to detect oil reserves in the Java Sea, as well as maps from the Field Museum and University of Chicago libraries. Sonar soundings and side scanning radar measure and plot the sea floor by detecting changes in sound or energy levels that bounce off sea mounts and valleys.



JOHN WEINSTEINGRUB/767 17C

Harold Voris, Field Museum Curator of Amphibians and Reptiles, and scientific illustrator Clara Simpson use many sources of published data to formulate sea level maps of Southeast Asia during the Pleistocene age.

With current information on ocean depth contours as well as published data on sea level changes in the past, Voris was able to estimate the changes in sea level that occurred during the major ice ages of the Pleistocene age (2 million years ago). With this information, Voris could reconstruct the coastlines of mainland Asia and the islands of Southeast Asia during three time periods — 17,000, 150,000, and 250,000 years ago. The information from side scanning radar helped him plot the rivers that may have served as corridors for freshwater species in the past.

But Voris was interested not only in the land and sea barriers that appear when sea levels fall and rivers emerge; he also wanted to consider their longevity. "If sea level was at or below 75 meters half the time, a land bridge would become very well established, and species would have plenty of time to disperse across it. But if sea levels went up and down every few 100 years, a land bridge wouldn't have existed long enough for vegetation to produce a suitable habitat for species to disperse across. So both the extent and the duration of sea level change determine the effectiveness of a land or sea bridge as a corridor for the dispersal of species," he says.

While mapping has been an important tool for hundreds of years, Voris is the first to produce a series of maps that illustrate some of the processes and dynamics of sea level change during the Pleistocene age. Voris' work brought data together from many sources to calculate the percentage of time sea levels met or fell below certain points. He reviewed information from coral reef terraces in New Guinea that provided an indication of the effect of tectonic movement of land on shorelines. The science is complicated but in essence reflects how the formation of mountains can push coral reefs inland from beneath the sea.

Voris also estimated the number of times sea levels fluctuated from oxygen isotope ratios, which is analogous to carbon dating and tells when a phenomenon, like sea level change, occurred in prehistoric times. He turned over all this data to Field Museum Scientific Illustrator Clara Simpson, who applied computer graphics and interpretative skills to produce maps that reconstructed the coastlines of islands and continents in Southeast Asia during the Pleistocene period.

Each of the maps provides interesting insights in biogeography. When sea level was 75 meters or lower than today (approximately 32% of the time 17,000 years ago), most of the continental shelves were exposed, forming lowland connections between Sumatra, Java and Borneo and adding 3.2 million square kilometers of land in Indo-China. The islands of Hainan and Taiwan were joined to mainland China, and Sri Lanka was linked with India. It's also likely that one or more freshwater lakes or swamps existed at various times in depressions where the Gulf of Siam is now located, and a peat swamp covered the eastern coast of the Malay Peninsula (see map, p. 5).

The map of coastlines at a sea level of 50 meters or lower, which occurred at least 30% of the time between 17,000 and 250,000 years ago, shows extensive land bridges between the Malay Peninsula, Sumatra, Java and Borneo. But Taiwan is separate from mainland China, and the Gulf of Thailand, the Java Sea and the Gulf of Carpentaria in Australia are significant bodies of water. And river corridors for freshwater species are missing between Sumatra and Borneo.

Voris is using the Field Museum's computer-based maps in combination with other lines of investigation to understand the dispersal of *Cerberus*. "We think that when sea levels fell below 50 meters, sea barriers isolated populations of *Cerberus* into separate basins and displaced some populations over large distances. Our analysis of the genetic makeup of *Cerberus* populations supports this hypothesis," he says.

Voris also hopes that these Pleistocene age sea level maps may be used as templates for scientists who are investigating the plants and animals of Southeast Asia. "Whether they're working on beetles, butterflies, shrimp or coral — all the botany and zoology in this part of the world affected by the sea level change phenomenon," he points out.

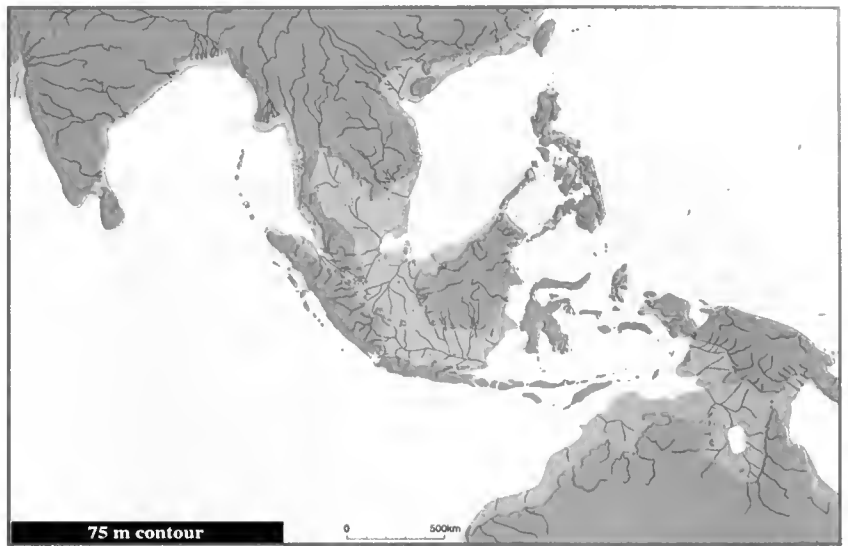
That is why he presented the maps, as well as details on how they were constructed, at the Biogeography of Southeast Asia 2000 meeting in Leiden, The Netherlands, in June, in a paper that will be published in the *Journal of Biogeography* later this year, and on a Web site, which went live in August: http://www.fmn.org/research_collections/zoology/zoo_sites/seamaps/.

Voris got help and encouragement on his map work from Jack Fooden, Field Museum adjunct curator of mammals, who has been plotting the distribution of all species of a genus of Asian macaque for the past 30 years. The genus, which includes 19 species, extends from Sumatra to Borneo and Java all the way to Sulawesi, the Philippines, Hainan, Taiwan and Japan.

"One species with about 10 subspecies inhabits many of these islands. Another species inhabits Hainan Island and adjacent mainland China, and the island form is identical to the mainland form. Each of two other species are entirely restricted to Taiwan and Japan," Fooden says.

"The puzzle is, why is that so? Presumably the answer has to do with when and how those monkeys got to those islands. And that is related to sea level change — how deep or how shallow the straits were between the islands and between the islands and the mainland," Fooden adds.

The strait between Taiwan and mainland China generally is deeper than 100 meters, and there is a ridge that forms an underwater bridge that is no more than 60 meters below the surface. During the time of the last glacier, when sea level was 120 meters lower than it is today and Taiwan was connected to China, the monkeys easily could have migrated across the land bridge without getting wet.



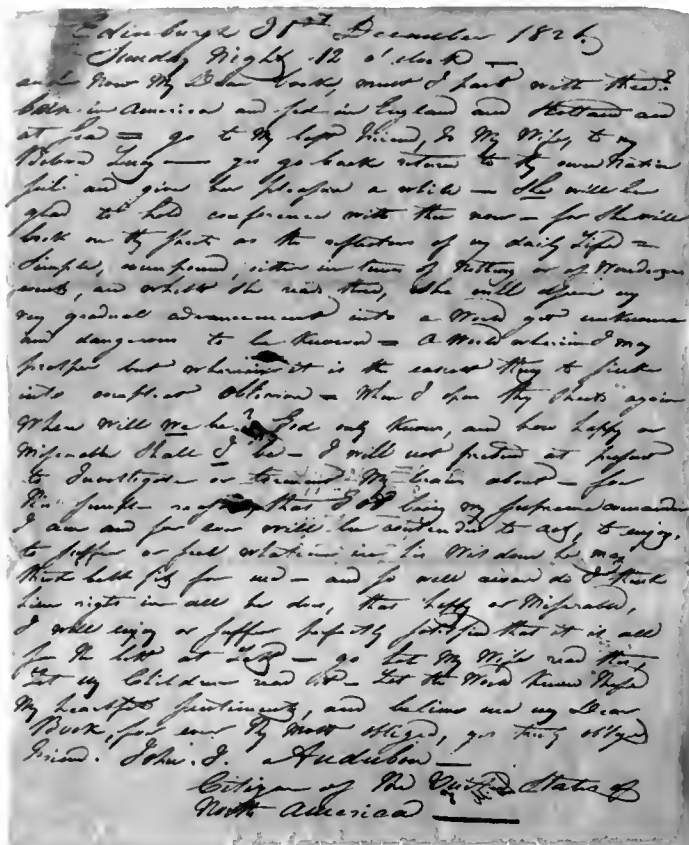
Map of sea level 75 meters below present level shows that the islands of Sumatra, Java and Borneo were connected and one or more freshwater lakes or swamps existed in what is now the Gulf of Siam.

The strait between mainland China and Hainan is much narrower and shallower. It makes sense, therefore, that the same form of macaque lives on both Thailand and Hainan. But the monkeys on Taiwan are genetically different from those in China. "The monkeys presumably did not get to Taiwan at the same time that monkeys got to Hainan. That's a difficult problem to solve, but it would seem that the dispersal of monkeys from the mainland to Taiwan did not occur at the time of the last glacial period but during a prior glaciation," Fooden explains.

Fooden believes the Pleistocene sea level map templates are valuable because they coalesce data from a variety of sources. "There hasn't been such a comprehensive set of maps up to now. The maps also incorporate some of the vast new quantities of information that were not available before, such as data from radar techniques for sensing the sea floor," he says.

The maps also provide historical context. "We know about the distribution of land and water in Southeast Asia today, and we know how land and water affects the distribution of plants and animals. Presumably, those same kinds of factors affected their distribution in the past. The maps are one way we can begin to visualize that historical information," says Fooden.

Wallace believed that the similarity of fauna on different islands in Southeast Asia was due to dispersal across shallow seas by swimming or rafting. He wasn't aware that sea levels had changed dramatically thousands of years ago and therefore that animals in the Pleistocene Epoch could disperse by walking across areas of exposed land. "The maps of sea level change represent a refinement of our understanding and documentation of the importance of sea level change in influencing the distribution of plants and animals over Sumatra, Java, Borneo and mainland Indo-China," said Voris. In fact, Voris' work may help many students of biogeography in their search for understanding today's distributions of plants and animals in Southeast Asia. **ITF**



FIELD MUSEUM LIBRARY

The final entry (Dec. 31) from Audubon's 1826 journal.

JOURNAL OF A VOYAGE

Ben Williams
Field Museum Librarian

"I Left My Beloved Wife Lucy Audubon and My Son John Woodhouse on Tuesday afternoon the 26th April, bound to England."

So begins John James Audubon's handwritten journal of his pivotal trip to England in 1826 to seek publication of his paintings of America's birds. The gift of Charles W. Palmer and family, this remarkable manuscript now resides in the Library's Mary W. Runnells Rare Book Room. There it joins the splendid Runnells copy of Audubon's *The Birds of America* (London, 1827-1838), one of the finest surviving sets of the double elephant folio.

Addressed to his wife Lucy, the journal describes Audubon's long, tedious voyage, his introduction to influential families and individuals in England, and the whirlwind of his acceptance into British society and the scientific establishment. Within weeks of his arrival in Liverpool, Audubon's new friends and supporters arranged an exhibition of his paintings at the Royal Institution there, with similar shows to follow in Manchester and Edinburgh. Throughout his ever-growing series of introductions, Audubon was moved

by the warmth and generosity of his new friends and acquaintances, and was especially struck by an ease of manner where he had least expected it. On meeting Lord Stanley, Earl of Derby, he was astonished to see this patron of naturalists and artists drop to his knees to closely examine and discuss Audubon's paintings. By the end of October his chain of introductions led him to William Home Lizars, Edinburgh publisher and engraver, who by mid-November produced the first prints of *The Birds of America*, laying the foundation for the nearly mythic status Audubon and his book were to achieve even during his lifetime.

It is Audubon himself, "quite dazzled with uncertainties of hope and fear," that the journal gives us. The date he chose for departure on his momentous voyage—April 26—was his birthday, and the journal repeatedly shows us Audubon on a threshold, gripped by a sense that success in his mission will mean his own birth into a new life, and that he will return to his beloved America a changed man. After nearly six weeks of slow progress through the Gulf of Mexico following their departure from New Orleans, Audubon reports on June 23:

We at last Entered the Atlantic Ocean this Morning 23d with a propitious Breeze — The Land Birds have left us and, I — I leave my Beloved America, my Wife Children and acquaintances — The purpose of this Voyage is to visit not only England but all Europe with the intention of Publishing My Work of the Birds of America; if not sadly disappointed, My return to these happy shores will be the brightest Birth day I shall have ever enjoyed: Oh America, Wife, Children and acquaintances Farewell!

Audubon never doubted his hard won accomplishments as an ornithological painter or the significance of his vast fund of observational knowledge of birds in the wild. He was fearful, however, about the response his work would receive from the circle of the more academic ornithologists and systematists. The term "academician," in fact, had acquired a sour taste to Audubon after his conflict with George Ord in Philadelphia. Ord was collaborator with Alexander Wilson on the latter's *American Ornithology*, (Philadelphia, 1808-1814), authored the final volume of the work after Wilson's death in 1813 and produced further editions in the following years. When Audubon had sought publication of his paintings in Philadelphia, Ord became his relentless antagonist, belittling Audubon's learning and enlisting colleagues in a campaign against Audubon. Ord and Wilson's engraver, Alexander Lawson, called Audubon an "imposter" and widely denigrated his skills. Ord continued his opposition to Audubon in England, even trying to prevent his election to membership in learned societies.

By contrast, the naturalists Audubon met in England appreciated the depth of his knowledge of living birds and valued the skill evident in his dynamic paintings. On December 13 Audubon met and spent the day with the ornithologist Prideaux John Selby,

whose *Illustrations of British Ornithology*, then being issued with life-size portraits of birds engraved by Lizars, would later earn him the title of “the English Audubon.” Selby and his equally well-known collaborator Sir William Jardine were so impressed with Audubon’s knowledge and talent that they requested lessons in his techniques of painting, which he duly provided. In the journal Audubon reports to Lucy on that first meeting with Selby, reassuring her he is not at all like Ord:

Mr Selby is a Gentleman Naturalist — not in the least resembling the Venomous Tallow Chandler of Philadelphia, the possessor of 3 Greek words, 7 of Latin, none belonging to what ought to be his usual Language, and the Describer of Objects unknown yet to the Almighty. Mr Selby is not a man that would say at a large meeting of the Wernerian Society that he would be damned rather than to give me a favorable vote of Election — he is not a man who would say that I knew nothing about Drawing, nor the habits of Birds, no my Lucy Mr Selby is not an Hipocritical Fool I assure thee —

A published version of the journal by Audubon scholar Alice Ford (1967; 2nd ed. 1987) now proves, by comparison with the original, to be more of a rewriting of Audubon’s text than a faithful transcription. With the stated intention of making the journal more accessible to the modern reader, Ford justifies regularizing Audubon’s spelling and punctuation, correcting his grammar, rearranging his word-order and rephrasing passages that seemed unclear to her. The result is a transformation of Audubon’s vigorous style into proper school prose, stripping away much of its verbal richness and meaningful idiosyncrasy. The effect is felt from the very first sentence. Compare the literal transcription on page 6 with Ford’s version, given here with her changes italicized: “I left my beloved wife Lucy Audubon and my son John Woodhouse on Tuesday [*afternoon is deleted*] the 26th of April, bound for England.” Such alterations seem entirely gratuitous and beg the question of exactly what Ford means by the statement in her foreword that her transcription is “scrupulously faithful to the original manuscript.” At its worst Ford’s rewriting changes the literal sense of Audubon’s statements, sometimes into the opposite of his meaning. As his ship nears England, for example, Audubon spins a political metaphor from a persistent cold, damp fog that obscures the sun over the Old World just as the culture of Europe dims “that real hope of Freedom now only better felt in the Western

Hemisphere ... The Englishmen on Board pronounced it, *Clear weather of England*, but I named it the Blasting atmosphere of Comfort.” Ford makes the final phrase “the atmosphere that blasts comfort,” contradicting Audubon’s clear meaning and transforming the boundlessly energetic Kentucky Woodsman into a lover of comfort. An accurate transcription of the journal is now in progress, intended to serve as a face-to-face guide to each page of the original in a facsimile publication of the manuscript.

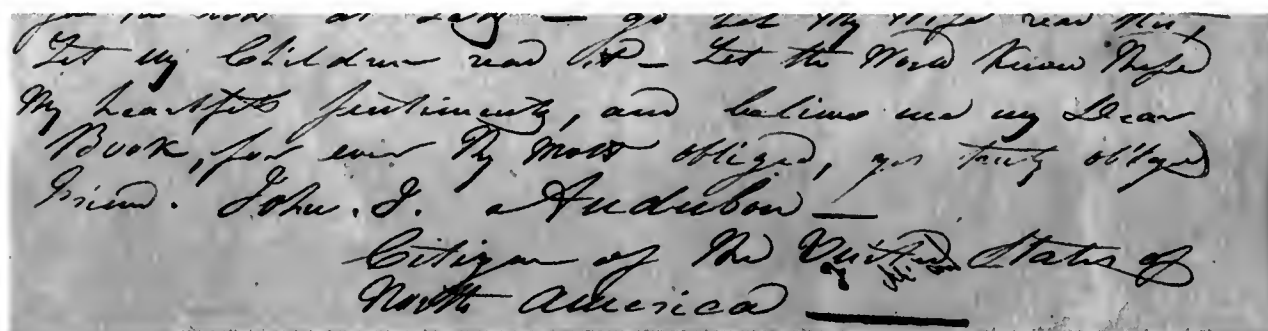
Audubon’s journal also served as his sketchbook, especially during the tedious weeks aboard the ship. Fourteen full-page pencil sketches include a dolphin, a shark and other fishes, a dusky petrel, several sketches of the ship’s crew and captain, and three delicate landscape scenes done in the Derbyshire countryside. Four sketches of the crew appear on the final pages of the journal, and are “upside down” since Audubon turned the volume over and opened it from the back for these sketches that amused both him and the crew.

