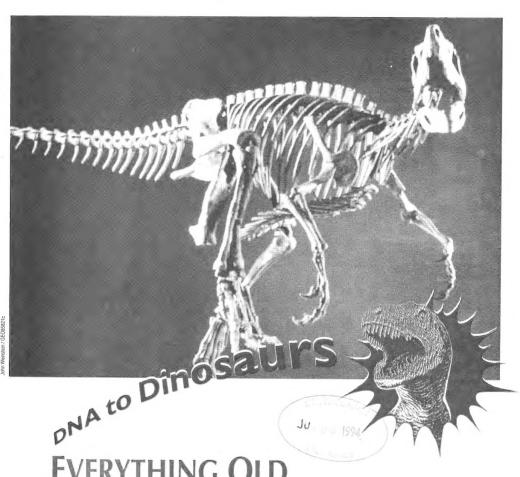
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the Field



EVERYTHING OLD

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The Bulletin of the Field Museum

1893-1993

The Field Museum Exploring The Earth And Its People

The Museum issues a call to collectors to help update its collection of Kachina dolls.

5-8

A complete schedule of events and special programs for Museum visitors in May and June

are at the forefront of evolutionary research and at the heart of the new exhibit.

MESOPOTAMIAN MYSTERY

A 5,000-year-old figurine from a burial at Kish in modern Iraq is whole again, and a zoological mystery is solved; a deer or a sivathere?

Story, Page 9





NA to Dinosaurs," the Field Museum's spectacular new permanent exhibit, opens to the public on Saturday, June 11. The debut is a highlight of the Museum's year-long Centennial Celebration, which began in September 1993 and concludes with the "Dino Dash" in September 1994. Created by the Museum's exhibit development team in collaboration

with the scientific staff and a host of outside consultants, "DNA to Dinosaurs" explores the early history and evolution of life on Earth from the appearance of the earliest single-celled life with DNA material some 3.5 billion years ago through the age of dinosaurs, restoring paleontology to a position of prominence in the Museum's public areas and firmly establishing the Museum's reputation as a leading venue for public learning on paleontological and evolutionary themes.

To mark the occasion the Museum will host "Kraft General Foods Day," a day-long celebration in honor of the exhibit's promotional sponsor. Highlights of the festivities include costumed characters who will roam about the Museum, and a live broadcast from Stanley Field Hall by WBBM Newsradio 78, the media sponsor of the exhibit.

"DNA to Dinosaurs" is located on the second floor, east side of the Museum in the Arthur Rubloff Halls of Life Over Time. The \$4-million exhibit occupies 16,000 square feet, nearly half of which (7,000 square feet) is given over to "Dinosaurs!", the final section of the exhibit located in the Elizabeth Morse Genius Dinosaur Hall. On display are approximately 650 fossils, all drawn from Field Museum collections.

The exhibit is arranged into 11 sections - an introductory area, followed by five chronologically ordered "slices of time" alternating with as many "laboratory" exploration areas. These sections take visitors on a journey through time to experience the fantastic history of life when the Earth was young. In order of appearance, these sections are: The Marquee, Time, First Life, Mutation, First Animals, Adaptation, Life on Land, Classification, Life on Four Legs, Extinction, and Dinosaurs!

The "slices of time" focus on landmark periods and events in Earth's history to relate a sense of what the world once was and the changes it has since undergone. The labs address the "hows" of evolution in a given period - how it occurred, and how it changed the Earth over the course of time. Bridging each time slice and its companion lab is the "Paleogeo-graphic Newscast," video presentations that employ a journalistic format to provide an overview of the section that follows with reports on the climate, biology, and geology of each period.

Important exhibit themes include the beginning and diversification of life, the continuity between ancient and modern life, the role of the environment in evolution, extinction processes, and the importance of classification as a tool for portraying evolutionary relationships. A total of 650 fossils - all drawn from the Museum's extraordinary collections plus theatrical reconstructions of organisms and environments, interactive games and exercises, computer-aided units, music, and audio-visual programs provide visitors with an exciting and enjoyable way to explore these themes.

- Steven Weingartner



Lead funding for "DNA to Dinosaurs" was generously provided by the Arthur Rubloff Trust. Major funding was also provided by the Chicago Park District, the Elizabeth Morse Genius Charitable Trust, the National Science Foundation, and the promotional sponsor, Kraft General Foods.

THE EVOLUTION OF LIFE OVER TIME

By Willard L. Boyd President, The Field Museum



n our Centennial year, Field Museum biologists and anthropologists understand better than most that one hundred years are insignificant in the span of evolution. So they take the long-term view in a world concerned primarily with the short term. They know that our world today is the result of evolution through eons of time and that the earth and the life it supports are infinitely more complex and unpredictable than human-kind would like.

In a period of mounting concern for the environment, the Field Museum's area of evolutionary research - systematic or organismal - is undergoing a striking renaissance initiated by a theoretical and methodological revolution. Modern systematists view the world's biotic diversity as a single genealogy by which all species, living and extinct, are interconnected. At the level of organisms, the gap between molecular and systematic biology is closing rapidly as scientists from both disciplines join to explore the basis of biological diversity and interconnectedness. At the most inclusive ecological level, a central element of this new holistic research agenda is to look to the geological record as crucial to understanding the complex biotic and environmental interactions that drive and respond to global change. This latticework of scientific research is the theme of the Field Museum's newest exhibit, "DNA to Dinosaurs."

Ironically, the Museum has never had a comprehensive exhibit on evolution, even though our collections and research are evolution-driven. "DNA to Dinosaurs" changes all of

that. It is an exhibit about the principles of evolution; it relates the story of life on earth within a chronological framework, beginning with the origin of life and concluding with the demise of dinosaurs. The exhibit highlights:

 the "whats" of evolution — what lifeforms and environments were represented at each point in time, including for example, the earliest single-celled creatures, giant plants and animals of an ancient coal forest, and a range of dinosaur species

• the "hows" of evolution — processes that contribute to evolutionary change, including mutation, adaptation, and extinction.