Through a remarkable circumstance, a leaf removed from the journal — possibly by Audubon himself — was rediscovered in private hands and acquired by the journal’s appraiser following the Palmers’ gift of the volume. On its reverse the leaf bears a fifth “upside down” sketch of the ship’s crew, and on front Audubon’s final entry in the journal, dated “Edinburgh 31st December 1826, Sunday Night 12 o’clock.” Ford had seen this leaf and includes it in her book, but refers to it as “addressed to Lucy.” Although perhaps serving as a cover letter to Lucy when he sent her the journal, the entry is addressed to the book itself, his constant companion during the most momentous events of his life: “and now My Dear book, must I part with thee?” Audubon consigns his fate, however “happy or miserable,” to his “Supreme comander,” and concludes: “go let my Wife read this, let my Children read it — let the world know these my heartfelt sentiments, and believe me my Dear Book, for ever thy most obliged, yes truly obliged Friend. John J. Audubon. Citizen of the United States of North America.”

The Friends of The Field Museum Library have committed to the acquisition of this leaf, returning it to its point of origin, and completing Audubon’s record of the birth of his great masterwork. **ITF**



FIELD MUSEUM LIBRARY



FIELD MUSEUM LIBRARY

Above: Pencil sketch of a sailor on back of last leaf.

Left: Closing entry of Audubon's 1826 journal.

AMERICANOS: LATINO LIFE IN THE UNITED STATES LA VIDA LATINA EN LOS ESTADOS UNIDOS

Actor, producer, activist Edward James Olmos had a dream to capture Latino life in the United States and to expose the world to its beauty and culture. His idea became a book of photographs and essays titled, *Americanos: Latino Life in the United States*, (Little, Brown and Company, 1999.) that reveals a people who are "diverse in culture, color ideas, and dreams, but who share a common desire to make a better life for themselves, their families, and their communities." After publication, the book became a traveling photographic exhibition produced by the Smithsonian Institution Traveling Exhibition Service. The Field Museum, in collaboration with the Mexican Fine Arts Center Museum, is pleased to bring this extraordinary, bilingual exhibit to its members from August 19 to November 12.

The 120 images organized into six sections representing different aspects of Latino life are accompanied by panels of text by prominent Latinos, including nov-

elist Carlos Fuentes, singer Celia Cruz, novelist Julia Alvarez and baseball player Sandy Alomar. The Field Museum features the sections depicting Family, Work, Sports and Culture and the Arts, while the Mexican Fine Arts Center Museum showcases photos of Community and Spiritual Life. Two of the 30 photographers who contributed to the exhibition work in Chicago: Antonio Perez, photographer from the Spanish language newspaper *Exito*, and Jose Osorio, photographer from the *Chicago Tribune*.

In the introductory panel, Fuentes writes, "Recognize yourself in he and she who are not like you and me." Some of the panels reflect the struggles of immigrants in the United States as with California Congressman, Xavier Becerra, who writes of his parents Maria Teresa and Manuel who came to California and "helped build our nation from the ground up, laying pipe and setting concrete." He concludes his essay with, "Whether in the House or in the home, I am realizing my dreams because of the sacrifice and devotion of Maria Teresa and Manuel." Intimate glimpses into the souls of the Latino people make this exhibition a powerful and enriching experience.

Since art has the power to transcend all mediums, *Americanos: Latino Life in the United States* is now an HBO documentary conceived and co-produced by Olmos and directed by Andy Young and Susan Todd celebrating the unique heritage of Latino-Americans. In addition, *Americanos: Latino Life in the United States—A Musical Celebration* was produced featuring a wonderful collection of Latino-American musical artists, including Ruben Blades, Los Lobos, Santana, Celia Cruz, Eddie Palmieri and many more. The music can be heard in the exhibition. The documentary can be viewed during the Museum's *Celebración 2000: Americanos* (see the Get Smart section).

Olmos summed up his experience in creating *Americanos: Latino Life in the United States*: "There have been few experiences in my life that have been as rewarding to me as the making of *Americanos*. As it evolved, it became a source of inner peace, and short of the birth of my children, nothing has inspired me more." The Field Museum will provide trolley service to the Mexican Fine Arts Center Museum every Saturday that the exhibition is open in October and November from 11 a.m. to 5 p.m. **ITF**

The Chicago presentation is sponsored by Target Stores and Marshall Field's Project Imagine. *Americanos*, a project of Olmos Productions, has been organized by the Smithsonian Institution Traveling Exhibition Service and the Smithsonian Center for Latino Initiatives. The exhibition has been made possible through the generous support of Time Warner Inc. and US West. Additional support has been provided by Farmers Insurance. Media support provided by *Exito*.



Above: Ramona Sandoval, 80, spends a light moment with her granddaughter Jasmine Zubia, in Los Angeles, California.

Right: Carlos Santana, 1998 tour. Concord California.



Membership News

KREMLIN GOLD: 1000 YEARS OF RUSSIAN GEMS MEMBERS' VIEWING DAYS

October 17, 3 – 10 p.m.

October 19, 9 – 4 p.m.

October 29, 5 – 10 p.m.

Drawn from the vast array of treasures in Moscow's Kremlin Museums, *Kremlin Gold* will present 120 masterpieces of gems and jewelry spanning one thousand years of Russian history. Illustrating major chapters from Russia's storied past, the objects in the exhibition include many never before seen in the United States. Thousand-year-old icons excavated on the Kremlin grounds, diamond-and-sapphire-encrusted crowns of the tsars, and two Imperial Faberge eggs, among other treasures, testify to both the splendor of Russian culture and the richness of its natural mineral resources.

Members will be among the first to see the exhibition during special viewing hours on October 17, 19, and 29, 2000. Look for your invitation in the mail. Reservations are required and must be ordered by mail.

Free Member Passes to Special Exhibitions

Members are eligible to receive up to four free member passes to see both *Kremlin Gold: 100 Years of Russian Gems* and *Star Wars: The Magic of Myth*. Member passes are available to you in addition to any tickets you may receive to attend the members' previews.

The passes may be used to see the exhibition a second time or pass them on to friends. Family members can receive up to four passes and Senior, Student, Individual and National Affiliate members up to two passes, by calling Ticketmaster at 312.902.1500. (A service charge and transaction fee will be assessed.) Members may be able to obtain passes for same day viewing if available at the Museum. No service charge



COURTESY OF STATE MUSEUM, MOSCOW KREMLIN, © 2000.

Kolt Medallion, Ryazan Old Russia, 12th century.



1997 ERIC LONG AND MARK AVINO

Chewbacca, Star Wars: The Magic of Myth, Star Wars™ and ©1997 by Lucasfilm Ltd.

will be incurred. For more information, call the membership office at 312.665.7700. **ITF**

Kremlin Gold: 1000 Years of Russian Gems and Jewels collection loaned by The State Museums of the Moscow Kremlin. Kremlin Gold was organized for its U.S. tour by The Field Museum in partnership with The Houston Museum of Natural Science.

Star Wars: The Magic of Myth was developed by the Smithsonian's National Air and Space Museum. The exhibition was organized for travel by the Smithsonian Institution Traveling Exhibition Service. All of the artifacts in this exhibition are on loan from the archives of LucasFilm Ltd.

FIELD MUSEUM MEMBERSHIP TOPS 40,000

What an exciting time it is to be a member of the Field Museum! We currently have more than 40,000 active members on our roster. At last count, the Museum has more than 34,000 members in Chicago and almost 7,000 in the United States and worldwide.

As members, you share in the pride when your Museum is featured on the nightly news with Peter Jennings and is featured in newspapers all over the world. Bringing natural history to the people has always been the Field Museum's mission. The Museum looks forward to continue sharing our latest discoveries and exhibitions with our members. The more we understand where we have been, the better we can chart our course for the future. **ITF**



JOHN WEINSTEINGN89752, OZAC

Sue continues to bring in the crowds at the Museum.

Inside

- 1 Exhibits
- 3 Calendar of Events
- 5 Get Smart
- 7 Free Visitor Programs



COURTESY OF STATE MUSEUM, MOSCOW KREMLIN, © 2000.

The tradition of the famous Faberge eggs began with Tsar Alexander III, who first commissioned them as Easter presents for his wife. The custom was continued by his son, Nicholas II, the last tsar. Each egg contained a surprise, usually commemorating an event in the imperial family's life; this exquisite model of the imperial yacht *Standart* was among the most beautiful. Inside a hollow egg carved of transparent quartz, riding on waves of aquamarine, is an exact replica of the yacht—complete with platinum lifeboats, moveable cannons and anchors on delicate gold chains.

Collection provided by The State Museums of the Moscow Kremlin. *Kremlin Gold* was organized in partnership with The Field Museum in collaboration with The Houston Museum of Natural Science.

KREMLIN GOLD: 1000 YEARS OF RUSSIAN GEMS AND JEWELS



COURTESY OF STATE MUSEUM, MOSCOW KREMLIN, © 2000.

This dipper illustrates the great changes that affected the life of Russia's nobility in the mid-eighteenth century, when the introduction of European arts such as fine tableware rendered

traditional Russian vessels obsolete. This vessel is an example of the transformation of a traditional utilitarian object into a symbolic and decorative presentation piece.

The Field Museum exhibition *Kremlin Gold: 1000 Years of Russian Gems and Jewels* brings the richly woven tapestry of Russian history and culture to Chicago from October 21, 2000 to March 30, 2001. More than 100 masterpieces of gems, jewels and precious metal objects, including many never before publicly displayed, will be exhibited.

The objects, both secular and sacred, represent major chapters in Russia's storied past, from the introduction of Byzantine Christianity in 988, through the turbulence of the Mongol invasions of the 13th century, to the rise of towering figures such as Ivan the Terrible, Boris Godunov, Peter the Great, Catherine the Great and Nicholas and Alexandra.

The treasures on display testify to the splendor of Russian culture and the wealth of the region's mineral resources. Breathtaking in their scope as well as their beauty, they include thousand-year-old icons excavated in the Kremlin grounds, diamond-and-sapphire-encrusted crowns belonging to the tsars, 12th and 13th century articles from the buried Ryazan treasure hoard, a gold-and jewel-encrusted Gospel from the 15th

century, a 17th century miter of gold thread and pearls and two imperial Faberge eggs. Together, these glittering works provide unique insight into the history and character of the Russian people over the past millennium.

Beyond the inherent beauty of the objects themselves, however, *Kremlin Gold* represents something more. Partnering with The Houston Museum of Natural Science, The Field Museum joined the directors and curators of the Moscow Kremlin Museums to organize this ambitious exhibition for its exclusive presentation in Houston and Chicago. Teaming up on research visits to Moscow, exchanging curatorial expertise and project management skills, sharing design inspirations and jointly publishing the catalogue to the exhibition, the two museums have taken the first steps toward a model for museum exhibitions in the 21st century. Presenting the world's scientific and cultural riches and bringing down the barriers that have so often separated peoples in the past, collaborations like *Kremlin Gold* actively further The Field Museum's mission of exploring the world and its people.

THE ENDURANCE: SHACKLETON'S LEGENDARY ANTARCTIC EXPEDITION

October 7, 2000 through January 14, 2001

This exhibition brings to life the epic story of Sir Ernest Shackleton's 1914 *Endurance* expedition, one of the greatest tales of survival in expedition history. More than 150 photographs of the expedition, taken by ship photographer Frank Hurley, are displayed chronologically alongside memoirs and rare film footage. These extraordinary photographs were printed from Hurley's glass plate negatives; They capture the courageous expedition crew and the extreme hardships they faced.

This exhibition was developed by the American Museum of Natural History with generous underwriting support from Mr. and Mrs. Joseph F. Cullman, 3rd. Images by Frank Hurley are from the collections of The Royal Geographical Society (with The Institute of British Geographers), The Scott Polar Research Center and State Library of New South Wales.

Right: *The return of the sun.* 1915 Hurley. Royal Geographical Society.

Below: *A glimpse in the fo'c'sle.* 1915 Hurley. Scott Polar Research Institute.



FRANK HURLEY/ROYAL GEOGRAPHIC SOCIETY



FRANK HURLEY/SCOTT POLAR RESEARCH INSTITUTE

KACHINAS: GIFTS FROM THE SPIRIT MESSENGERS

October 3, 2000 – June 16, 2001

Kachinas: Gifts From The Spirit Messengers presents an exploration of a familiar, yet fascinating, Native American art form. The exhibition, which is part of the Webber Gallery program highlighting contemporary Native American artifacts, will run from October 3, 2000 to June 16, 2001.

Created by the Hopi people of North Eastern Arizona, colorful, carved wooden kachinas represent spirit messengers (called *katsinam*) who act as intermediaries between the Hopi world and the supernatural realm. In Hopi belief, *katsinam* are spiritual helpers who provide rain and abundant crops and assure the continuation of life in a harsh desert land. Small kachina dolls representing these spiritual friends are given to children, and sometimes women, to reinforce their religious and cultural education.

Important in transmitting and safeguarding ancient Hopi traditions, kachinas also illustrate the dynamics of cultural change and adaptation, as Hopi carvers respond to influences from outside their own world. Created both for traditional religious uses and for commercial trade, many contemporary kachinas in the exhibition reflect the use of new carving tools and techniques, as well as the introduction of motifs from Western popular culture.

Curated by Dr. Jonathan Haas, Field Museum Curator of North American Anthropology, *Kachinas* was made possible by bequests from the collections of Marcia and Vernon Wagner and through the generous support of Mr. Donald W. Paterson.



JOHN WEINSTEIN/113936C

JOHN WEINSTEIN/113937C



Stephen Jay Gould to speak on paleontology, evolution and science education at the Museum.

An Evening with Stephen Jay Gould

9/14, Thursday, 6:30 p.m.

Acclaimed for his literate and accessible interpretations of the social consequences of science, Stephen Jay Gould presents an engaging lecture on paleontology, evolution and science education. As a scientist, Gould has directed and participated in debates of the biological and geological sciences. As a writer, he has authored more than 20 books and hundreds of essays and articles, becoming one of the most popular and well-known scientists in America. A winner of the MacArthur Foundation prize fellowship, his credentials include being Professor of Zoology and Professor of Geology at Harvard, Curator of Invertebrate Paleontology in the Harvard Museum of Comparative Zoology and president of the American Association for the Advancement of Science.

Co-sponsored by the Earth Science Club of Northern Illinois. \$20, \$18 students/educators, \$15 members. Please call 312.665.7400 for more information or to register.

Museum Week

9/18-9/24, 9 a.m. – 5 p.m.

The Field Museum proudly celebrates *Museum Week*, organized by Chicago's Department of Cultural Affairs in appreciation of the city's 49 museums. The Field

Museum will be offering two-for-one admission to the Museum during that week. Highlights include the **World Music Festival**, performances of **Dancing With Dinosaurs** and **Unity Day**. Rounding out the activities for the week will be hands-on activities and other programs, all free with Museum admission. For more information, please call 312.665.7400.

UNITY Day

World Music Festival: Chicago 2000

9/23, Saturday, 11 a.m. – 3 p.m.

The Field Museum, the Human Relations Foundation and the Chicago Commission on Human Relations celebrate UNITY, in this day filled with music and activities. This year, UNITY Day helps kick off the opening weekend for the World Music Festival: Chicago 2000. This daylong celebration of diversity in culture and musical traditions will highlight various hands-on artistic and musical activities. Enjoy performances by musicians from around the world; hear the sacred chants of the *Drepung Gomang Monks*, see the riveting classical Indian dance of the *Natyakalalayam Dance Company* and experience the spiritual world of *Steve Coleman and the Mystic Rhythmic Society*. Free with Museum admission, pre-registration not required. For more information, please call 312.665.7400.



The *Natyakalalayam Dance Company* specialize in *Bharatanatyam*, a classical dance style of Southern India.



Chicago Samba brings Brazilian rhythms to the Museum during the World Music Festival: Chicago 2000.

U.N.O. Day

World Music Festival: Chicago 2000

9/30, Saturday, 9:30 a.m. – 3 p.m.

Over 10,000 guests are expected at The Field Museum for the United Neighborhood Organization's (U.N.O.) *Take 10! Minutes With Your Child* parental involvement initiative annual kick-off event. The day begins with a public welcome at 9:30 a.m. outside the Museum and will continue with musical performances, storytelling and educational activities throughout the day. Offered in collaboration with the World Music Festival, this all-day family event will feature the rhythmic Brazilian sounds of *Chicago Samba*, the intoxicating Latin romance of *Casolando* and the West African group *WOFA*. Free with Museum admission, Pre-registration not required. For more information, please call 312.665.7400.

Dozin' with the Dinos

9/29-9/30 5:45 p.m. – 9 a.m.

What is it like to be in the museum after the crowds have gone home and the doors have been locked? Experience The Field Museum in a unique way as you and your family spend a night of discovery before falling asleep among specially chosen exhibitions. Overnights are designed for families (adults accompanied by children grades 1-6) and include two natural science or culturally based workshops, an evening snack, a performance and a continental breakfast. Our official *Dozin' with the Dinos* T-shirt (available only at overnights) will be sold. This program is designed for families with children ages 6 and up. Cost is \$45 for non-members, \$38 for members. Please call 312.665.7400 for more information or to register.

Adult Course

Russia Then and Now

10/5-11/9, Thursdays, 6 – 8 p.m.

Join Russian historian Michael Johnson (PhD Candidate, History Department, University of Illinois at Chicago) as he explores Russia in a historical overview from the country's beginnings to the present day. Major personalities from Russian history come alive in this six-week course, which includes the Kievan period, the development of Moscow and the rise and fall of the Russian Empire. The course also examines the Russian Revolution and the subsequent Soviet Union, before concluding with the collapse of the Communist system and a review of Russia's current situation. Individual classes consist of lecture and discussion, with questions taken throughout. Cost is \$90 for non-members, \$75 for members. Please call 312.665.7400 for more information or to register.

Valley of the Golden Mummies

Zahi Hawass

10/13, Friday, 6:30 p.m.

In the summer of 1996, archaeologist Zahi Hawass discovered more than 100 undisturbed mummies in a 2000-year-old tomb deep in the Egyptian desert. Considered perhaps the most spectacular Egyptian archaeological discovery since King Tut's

tomb, Hawass' find represents the first time in history that so many perfectly preserved mummies were discovered at one time. Hawass is Egypt's Director General of the Giza Pyramids and Field Director of the Bahariya Oasis Excavation; has been profiled in *National Geographic* and *Newsweek*; and has appeared on the *Today Show*, *Dateline*, *Nova* and *Fox TV*. Admission is \$12 non-members, \$10 students/educators, \$8 members. Please call 312.665.7400 for more information or to register.