"DNA to Dinosaurs" underscores the great importance of the work of the Field Museum's Center for Evolutionary and Environmental Biology. Not only does the exhibit present the results of evolutionary research, but it also engages the visitor in an active role as researcher. There is a laboratory dimension to the exhibit that evokes the laboratories our curators use in the 500,000 square feet of the Field Museum which are behind the scenes.

During the past six years, the Field Museum has pioneered new exhibit techniques to appeal to a more diverse group of visitors and to involve them in more active learning. New approaches mark "DNA to Dinosaurs." The exhibit is augmented by a comprehensive interpretive program of orientation videos and experience boxes available for school and community use. Our Education Department will also provide an extensive program of teacher training. It is particularly appropriate that "DNA to Dinosaurs" provides the basis for a comprehensive science learning program because during the Second World War, a young high school volunteer — James D. Watson — worked in

our Bird Division and later went on to share the Nobel Prize for the discovery of DNA.

We are grateful to the individuals and the taxpayers who have made "DNA to Dinosaurs" possible. In recognition of the extraordinary personal gift of Arthur Rubloff we are desig nating the exhibit areas as the Arthur Rubloff Halls of Life Over Time. The Mesozoic gallery of dinosaurs will be designated the Elizabeth Morse Genius Dinosaur Hall to recognize the exceptional generosity of the Elizabeth Morse Genius Charitable Trust. These two magnanimous gifts have been matched by the people of Chicago and the United States through the Chicago Park District capital bond matching program and the National Science Foundation. Finally, generous corporate support has come from Kraft General Foods. Because of this generous support which reflects the unique American way of private-public partnership, the Field Museum is able to push out the bounds of public learning and to reach the broadest audience.

ike nature itself, the funding of the Museum's operating budget is constantaly evolving. Historically the two major sources of funding have been our endowment and Chicago tax revenue available through the Chicago Park District. Increasingly the Museum is dependent on earned income. Even so more than half of the visitors to the Museum currently pay no admission charge. Reluctantly we must now ask our visitors to help us pay for more of the expenses of the Museum. As a result there will be a special charge for the "DNA to Dinosaurs" exhibit of \$2 for adults, \$1 for children. Because Chicagoans support the Museum through their taxes, groups from Chicago schools, park programs, and other public agencies will be admitted free. In addition we will periodically distribute coupons for free admission to "DNA to Dinosaurs" to Chicagoans through the parks and other outreach programs. Because of your generosity and commitment, you as members will be admitted free to the exhibit and will be able to enter at any time, even when there is a waiting line for the exhibit.

We look forward to welcoming you on June 7, 8, and 9, the Members' Previews for "DNA to Dinosaurs."

MAMMAL FACILITY NAMED FOR WILLIAM & JANICE STREET

he Museum's Tanned Skin Facility, an internationally significant center for the study of large mammals, has been named in honor of William S. and Janice K. Street, who have been key supporters of mammal research at the Field Museum since 1947.

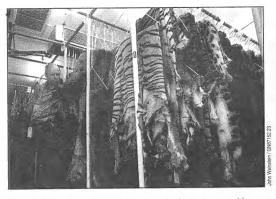
President Willard L. Boyd, in announcing the dedication of the facility, noted that the Streets have organized and led major interdisciplinary collecting expeditions to four continents, and have generously supported Museum programs enabling numerous students and associates to participate in and expand the scope of these projects. "The resulting collec-

tions," he said, "the finest of their kind, have indelibly influenced our assessments of diversity and relationships, especially in Iran and Afghanistan, but also in Nepal, Australia, and Peru."

Living mammals constitute one of the most impressive radiations of life on Earth, and include the largest living animals on land and at sea. To study all parts of mammalian diversity requires a considerable array resources - a single elephant skeleton cannot fit in specimen cases that accommodate hundreds or even thousands of shrews and mice. Under-

standing the evolution of large mammals requires that we study not only their skulls and teeth, but also their external anatomy and its variation in relation to age, sex, season, and geography.

The collections that serve these needs are mainly historic ones, because most large mammals are now severely endangered by direct persecution and habitat destruction. Preserving these scientifically valuable specimens for posterity requires special storage and climate-control conditions. Moreover, the commercial value accorded to the pelts of many large mammals raises security problems that must be met



William Stanley, collections manager, with specimens in the William and Janice Street Tanned Skin Facility.

for proper storage. "Few institutions can meet these scientific and preservational requirements," President Boyd said. "Through long-standing institutional commitments, the work of staff and volunteers, and support from the National Science Foundation, this is one of those facilities. . . . The Field Museum takes great pride in recognizing the contributions of William and Janice Street by naming this important research facility in their honor."

In the Field

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The Field Museum Exploring The Earth And Its People

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RAIN FORESTS MAY YIELD HUMAN ANCESTORS

ULIAN KERBIS PETERHANS, research associate in the Department of Zoology, has received an award from the Office of Grants and Fellowships of the American Museum of Natural History in New York. The award will enable Peterhans to pursue his research on small mammals of the Albertine Rift in central Africa. Research by Peterhans and colleagues was featured in a New Scientist article, "African Rainforest May Hold Clue to Human Origins," discussing the retrieval of chimpanzee skeletal remains. Originally published in the Journal of Human Evolution, Peterhans's work suggests that the equatorial rain forests of central and eastern Africa may be a reasonable place to look for fossil human remains. The search for human and proto-human ancestors has been concentrated in more arid regions.



JONATHAN HAAS, the MacArthur Curator of North American Anthropology, presented a paper titled "The Origins of War and Ethnic Violence" at a symposium on the anthropology of war sponsored by the Triangle Universities Securities Seminar (TUSS) in Raleigh, North Carolina. The TUSS group is conducting a series of symposia with scholars from various disciplines to examine the origins, causes, and nature of war across human history. Haas helped organize the first of these symposia, focused on the insights gained from anthropological studies of war in early societies.