Margaret Mead Traveling Film and Video Festival

10/21, Saturday, 11 a.m. – 6 p.m.

The Field Museum hosts the *American Museum of Natural History's Margaret Mead Traveling Film and Video Festival*, which features highlights from the largest showcase of independent cultural documentaries in the United States. This year's exhibition at the Museum—the only Chicagoland presentation of the Margaret Mead Film and Video Festival—includes three programs, each devoted to specific social or cultural topics. Ethnographic film specialist Martha Foster introduces the films and moderates a discussion following each program. Free with Museum admission. Please call 312 665 7400 for a complete listing of movie titles and times.



Zahi Hawass is Egypt's Director General of the Giza Pyramids and Field Director of the Bahariya Oasis Excavation.

COMING THANKSGIVING WEEKEND! JULIE TAYMOR'S *THE KING STAG*

Friday-Sunday, November 24-26

Friday, 7:30 p.m.; Saturday, 8 p.m.; Sunday, 3 p.m.

Performances at the Chicago Theatre

Presented by The Field Museum and CAPA The American Repertory Theater of Boston. *The King Stag* is a fairy tale for all ages, a story of love and betrayal, intrigue and mirth, magic spells and pageantry. Puppet birds zoom through space, and fanciful beasts cavort with delicacy and grace. Carlo Gozzi's 18th-century fable about the search for true love is a delightful theatrical event with costumes, masks, puppetry and movement by Tony-winning Julie Taymor (*The Lion King* and *The Green Bird*).

Tickets: \$24, \$34, \$44 mention your Field Museum Membership and receive a \$5 discount. For tickets call Ticketmaster at 312.902.1500 or visit the Chicago Theatre Ticket Office or any Ticketmaster outlet. Or visit www.capa.com



RICHARD FELDMAN



RICHARD FELDMAN

Scenes from *The King Stag*, costume, masks, puppetry, and choreography by Julie Taymor.

CELEBRACIÓN 2000: AMERICANOS

October 5-6, 10 a.m. – 1 p.m.

October 7-8, 11 a.m. – 4 p.m.



Experience Latin American culture at *Celebración 2000: Americanos*. The 4-day festival gives visitors the opportunity to talk with representatives from Chicago's Latino communities about what it means to be Latino in Chicago and participate in interactive educational demonstrations.

Field Museum Division of Insects scientist, Phil Parrillo will explain and demonstrate how insects are used as objects of art and religion by South American Indian cultures. Learn about the long history of scientific bird investigation in South America with staff from the Museum's Bird Division. Chat with scientist from the Office of Environmental and Conservation Programs

Queen of Salsa, Celia Cruz is pictured with her husband, conductor Pedro Knight. This is one of the many images depicting Latino life in the photographic exhibition Americanos: Latino Life in the United States. You can also hear Cruz's music while walking through the exhibit.

and explore life in the Cofan Village of Zábalo in Amazonian Ecuador.

The Museum will also screen the award-winning HBO documentary *Americanos*. On October 5 at 6:30 p.m. see the video and hear panelists David Carrasco, Antonio Perez and Mark Hinojosa discuss their work on the project *Americanos: Latino Life in the United States*. Admission is \$12 non-members, \$8 members and \$10 student/educators. A free screening of the documentary will also be shown on October 8, at 1 p.m.

Throughout the festival, Latin Street Dancing Inc. will offer demonstrations and instruction in traditional style Latin "street" dances such as Merengue, Mambo and Salsa. Festival activities also include demonstrations of traditional Latin American toys and musical instruments, and culinary stations featuring salsa and chocolate. For more information, call 312.665.7400.

WORLD MUSIC FESTIVAL: CHICAGO 2000

September 21 – October 1

The Field Museum in association with the Chicago Department of Cultural Affairs, Mayor's Office of Special Events, the Old Town School of Folk Music, Museum of Contemporary Art and Hothouse/CIPEX (Center for International Performance and Exhibition) present the World Music Festival: Chicago 2000. This is Chicago's second annual multi-venue music festival, which will kick off on Thursday, September 21 with an evening concert on the north steps of the Field Museum. Performers include; Steve Coleman and the Mystic Rhythm Society, Canada's *Kanenhi:io Singers*, Zimbabwean legend *Oliver Mtukudzi and Black Spirits* and Puerto Rico's *Plena Libre*. The opening night musical extravaganza begins at 5:30 p.m. and ends at 9 p.m. and is free.

A wide variety of venues will host musical entertainment featuring performers from dozens of countries. Last year, more than 50,000 people attended more than 100 concerts, live radio broadcasts, workshops and educational programs. To ensure that everyone can attend the concerts, the World Musical Festival: Chicago 2000 is made up of a mixture of free and ticketed events costing no more than \$10. A detailed brochure including a complete schedule is available by calling the World Music Festival: Chicago 2000 hotline at 312.742.1938 or by visiting the website at www.cityofchicago.org/worldmusic. For more information on the Field Museum's concerts and educational programs call 312.665.7400.



Steve Coleman will perform at the Field Museum opening night of the World Music Festival: Chicago 2000.

Coming to the Museum September 29; Savina Yannaton & Primavera en Salonico and Caslando, 8 p.m. Tickets are \$10.

HALLOWEEN AT THE FIELD MUSEUM

Field Museum Halloween Harvest Festivities Costume Creation Stations

Saturdays, October 14, 21, & 28
10 a.m. – 3 p.m.

Supplies and materials fee for costumes, masks and pumpkins

'Dem bones, 'dem bones, 'dem bones gonna walk around.... It took 67 million years for Sue's bones to fossilize, be discovered and then erected at The Field Museum. Now visitors can use Sue and the Museum's other world class exhibitions to inspire creativity and construct a unique Halloween masterpiece with the help of artists. Fashion your own dinosaur mask, design a unique alien creature or produce a festive decoration that expresses your personality and interest!

Halloween Harvest Festival

October 28, 10 a.m. – 3 p.m.

Whether you want to howl at the moon with the creatures of the night, or give thanks for the bounty of a good harvest, join The Field Museum for the Halloween Harvest Festival. Activities include self-guided terror tours, pumpkin painting, costume creation stations and two fun-filled performances by Dave Herzog's Marionettes. The festival will culminate with a spectacular performance by Chicago's own Redmoon Theatre presenting their annual Halloween Spectacle that includes larger-than-life puppets, elaborate masks and dynamic physical performances. Wear a costume or create one on-site, but don't miss the fun.

Redmoon Theatre creates thrills and chills during their Halloween Spectacle.



POLAR EXPLORATIONS AT THE FIELD MUSEUM AND THE NEWBERRY LIBRARY



Sir Ernest Shackleton. 1915 Hurley Scott Polar Research Institute

Join The Field Museum and the Newberry Library for two programs that complement the Museum's *The Endurance: Shackleton's Legendary Antarctic Expedition* exhibition and *To the Ends of the Earth: Exploring the Poles*, on view at the Newberry from October 7, 2000 – January 13, 2001.

Going to Extremes: The Arctic, the Antarctic, and the Himalayas

Saturday, October 7, 10 a.m.
Newberry Library (60 W. Walton,
312.255.3700)

In the opening public program for the two exhibitions, three Illinoisans who have personally experienced the earth's extremes join journalist Bill Kurtis to discuss what motivates humans to explore and live on the ends of the earth. Panelist James VanStone has spent nearly half a century working with Arctic and Subarctic peoples. Sharon Hogan twice attempted to climb Mount Everest, often dubbed the earth's third pole. As a student in 1949 and 1950, Edmund Thornton participated in Admiral Donald B. McMillan's Arctic expedition and

met two of the Inuits who accompanied Admiral Peary on his 1909 quest to reach the North Pole. Kurtis is producer of the television series, *The New Explorers*. Admission is free.

Shackleton: The Man and the Expedition

Saturday, October 14, 2 p.m.
The Field Museum

The guest curator for *The Endurance: Shackleton's Legendary Antarctic Expedition*, Caroline Alexander brings imagination and rich detail to the story of Ernest Shackleton and his crew. The exhibition, and a companion book, features the struggle to survive that began when Shackleton's sailing ship *Endurance* became trapped in ice on January 19, 1915. The cost is \$12 non-members, \$10 students/educators, \$8 Field Museum Members and Newberry Library Associates.

These programs are made possible in part by a grant from the Illinois Humanities Council, the National Endowment for the Humanities and the Illinois General Assembly.

Free Visitor Programs

Saturdays and Sundays

Family Fun at The Field

1 p.m. **Story Time: Facts, Fables and Fiction.** Learn new songs and stories and have fun creating artwork—all in a 20-minute program in the Living Together exhibit. In September and October, hear stories about *Underground Adventure*, hibernation, the fall harvest, music or a Mexican folk tale and then design your own cuckoo bird, forest habitat, underground environment, jack-o-lantern or drum. This program, designed especially for young children and their families, offers an opportunity to relax and learn about different aspects of our environment. From worms to birds to pumpkin hunts to learning where animals sleep in the winter, we offer a wide variety to whet the appetite and send you exploring our galleries to learn more. The songs are fun to learn and easily could become family favorites. This program is sponsored by The Siragusa Foundation Early Childhood Initiative. One adult for every three children, please.

Daily

Interpretive Station activities: Drop by hands-on stations located throughout the Museum (check informational directories for daily listing) and delve into the fascinating world of natural history.

September 9 – Saturday

11 a.m. – 2 p.m. **Scientists on the Floor.** Visitors will have the opportunity to view rarely displayed specimens from Museum collections and listen as Museum specialists discuss their research relating to our new permanent exhibit, *Underground Adventure*.

11 a.m., Noon & 2 p.m. **Performance: Dancing with Dinosaurs: The Story of Sue**

The Field Museum and Music Theatre Workshop present the Teens Together Ensemble in a 30-minute musical about Sue, the largest, most complete, and best preserved *T. rex* ever found.

September 16 – Saturday

11 a.m., Noon & 2 p.m. **Performance: Dancing with Dinosaurs: The Story of Sue.** See September 9

September 18 – Monday

9 a.m. – 5 p.m. **Museum Week**

The Field Museum proudly celebrates **Museum Week**, organized by Chicago's Department of Cultural Affairs in appreci-



THE FIELD MUSEUM

Join the fun at the Halloween Harvest Festival!

ation of the city's 49 museums. The festivities include performances by the Music Theater Workshop Teens Together Ensemble and various music-related activities.

September 19 – Tuesday

9 a.m. – 5 p.m. **Museum Week.** See September 18

September 20 – Wednesday

9 a.m. – 5 p.m. **Museum Week.** See September 18

September 21 – Thursday

9 a.m. – 5 p.m. **Museum Week.** See September 18

September 21 – Thursday

5:30 p.m. – 9 p.m. **World Music Festival: Chicago 2000, Opening Concert.** Dance and sway into the sunset with a mixture of traditional, spiritual and rhythmic sounds from Africa, the Latin-Caribbean, Canada and the United States. See Get Smart section for a more complete description.

September 22 – Friday

9 a.m. – 5 p.m. **Museum Week.** See September 18

September 23 – Saturday

9 a.m. – 5 p.m. **Museum Week.** See September 18

September 23 – Saturday

11 a.m. – 3 p.m. **UNITY Day.** The Field Museum, the Human Relations Foundation and the Chicago Commission on Human Relations celebrate diversity in culture and musical traditions with various hands-on artistic and musical activities.

11 a.m., Noon & 2 p.m. **Performance: Dancing with Dinosaurs: The Story of Sue.** See September 9

September 24 – Sunday

9 a.m. – 5 p.m. **Museum Week.** See September 18

September 30 – Saturday

11 a.m., Noon & 2 p.m. **Performance: Dancing with Dinosaurs: The Story of Sue.** See September 9

9:30 a.m. – 3 p.m. **U.N.O. Day.** Over 10,000 guests are expected at The Field Museum for the United Neighborhood Organization's (U.N.O.) *Take 10! Minutes With Your Child* kick-off event. The day begins with a public welcome at 9:30 a.m. and continues with musical performances and educational activities throughout the day.

October 5 – Thursday

10 a.m. – 1 p.m. **Festival: Celebración 2000: Americanos.** Enjoy music and activities that celebrate the arts and culture of Latin America. See "Get Smart" section for a complete description.

Please note that programs are subject to change. Check the informational directories located throughout the Museum for daily program listings.

October 6 – Friday

10 a.m. – 1 p.m. Festival: *Celebración 2000: Americanos*. See October 5

October 7 – Saturday

10 a.m. Lecture: *Going to Extremes: The Arctic, the Antarctic, and the Himalayas*. In a powerful opening public program, three Illinoisans who have personally experienced the earth's extremes comprise a panel to discuss what motivates humans to explore and live on the ends of the earth. The lecture meets at the Newberry Library, see "Get Smart" section for more details.

11 a.m. – 4 p.m. Festival: *Celebración 2000: Americanos*. See October 5

October 8 – Sunday

11 a.m. – 4 p.m. Festival: *Celebración 2000: Americanos*. See October 5

October 14 – Saturday

10 a.m. – 3 p.m. *Costume Creation Stations*. Create a unique costume of your favorite creature or plant with the help of artists who will encourage the use of the surrounding exhibitions for inspiration. See the "Get Smart" section for a more complete description of *Halloween Harvest Festival* activities.

11:30 a.m. & 1:30 p.m. Performance: *Dancing with Dinosaurs: The Story of Sue*. See September 9

11 a.m. – 2 p.m. *Scientists on the Floor*. See September 9

October 21 – Saturday

10 a.m. – 3 p.m. *Costume Creation Stations*. See October 14

11 a.m. – 6 p.m. *Margaret Mead Traveling Film and Video Festival*. This film festival features highlights from the largest showcase for independent cultural documentaries in the United States. See "Calendar of Events" section for a more complete description.

11:30 a.m. & 1:30 p.m. Performance: *Dancing with Dinosaurs: The Story of Sue*. See September 9

October 28 – Saturday

10 a.m. – 3 p.m. *Halloween Harvest Festival*. The Field Museum's *Halloween Harvest Festival* includes self-guided terror tours, pumpkin painting and costume creation stations. The festival culminates with a Halloween Parade and performance by Redmoon Theatre. See the "Get Smart" section for a more complete description of *Halloween Harvest Festival* activities.

11:30 a.m. & 1:30 p.m. Performance: *Dancing with Dinosaurs: The Story of Sue*. See September 9

Resource Centers

Explore topics in more depth through a variety of resources, including computer programs, books, activity boxes and much more at the Africa Resource Center and the Daniel F. & Ada L. Rice Wildlife Research. Open daily from 10 a.m. to 4:30 p.m.



ANDRZEJ FIDYK

The Field Museum hosts the American Museum of Natural History's Margaret Mead Traveling Film and Video Festival, which features highlights from the largest showcase of independent cultural documentaries in the United States.

Pawnee Earth Lodge

Visit a traditional home of the Pawnee Indians and learn about their life on the Great Plains. Open from 10 a.m. to 4:30 p.m. on weekends and at 1 p.m. during weekdays.

Ruatepupuke:

The Maori Meeting House

Discover the world of the Maori people of New Zealand at the treasured and sacred Maori Meeting House. Open daily from 9 a.m. to 5 p.m.

McDonald's Fossil Preparation Laboratory

Watch Field Museum preparators work on various fossil specimens. Open daily from 9 a.m. to 5 p.m.



JOHN WEINSTEIN/GB9746 24C

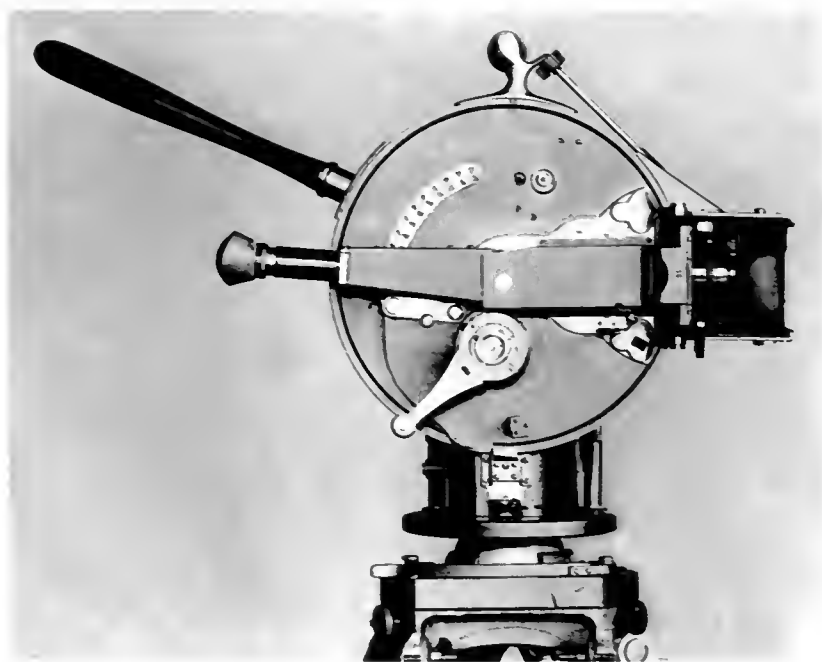
Dancing with Dinosaurs: The Story of Sue delights children of all ages.

Please note that programs are subject to change. Check the informational directories located throughout the Museum for daily program listings.

MOTION PICTURES AS TAXIDERMY: CARL AKELEY AND HIS CAMERA

Mark Alvey
Administrative Coordinator, Academic Affairs

Although time has diminished his celebrity, Carl Akeley's name is still familiar to those steeped in the age of exploration, natural history and the art of taxidermy. He was The Field Museum's Chief Taxidermist from 1896 to 1909. Akeley revolutionized taxidermy and museum dioramas with *The Four Seasons* deer groups in *Nature Walk* and *The Fighting Bulls* that stand in Stanley Field Hall; the basic principles of his groundbreaking techniques are largely unchanged today. His African collecting trips for the Museum inspired no less an adventurer than President Theodore Roosevelt to undertake his famed 1909 safari. Akeley was also a sculptor (witness the *Nandi Lion Spearing* bronzes on the Museum's ground floor), and an inventor (with patents on a WW I-era search light and a cement gun, among many others). From the standpoint of both zoological documentation and popular culture, however, Akeley's most important invention was surely the Akeley Motion Picture Camera, which countless newsreel cameramen, documentary filmmakers and Hollywood cinematographers would come to rely on in the '20s and '30s.



The Akeley Motion Picture Camera. Because of its distinctive shape, the Akeley was affectionately dubbed "the pancake" by the Hollywood cameramen who used it.

Akeley's camera was a direct product of his museum collecting experiences, born of the same impulse as his taxidermy — a passion to document the wildlife of Africa. Akeley regarded photographic gear as an essential tool on his first Field Museum expedition to Africa in 1896, and by 1906 was already working on his first designs for a motion picture camera in his Chicago studio. It was on an expedition for the American Museum of Natural History in 1910 that Akeley's quest for the ideal movie camera garnered the full force of his inventiveness. Akeley longed to film the Nandi of Uganda in a traditional (albeit staged) lion hunt, but his camera was not up to the task — the bulky apparatus was awkward at best when it came to recording the actions of quick-moving, unpredictable game. After three weeks of frustrated attempts to capture the lion-spearing on film, Akeley resolved not to return to Africa until he had created his dream camera.

Back in New York in 1911, Akeley attracted some investors to form the Akeley Camera Company, and spent his spare moments working through the design of the camera. After devising and abandoning several versions, in late 1915 Akeley patented the Akeley Motion Picture Camera. The Akeley incorporated a number of truly revolutionary advances, but the most important feature to the naturalist, and the one that would make it indispensable to other filmmakers, was the freewheeling damped-action gyroscopic tripod head that allowed the operator to pan (side-to-side) and tilt (up and down) with a steady, fluid motion, using only one hand. Previous tripod heads required left-hand cranking of two separate levers for each axis of movement, in addition to the right-hand cranking that advanced the film.

World War I created a rapid and probably unexpected demand for the camera. After inviting Akeley to Washington to demonstrate his invention, the U.S. Signal Corps adopted it for aerial reconnaissance, purchasing the Akeley factory's entire output for the duration of the war. After the war ended, newsreel companies like Pathé and Fox Movietone were quick to adopt the Akeley camera to film their "news weeklies." Such momentous events as Man O' War's final race, the Dempsey-Carpentier fight and the 1925 Shenandoah dirigible disaster were captured with Akeleys.

Not surprisingly, the Akeley also became the camera of choice for explorers and scientists. In 1921 Akeley himself used his invention, equipped with an extra-long lens, to take the first-ever motion pictures of gorillas in the wild in present-day Zaire. The list of

AMERICAN MUSEUM OF NATURAL HISTORY

expeditions that added Akeley cameras to their gear reads like a greatest hits list of early 20th century exploration: the Katmai Expedition of the National Geographic Society, the Mulford Biological Expedition to the Amazon, the American Museum Natural History Third Asiatic Expedition and the Byrd Antarctic Expeditions. Akeley took a direct role in equipping the Field Museum's 1925 Simpson-Roosevelt Asiatic Expedition with movie gear, and on the Chancellor-Stuart-Field Museum Expedition to the South Pacific, Philip Chancellor used an Akeley to record some of the earliest footage of Komodo Dragons on Flores Island, Malaysia.

The Akeley camera was also embraced by documentary filmmakers and commercial "motion picture explorers." Filmmaker Robert Flaherty took two Akeleys with him to the Arctic to film his classic *Nanook of the North* (1922), and used Akeleys in Samoa to film *Moana* (1926). Noted still photographer Paul Strand bought an Akeley after the war and worked as a freelance newsreel cameraman in the '20s, along the way shooting the experimental film *Manhatta* (1921) with artist Charles Sheeler. Explorer-filmmaker Martin Johnson used Akeleys in his dramatized (and sensationalized) wildlife films, most notably *Simba* (1928), which included lion-spearing footage shot by Carl Akeley himself, and *Congorilla* (1932).

By this time the Akeley camera was as well-known on Hollywood back lots as it was in tropical jungles. The skills of "Akeley specialists" were in demand—they were even listed separately on the American Society of Cinematographers roster. The influence of postwar German films caused producers to seek more camera movements and unusual angles, for which the Akeley was ideally suited. Thus, "Akeley specialists were called upon to lash their instruments high on the masts of ships, on the arms of derricks, or to be still different, in deep holes looking up," as an *American Cinematographer* writer put it in 1928. By the mid-'20s Akeleys were in such wide use in studios that "Akeley shots" were routinely called for in shooting scripts.

Akeleys were the natural choice when Hollywood undertook ambitious location projects, traveling to Africa for the epic *Trader Horn*, and to Newfoundland for the seafaring adventure *The Viking* (both 1931). The Akeley's deft mobility also made it the ideal tool for action and spectacle, Hollywood style. Akeley specialists shot some of the most breath-taking aerial sequences ever put on film for William Wellman's *Wings* (1927), helping it win the first Academy Award for Best Picture, and the studios sent Akeleys into the sky for dozens of subsequent aerial-actioners, like



Above: "Motion Picture Explorers" Osa and Martin Johnson in Africa with their Akeley (right, outfitted with extra-long lenses), circa 1925.

Left: Carl Akeley with an early version of his camera. Subsequent models added more innovations and features.

Frank Capra's *Flight* (1929) and Howard Hughes' *Hell's Angels* (1930). Western star Tom Mix and swashbuckler Douglas Fairbanks both called on Akeleys to capture the elaborate and daring stunts for which they were famous. Akeleys were also used to shoot the spectacular chariot races in the 1926 version of *Ben Hur*, racetrack scenes in *Silks and Saddles* (1929), and chases, stunts and daredevilry in numerous adventure serials and countless westerns (e.g., *The Last Outlaw* [1927] starring a young Gary Cooper).

The Akeley camera hung on in Hollywood for a remarkably long time considering it debuted in the teens. Although it eventually gave way to lighter and more mobile gear developed during World War II, the Akeley gyroscopic tripods continued to be used by major studios at least through the late 1980s. While Carl Akeley was undoubtedly tickled at Hollywood's adventurous uses of his invention, his own interest in the camera never went beyond his original aims, and he continued to promote the importance of nature filmmaking for educational uses. All of Akeley's artistic endeavors harked back to the business cards he had printed up while still in his teens announcing his profession: "artistic taxidermy in all its branches." In a sense, motion pictures for Carl Akeley were simply another branch of the art form that was always his primary passion. **ITF**



Left: Stephen and Peter Nash with Yoruba Twin Figures in 1967.

Above: Stephen and Peter Nash in 2000.

FROM THE PHOTO ARCHIVES

Old Friends: Then and Now

Stephen E. Nash
Head of Collections, Department of Anthropology

*"The birth of twins and their subsequent relationship to each other and to their society have always fascinated men . . ."*¹

With these words, Assistant Curator of African Ethnology Leon Siroto introduced *Field Museum of Natural History Bulletin* (precursor to *In The Field*) readers to the temporary exhibit entitled "Yoruba Twin Figures." The exhibit highlighted the acquisition of 68 Yoruba twin statues collected by English artist John Underwood. As part of the public relations efforts preceding the exhibit, Edward G. Nash, at that time Managing Editor of the *Bulletin*, arranged this photograph of his twin sons Stephen and Peter with these Yoruba statues. The photograph was published in the *Chicago Sun-Times* on July 7, 1967 under the headline "Chicago Twins Meet Yoruba Twins".²

Thirty-three years to the day after this photo was published, the Museum Loan Network, a granting agency based at the Massachusetts Institute of Technology, officially awarded The Field Museum a grant of \$14,490 to conserve, photograph and research its Yoruba Collection. Interestingly, Stephen, pictured here on the left (or is it the right?), is now Head of Collections in the Department of Anthropology and wrote the Museum Loan Network grant with assistance from Research Associate Deborah Stokes and

Curator of African Anthropology Chap Kusimba. Though his father left the Museum in 1970, The Field Museum was critical in helping Steve develop a life-long interest in the natural and social sciences. Some of his earliest and fondest memories are from The Field Museum in the late 1960s, including a Department of Geology fossil hunting trip to southern Illinois, a tour through the insect collections in the Department of Zoology and a visit to the Department of Anthropology's archaeological field school at Vernon, Arizona.

After completing a major in Anthropology and Environmental Studies at Grinnell College in 1986, Steve pursued graduate study in archaeology at the University of Arizona before coming to the Museum as a Post-Doctoral Fellow in Anthropology in 1997. He was promoted to his current position in August 1999 and looks forward to renewing an old friendship with Yoruba twins. Peter became an economics major at Macalester College and went on to earn an M.B.A. at the University of Southern California. He is now a stock and market surveillance analyst with Thomson Financial Investor Relations in Oak Brook, IL. **ITF**

¹ Siroto, Leon, 1967. "Twins of Yorubaland" *Field Museum of Natural History Bulletin* 38(7):4.

² The statues in each photograph are catalog numbers 210116 and 210118, acquired by the Museum in 1957 from Dr. William Bascom of San Francisco, who collected them at Oyo, Nigeria, at an unknown date.

ASK A SCIENTIST

Do you have a question for one of our scientists? If so, please send it to the Publications Department, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605, or via e-mail to shines@fmnh.org. Only questions published in the magazine will be answered. An archive of questions and answers that have appeared in past issues can be found at www.fieldmuseum.org/askascientist.htm.

Can I see Sue even if I don't live in Chicago?

Two identical Field Museum, *A T-rex Named Sue*, exhibitions sponsored by McDonald's Corporation will travel simultaneously to cities across the country. The tours began at Boston's Museum of Science on June 21, 2000, and Honolulu's Bishop Museum on July 15, 2000. The exhibitions will spend approximately three months in each city on the tour. A current list of cities hosting *A T-rex Named Sue* can be found at www.fieldmuseum.org/sue/travel. The centerpiece of the exhibition is a breathtaking life-sized articulated cast skeleton of Sue. The exhibition tells the amazing story of this fossil through video footage,

freestanding interactive exhibits, colorful graphics and touchable casts of bones. Interactive anatomical models will allow visitors to control the movements of a T. rex's jaw, tail, neck and forelimbs. Visitors can put together a large format 3D puzzle of Sue's skeleton, see the Cretaceous world through Sue's eyes, experience an eye-level view of Sue's massive skull and touch models of Sue's dagger-like 12" long teeth.

Marlene Rothacker
Project Administrator
The Field Museum

CELEBRATE THE PAST, PRESENT AND FUTURE OF FIELD MUSEUM ANTHROPOLOGY

The Cultural Collections Committee and the Department of Anthropology are planning a two-day event to *Celebrate a Century* of anthropology at The Field Museum. Dr. Gary Feinman, Curator of Mesoamerican Archaeology and Ethnology and Chair of the Department of Anthropology will serve as host and moderator for a symposium beginning at 4 p.m. Sunday, October, 22 followed by cocktails and dinner on Monday, October, 23 at 5:30 p.m.

The keynote speaker on Sunday, October 22, will be Dr. David Wilcox of the Museum of Northern Arizona who will present *Curating Field Anthropology—Why Remembering Matters*. Following this presentation, anthropologists Jonathan Haas of the Field Museum, Elaine Bluhm Herold of the State University of New York at Buffalo, Alice Kehoe of Marquette University and Don McVicker of North Central College in Naperville will comment on Wilcox's presentation and offer their own perspectives on the legacy and future of Field Museum anthropology.

On Monday, October 23, at 5:30 p.m., guests will gather for cocktails and have the opportunity to examine artifacts from Field Museum storerooms, hunt for objects that have been on exhibit since the 1893

World's Columbian Exposition and enjoy a slide show on the history of Field Museum anthropology. Dinner will begin at 7 and will be accompanied by short historical presentations by Sibel Barut on Henry Field, the Old World, and paleolithic archaeology; Ben Bronson on Berthold Laufer and Asian anthropology; Steve Nash on George Dorsey, Paul Martin, and North American anthropology; and John Terrell on A.B. Lewis and Pacific anthropology.



JOHN WEINSTEIN/WA113935C

Lecture Presentation Only

October 22

\$12 (\$10 students/educator
& \$8 members)

For more information, please
contact The Education Department
at 312.665.7400

Lecture Presentation and Dinner

October 22 & 23

\$100

For more information, please
contact Stephanie Powell
at 312.665.7132

Museum Tours at a Glance

For more information or free brochures, please call Field Museum Tours at 773-938-4444, or send them an e-mail at fmtours@sover.net. Please note that prices and itineraries are subject to change and that prices are in U.S. dollars, based on double occupancy.



UNDBREAD EXPEDITIONS

Each winter grey whales migrate south from their arctic feeding grounds to breed and rear their young in Baja's sheltered lagoons. In March 2001 join Dr. Janet Voight to learn about whale behavior.

Amazon by Riverboat

December 9 – 17
Duration: 9 days
Museum Leader: Botanist William Burger
Price: \$3,598, including airfare from Chicago

Egyptian Odyssey

January 21 – February 4, 2001
Duration: 15 days
Museum Leaders: Frank Yurco, Egyptologist and Research Associate at The Field Museum
Price: \$5,550, including airfare from Chicago

Classic Tanzania Safari: Wildebeest Migration

January 22 – February 4, 2001
Duration: 14 days
Museum Leaders: Zoologists William Stanley and Mary Ann Rogers
Price: \$7,940, including airfare from Chicago

On the Learning Board

Ancient Wonders of the World 2001
Treasures of Oaxaca 2001
Archaeology of Sotho 2001 A 5/01

Central America Under Sail

February 10 – 25, 2001
Duration: 16 days
Museum Leader: Botanist William Burger
Price: Starts at \$7,990, not including airfare

The Natural Wonders of Hawaii

February 14 – 24, 2001
Duration: 11 days
Museum Leaders: Zoologist Harold Voris
Price: \$5,545 including airfare from Chicago

The Natural and Cultural History of Tsavo: A Luxury Tented Safari Through the Land of the Man-eaters

March 3 – 17, 2001
Duration: 15 days
Museum Leaders: Zoologist Bruce Patterson, archaeologists Chap and Sibel Kusimba, and ecologist Barbara Harney
Price: \$8,800, including airfare from Chicago.

Baja: Among the Great Whales

March 9 – 17, 2001
Duration: 9 days
Museum Leader: Zoologist Janet Voight
Price: Starts at \$2,990, not including airfare



THE FIELD MUSEUM/2983311C

For the first time, the Field Museum is sponsoring a trip to Tsavo National Park in Kenya led by four Field Museum scientists.



SIEMER & HAND TRAVEL

The isolation of the Hawaiian Archipelagos, has allowed much of the island's extraordinary geology and biology to remain undisturbed. The February 2001 tour, led by Dr. Harold Voris, studies Hawaii's marine life through tide pooling, snorkeling and whale-watching.

Costa Rica Adventure

February 25 – March 6, 2001
Duration: 10 days
Museum Leader: Botanist William Burger
Price: \$3,995, including airfare from Chicago

Circumnavigation of Crete

May 3 – 13, 2001
Duration: 11 days
Museum Leader: Archaeologist David Reese and anthropologist Catherine Sease.
Price: \$3,795 and higher, not including airfare



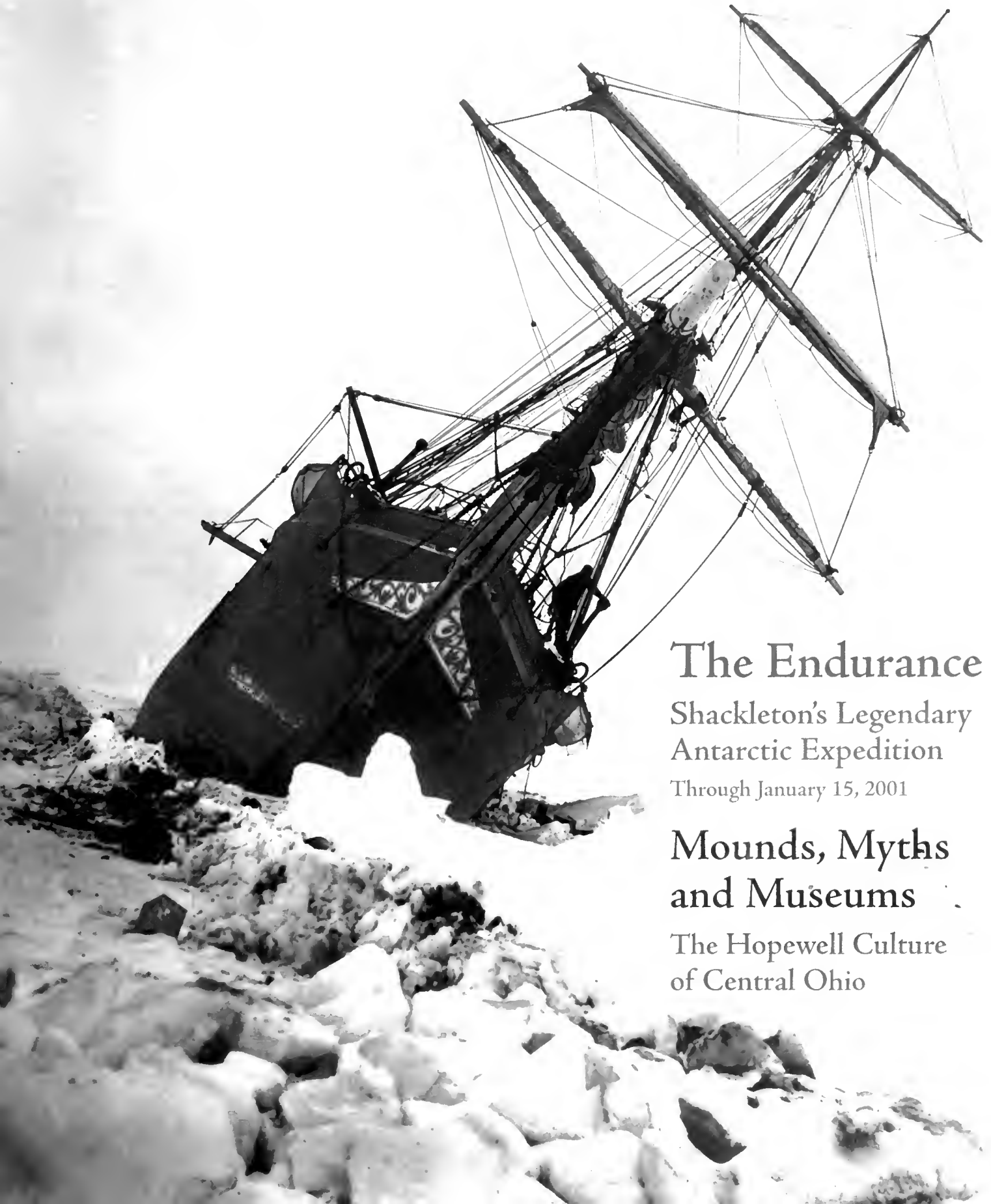
THE FIELD MUSEUM/293658

Travelers will explore this rugged, pristine park in depth, studying its incredible fauna, flora, geology, overall ecology and human history. Also see Amboseli National Park's large, well-researched herds of elephants.