Peruvian mammalogist VICTOR PACHECO, research associate in the Department of Zoology, has been admitted to the doctoral program at American Museum-City University of New York. Pacheco received his master's degree in biological sciences at the University of Illinois at Chicago in 1989, where he worked with Bruce Patterson, Field Museum curator of mammals, on the systematics and biogeography of South American bats. Since then he has been teaching and advising graduate students of his own at San Marcos University, Lima, Peru.



MICHAEL DILLON, curator of vascular plants, traveled to Cajamarca, Peru to develop a grant proposal to the McKnight Foundation with the University of Cajamarca, Ohio State University, Center for International Tropical Agriculture, and the Field Museum. The proposed project, "Development of Alternative Tropical Crops," is designed to enhance the nutrition and economy of local farmers and consumers while preserving and enhancing the biodiversity of so-called "orphan crops." Continued planning for the project is slated to take place in June with a meeting in Cali, Colombia.



RÜDIGER BIELER, associate curator of invertebrates, received a 1994 Visiting Scientist Award for work at the Smithsonian Marine Station in Fort Pierce, Florida. The Smithsonian grant will cover travel and local research expenses, including access to research vessels, laboratories, and diving facilities. This will allow Bieler to continue his projects on snails of the subtropical western Atlantic. This is the tenth grant Bieler has received for his Florida field project.

Bieler has also published a 376-page monograph on the Sundials, a widely distributed group of marine snails. The monograph, titled Architectonicidae of the Indo-Pacific (Mollusca: Gastropoda), was based on specimens collected in Bieler's research programs in Africa and the Central Pacific as well as mate-

rials studied from over 50 museum collections in the Americas, Europe, Asia, and Australia. The work is one of a very few modern monographs that treat a marine invertebrate family for the entire Indian and Pacific Oceans. Almost all of the monograph's 600 photographs, scanning electron micrographs, distribution maps, and other figures were produced by the author, who is currently working on a revised version that will include species of the Atlantic Ocean. The book was published as a joint effort by the Natural History Society of Hamburg, Germany, and Gustav Fischer Publishing House (Stuttgart/Jena/New York).



BRUCE PATTERSON, curator of mammals, has agreed to chair the opening session, titled "Biodiversity," at Rodens & Spatium, an international conference on rodents and space to be held in Rabat, Morocco in 1995. His 40-minute lecture and six other 20-minute papers will explore morphological, physiological, and behavioral adaptations of rodents to different habitat types. The colloquium is expected to attract researchers from around the world who are interested in understanding various aspects of rodent biology. Other symposia at the meeting will cover population biology, rodent-plant interactions, communication modes and cognition, and rodent-human interactions.



HAROLD VORIS, curator of amphibians and reptiles, presented an invited paper on disappearing amphibians in Southeast Asia at a symposium on "Contraction of Ranges, Disappearance and Extinction" during the Second World Congress of Herpetology in Adelaide, Australia. Voris also presented a paper on thermal ecology of the banded sea krait at a symposium on "Adaptations to Marine Life."



OLIVIER RIEPPEL, curator of fossil amphibians and reptiles, has returned from four weeks of museum research on marine Mesozoic reptiles in the Netherlands and Northern Italy. In the Netherlands, Rieppel met with a group of non-

CUBAN VISITORS

epresentatives of the Cuban Academy of Sciences and its National Museum of Natural History visited the Field Museum in March. Yazmin Peraza, director of the museum, and Gilberto Silva Taboada, senior scientist, met with Field Museum curators to discuss ways in which the two institutions might cooperate on research projects. They also talked with exhibit developers and educators about plans for updating the Havana museum's exhibits and public programs when it moves to a new location in the next few years.

Since 1964, the Academy and the museum have shared space in the Capitolio, a replica of the U.S. Capitol that was the government headquarters when Cuba was a U.S. protectorate. The museum is scheduled to move to the former U.S. embassy building. The two countries do not maintain diplomatic relations.

Silva and Peraza's North American tour—they also visited museums in New York and Toronto—was sponsored by the Center for Marine Conservation in Washington, D.C. under a grant from the MacArthur Foundation's World Environment and Resources Program.

commercial amateur collectors who have assembled a whole fauna from the lowermost Muschelkalk in Winterswijk. In Milan, Rieppel was able to study the most complete skull known of the mollusk-eating reptile Placodus.



"Anthropology and Adoption," a paper by JOHN TERRELL, curator of Oceanic archaeology and ethnology, and Judith Modell of Carnegie Mellon University, was published in the March American Anthropologist. Terrell and Modell have also been jointly invited by the General Anthropology Division and the American Ethnological Society, two units of the American Anthropological Association, to organize a symposium on the subject. Titled "Adoption, Anthropologists, and Other Disciplines: Developing Approaches to Adoption, Foster Care, and Kinship," the interdisciplinary symposium will focus on using the "window" of adoption to study other critical anthropological issues such as the construction of personhood, identity, ethnicity, and nationality. The project aims at stengthening public awareness of the diverse ways people in different parts of the world build and value human relationships, family ties, and family obligations.



BARRY CHERNOFF, associate curator of fishes and chair of the Department of Zoology, presented an invited seminar at the University of Chicago for faculty and students in biology. His seminar, on "The Dynamics of Morphological Evolution: Genetic and Developmental Constraints," discussed his recent research on the mechanisms by which the body forms of organisms evolve.



The Capitolio in

May/June 1994

CALL FOR KACHINAS

The Field Museum has an extensive collection of more than 200 Kachina dolls, almost all of them acquired on the Hopi Reservation around the turn of the century. The Hopi people reside in the stark but beautiful canyon and mesa country of northern Arizona; integral to their religion are certain spirits, known as Katsinam (plural for Katsina), who as messengers to the gods carry the prayers of the people for the continuation of life, goodwill, rain, and a bountiful harvest.

> Kachina dolls or Tithu are carved wooden representations of the Katsinam. These dolls are said to be carved by the Katsinam themselves and are given to children and sometimes to women during dances.

The dolls teach oung people about the Hopi religion, and are an ongoing blessing to the recipient. Kachinas are not played with, like dolls in other cultures, but are hung on the walls of Hopi houses to carry their message of well-being and hope.

Although the Field Museum collection well represents the artistry and range of dolls carved 100 years ago, it does not adequately reflect later changes in Kachina-carving art. Donations of recent Kachinas would greatly augment the strengths of the Museum's existing Kachina collection.

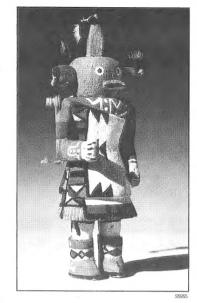
High-quality dolls made since 1960 by known artists are of particular interest. Older Kachinas would also be considered.

Anyone interested in donating Kachinas or other objects of Hopi art and material culture should contact Jonathan Haas, MacArthur Curator of North American Anthropology at the Field Museum at (312) 922-9410 ext. 641.

To learn more about Kachinas at the Field Museum visit the "Indians of the Southwest" exhibit hall on the first floor.

The Museum store carries two excellent books on Kachinas: Kachina Dolls: The Art of Hopi Carvers, by Helga Teiwes (University of Arizona Press, 1991); and The Hopi Approach to the Art of Kachina Dolls, by Erik Bromberg (Schiffer Publishing Co., 1986).

For information about the Field Museum's



Collections Committee, which holds educational programs and activities on ethnographic collections and collecting, call Julie Sass at (312)

early 1950s by Byron Harvey III of Cambridge, Massachusetts. The dolls are from the Hopi communities of Kovemsi (far right) and Hilili.

Kachina dolls

donated to the

Museum in the

PREVIEW SCHEDULE FOR "DNA TO DINOSAURS"

Special previews of the new exhibit have been scheduled as follows:

- May 24 Museum staff
- May 25 news media
- · June 1 donor groups (Explorers, Naturallists, Adventurers, and Contributors)
- June 2 Founders Council
- June 7, 8, and 9 Museum members

The exhibit opens to the public June 11.

43rd Annual **Members' Night** Friday, May 6, 1994 5 p.m. - 10 p.m.

or 100 years The Field Museum has shared its vast collections with the people of Chicago and the world. Tonight we For 100 years The Field Museum has shared its vast collections with the people of Chicago and Gardina usually off-limit invite our members to join us in celebrating The Field Museum's Centennial and to visit the Museum's usually off-limit. areas. Go behind the scenes and talk with the Museum's scientists, exhibit developers, researchers, and educators and learn more about the Museum's fascinating history and its plans for its second century

Present your Members' Night invitation or membership card at any Museum entrance for admission. Members may bring their families and two greats M.D. and the property of the card at any Museum entrance for admission. bring their families and two guests. McDonald's and Picnic in the Field will be open until 9:30 and soft drinks and cocktails will be available for purchase from a cash bar. Parking is free in the Museum lots and in the Soldier Field lot. Free Willett bus service will be available at 20-minute intervals from the Canal Street entrances of Union and Northwestern stations, and at State and Washington, Michigan and Washington, Michigan and Adams, and Balbo and Michigan.



ORLD CUP WOES

Come to the Members' Preview on June 7, 8, or 9 to see

ATTENTION OWN-A-BONE PARTICIPANTS!

your name on the Brachiosaurus donor plaque - this will be the last chance to proofread before we install the permanent plaque in June.

> If you visit the Museum before June 7, stop by the Visitor Services office on the main floor to check the printed list of donors for your name.

ith summer upon us thoughts in Chicago are certainly turning to World Cup Soccer at Soldier Field. The world's largest sporting event will undoubtedly make Chicago the center of the world's attention. Along with world class soccer will come worldclass problems with traffic and parking.

The Field Museum has developed a plan to ensure visitors will be able to reach the Museum as smoothly as possible. The World Cup events will last from June 15 to July 9, with opening ceremonies at Soldier Field on Friday, July 17 and games on Tuesday, June 21; Sunday, June 26; Monday, June 27; and Saturday, July 2.

During this period on non-game days the lots on the north and west sides of the Museum will be available as normal. However, the East Soldier Field Lot will be closed. Visitors will be able to park in Soldier Field Lot D near McCormick Place on the south side of Waldron Street. For your convenience, the Museum will operate a shuttle bus between Lot D and the Museum.

On game days Soldier Field Lot D will also be closed along with the north and west lots adjacent to the Museum. During this period, visitors are strongly encouraged to take public transportation. The CTA No. 146 bus will run a normal course and schedule during non-game days and on game days will run an altered course with the closure of McFetridge Drive. For more information, contact the Museum at (312) 922-9410.

CALENDAR OF EVENTS

DNA to Dinosaurs

OPENS JUNE 11

OLD FAVORITES JOIN NEW DISPLAYS

everal of the Field Museum's most famous displays return to public view with the opening of the spectacular new "DNA to Dinosaurs" evolution exhibit in the Arthur Rubloff Halls of Life Over Time.

In the Life on Land segment, for instance, visitors may once again view the Coal Forest, a renowned 1931-vintage diorama that has been dramatically updated and reconfigured into a walk-through exhibit that incorporates what scientists have since learned about the 310-million-year-old woodland setting it depicts. The mounted skeleton of the 80-foot Apatosaurus, long a resident of the Museum's old Dinosaur Hall, has been relocated to the new Elizabeth Morse Genius Dinosaur Hall. Just next to this specimen is the ferocious Albertosaurus, another star attraction of years past. This 30-foot member of the Tyrannosaur group, formerly the terror of Stanley Field Hall, here stands poised once again in predatory triumph over the remains of the Lambeosaurus it is about to

dayour

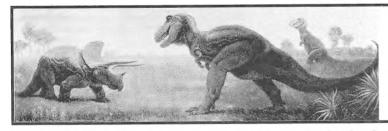
Such traditional favorites are joined by a host of new displays and other exhibit elements. These include - to name but a few carnival-style banners by artist Glenn Davies; "talk-back stations" that allow visitors to express their views on some of the themes addressed in the exhibit: three life-sized models of Herrerasaurus, a ten-foot, meat-eating dinosaur that lived 225 million years ago at the dawn of the age of dinosaurs; a walk-through environment depicting a seascape in the Paleozoic Era, some 400 million years ago; carnivaltype wheels-of-fortune that visitors can spin to select a successful adaptation for a fish or plant species, and a craps game that uses a highstakes gambling motif to demonstrate the inevitability of species extinction; a representation of the laboratory used by Field Museum geologist John Bolt in his research on the evolution of frogs and salamanders; and the Paleogeographic Newscast, a series of local-newsstyle programs that report the climatic changes, geological upheavals, and other events that marked each evolutionary period.