INTHEFIELD

November
December
2000

The Field Museum's Member Publication



The Endurance

Shackleton's Legendary
Antarctic Expedition

Through January 15, 2001

Mounds, Myths and Museums

The Hopewell Culture
of Central Ohio

From the President



JOHN WEINSTEIN / GNB119 6

INNOVATION ROOTED IN TRADITION

Because they amass collections, museums are frequently viewed as storehouses of the past. While a good museum carefully preserves the past, a great museum finds new ways to bring its resources to the public. The vitality of a great museum lies in the interplay between traditional and new approaches to museum-based learning.

Consider the Harris Educational Loan program. When it began in 1911, a truck carried boxes of specimens and objects to classrooms throughout Chicago to establish a branch of the Museum in every school. Today, Harris provides teachers with access to interactive experience boxes, miniature dioramas and other resources. Every year, these materials teach more than 300,000 area students about nature and culture.

A more recent example of the portable outreach museum is the Soil Adventure Museum or SAM. Launched last year as an extension of "Underground Adventure," SAM trucks bring the world of soil to

life for thousands in schools and community organizations from as close as Chicago to as far away as Washington, D.C., and St. Louis, Missouri.

Creative partnerships also help us stimulate learning far outside the Museum's doors. One partnership with an indigenous community in South America is helping its citizens protect and study endangered turtles along the rivers of eastern Ecuador. The Cofan are also sharing what they know and learn with other South American communities through displays, posters and illustrated technical booklets.

While one tradition brings the Museum to the public, it remains important to bring the public to the Museum. We are on a pace to welcome 350,000 school visitors by the end of 2000—an increase from 317,000 visits last year.

In 1999, we created the Field Ambassadors program to extend our reach into the classroom and encourage increased school visits to the Museum. This program familiarizes teachers, known as Field Ambassadors, with the Museum's resources so they, in turn, can provide exciting, effective and unforgettable learning experiences for their students. This year, 64 Field Ambassadors are exposing more than 3,000 students to the wonders of natural science, and visits from these schools have increased dramatically.

Our Dozin' with the Dinos program allows children and their families to spend the night in the Museum. Here they enjoy flashlight tours of exhibitions, art-related activities and educational performances. During the 2000-2001 school year, we will welcome close to 7,000 people through 14 of these special evenings.

We are constantly exploring new ways of how technology can introduce students to all this Museum offers. Starting next month, for example, you can once again share in the process of discovery as Dr. Gary Feinman and a team of Chinese and American archeologists excavate an ancient site in China. Regular e-mail updates and digital photographs give participants in this virtual archeological expedition a first-hand view of scientific exploration.

We also offer multimedia educational programs called e-fieldtrips, which feature live broadcasts of field research and supporting online curriculum activities. The broadcasts have enabled more than 5 million students to participate in scientific investigation by giving them access to our scientists, collections and field research sites. The online activities allow students to conduct scientific experiments of their own. Since the first e-fieldtrip in 1999, the program has broadcast from a working dinosaur dig in Grand Junction, Colorado, to the live Sue unveiling this past May, which an estimated 3 million students viewed.

These are only a few examples. We constantly develop new workshops, symposia and other programs to serve students, teachers, families, younger learners and older adults. Now that 2000 signifies another successful chapter in the Museum's history, we look forward to bringing you exciting developments in 2001.

A handwritten signature in black ink that reads "John McCarter". The signature is written in a cursive, flowing style.

John W. McCarter Jr.
President & CEO

What do you think about *In the Field*?

Please send comments or questions to Amy Cranch, publications manager, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496, or via e-mail at acranch@fmnh.org.

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Anthropologists Stephen E. Nash and Jonathan R. Haas explore the facts and fiction of the Ohio Hopewell moundbuilders.

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The Cofan, an indigenous group from Ecuador, are saving endangered river turtles and teaching other communities and countries how to participate.

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Fun member events and savings will light up your holidays.

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The Field Museum Library joins the digital movement.

Your Guide to The Field

Whether it's a polar expedition, Puerto Rican guitar concert or dinosaur festival for the family, find the activity that suits you in our complete schedule for November and December.

Museum Campus Neighbors

Shedd Aquarium

Looking for a New Year's celebration the whole family can enjoy? Join Shedd Aquarium for its traditional Kiddie New Year, Sunday, Dec. 31, from 3 to 6 p.m. This family-oriented party features crafts, games, refreshments, entertainment and a noisy "midnight" countdown to 2001 that even the littlest revelers can stay awake for. Admission is \$35 for adults and \$30 for children (ages 3 to 11) and seniors. Children age 2 and under attend free. All children must be accompanied by an adult. Reservations are required; call Shedd at 312.692.3333.

Adler Planetarium

Visit Adler on Friday nights through mid-April for a free telescope viewing of exploding stars. For more in-depth learning, participate in our extensive lecture programs. Call 312.322.0323 for dates and costs on the secrets of black holes, the beauty in physics and the accelerating universe, or the discovery of pulsar planets beyond our solar system. Call 312.322.0329 to register for a free Oct. 22 Webster Lecture on "Tombs, Temples and Their Orientation: Adventures in Mediterranean Archeology." Or, take an Education Department class on stargazing

for beginners, previewing the fall and winter skies, the remarkable work of legendary Polish astronomers, and more. For class information, call 312.322.0551.

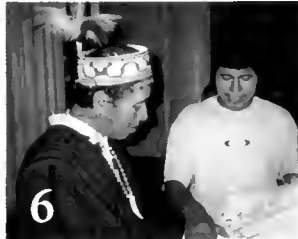
The Field Museum

See the **Calendar Section** for a list of programs and exhibitions offered in November and December.



2

Grizzly bear tooth inlaid with freshwater pearl.



At the Field, Roberto Aguinda (right) explains how the Cofan rescue endangered turtles to a Shipibo chief from eastern Peru, José Roque Maynas.



Detail from the Common American Wild Cat, Plate I, in J. J. Audubon, *The Viviparous Quadrupeds of North America* (1845-1848)

INTHEFIELD

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This issue's cover photograph, "The *Endurance* keeling over" by Frank Hurley, 1915, © Royal Geographical Society, can be viewed in the exhibition, "The *Endurance*: Shackleton's Legendary Antarctic Expedition."

The Field Museum

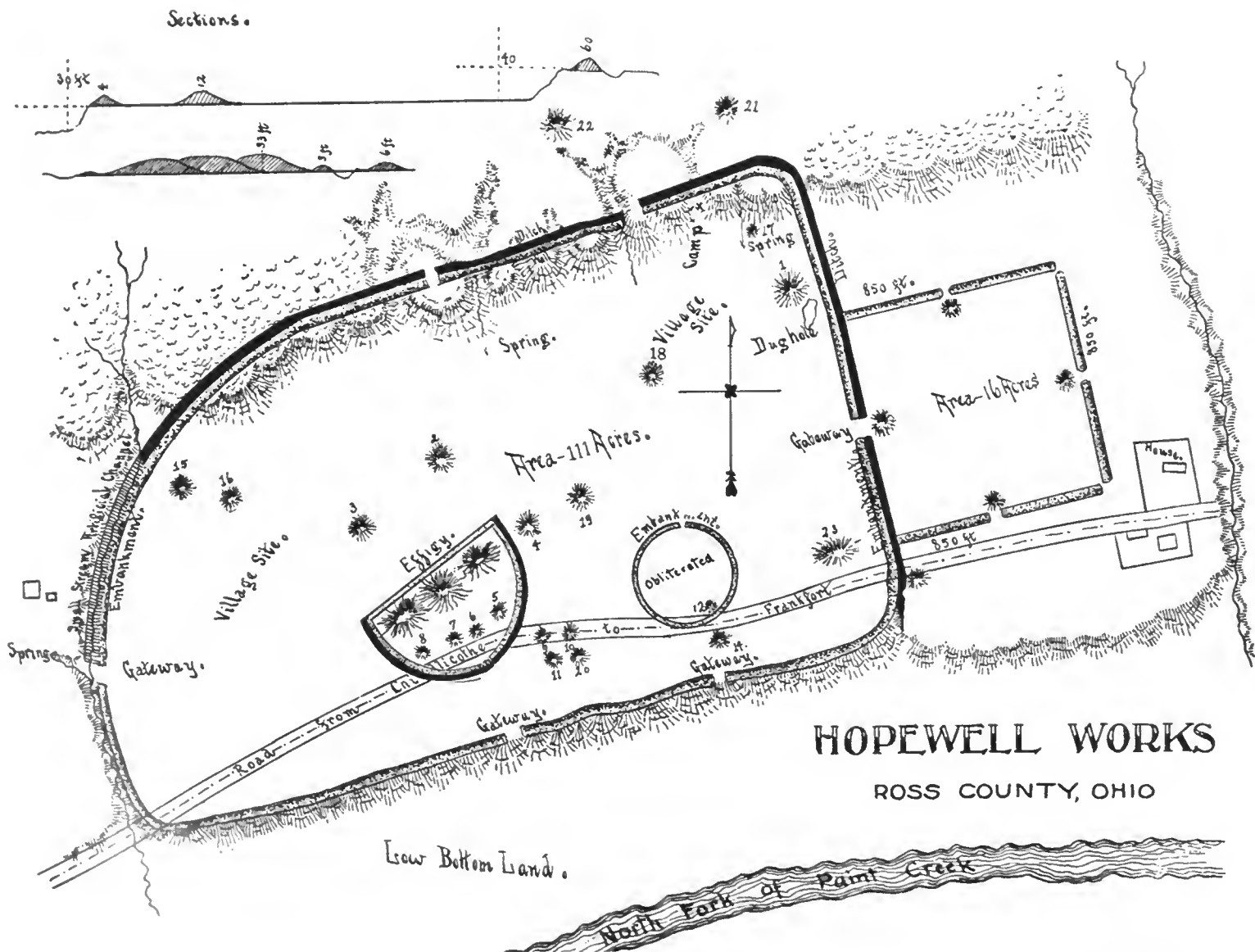
The Field Museum salutes the people of Chicago for their long-standing generous support of the Museum through the Chicago Park District.

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MOUNDS, MYTHS AND MUSEUMS: THE HOPEWELL CULTURE OF CENTRAL OHIO, 100 B.C.—A.D. 400

Stephen E. Nash and Jonathan R. Haas, Department of Anthropology



THE FIELD MUSEUM/CSA39651

Early archaeological rendering of the Hopewell Site, including plan and cross sections.

In the land we call Ohio, a sophisticated, flamboyant and prosperous people thrived 2,000 years ago. Known by archaeologists as the Ohio Hopewell, they were successful gatherers, hunters, gardeners and engineers. They built large ritual and burial mounds without the aid of draft animals such as horses or oxen, traded all over North America without knowledge of the wheel, and developed sophisticated naturalistic and geometric art forms and styles that distinguished them from other cultures across the continent.

Developing our understanding of Hopewell culture is a story of anthropological research at The Field Museum, from the earliest excavations in the 1890s through collections-based research today.

Who were the Ohio Hopewell?

The Ohio Hopewell were one of dozens of prehistoric, largely autonomous cultures present all over North America 2,000 years ago. Recent radiocarbon dating of organic remains in The Field Museum collection by Dr. N'omi Greber, curator of archaeology at the Cleveland Museum of Natural History, has confirmed that the Hopewell thrived between approximately 100 B.C. and A.D. 400. Their cultural center was located in southern Ohio, and the Hopewell Site, for which the culture is named, is now part of the Hopewell Culture National Historic Park near Chillicothe, Ohio.

The Ohio Hopewell survived in a lush environment by gathering wild plants, nuts and seeds, and hunting wild deer, turkey and fishes. Though maize horticulture was introduced to the Ohio Hopewell by about A.D. 100, they were never full-time maize agriculturalists and instead tended local oily (e.g., sumpweed and sunflower) and starchy (e.g., goosefoot, maygrass, erect knotweed, little barley) seeds and plants. They did, however, make ritual use of corn to supplement their already diverse diet. Despite their relatively well-balanced diet, life was not always easy.

Physical ailments, including arthritis, rickets, osteoporosis, tuberculosis and syphilis, plagued individuals, and the average life expectancy was much shorter than it is today.

What makes the Ohio Hopewell so unusual among prehistoric North American populations? Two things — mounds and objects. Burial and ceremonial mounds of various shapes and sizes, including snakes, spirals and vast complexes of



Copper celt.

JOHN WEINSTEIN/A113968C

circles, squares and walled enclosures dotted the land. The mounds, often containing elaborate funerary structures and ceremonial artifacts, ranged from small, simple, single-burial mounds to large, multiple-acre mounds constructed to honor the elite, as indicated by the sheer mass of mounds and the exotic raw materials and objects buried with the dead.

The Ohio Hopewell did not live on these large mounds, however. They lived in small homesteads and camps of one to a few households each, evenly dispersed across the valleys and organized around mound sites. It is difficult to reconstruct prehistoric societies without written records, yet we do know that the Ohio Hopewell's social and political systems changed during their 500-year history. It is likely that leadership was determined through social custom, familial lineage, persuasion and individual abilities and accomplishments.

Ohio Hopewell ritual and burial deposits contain a bewildering variety of finished artifacts and exotic raw material, often fashioned into ceremonial objects, from all over North America. Copper from Lake Superior's shores became ear spools, celts, plaques and headdresses. Freshwater pearls and grizzly bear teeth from the northern Rocky Mountains were used to make necklaces and ornaments. Mica sheets from eastern Tennessee were fabricated into silhouette and cutout forms of geometric and naturalistic objects. Soft pipestone was ground into ornate pipes with human and animal effigy forms. Obsidian from Wyoming's Yellowstone area and crystal quartz were shaped into extremely large blades and other stone tool forms. Interestingly, each raw material and finished artifact is uniquely distributed across space and through time, suggesting that the Hopewell exchanged with a vast array of groups across North America at any given moment.

Sometime around A.D. 400 the Hopewell trade networks collapsed, inter-regional art styles disappeared, and moundbuilding activity in the core Ohio Hopewell area ceased. Archaeological evidence does not explain why, though a complex combination of social, environmental and other factors probably disrupted the balance Ohio Hopewell culture had enjoyed for five centuries. It is important, however, that we resist saying the Ohio Hopewell "mysteriously disappeared." Rather, they changed the way they lived off the land and, like other well-known ancient cultures, faded from their dominant position. Descendants of the Ohio Hopewell exist in Native American populations today.



Effigy figurine.

JOHN WEINSTEIN/A113973C

The Hopewell Site and Collection

The Hopewell Site at Paint Creek in Ross County, Ohio, is massive, with at least 38 mounds scattered over about 110 acres. Its most prominent feature is a rectangular earthwork enclosing more than 99 acres that follows the contours of the creek's north fork. A smaller square earthwork conjoins the enclosure's eastern side, and another D-shaped enclosure surrounds the largest mound inside the larger rectangular enclosure.

The contents of Hopewell Site mounds are impressive. Mound 2 held more than 8,000 chipped stone disks made of Knife River flint from South Dakota. Mound 11, two feet high and 45 feet in diameter, contained a ritual cremation deposit with nearly 500 pounds of obsidian from Yellowstone National Park in Wyoming. Mound 17 contained one individual buried with 3,000 sheets of mica, a silicate mineral from eastern Tennessee and southwestern North Carolina, and 200 pounds of galena, a bluish gray mineral that forms in perfect cubes in western Illinois and elsewhere.

Mound 25, the largest and arguably most complex mound at the Hopewell Site, consisted of three segments that covered a central building complex flanked by plaza areas. It is 500 feet long, 180 feet wide, 30 feet high and contained more than 250 burials. The central buildings, which housed burials and groups of artifacts, including one with 150 ceremonial obsidian spear points and 63 copper celts, were destroyed before the final construction of the mound. Layered deposits indicate that these mounds were used over generations of time. In short, Mound 25, and others like it, was not constructed as a mound *per se*; it was constructed to cover ritual and ceremonial spaces filled with deposits of exotic raw materials or finished artifacts.

The Hopewell Site stands out in Ohio Hopewell culture. It is more massive, elaborate and complex. It has received the most archaeological attention, particularly because of its artifact types and features. And it has greatly influenced our understanding of Hopewell life.

Recent Research

The Field Museum and the Ohio Historical Society now curate the massive collections created from the first expeditions in the 1890s and 1920s. The Kalamazoo Valley Museum greatly enhanced our collection this year with a major donation, including

at least 45 objects that we had given them in 1931, and they are now giving back. The new objects have been fully integrated into our collections, fascinating archaeologists who continue to tease additional information from the vast materials yet unanalyzed.

To enhance research access to our rich Hopewell collection, we recently reorganized and computerized it with support from the National Endowment for the Humanities. Recent analyses have focused on a variety of topics ranging from Hopewell iconography to geophysical origins of silver and other minerals, to paleodemographic and paleopathology analyses of human remains.

In 1998, The Field Museum awarded a Karl P. Schmidt Fellowship to Dr. Greber to obtain new radiocarbon dates for the Hopewell collection. Because of recent technological advancements in radiocarbon dating, it is now possible to derive dates from very small samples of organic materials, such as bits of wood, plants, textiles or bone. In 1999, Greber gathered organic samples from pieces in the collection and submitted them to a radiocarbon dating laboratory. We now have 10 radiocarbon dates for the Hopewell Site, when we previously only had three, that reinforce our belief that the Hopewell lived between 100 B.C. and A.D. 400.

Earlier this year, Dr. Christopher Carr, professor of anthropology at Arizona State University, analyzed copper plaques and ornaments using digital photography, electron microprobes and image enhancement techniques. He was trying to determine whether the Ohio Hopewell attached materials such as pigments, textiles or shells to the plaques to enhance their visual imagery and symbolism. Carr's technologically sophisticated analyses testify to the value of curating museum collections, for his insights help us better understand the fascinating world of the prehistoric Ohio Hopewell.