"DNA to Dinosaurs" carries a special admission charge of \$2 for adults and \$1 for children. Members of the Field Museum will continue to enjoy free admission and priority entrance to the exhibit.

In November 1994, "DNA to Dinosaurs" will be joined by a companion exhibit that traces the history of life from the demise of dinosaurs through the Ice Ages and the evolution of humans.

- Steven Weingartner





Lead funding for "DNA to Dinosaurs" was generously provided by the Arthur Rubloff Trust. Major funding was also provided by the Chicago Park District, the Elizabeth Morse Genius Charitable Trust, the National Science Foundation, and the promotional sponsor, Kraft General Foods.

IMAGES IN MOTION

n May and June the Field Museum will present the third and fourth "Images in Motion" light shows in a four-show series celebrating the Museum's Centennial. The shows can been seen nightly, 8:30 p.m. to 12:30 a.m., on the Museum's north facade throughout the length of their respective runs.

The third show, "The Living World," premieres on Friday, May 20 and continues through Thursday, June 2. Sponsored by Michael Reese Hospital and Medical Center, the show will complement the Museum's international biodiversity colloquium, which will be held May 21-22. Featured are images of animals, birds, flowers, fossils, people, and places from the Arctic to the rain forest.

The fourth and final show in the series, "Faces of America," will run Sunday, June 5 through Saturday, June 18. It will celebrate the diversity of American culture, traditions, and terrain with images of people, artifacts, and landscapes from the Northwest, Southwest, and Mid-Continent of the United States. This show is sponsored by The Coca-Cola Company.

The "Images in Motion" shows were produced by Technique Mirage of Atlanta. Each show makes use of slides mounted on a continuous loop which cycles all the way through



every fifteen minutes. Specially designed projectors cast the slide-images against the north facade, where they appear as huge, brightly colored pictures visible for several hundred yards along the lakefront. The pictures are in constant motion, dancing across the Museum's face and behind the classical columns even as the columns themselves are bathed in swirling colors and appear to rotate. The images are from the Field Museum's extensive photo collections or have been donated exclusively for this show.

For further information call the Centennial Hotline: (312) 322-8859.

5/6 Friday 43rd Annual Members' Night

Members are invited to join in celebrating the Field Museum's Centennial at this annual event. As always, members will be able to go behind the scenes to talk with Museum scientists, exhibit developers, researchers, and educators, and to explore the labs and other non-public areas. The festivities last from 5 to 10 p.m. and are free to members and their families.

5/7 Saturday

Seminar: 'The African Presence in Mexico'

This seminar, held in collaboration with the Mexican Fine Arts Center, complements "Africa's Legacy in Mexico." See opposite page for details.

5/14 Saturday Neighbors Night

The Field Museum's sixth annual Neighbors Night Open House offers members of Chicago's diverse communities a chance to interact, learn about each other, and enjoy the Museum's cultural exihibits and displays. A performance by the R. H. Lee School Choir will highlight the evening. All Chicago residents are invited to participate. Bus shuttle service will be provided to and from Englewood, West Englewood, Auburn-Gresham, South Shore, South Chicago, Pilsen, Chinatown, and North and South Lawndale. For more information, call the Museum's Community Outreach Program at (312) 922-9410, ext. 363 or 478.



5/28-29

Saturday & Sunday

Festival of Khmer Art

Exhibit, slide presentations, panel discussion, and performance celebrating Cambodian culture and art. The festival is made possible by the Cambodian Association of Illinois, the Cambodian Network Council, the Folk Arts Program of the National Endowment for the Arts, and the Illinois Arts Council. For details, see the Visitor Programs page.

5/17&24

Tuesdays

Course: Toni Morrison

"My Stories, My Words: Literature by Toni Morrison," is a course for adults offered on consecutive Tuesdays in May. The instructor is Danille Taylor-Guthrie, Ph.D., professor of African-American Studies and English at Indiana University Northwest. Participants will provide their own books to discuss Morrison's story, "The Bluest Eye." Hours for each session are 6 to 8 p.m. Cost is \$25 per person (\$20 for members). Preregistration is required. For information, call (312) 322-8854

5/20-6/18

Images in Motion

The north facade of the Field Museum provides the venue for the final two light shows in a series honoring the Museum's Centennial. "The Living World" will run nightly from Friday, May 20, through Thursday, June 2, and is sponsored by Michael Reese Hospital and Medical Center. "Faces of America" will run nightly from Sunday, June 5, through Saturday, June 18; it is sponsored by The Coca-Cola Company. The 15-minute shows play continuously from 8:30 p.m. to 12:30 a.m.

5/22 Sunday

Family Fossil Hunt

The Mazon Creek area provides the site for a fossil hunt that will take participants back in time to northern Illinois as it existed 300 million years ago during the coal age. Discussions of local geology and demonstrations of collecting techniques will assist beginning collectors in their search for fossils. Transportation is by school bus, and the trip will be made come rain or shine! For families, adults, and children grades 4 and up. Hours are 8 a.m. to 3 p.m., and the cost is \$25 per person (\$22 for members). Preregistration is required. Call (312) 322-8854 for space availability and more information.