Conclusion

The Field Museum had, and will continue to have an integral part in understanding the Hopewell culture. From one of the early successes of scientific archaeology—refuting the Myth of the Moundbuilders (see page 5)—to applying 21st century technology in the study of prehistoric cultures, Field Museum anthropologists do more than manage collections. They facilitate the creation of new knowledge. **ITF**

JOHN WEINSTEIN/A113969C



Obsidian blade.

JOHN WEINSTEIN/A113971C



Effigy pipe.

THE MYTH OF THE MOUNDBUILDERS

Early Euro-American attempts to understand the source and function of mounds in eastern North America resorted to pure, unabashed speculation based on Biblical, historical and mythical texts. Published theories attributed the mounds to the Asians, Celts, Egyptians, Hindus and other groups that, we now know, never came close to the Americas in ancient times. Other theories, later known as the Lost Race Theory or the Myth of the Moundbuilders, held that a technically advanced, artistically sophisticated super-race of Anglo or Asian origin created the mounds but then disappeared or was vanquished by intruding Native Americans. Anthropologist Donald Blakeslee has recently found archival evidence that the Myth of the Moundbuilders may be attributed to one individual—John Rowzee Peyton.

In 1774, the intrepid, creative and socially connected Peyton was arrested for unknown reasons in Santa Fe, N.M. During his incarceration he convinced the jailer's daughter to help him and his servant break out of jail. After a successful escape, the trio acquired an old, rudimentary map of the American West and walked to St. Louis, Mo. During an arduous four-month flight, the trio took time out to excavate a burial mound in central Kansas. Though not considered scientific, their excavation constitutes one of the earliest documented archaeological examinations in the New World. Peyton's diaries describe the investigations and speculate about a super-race of technological sophisticates that created the mounds.

The Peyton family was prominent in Virginia's political and intellectual circles, befriending such notables as Ben Franklin and Patrick Henry. By the time John Rowzee Peyton arrived in Washington, now a seasoned fugitive and partially paralyzed Revolutionary War hero, he was the talk of the town. Books containing various permutations of his Myth of the Moundbuilders were published, and resolving who constructed the mounds, as well as other mounds discovered in the Southwest, came to dominate the archaeological agenda between the 1780s and the 1880s.



Moorehead's excavation crew at their field camp, 1891.

The myth—inaccurate, speculative and fantastic though it was—served several socio-political functions that helped maintain its appeal, despite the lack of material evidence to support it. It satisfied romantic notions that superhuman forces created the mounds; it justified Euro-American emotional prejudice against Native Americans who, they believed, could not possibly have created the mounds; and it supported Biblical and mythical explanations of other phenomena around the world. In short, the Myth of the Moundbuilders helped European Americans justify exploitation of Native Americans by suggesting that they were technologically inferior, or had somehow regressed, from the sophisticated moundbuilder culture.

Serious scholarly attention to resolving the moundbuilder question began with the 1820 publication of Caleb Atwater's *Archaeological Americana*, which detailed numerous mound groups in Ohio and elsewhere but did not attempt to explain their origin. Between 1825 and 1840 political events such as moving Native Americans to reservations did nothing to dissuade moundbuilder believers.

Ephraim G. Squire and Edwin H. Davis were the next archaeologists to tackle the issue when, in 1845, they

visited and mapped the Hopewell Site and excavated four or five mounds. In 1848, Squire and Davis' report was published as the first scholarly contribution of the newly founded Smithsonian Institution. Like Atwater, their predecessor, they offered descriptions but not explanations of the mounds, and for the next 50 years, almost no systematic field research was conducted on Ohio Hopewell sites.

Warren K. Moorehead supervised the first formal excavations of the famous Hopewell Site in Ross County, Ohio, in 1891 and 1892. Moorehead's excavations collected artifacts for the 1893 World's Columbian Exposition at Chicago and illuminated the moundbuilder problem. As he wrote in *Primitive Man in Ohio* in 1892, "The purpose of our book is to do away with certain of these illusions... The time has come when we prefer facts to flights of fancy." Indeed, the materials he recovered became part of The Field Museum's founding collection in 1893 and helped slay the mighty Myth of the Moundbuilders. Today, a richly detailed archaeological record helps us recognize that the marvelous mounds and material culture of the Hopewell were the products of Native American genius and creativity. **ITF**

PROJECT TOOLBOX: SUPPORTING COMMUNITY CONSERVATION IN THE ECUADORIAN AMAZON

Dan Brinkmeier, community outreach program developer, Environmental and Conservation Programs

Zábalo, Ecuador: A small group of men and women cluster around the glowing screen of a laptop as they tap in numbers on a keyboard. Others take turns reading figures from their hand-written notes in their own language, Cofan. The data they enter into a spreadsheet—changes in the river's temperature and level, rainfall and the number of turtle eggs found in nests—will be used to help the Cofan and scientists understand environmental effects on endangered river turtles.

Suddenly, chaos erupts. The group is yelling excitedly in Spanish, "It's a little animal!" A man runs to tell me that an "animal" is in the computer! I see that they have accidentally activated the help menu and are experiencing 21st century technological humor. An animated icon of a bug-eyed "paperclip man" wiggles and whirls across the blinking screen—an animal that couldn't exist in their wildest dreams. I close out the help menu, and the cartoon paperclip jumps up, spins around and disappears from the screen, the Cofan laughing and waving goodbye. Modern technology crashes headlong into the rainforest, sometimes with amusing consequences.

This is just another typical day for Project Toolbox, as The Field Museum's Environmental and

Conservation Programs (ECP) collaborates with an indigenous group—the Cofan—to recover populations of two species of endangered river turtles, *Podocnemis unifilis* and *Podocnemis expansa*. This community of 25 families on the Aguarico River, deep in the Ecuadorian rainforest, collects baby turtles from their nests on the river's beaches, and then raises the hatchlings for one year before releasing them back into the wild. Larger, and with harder shells, the yearlings have a greater chance of escaping predation and surviving into adulthood. Combined with a moratorium on turtle hunting and collection of eggs for food, this program is increasing the number of turtles in the Aguarico River.

For conservationists, the key to this successful grassroots effort comes from within the community itself. This is a Cofan-based initiative that capitalizes on their knowledge of the environment. Now, in collaboration with The Field Museum and others, the Cofan are showing the way for other communities as well.

But the rescue of endangered turtles is not the entire story. In addition to collecting data and information about the turtles and the environment for nearly 10 years, the Cofan are also demonstrating how the rainforest can be managed in a sustainable way for future generations. A gentle society, the Cofan have instituted progressive resource-use regulations on nearly 130,000 hectares of rainforest now under their control. Hunting animals such as turtles, parrots and



Left: ECP staff Sophie Twichell (standing with backpack) and Tyana Wachter (lower right), along with turtle project members, carefully open a turtle nest on a river beach. The baby turtles are removed, raised in ponds for one year and then released into the wild.



Right: The kids in Zábalo actively help save turtles. Elio Lucitante holds a yearling before it is weighed, measured and marked for its release.

monkeys is prohibited, and restricted hunting zones around the village allow each family to take only a certain number of some animal species each year. Using poisons and dynamite for fishing is prohibited. Forest resources are also protected, and families cannot sell wood for profit.

These self-imposed environmental management practices starkly contrast the uncontrolled hunting and logging the Cofan see around them on lands invaded by colonists or other indigenous groups pushed out of their own ancestral lands by unregulated development. The Cofan reserve at Zábalo stands as a sanctuary of protected rainforest in a world where rivers are polluted with oil spills, animals have disappeared from habitats and forests are clear-cut for raising cattle and crops that exhaust fragile tropical soils. The Cofan are alarmed and struggle to combat what is happening around them.

Museum initiatives with the Cofan also include ECP's Robin Foster's development of visual reference guides that identify local plants using scientific and Cofan names, and labeling trees and vines along an interpretive trail at Zábalo. As part of this ongoing collaboration to document Cofan knowledge and use of plants, Zábalo president Roberto Aguinda recently spent eight weeks at the Museum's herbarium, thanks to a gift from Mrs. Robert D. Hyndman. The Cofan people were once renowned throughout the Ecuadorian Amazon for their extensive knowledge of medicinal plants, and that heritage now benefits the Museum.

The Cofan realize that if they are going to help protect the rainforest, they cannot do it alone. The community of Zábalo controls only the section of the Aguarico River that runs through its protected reserve, and since river turtles do not know the reserve's boundaries, the Cofan are reaching out to other communities — and other countries — to include the whole watershed in their conservation efforts. After learning that an indigenous community in Venezuela wanted to start its own turtle recovery project, Zábalo turtle project leader Eduardo Yiyoguaje said, "They're indigenous people... like me... and they need our help." And while working with the Museum's botany collection, Aguinda met members of an indigenous group from Peru, the Shipibo, and offered Cofan expertise to the Shipibo when they start a turtle conservation project of their own. The Shipibo, in return, offered to help the Cofan relearn how to produce pottery, a traditional skill the Cofan have lost.

To get their word out, the Museum is working with the Cofan to develop their own educational tools such as illustrated books, posters and small exhibits — appropriate resources for a rural world of poor schooling and little access to mass media. Early last year Museum staff and the Cofan designed an illustrated technical manual depicting the rescue and care of river turtles — a "comic book for conservation." Since



Above: Page from bilingual version of the turtle conservation technical booklet, with captions in Spanish and Cofan. The Cofan are the narrators in the drawings. Versions in other indigenous languages are also under way.

Left: Boys on the remote Muyumanu River in northwestern Bolivia eagerly read the Cofan's illustrated technical manual on how to save turtles.

the same turtle species are endangered throughout the Amazon, other versions of the book are being produced in different languages, including a bilingual version in Cofan and Spanish.

This past July marked the grand opening of the Turtle Project Information Center along the Aguarico River at Zábalo, next to a pond in which last year's baby turtles will grow until they are released next spring. It may appear rustic compared with more formal institutions, and may not receive as many visitors, but it is as important as any museum in the world because it symbolizes how "citizen scientists" teaching other people just like themselves is what the future of conservation is all about. It all starts right here at the ground level, with the Cofan and Project Toolbox.

Project Toolbox has been funded in part by the John D. and Catherine T. MacArthur Foundation, Patricia Schnadig-Field Dreams and the Kaye Family Foundation. To find out more about the Cofan, visit www.cofan.org. **ITF**

GIFT GIVING SIMPLIFIED AT THE FIELD MUSEUM STORE

Lisa G. Laske

Every holiday season the same troubling thoughts dance like sugarplums in my head. What do I give my friends and family who seem to have everything? Where can I shop to find unique, one-of-a-kind gifts that fit my budget? After a visit to see Sue the *T. rex*, the answer hit me — The Field Museum Store. I receive a 10 percent discount as a member, my purchases support education and research at the Museum, and the array of merchandise is amazing!

If jewelry lovers are on your list, this is the place for unique pieces. Personalized cartouche necklaces, styled after the nameplates and seals used by ancient pharaohs, are handcrafted by Egyptian artists and shipped direct from Egypt. The cartouches translate English names or words such as “peace” into hieroglyphics. If your taste leans toward turquoise and beads, consider Native American jewelry. Using a design technique called “symmetry,” Navajo artisans focus on the center of each piece and work outward to create intricate designs. I also found a beautiful

display of Native American fetishes, small stone carvings used to invoke protection, luck, fertility and healing through an association with the animal it represents. My favorite is the horned toad, said to bring good luck!

Teapots, vases, copperware, bookends and silk scarves can all be found within 15 feet of one another. This year’s Egypt in Chicago: Festival of the Sun has set the trend for collecting Egyptian artifacts, such as a pair of Pharaoh bookends or a delicate glass-blown perfume bottle. Tea lovers would relish Korean Celadon pottery teapots, replicas of Koryo Dynasty (A.D. 918-1392) pottery with their characteristic green hue. Pick up one of the numerous books on tea as a perfect companion to the teapots.

For me the gift’s origin often holds as much meaning as the gift itself. The store’s copperware from Nepal has a wonderful tale. Beautifully decorative and useful hand-hammered artifacts made under the guidance of the Association for Craft Producers support indigenous craft-focused development organizations in Nepal. The 24 blacksmiths come from low-income social groups that do not own land and depend on copper making for their livelihood. In fact, the Museum supports many impoverished nations by purchasing local artifacts to sell in the store.

If you are looking for the written word, the store offers books to please any friend or relative with an eclectic taste in literature. Colorful field guides can help nature enthusiasts identify birds, trees, flowers and other wildlife. Cookbooks featuring global foods and flavors might inspire a different holiday dinner, or select from numerous books about religions around the world. For the armchair academic the store carries more than 30 titles written by Field Museum scientists ranging from memoirs of a paleontologist to the man-eating lions of Tsavo to tree-ring dating. For young readers, Jan Wahl’s *The Field Mouse and the Dinosaur Named Sue* (Scholastic Inc., 2000) is a delightful tale told by a curious mouse of how Sue came to The Field Museum.

Cookbooks, vases, candles, birdhouses and hundreds of children’s games, books and t-shirts — the list runs long. I can’t think of a better way to prepare for the holidays than touring my favorite Field Museum exhibits and then finding rare gifts in the store for those hard-to-buy-for friends and relatives. The store is open daily from 10 a.m. to 5 p.m., and some items can be purchased via phone or mail forms located at www.fieldmuseum.org. For additional store information, call 312.665.7694. **ITF**



A delight for all ages and interests, The Field Museum Store is a New World marketplace embodying the extraordinary diversity for which the Museum itself is so well known.

JOHN WEINSTEIN/GMB794C

Membership News

NOTES ON SHOPPING DAYS, PROGRAMS AND VISITING GUESTS

Member Double Discount Shopping Days

On December 2, 3 and 4, enjoy a double discount off merchandise purchased in the Museum Stores, where you will find an abundance of distinctive hand-crafted gifts, educational toys, books and festive souvenirs to please anyone on your holiday gift list. Instead of your regular 10 percent discount, receive 20 percent off nearly all of your purchases in The Field Museum stores.

ASTC Reciprocal Admission Program

Since May, The Field Museum has been a member of The Association of Science-Technology Center's (ASTC) Reciprocal Free Admission Program, which offers you free admission privileges when visiting one

of the more than 200 institutions in 50 states and several foreign countries that participate. These privileges are subject to restrictions established by each institution, so it is wise to call before visiting. Call the membership department at 312.665.7700 if you would like to receive a roster of participating institutions.

Visiting with a Guest

Members often visit the Museum with a non-member guest who is required to pay admission. To expedite purchasing tickets for your visitors, you can now obtain admission and special exhibition tickets at the Membership Desk on the south side of Stanley Field Hall. **ITF**

CHILDREN'S HOLIDAY TEA CELEBRATION

Wednesday, December 6, 4-6:30 p.m.

Every December the Women's Board hosts the Museum's Children's Holiday Tea Celebration for Field Museum members and their families. This year's celebration will spotlight one of our newest exhibits, "The Endurance: Shackleton's Legendary Antarctic Expedition." Through craft-making activities and educational programs along our Winter Wonderland Walk, guests will learn how animals and humans adapt to Mother Nature's harshest season.

As is tradition, the celebration will also include an appearance by Santa Claus and one of his merry elves, holiday music by the Stu Hirsh Orchestra and performances by the Jessie White Tumblers, Mr. Imagination, Ballet Chicago Youth Company, the Chicago Children's Choir, and stilt walkers and jugglers Frank Birdsall and Andy Head. Throughout the afternoon, guests can feast on pizza, popcorn, hot dogs, ice cream and a host of holiday treats and refreshments.

If you would like to attend, please fill out the form on the right, cut it out or photocopy it and mail to: Children's Holiday Tea Celebration, The Field Museum, Women's Board Office, 1400 South Lake Shore Drive, Chicago, IL 60605.

To receive your tickets by mail, include a self-addressed stamped envelope and a check made payable to The Field Museum. Guests cannot purchase tickets at the door. Reservations are limited, so please reply early. For more information, call 312.665.7135. **ITF**



KIMBERLY MAZANEK/GN89527 29AC

Ballet Chicago Youth Company.

The Women's Board Children's Holiday Tea Celebration

Please fill out this form, cut it out or copy and mail to:

Children's Holiday Tea Celebration, The Field Museum, Women's Board Office,
1400 South Lake Shore Drive, Chicago, IL 60605

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE _____

Adult Members at \$12 each	NO. OF TICKETS _____	PRICE _____
Adult Non-Members at \$17 each	NO. OF TICKETS _____	PRICE _____
Children (13 and under) at \$7 each	NO. OF TICKETS _____	PRICE _____
Total	=====	=====

Your Guide to The Field

Inside

- 1 Exhibits
- 3 Calendar of Events
- 5 Get Smart
- 7 Free Visitor Programs

THE ENDURANCE: SHACKLETON'S LEGENDARY ANTARCTIC EXPEDITION



FRANK HURLEY, 1915 © ROYAL GEOGRAPHICAL SOCIETY

Through striking photographs, vintage films and diary excerpts, "The Endurance: Shackleton's Legendary Antarctic Expedition" tells a true drama of adventure, courage, heroism and survival against a brutal polar backdrop. It follows Sir Ernest Shackleton's 1914 expedition to Antarctica, when his ship sank and he traveled 800 miles in a lifeboat to rescue his crew, who lived in severe conditions for nearly a year. Frank Hurley was the ship's photographer whose bold, experimental approach inspired a dive into icy waters as the ship descended to retrieve his glass plate negatives.



FRANK HURLEY, 1915 © ROYAL GEOGRAPHICAL SOCIETY

14 January, 1915. "This ice was more like serracs than pack ice for it was so tossed, broken & crushed. Great pressure ridges thrown up 15 to 20 feet in height bear evidence of the terrific force & pressure of the ice in these latitudes." (Hurley, diary).

This exhibition was developed by the American Museum of Natural History with generous underwriting support from Mr. and Mrs. Joseph F. Cullman, III. Images by Frank Hurley are from the collections of the Royal Geographical Society (with the Institute of British Geographers), the Scott Polar Research Center and State Library of New South Wales. "The Endurance" runs through Jan. 15, 2001.

Hauling the James Caird. "We all followed with the heavier boat on the composite sledge. It was terrific work to keep it going. We all did our best but were practically exhausted by the time we reached the new camp, No. 4, barely $\frac{3}{4}$ miles away." (Lees, diary). Loaded, the boats weighed as much as a ton each.