5/25

Wednesday

Herpetologists

The Chicago Herpetological Society's meeting will begin at 7:30 p.m. and is open to everyone interested in amphibians and reptiles. The guest speaker is Sandra Barnett, Senior Herpetologist at the National Aquarium in Baltimore. She will speak on the captivity requirements for the several species of fascinating tree-dwelling iguanid lizards maintained at the National Aquarium. Call Cassandra Redhed at (312) 922-9410, ext. 271 for more information.

5/31

Tuesday

Lecture: Field Museum Paintings

Artist Peggy Macnamara presents a lecture at the Art Institute of Chicago titled "Field Museum Paintings: Bird and Animal Images Discovered in the Artistic Process." The lecture, at 6 p.m., is free to the public and is offered in conjunction with the Art Institute's Audubon exhibition. For information, call the Art Institute at (312) 443-3600.

6/11 Saturday Exhibit Opens: 'DNA to Dinosaurs'

The Museum's much anticipated new permanent exhibit debuts to the public. Admission to the exhibit is \$2 for adults, \$1 for children (members free). For membership information, see opposite page.

6/17 Friday

Opening Ceremonies: World Cup Soccer

The games and associated activities at Soldier Field will complicate traffic and parking for lakefront museums, through July 2. CTA service will be available.

6/19

Sunday

'Visiones: Folk Art of Latin America' Closes

Your last chance to see this touring exhibit. In the Special Exhibit Gallery, ground floor. The exhibit is sponsored by the Ford Motor Company.

LECTURE, SEMINAR ON EXHIBIT THEMES

"The African Presence in Mexico" Miriam Jimenez Roman, Schomburg Center for Research in Black Culture/New York Public Library and Malinali Meza Herrera,

Ph.D., Ethnologist and Researcher of Afro-Mexican History, Mexico City

n collaboration with the Mexican Fine Arts Center, we are pleased to host two scholars to share the heritage of Africa in Mexico. Our seminar complements the traveling exhibition, "Africa's Legacy in Mexico," featuring Tony Gleaton's photographs on display at Field Museum from April 1-July 17. While African history has been largely ignored in the study of Mexican history, hundreds of thousands of enslaved Africans were brought to Mexico after the Spanish conquest. The town of Yanga, on Mexico's Gulf Coast, was one of America's earliest "maroon communities" founded by fugitive slaves. African people have played an important role in the historic, economic, and cultural development of Mexico. The present

day and historic dynamic of the social and racial mixture will be our guest speakers' main focus.

Saturday, May 7, 10 a.m. - 2 p.m. \$30 (\$25 Field Museum and Mexican Fine Arts Center members).

Breakfast with the Curator, Lecture and Book Signing "Visiones del Pueblo: The Folk Art of Latin America"

Marion Oettinger Jr., Ph.D., Curator, Folk Art and Latin American Art, San Antonio Museum of Art

n celebration of the traveling exhibition, "Visiones del Pueblo: The Folk Art of Latin America" (on display through June 19), the curator of the exhibit, Dr. Marion Oettinger Jr., will give a guided tour followed by an atfernoon slide lecture on the diversity of artistic expression in folk art created for ceremonial, utilitarian, recreational, and decorative purposes in Latin America. A cultural anthropologist, Dr. Oettinger will share his experiences and insights traveling through Latin America to gather the exhibit pieces and his contact with



May - August 'Field Guide' available

Registration has begun for a variety of programs for all ages being offered this summer. New courses for adults include "China and Tibet by the Back Roads," African Ethics: Traditional and Contemporary," and "Exotic and Unusual Tropical Fruits." Popular field trips exploring the Indiana Dunes and traveling "Chicago Waterways" will be offered again. Families will enjoy our Family Overnight on July 15, a variety of behind-the-scenes tours, a family walk-through in "Africa," and a new late-evening program in August. Preregistration is required for all subscription programs. For a complete May - August Field Guide -Programs for Adults and Children with program descriptions and a registration form, call (312) 322-8854.

> the numerous contributing artists. While a significant portion of this exhibit is from this century, "Visiones del Pueblo" presents works from the past 400 years that demonstrate how folk art traditions have evolved from pre-Columbian times to the present. After the morning's guided tour, enjoy a continental breakfast with Dr. Oettinger.

Exhibit Walk-Through and Breakfast: Saturday, May 14, 9-10:30 a.m. \$15 (\$12 Field Museum members)

Lecture: Saturday, May 14, 2 p.m. \$7 (\$5 Field Museum members)

Space is limited and preregistration is required for both programs. Call (312) 322-8854.



The third annual "Green and Growing . . . An Urban Gardening Fair" was held March 19 and 20 in Stanley Field Hall (below). The fair's theme, "Greening the Streets," featured sessions such as Gardening for Urban Wildlife, and Quick Demonstrations on mulching and cooking with herbs. The winding "streets" filled with displays and gardens created by community organizations, commercial vendors, and Chicago Public Schools were eniovable for all. The fair was cosponsored by the Chicago Botanic Garden, City of Chicago, the Field Museum, Openlands Project, and the University of Illinois Cooperative Extension.

Gift of Membership Is Now Worth an Extra Ouarter

Buy a new or renewal membership for a friend and receive three extra months free! Fifteen months of membership for the same low price as twelve.

A Field Museum membership guarantees members invitation to the parties in June 1994, before the public opening, to preview the Museum's Centennial Festival exhibit featuring dinosaurs.

Complete the form below and drop it in the mail, or call the Membership Department at (312) 922-9410,

(Offer valid through June 30, 1994, for new and renewing individual, family, senior, and student memberships only.)

- Free admission
- Free coat checking and strollers
- Invitation to Members' Night
- Exhibit preview parties
- Free subscription to In the Field
 - 13-month wall calendar featuring exhibit photographs
- Reduced prices on selected magazines
- 10% discount at all Museum stores Use of our 250,000-volume library
- Discount on classes, field trips, and seminars for adults and children
 - Members-only tour program
- Opportunity to attend the annual
- children's Holiday Tea Children's "dinosaur" birthday card
- 10% discount at Picnic in the Field

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15 months 27 months
Family – one year \$45 / two years \$85
(Includes two adults, children and grand-
children 18 and under.)
Student/Senior – one year \$25
(Individual only, Copy of I.D. required.)
0 7 6
Field Contributor – \$100 - \$249
Field Adventurer – \$250 - \$499
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Field Naturalist - \$500 - \$999
Tread rate and \$500 \$500

Recipient

Field Explorer - \$1,000 - \$1,499 All the benefits of a family membership

Founders' Council - \$1,500

Send form to: Membership Department, The-Field Museum, Roosevelt Rd. at Lake Shore Dr., Chicago, IL 60605. Or charge your gift membership by phone: (312) 922-9410, ext. 453.

VISITOR PROGRAMS

Visiones Del Pueblo: The Folk Art of Latin America Family Festival Saturday, April 30

11am - 3pm Family Activities: Plaiting Mats, Papel Picado, & Peruvian Games Demonstrations: Haitian Painting, Peruvian Wood Carving, Stone Carving, Mexican Weaving, Guatemalan Weaving, "La Belle Creole: Haitian Dolls & Storytelling," Paper Flowers, and the making of two murals. Performances:

11am Renacer Boliviano Bolivian Regional Dances

12 Som Brasil "The Brazilian Sound of Jazz & Samba"

1pm Juan Dies & Victor Pichardo "El Son y el Corrido: Storytelling & Song in Two Mexican Ballad Traditions"

2pm Cantores Guaranies Music of Paragua 3pm Mexican Folkloric Dance Company of Chicago with Mariachi Guadalajara Alma de Mexico" Traditional Mexican Regional Dances The festival is made possible by your local Ford Lincoln-Mercury Dealers.

Visiones Del Pueblo: The Folk Art of Latin America Family Festival Sunday, May 1

11am - 3pm Family Activities: Peruvian Games, Panamanian Molas, Lottery Game, & Plaiting Mats Demonstrations: Haitian Painting, Peruvian Wood Carver, Stone Carving, Mexican Weaving, Guatemalan Weaving, "La Belle Creole: Haitian Dolls and Storytelling," Paper Flowers, & the making of 3 murals Performances:

10:30am Evanston High School Dance Group Haitian Dances 11am Bataraumba Percussion Ensemble Afro-Cuban Dance 12 Sabor a Tango "Tango: Music, 1pm Raices del Ande Music of the Andes 2pm Pleneros del Yucayeque Afro-Puerto-Rican Music 3pm Mexican Folkloric Dance

Company of Chicago with Mariachi Guadalajara "Alma de Mexico" Traditional Mexican Regional Dances

Thursday, May 5

11am - 3pm Demonstrations: Wood Block Prints & Paper Flowers Performance:

12noon Dueto Nicaragua Traditional Nicaraguan Music 11am & 1pm Celebrating Our Centennial Highlight Tour

Friday, May 6

10am - 1pm Rock & Mineral Match

Saturday, May 7

11am - 3pm Demonstrations: Mexican Weaving, Guatemalan Weaving, & Peruvian Games Performances:

1pm Juan Dies & Victor Pichardo "El Son y el Corrido: Storytelling and Song in Two Mexican Ballad Traditions

3pm **Grupa Rumba** Merengue Music from the Dominion Republic 11am Stories Around the World

Sunday, May 8

11am - 3pm Demonstrations: Wood Carving, Haitian Painting, & Mural Making

1pm Carmen Aguilar Stories of Latin America 3pm Argentina Canta Así Tango & Gaucho songs Thursday, May 12

11am - 3pm Demonstrations: Pinátas and Storytelling & Dolls from Haiti Performance:

12noon Venicio de Toledo Afro-Brazilian Rhythms

Friday, May 13 10am - 1pm Lava activity

Saturday, May 14

11am - 3pm Demonstrations: Mural Making, Wood Carving, & Haitian Painting

1pm Diego Juarez Sanchez Traditional music of the Americas 3pm Grupo Yuba Plena and Bomba Music from Puerto Rico

Sunday, May 15

11am - 3pm Demonstrations: Guatemalan Weaving, Storytelling & Dolls from Haiti, Mural Making

1pm Oxib-Kajau Marimba Ensemble Music of Guatemala 3pm Renacer Boliviano Dances of Bolivia

Thursday, May 19 11am - 3pm Demonstrations: Mexican Weaving & Puppets

12noon Keith Eric Music & Stories

Friday, May 20 10am - 1pm Terrific Teeth activity

Saturday, May 21

11am - 3pm Demonstrations: Guatemalan Weaving, Ojo de Dios, & Mural Making Performances:

1 nm Mariachi Guadalaiara Music of Mexico

3pm Ballet Folklorico de Puerto Rico "Yucayeque" Dances from the mountains of Puerto Rico 11am Stories Around the World

Sunday, May 22

11am - 3pm Demonstrations: Panamanian Molas, Haitian Painting, & Mural Making Performances:

1pm Raices Del Ande Music of the Andes

3pm Sonora Tropical Haitian Creole music

Thursday, May 26

11am - 3pm Demonstrations: Mexican Paper Flowers & Papel Picado Performance:

12noon Hector Fernandez & Maria Gitara of the Old Town School of Folk Music Latin Music & Dance

Friday, May 27

10am - 1pm Lava activity

Festival of Khmer Art. May 28-29



Saturday, May 28

National Festival of Khmer Art

9:30am Opening Ceremony 9:30am - 5pm Cambodian Culture

& Art Exhibit and demonstration of painting, sculpture, handicraft, and instruments.

3pm Traditional Music and Dance of Cambodia Performance

Sunday, May 29 National Festival of Khmer Art

9:30am - 5pm Cambodian Culture & Art Exhibit and demonstration of painting, sculpture, handicraft, and

1pm Slide Presentation celebrating the rich heritage of Cambodia. 2pm Panel Discussion of Cambodian Culture and Art. The Festival is sponsored by the

folk arts program of the National Endowment for the Arts, the Illinois Arts Council, the Cambodian Association of Illinois, and the Cambodian Network Council.