Here is an abbreviated timeline of events to accompany the photos in the exhibit:

1914

Jan. 13 Sir Ernest Shackleton announces the trans-Antarctic expedition.

Aug.–Dec. The *Endurance* first sails from England to South America and then to South Georgia Island. On Dec. 5 it leaves South Georgia through the Weddell Sea for Vahsel Bay, Antarctica. It enters pack ice two days later and still proceeds toward the continent.

1915

Jan. 18 One day's sail from the continent, the *Endurance* becomes trapped.

Feb.–Oct. Ice floes carry the *Endurance* to its southernmost point, the 77th parallel. Shifting ice shakes, wrenches and throws the ship, sometimes onto its side, and dangerous leaks form in the sternpost.

Oct. 27–Nov. 1 Shackleton orders the crew to abandon ship. They establish Dump Camp and try to march on for three days. On Nov. 1 they establish Ocean Camp.

Nov. 21 The *Endurance* sinks.

December The crew hauls the three lifeboats westward, but can only go a short distance. They abandon Ocean Camp on Dec. 23, march for six days and set up Patience Camp on Dec. 29, which drifts north of the Antarctic Circle.

1916

April 9–23 The ice breaks and the crew journeys to Elephant Island in the three lifeboats. On April 16, they touch dry land

—the first in 16 months. For the next eight days, the crew prepares a lifeboat for its voyage to South Georgia Island and sets up camp for the 22 men staying behind.

April 24–May 10 Shackleton and five crewmen set sail in the *James Caird* for South Georgia Island, 800 miles away. They land safely at King Haakon Bay.

May 11–18 The band recovers mentally and physically from the voyage and plans its route to the whaling stations on the other side of the island.

May 19–20 Shackleton and two men cross snowfields, glaciers and mountains, covering 22 miles in 36 hours. From Stromness Station they plan a rescue for those on the other side of South Georgia and the 22 left on Elephant Island.

May 23–July 12 Three rescue attempts are all thwarted by unrelenting pack ice.

Aug. 25–30 With help from the Chilean government, Shackleton sets sail on trawler *Yelcho* for his fourth attempt. It finally penetrates the pack ice and rescues the 22 men left on Elephant Island.

Sept. 3 Shackleton and crew arrive in Chile. All 28 men had survived the 22-month odyssey.

1922

Jan. 5 Shackleton dies of a heart attack in South Georgia while on his fourth Antarctic expedition.

"KREMLIN GOLD:" BEYOND THE GLITTER

"Kremlin Gold: 1000 Years of Russian Gems and Jewels" brings 120 sacred and secular objects to The Field Museum in an exhibition that illuminates the grand pageant of Russian history—both glorious and tragic—as well as the objects themselves. Many have never before been publicly exhibited, while others are making their first U.S. appearance.



COURTESY OF STATE MUSEUM, MOSCOW KREMLIN, © 2000.

Most of Russia is unknown to the average American, and the objects do not fit our stereotypical vision of its vast, cold terrain. Cast in gold, worked into exquisite detail and encrusted with precious jewels, each piece represents a moment in Russian clerical or imperial history, the human story behind it surpassing its value in carat weight and beauty.

For example, in 1557 Ivan IV, also known as Ivan the Terrible, commissioned the icon cover pictured left as a frame to fit over a painting of the Madonna and child. Amidst the saints depicted along the edge is St. Anastasia, for whom Ivan's first wife was named. She died 13 years after they were married, and historians often cite this psychological trauma as a source of Ivan's reputed madness and sadism.

The "Kremlin Gold" exhibition, as evocative as the pieces themselves, expands viewers' knowledge and appreciation of Russian history. It runs through March 30, 2001.

Icon cover: Our Lady of Odigitria, 1557-60. Gold, ruby, sapphire, emerald, tourmaline and pearl.

Visit The Field Museum Store for a wide variety of Russian merchandise to complement "Kremlin Gold." Choose from items to fit every price or gift need, including lacquered boxes, nesting dolls, decorative enameled eggs, fine porcelain tableware, linens, books, jewelry, toys, stationery and holiday items such as hand-carved Santa Clauses and ornaments. (Reminder: member double discount shopping days are Dec. 2, 3 and 4.) For more information, call 312.665.7651.



PETER BOSY

Collection loaned by The State Museums of the Moscow Kremlin. "Kremlin Gold" was organized for its U.S. tour by The Field Museum in partnership with The Houston Museum of Natural Science.

KACHINAS DOLLS BRIDGING THE CULTURAL GAP



JOHN WEINSTEIN/VAT1393BC

Days after "Kachinas: Gifts From The Spirit Messengers" opened in October, Dr. Jonathan Haas, curator of North American anthropology, received a pointed letter from a fifth-grade boy disputing the labels on two wooden dolls. "Donatello and Leonardo's tags should be switched around. Donatello is the purple one and Leonardo is the blue one."

He wasn't referring to replicas of the famous Italian Renaissance artists. He was referring to the Teenage Mutant Ninja Turtles, or vibrant representations of them created by the Hopi people of northeastern Arizona. Not only did the letter allow us to fix an error, but it revealed a more global accomplishment The Field Museum is always striving for—that a Chicago child visiting our Museum could connect to an Arizona Hopi child through their mutual interest in these cartoon icons.

"Kachinas" was made possible by bequests from the collections of Marcia and Vernon Wagner and through the generous support of Donald W. Paterson. It runs through June 16, 2001.

Kachina dolls represent spirit messengers called katsinam who act as intermediaries between the Hopi world and the supernatural realm. The Hopi believe katsinam provide rain and abundant crops to ensure continued life in a harsh desert land. Small kachina dolls signifying these spiritual friends are given to children, and sometimes women, to reinforce their religious and cultural education.

Important in transmitting and safeguarding ancient Hopi traditions, kachinas also illustrate the dynamics of cultural change and adaptation as Hopi carvers respond to outside influences. Created both for traditional religious uses and commercial trade, many contemporary kachinas in the exhibition reflect new carving tools and techniques and motifs from Western popular culture.

Calendar of Events

Family Behind-the-Scenes Evening: Department of Geology

Friday, November 3, 6–8 p.m.

Did you know that The Field Museum has more than 70 scientists on staff helping us learn more about our world? Fossil preparator Jim Holstein will take you on a guided tour of the Museum's Geology Department. Get the inside scoop on how scientists collect, transport and prepare the fossils that are on display in the Museum's exhibit halls. You'll also learn about the research that goes on behind-the-scenes at the Museum and what scientists have learned about life on Earth millions of years ago. \$12; members \$10. Please call 312.665.7400 for more information or to register.

Family Field Trip: Life Underground

Saturday, November 4, 10 a.m.–3 p.m.

Discover what goes on every day in the exciting world that is just beneath our feet. Start your day at The Field Museum, where you'll be magically shrunk to the size of a bug and receive a guided tour through the "Underground Adventure" exhibition. You'll walk through a soil ecosystem that has been blown up to 100 times its normal size so that you can see what life is like through the eyes of a bug. You'll meet millions of

microscopic creatures that aren't usually visible to the human eye. Then board a bus for Lincoln Park Zoo, where you'll meet a ferret, a rabbit and other animals that make their homes in the earth. Join us to learn how life below the earth's surface sustains life above it. Fee includes round-trip transportation to the Lincoln Park Zoo and admission to The Field Museum and "Underground Adventure." Please bring a sack lunch. Beverages will be provided. \$12; members \$10. Please call 312.665.7400 for more information or to register.

Adult Course: Healing Aromatherapy/Essential Healing

Saturday, November 11, 10 a.m.–5 p.m.

*and Sunday, November 12, 10 a.m.–4 p.m.
(2 sessions.)*

Discover the healing properties and therapeutic uses of essential oils and develop your own therapeutic blend to take home. You'll learn the basics of aromatherapy, including its history, safety and distillation practices. You'll also learn the basic recipes and techniques to promote healing for the skin, body, stomach, heart, chest and lungs. \$175; members \$150. Please call 312.665.7400 for more information or to register.



On November 4, the Life Underground Family Field Trip will include a guided tour through "Underground Adventure" and a trip to Lincoln Park Zoo.

Adult Field Trip: Orthodox Cathedrals and Churches

Saturday, November 4, 9 a.m.–4 p.m.

Experience the powerful architecture of Orthodox Cathedrals and learn the history of the Orthodox Christian community in Chicago. Join church historians Harold and Faye Peponis for a day-long tour of these cathedrals, many of which were established more than a century ago by industrious immigrants who were nurtured by tradition, a love of freedom and a strong faith. Key stops include Annunciation Greek Orthodox Cathedral, Holy Resurrection Serbian Orthodox Cathedral and Holy Trinity Orthodox Cathedral—a Chicago landmark that is also on the National Register of Historic Places. Lunch is included. \$60, members \$52. Please call 312.665.7400 for more information or to register.

Pawnee Earth Lodge

Every Saturday and Sunday,

Open House 10 a.m.–4:30 p.m.

Weekdays, Programs at 1 p.m.

Experience a way of life as the Pawnee Indians lived more than a century ago out on the Great Plains. An interactive exhibition, the Pawnee Earth Lodge is a full-size replica of an 1850s Pawnee lodge. Sit on buffalo hides around the cooking fire and try to use buffalo horn spoons. Examine tools and toys made of buffalo as you listen to stories of what it was like to go on a buffalo hunt. Free with Museum admission. Call 312.665.7400 for more information.



Fossil preparator. Join us on November 3 for a behind-the-scenes tour of the Museum's Geology Department.

Performing Arts: The Puerto Rican Cuatro Conference and Festival

Conference: Friday, November 3, 10 a.m.–4 p.m.

Evening Concert: Friday, November 3, 7 p.m.

Discover the cuatro guitar—the 10-string instrument that is a compelling symbol of Puerto Rican identity. Organized by the Puerto Rican Arts Alliance, this event includes a series of public workshops for both adults and students. Enjoy musical demonstrations and learn about the history of this guitar and its significance in Puerto Rican society. The conference will culminate in an evening concert that features several of today's most important cuatro musicians. Workshops at the conference are free. Tickets to the evening concert are \$20. For more information, call 773.342.8865.



This festival, celebrating the 10-string cuatro guitar, will be at The Field Museum on November 3.

SOR JUANA FESTIVAL FEATURING LAS SUPER TEJANAS

Friday, November 10, 7 p.m.



Come hear the musical legends of Tejano music in this showcase of Latina artists. From Lydia Mendoza's pioneering recording to Selena Quitanillas' meteoric rise and tragic death, the music of Texas Mexican-American women has made a significant impact on their community. This first-time grouping includes a wide range of Tex-mex musical styles, from contemporary country to traditional romantic trios. Performers include stellar guitar player Rosie Flores, conjunto accordionist Eva Ybarra and shining stars Tish Hinojosa and Shelley Lares. This program is presented through a partnership between The Field Museum and The Mexican Fine Arts Center Museum. For more information and tickets, please call 312.738.1503.



The powerhouse musical showcase known as Las Super Tejanas will make its Midwest premiere at The Field Museum on November 10.

NEW DINOSAUR DISCOVERIES

**New Discoveries from the
Age of Dinosaurs in Madagascar**
Thursday, November 16, 6:30 p.m.

Find out what Field Museum scientists are discovering about dinosaurs and other animals that lived millions of years ago. Dr. John Flynn, chair of the Museum's department of geology, has lead numerous field expeditions in the United States, Madagascar, Mexico and South America. You'll learn what his latest research reveals about dinosaurs, mammals and "cynodonts"—mammal ancestors with some reptile-like traits. Dr. Flynn is also the associate chair of the Committee on Evolutionary Biology at the University of Chicago and the president of the Society of Vertebrate Paleontology. Tickets are \$12 for general admission, \$10 for students and educators and \$8 for members. For more information, call 312.665.7400.



Field Museum Geologist Dr. John Flynn will share his latest research on November 16.

POLAR EXPLORATIONS

The Field Museum and the Newberry Library are collaborating on this series about polar exploration to complement exhibitions at both institutions.

"The Endurance: Shackleton's Legendary Antarctic Expedition" is at The Field Museum through January 15, 2001.

"To the Ends of the Earth: Exploring the Poles" is at the Newberry Library through January 13, 2001. The Newberry Library is located in Chicago at 60 W. Walton.

For inquiries about programs at The Field Museum, please call 312.665.7400. For programs at the Newberry Library, please call 312.255.3700.



FRANK HURLEY/SCOTT POLAR RESEARCH INSTITUTE

A Social Anthropologist in the Arctic

Thursday, November 2, 6:30 p.m.
The Field Museum

Ernest S. Burch Jr. of the Smithsonian Institution's Arctic Studies Center will reflect on his experiences from 23 research trips to the Arctic over the past 40 years. Tickets are \$12 for general admission, \$10 for students and educators and \$8 for Field Museum Members and Newberry Associates.

World Premiere: The Arctic and Antarctic in Image, Word and Song

Saturday, November 11, 11 a.m.
The Newberry Library

Music, images and dramatic readings of first-person accounts let you experience the feelings of fear, excitement and accomplishment that polar explorers have faced. Written and directed by Douglas Post. Tickets are \$12 for general admission, \$10 for students and educators and \$8 for Field Museum Members and Newberry Associates.

Left: Frank Hurley, the Australian photographer whose images tell the tale of "The Endurance: Shackleton's Legendary Antarctic Expedition" at The Field Museum.

The Politics of Polar Exploration

Saturday, December 9, 11 a.m.
The Newberry Library

Take a provocative look at how the politics of gender and cultural identity influence the portrayal of polar exploration in our culture. Lisa Bloom of the University of California at San Diego presents this slide lecture. Learn about African-American explorer Matthew Henson—the unacknowledged co-claimant to the discovery of the North Pole. Find out how rethinking famous expeditions has assumed new cultural importance. Admission is free.

Mapping the Poles

Saturday, December 16, 11 a.m.
The Newberry Library

Track the history of polar cartography, beginning with the earliest European expeditions.

Curator of Maps at the Newberry Library, Robert W. Karrow Jr. draws on materials from the library's own collection to present this slide lecture. Karrow is also the curator for the current exhibition "To the Ends of the Earth." Admission is free.

These programs are made possible in part by a grant from the Illinois Humanities Council, the National Endowment for the Humanities and the Illinois General Assembly.

JULIE TAYMOR'S *THE KING STAG*

COMING THANKSGIVING WEEKEND!

Friday, November 24, 7:30 p.m.;

Saturday, November 25, 8 p.m.;

Sunday, November 26, 3 p.m.



RICHARD FELDMAN

Julie Taymor, best known for her Tony-award-winning direction of *The Lion King* on Broadway, brings her vibrant costumes, enchanting movement and remarkable puppets to the lavish Chicago Theater for three special Thanksgiving weekend performances. Performed by the American Repertory Theater, *The King Stag* is a magical Italian fable for all ages about the search for true love. The Field Museum is collaborating with the Chicago Association of Performing Arts (CAPA) to present this event, and a retrospective exhibition, "Julie Taymor: Playing with Fire," will open at the Field in June 2001.

"Julie Taymor: Playing with Fire" will feature designs from *The King Stag*, *The Lion King*, the film *Titus* and other examples of Taymor's flair for visual wizardry. The exhibit is organized by the Wexner Center for the Arts at The Ohio State University and is made possible by a generous gift from Ford Motor Company. Major support is also provided by Agnes Gund and Daniel Shapiro, the John S. and James L. Knight Foundation and PricewaterhouseCoopers.

Tickets for *The King Stag* are \$24, \$34 and \$44. Field Museum members receive a \$5 discount. For tickets, call Ticketmaster at 312.902.1500 or visit the Chicago Theater box office or any Ticketmaster outlet. Visit www.capa.com or www.fieldmuseum.org for more information.

DINOSAURS AND MORE FESTIVAL

Saturday and Sunday, November 11–12, 11 a.m.–3 p.m.

Monday, November 13, 10 a.m.–1 p.m.

Explore the world of dinosaurs at this festival for the entire family. Enjoy theater performances, hands-on activities, storytelling and demonstrations by Field Museum scientists—including Chris Brochu, who heads the research on Sue the *T. rex*. Sue Hendrickson, the fossil hunter who discovered Sue the dinosaur in South Dakota in 1990, will sign autographs from 11 a.m. to 2 p.m. each day of the festival. John Lanzendorf, whose dinosaur art collection is featured in the "Picturing *T. rex*" exhibition, will offer tours at noon on Saturday and Monday and sign autographs from 10 a.m. to noon and 1:30 to 3 p.m. on Monday. Learn about the evolution of dinosaurs through *Dancing with Dinosaurs: The Story of Sue*, the latest original musical by The Field Museum's Teens Together Ensemble. You can also search the Museum floor for remnants of ancient sea creatures, interact with colossal dinosaur puppets and create your own dinosaur with fun foam. Free with Museum admission.



GEORGE PAPADAKIS/IGN898607C

Sue Hendrickson, who discovered Sue the *T. rex*, will be signing autographs at the *Dinosaurs and More Festival*.

STAR WARS SYMPOSIUM



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The Stories Behind Star Wars and Sue: Envisioning Environments in Film and at The Field

Saturday, December 9,
8:30 a.m.–5 p.m.

Get a behind-the-scenes look at how filmmakers and museum professionals create the environments that transport us to other worlds and bring ancient creatures to life. Presenters include artists from The Field Museum's acclaimed exhibits department and award-winning film artists Lorne Peterson and Paul Huston from Lucasfilm's Industrial Light & Magic, who created models and visual effects for the *Star Wars* films. Hear how design, storytelling, model making and special effects come together to produce such industry-changing projects as *Star Wars* and "Sue." This symposium includes lunch and a viewing of "Star Wars: The Magic of Myth" and "Sue." Tickets are \$30 for general admission, \$25 for students and educators and \$23 for members.

"*Star Wars: The Magic of Myth*" was developed by the Smithsonian's National Air and Space Museum and organized for travel by the Smithsonian Institution Traveling Exhibition Service. All artifacts are on loan from Lucasfilm Ltd.

Free Visitor Programs

Every Saturday and Sunday

Family Fun at The Field

1 p.m. Story Time: Facts, Fables and Fiction. In November and December, hear a Russian folk tale, a story about Sue the *T. rex*, children around the world or Antarctica. From life today to prehistoric times, we offer a wide variety of subjects to whet the appetite and send you exploring our galleries to learn more. Story Time takes place in the "Living Together" exhibit. This program for young children and their families is sponsored by the Siragusa Foundation Early Childhood Initiative. One adult for every three children, please. For more information, call 312.665.7400.

Interpretive Station Activities

Every weekend you'll find a variety of hands-on activities throughout the Museum as you delve into the world of natural history and culture. For example, you may be able to learn what makes a dinosaur a dinosaur, see a soil scientist at work, find out what your name would look like in Egyptian hieroglyphs or dissect an owl pellet to see what the bird ate. Check the informational directories when you arrive at the Museum for a list of each day's activities.

Peaceable Kingdom Holiday Festival



THE FIELD MUSEUM/CZ55526

This tranquil winter scene is one of many on display during the holidays.

November 1–Wednesday

11:30 a.m. and 1:30 p.m. **Guided Tour: Northwest Coast Indians and Eskimos.** Discover a spectacular array of artifacts depicting two very different North American neighboring environments and cultures.

November 3–Friday

10 a.m.–4 p.m. **The Puerto Rican Cuatro Conference and Festival.** Join us for a series of public workshops on the cuatro guitar, the 10-string instrument that is a compelling symbol of Puerto Rican identity. This event is organized by the Puerto Rican Arts Alliance and includes workshops for students and adults.

November 4–Saturday

11 a.m., 1 p.m. and 2:15 p.m. **Dancing with the Dinosaurs: The Story of Sue.** Learn about the evolution of dinosaurs and the science of paleontology in this original musical by the Teens Together Ensemble.

November 8–Wednesday

11:30 a.m. and 1:30 p.m. **Guided Tour: Northwest Coast Indians and Eskimos.** See November 1.

November 11–Saturday

10:30 a.m. and noon, **Guided Tour: Northwest Coast Indians and Eskimos.** See November 1.

11 a.m.–3 p.m. **Dinosaurs and More Festival.** Explore the world of dinosaurs at this festival for the entire family. Enjoy theater performances, hands-on activities, storytelling and demonstrations by Field Museum scientists. See page 6 for details.

11 a.m., 1 p.m. and 2:15 p.m. **Dancing with the Dinosaurs: The Story of Sue.** See November 4.

November 12–Sunday

11 a.m.–3 p.m. **Dinosaurs and More Festival.** See November 11.

2:15 p.m. **Dancing with the Dinosaurs: The Story of Sue.** See November 4.

November 13–Monday

10 a.m.–1 p.m. **Dinosaurs and More Festival.** See November 11.

November 15–Wednesday

11:30 a.m. and 1:30 p.m. **Guided Tour: Northwest Coast Indians and Eskimos.** See November 1.

November 18–Saturday

10:30 a.m. and noon, **Guided Tour: Northwest Coast Indians and Eskimos.** See November 1.

11 a.m.–2 p.m. **Scientist on the Floor.** Find out more about those creepy critters that live beneath our feet from Field Museum scientist Dan Summers.

11 a.m., 1 p.m. and 2:15 p.m. **Dancing with the Dinosaurs: The Story of Sue.** See November 4.

November 25–Saturday

11 a.m., 1 p.m. and 2:15 p.m. **Dancing with the Dinosaurs: The Story of Sue.** See November 4.

11:30 a.m., 1 p.m. and 2:30 p.m. **Guided Tour: The Aztec, Maya and Their Predecessors.** Learn about the diverse and complex pre-Columbian cultures of Mexico and Central America.

November 29–Wednesday

11:30 a.m. and 1:30 p.m. **Guided Tour: Northwest Coast Indians and Eskimos.** See November 1.

Please note that programs are subject to change. Check the informational directories located throughout the Museum for daily program listings.

December 2–Saturday

10:30 a.m. and noon. **Guided Tour: Northwest Coast Indians and Eskimos.** See November 1.

11 a.m., 1 p.m. and 2:15 p.m. **Dancing with the Dinosaurs: The Story of Sue.** See November 4.

11 a.m.–2 p.m. **Scientist on the Floor.** See rarely displayed specimens from the Museum collections and hear scientists talk about their research as it relates to the “Underground Adventure” exhibit.

1:30 p.m. **Tibet Today and Faith in Exile.** Visit Tibet and Tibetan refugee sites around the world through this slide show.

December 6–Wednesday

11:30 a.m. and 1:30 p.m. **Guided Tour: Northwest Coast Indians and Eskimos.** See November 1.

December 9–Saturday

11 a.m., 1 p.m. and 2:15 p.m. **Dancing with the Dinosaurs: The Story of Sue.** See November 4.

December 13–Wednesday

11:30 a.m. and 1:30 p.m. **Guided Tour: Northwest Coast Indians and Eskimos.** See November 1.

December 16–Saturday

10:30 a.m. and noon. **Guided Tour: Northwest Coast Indians and Eskimos.** See November 1.

December 26–Tuesday

11 a.m.–4 p.m. **Peaceable Kingdom Holiday Festival.** See sidebar on previous page.

December 27–Wednesday

11 a.m.–4 p.m. **Peaceable Kingdom Holiday Festival.** See sidebar on previous page.

11:30 a.m. and 1:30 p.m. **Guided Tour: Northwest Coast Indians and Eskimos.** See November 1.

December 28–Thursday

11 a.m.–4 p.m. **Peaceable Kingdom Holiday Festival.** See sidebar on previous page.

December 29–Friday

11 a.m.–4 p.m. **Peaceable Kingdom Holiday Festival.** See sidebar on previous page.



The Pawnee Earth Lodge.

December 30–Saturday

11 a.m.–4 p.m. **Peaceable Kingdom Holiday Festival.** See sidebar on previous page.

December 31–Sunday

11 a.m.–4 p.m. **Peaceable Kingdom Holiday Festival.** See sidebar on previous page.

January 2–Tuesday

1 p.m. **Story Time: Facts, Fables and Fiction.** See Family Fun at The Field, page 7. During the first week in January this program will also be offered during the week.

January 3–Wednesday

1 p.m. **Story Time: Facts, Fables and Fiction.** See January 2.

January 4–Thursday

1 p.m. **Story Time: Facts, Fables and Fiction.** See January 2.

January 5–Friday

1 p.m. **Story Time: Facts, Fables and Fiction.** See January 2.

Resource Centers

Explore topics in more depth through a variety of resources, including computer programs, books, activity boxes and much more at the Africa Resource Center and the Daniel F. and Ada L. Rice Wildlife Research Center. Open daily from 10 a.m.–4:30 p.m.

Pawnee Earth Lodge

Visit a traditional home of the Pawnee Indians and learn about their life on the Great Plains. Open from 10 a.m. to 4:30 p.m. on weekends and at 1 p.m. on weekdays.

Ruatepupuke:**The Maori Meeting House**

Discover the world of the Maori people of New Zealand at the treasured and sacred Maori Meeting House. Open daily from 9 a.m. to 5 p.m.

McDonald's Fossil Preparation Laboratory

Watch Field Museum preparators work on various fossil specimens. Open daily from 9 a.m. to 5 p.m.

Daily Highlight Tours

Want to learn more about what you see at the Field? Take a guided tour of the exhibits that make this Museum one of the world's finest. Tours are offered Monday through Friday at 11 a.m. and 2 p.m., and at 11 a.m. and 1 p.m. on Saturdays and Sundays.

Please note that programs are subject to change. Check the informational directories located throughout the Museum for daily program listings.

RARE BOOKS, NEW FORMATS: TOWARD THE DIGITAL LIBRARY

Ben Williams, Librarian



Above: Rare classroom wall chart from Rudolph Martin's *Wandtafeln für den Unterricht in Anthropologie* (Zurich, 1902).

Opposite page top: The Museum's original charter, September 16, 1893, under the name *Columbian Museum of Chicago*.

Opposite page bottom: Detail from the *Virginian Partridge*, Plate 76, in J. J. Audubon, *The Birds of America* (1827-1838).

At any given moment 20,000 of the 265,000 total volumes from The Field Museum Library's regular research collections have been checked out by research staff, exhibit developers or education specialists. Volumes flow in and out of nine separate stack areas, and photocopiers run almost continuously as Museum staff copy essential resources for their ongoing work. And since no library can own everything it desires, an interlibrary loan specialist borrows or acquires requested materials from other holding libraries. More and more, these copies are received in electronic format and forwarded through the Museum's computer network to individual desktops.

For more than a century, as the Museum's scientific collections grew toward 21 million objects, the Library has built its research collections through purchase, gift and exchange with other institutions. Each year we receive about 3,000 journals and acquire more than 2,000 books — each one a record of the natural and cultural objects in our own Museum and other museums throughout the world. The Library's holdings could conveniently be called the collection that is used to study collections.

The Library's regular research holdings merit bibliographic and historical study in their own right, but they form only part of a broader, richer context that includes special collections of rare books, original art, archives, manuscripts and objects. This distinctive, varied treasure trove can be mined for historical insight into scientific disciplines, notable individuals and the origins and development of our Museum. With startling immediacy these special collections, which contain many objects found nowhere else, often reveal the "news that stays news" about our endless endeavor to understand the world.

Entering the Mary W. Runnells Rare Book Room one walks past the case holding our remarkable copy of Audubon's *The Birds of America* and is suddenly surrounded by original paintings and sketches by Louis Agassiz Fuertes, the best of all ornithological artist-naturalists. His watercolor field studies, created on the Museum's Abyssinian Expedition of 1926-1927, feature his favorite birds of prey poised and looking at you, the viewer, as if ready to strike.

A large table that once stood in President Stanley Field's office is usually littered with books and objects examined by researchers, visiting groups or college students from the School of the Art Institute, the University of Chicago and other institutions. One recent class surveying how fibers are used across the world left in its wake a pictographic divinatory manuscript rendered on bark by a Nakshi divine in China, our volume of tapa cloth samples collected on Captain James Cook's voyages to the Pacific in the 1770s and 1780s, and a portfolio of loose prints of classic Indian ornamental calico patterns. One might also find among the table's clutter some of our oldest Western

THE FIELD MUSEUM LIBRARY/BLACK BOX COLLOTYPE

From the Archives and Beyond

BIG MUSEUM ON THE LAKE

Amy Cranch, publications manager



As a child I wanted to be two things when I grew up — English and Laura Ingalls Wilder. I still occasionally fake an English accent to my friends' embarrassment, and while I don't

live on the prairie, my favorite TV show and hours of backyard pretend (reluctantly playing Ma because I was too tall for Laura) have deeply influenced me as an adult.

My idea of a vacation is a week in the woods. A simple cabin surpasses any hotel, and hot almond milk by the fire tastes like a fine cocktail. I relish a trickling creek, a moss-covered rock or a meadow lit by fireflies and a full moon. Finding nature — or nature finding me — has given me a greater sense of adventure, wonder and peace.

As the new editor for *In the Field*, I hope to bring some of my passion and curiosity about the natural world to the magazine. A journalist with nearly 10 years experience, including two years at the John G. Shedd Aquarium, I am learning how to put some scientific context around the splendor I observe outdoors. For *In the Field* I will look at every potential article with fresh eyes and an ear toward ensuring the magazine can be understood by our 10- and 80-year-old members alike. My desire is to make the faces and facts behind the Field more accessible to you—to keep you reading, learning and coming back.

I have the Field's commitment and the talent and foresight of my predecessors to thank for making *In the Field* the quality publication that it is. As I plan for 2001 and beyond, I will be reviewing how to even better serve our growing readership,

now at about 50,000 members, with surveys or other opportunities to add your opinion. After all, this is your publication and one of the best ways to stay connected to the Museum.

I don't anticipate writing any books like my childhood heroine's famed *Little House on the Prairie* series, but upcoming issues of *In The Field* may become my own personal anthology of all our experiences with this beloved institution. Maybe I'll call it *Big Museum on the Lake*. **ITF**

The museum's magazine first started in 1930 and was called Field Museum News. In 1944 it became The Bulletin and then changed to its current name, In the Field, in 1990. The covers below are: (top row, left to right) 1948, 1963, 1964 and 1974; (bottom row, left to right) 1985, 1988, 1997 and 2000.



Field Tidbits

LIVE FROM THE FIELD: A VIRTUAL ARCHAEOLOGICAL EXPEDITION IN CHINA

From Dec. 10, 2000, through Jan. 15, 2001, you can virtually join an archaeological field expedition in Shandong, China. In his sixth year of fieldwork, Dr. Gary Feinman, chair of The Field Museum's anthropology department, will send electronic updates about a Chinese and American archaeological team's work to investigate the origins of early civilization more than 4,000 years ago.

Consider what you will learn on this virtual expedition through regular e-mails and digital photographs:

Get a taste of the day-to-day challenges of fieldwork and the experiences of a team of archaeologists.

Hear about the team's efforts to pioneer a research method new to China called regional survey. Walking systematically over the land, scientists look for ancient pottery and other surface remains that are used to map and date the sites.

Share discoveries of ancient sites. To date, the team has covered 400 square kilometers, more than two-thirds the size of Chicago, and discovered and mapped hundreds of sites.

Gain insight to the world of anthropology and Chinese culture and life.

One teacher, whose students received e-mails from a previous dig, said, "Feinman in China was a wonderful experience for our students. They eagerly awaited each

update, charted where he was and had many lively discussions. It was a revelation to find that fieldwork does not resemble an *Indiana Jones* movie. Other students started investigating anthropology because they thought that kind of work would be very 'cool.'"

If you would like to subscribe to this FREE list, e-mail fieldexpeditions@fieldmuseum.org with the subject heading "Feinman in China." For more information, call 312.665.7557. **ITF**



Dr. Feinman (standing right) collects ceramics from the surface of an archaeological site in China with the help of his colleague, Fang Hui (white cap), and local schoolchildren.

OBTAINING MEMBER PASSES FOR SPECIAL EXHIBITIONS

Members are eligible to receive free passes to see selected special exhibitions throughout the year. Family members receive four free passes, and Individual, Senior, Student and National Affiliate members receive two passes to each special exhibition. Use them yourself or give them to friends or family members.

You can obtain your member passes three different ways:

Come to the Museum the day you would like to see an exhibition and obtain your passes on a first-come, first-served basis. Tickets are not guaranteed but are usually available before 11 a.m. each day.

Reserve your passes for a future date and time through Ticketmaster at 312.902.1500. Remember to give them your member number. Ticketmaster adds a discounted service charge and transaction fee to provide this service.

Visit the Membership Services Desk if you are visiting the Museum and would like to reserve your passes for future dates. There is no extra service charge. Regular operating hours are from 9 a.m. until 5 p.m.

If you have any questions about member events or benefits, please call the membership department at 312.665.7700 between 8:30 a.m. and 4:30 p.m. **ITF**

Field Museum Tours at a Glance



DAVE BRANTON

This winter you will have two chances — one by water and one by land — to join Field Museum Botanist William Burger and explore Costa Rica and Central America. Dr. Burger has been conducting research in Costa Rica for more than 30 years.

Central America Under Sail

Feb 10–25, 2001 (16 days)

On this 16-day odyssey, sail aboard the luxurious Wind Star in the Pacific and the Caribbean, visiting Costa Rica, Panama, Nicaragua, Honduras and Belize. Optional extension to see Costa Rica's volcanoes and cloud forest, and/or the Mayan ruins of Tikal in Guatemala.

Museum Leader:

Botanist William Burger
Price: \$7,990 and higher,
not including airfare

The Natural Wonders of Hawaii

Feb 14–24, 2001 (11 days)

Join us on an in-depth natural history excursion to Hawaii—a living museum of geology and biology. Study marine biology through exploring tide pools, snorkeling and a whale-watching cruise, and observe spectacular birds and vivid examples of volcanic activity.

Museum Leader:

Zoologist Harold Voris
Price: \$5,545, including
airfare from Chicago

On the Drawing Board

Treasures of Oaxaca, 4/01

For more information or free brochures, please call Field Museum Tours at 800.811.7244 or send them an e-mail at fmtours@sover.net. Please note that rates, prices and itineraries are subject to change and that prices are per person, double occupancy.

Costa Rica Adventure

Feb 25–March 6, 2001 (10 days)

Costa Rica's natural heritage is one of astonishing diversity. Our itinerary includes the jungle river channels of Tortuguero on the Caribbean coast, Poas Volcano and the cloud forests of Monte Verde high in the central mountains and Palo Verde's wildlife areas on the Pacific. Optional extension to Tamarindo Bay.

Museum Leader:

Botanist William Burger
Price: \$3,995, including
airfare from Chicago

The Natural and Cultural History of Tsavo: A Deluxe Tented Safari Through the Land of the Man-eaters

March 3–17, 2001 (15 days)

For the first time ever, four FM scientists are leading a trip to the spectacular Tsavo National Park, home to the legendary man-eating



TRAVEL DYNAMICS

Explore Crete, home of the ancient Minoans, with Field Museum Anthropologists David Reese and Catherine Sease, who combined have nearly 40 years of archaeological experience on this historic island. David and Catherine led last year's successful Crete voyage and look forward to again showing you the rich cultural heritage of the island.

lions. Experience the unforgettable ambiance of a luxury mobile tent camp while enjoying the company of Museum scientists involved with primary research in Tsavo. Also visit Amboseli National Park, home to large, well-researched herds of elephants, and experience urban Africa in Nairobi. Extensions available to Kenya's Indian Ocean coastline and/or Tanzania's Serengeti.

Museum Leaders: Zoologist Bruce Patterson, Archaeologists Chap and Sibel Kusimba and Ecologist Barbara Harney

Price: \$8,800, including airfare from Chicago



THE FIELD MUSEUM/ZMA092

Circumnavigation of Crete

May 3–13, 2001 (11 days)

Circumnavigate Crete on a 34-passenger luxury yacht, visiting a variety of splendid archaeological sites such as Gournia, Lato, Phaestos, Gortyn and Knossos. Explore quaint villages and breathtaking ocean views, plus the wildly beautiful Kourtaliootiko Gorge, Frangokastello fortress and Europe's only palm-tree forest.

Museum Leader: Archaeologist David Reese and Anthropologist Catherine Sease

Price: \$3,795 and higher,
not including airfare

Explore Tsavo National Park, with four Museum scientists and learn about the infamous man-eating lions that killed and ate 135 railroad workers at the end of the 19th century. Lt. Col. Patterson, the railroad's chief engineer, shot these lions, which The Field Museum later bought and still exhibits.