Thursday, June 2

11am - 3pm Demonstrations: Panamanian Molas & Mexican Weaving Performance:

12noon Grupo Folklorico Generacion Hispana Dances from Nicaragua, Columbia & the Dominican Republic 11am & 1pm Celebrating Our Centennial Highlight Tour

Saturday, June 4

11am - 3pm Demonstrations: Wood Block Prints, Storytelling & Dolls from Haiti, & Mural Making

1pm Raices Del Ande Music of the Andes 3pm Diego Juarez Sanchez Traditional music of the Americas 1:30pm Tibet Today: A Faith in

Exile slide program Sunday, June 5

11am - 3pm Demonstrations: Wood Carving, Peruvian Games, & Mural Making Performances:

1pm Oxib-Kajau Marimba Ensemble Music from Guatemala 3pm Grupo Rumba Merengue from the Dominican Republic

Thursday, June 9

11am - 3pm Demonstrations: Pinátas & Molas Performance:

12noon Grupo Folklorico International Dances from El Salvador, Colombia and Costa Rica 11am Stories Around the World

Saturday, June 11 "DNA to Dinosaurs" exhibit opens today. Look for Facilitators to help you explore the exhibit.

11am - 3pm Demonstrations: Tin Painting, Mural Making, & Mexican Puppets Performances:

1pm Raices del Ecuador Dances, Songs & Poetry from Ecuador 3pm Carmen Aguilar Stories from Latin America

Sunday, June 12

11am - 3pm Demonstrations: Storytelling and Dolls from Haiti,

Mural Making, & Peruvian wood carving Performances:

12 noon Carmen Aguilar Stories of Latin America 1pm Machu-Picchu Peruvian & Andean Music 3pm Argentina Canta Así Tango & Folklore

Thursday, June 16

11am & 1pm Celebrating Our Centennial Highlight Tour

Thursday, June 23

11am & 1pm Celebrating Our Centennial Highlight Tour

Saturday, June 25

11am Stories Around the World 1:30pm Tibet Today: A Faith in Exile slide program

Thursday, June 30

11am & 1pm Celebrating Our Centennial Highlight Tour

Latin American Folk Art Programs are made possible by the Ford Motor Company.



Daniel F. & Ada L. Rice Wildlife Research Station

Videotapes, computer programs, educator resources, books and activity boxes about the animal kingdom are available. Daily 9am-5pm

Wehher Resource Center Native Cultures of the Americas

Books, videotapes, educator resources, tribal newspapers and activity boxes about native peoples of the Americas are available. Daily 10am-4:30pm

Harris Educational Loan Center

Chicago area educators may borrow activity boxes and small dioramas from Harris Center, For more information call: (312) 322-8853. Open House Hours: Tuesdays 2:30-7pm Thursdays 2:30-5pm Saturdays 9am-5pm

Place For Wonder

A special room of touchable objects where you can discover daily life in Mexico, in addition to an array of fossils, shells, rocks, plants and live insects.

Weekdays: 12:30-4:30pm Weekends: 10am-4:30pm

Pawnee Earth Lodge

Walk into a traditional home of the Pawnee Indians of the Great Plains and learn about their daily life during the mid-19th century. Weekdays: 1:00 pm programs Saturdays: 10am-4:30pm; Free ticketed programs at 11, 12, 2 & 3. Sundays: 10am-4:30pm

Ruatepupuke: A Maori Meeting House

Discover the world of current Maori people of New Zealand at the treasured and sacred Maori Meeting House

Open daily 9am-5pm

Africa Today: Resource Center

Books, periodicals, videotapes, educator resources and activity boxes to complement the new Africa exhibit. Open daily 10am-4:30pm

Volunteers for "Life Over Time"

exhibit are needed. Evolution from prehistoric mammals throughthe Ice Ages and early humans will be covered in the exhibit, Weekday & weekend facilitators are welcomed. A 3 week training program will be offered in late September. A \$10 fee to cover the cost of materials is required. Scholarships are available. Please contact the Museum Volunteer Coordinator at (312)922-9410, ext. 360 for further detail.

DEER OR SIVATHERE?

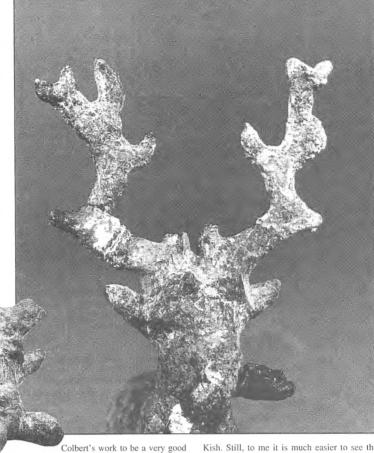
MYSTERY FROM MESOPOTAMIA

By David S. Reese Department of Anthropology

n 1928 the Field Museum – Oxford University excavations at Kish in Iraq uncovered, at a depth of eighteen feet below the modern plain level, a very rich burial known as Cart or "Chariot" Burial II. The burial dates to the Early Dynastic II period, around 2700 B.C.

Among the objects found at the site was a rare four-wheeled cart (probably a better term than chariot in this instance) with wooden plank wheels, each adorned with more than fifty copper studs around its rim. At the time of excavation it was the earliest wheeled vehicle known. The front of the cart was not found, but a pole that had extended nine feet from it was located. This pole terminated in a copper-alloy cap. Adjacent to the cap was a copper-alloy rein-ring (one of the earliest known from Iraq) topped by an animal figurine.

Field Museum anthropologist Henry Field published the first scholarly paper on the rein-



The Kish figurine restored by Catherine Sease, top. Below and at right, 1930s photographs of the object with its antlers missing.

ring, describing the ornament as a representation of a hobbled and tame Mesopotamian fallow deer, Dama mesopotamica. Field and Berthold Laufer, then the Museum's chief curator of anthropology, thought it tame because of the heavy halter that runs through the nose and is tied to the right foreleg. [Two early-1930s photographs are reproduced here. I thank Nina Cummings for finding them in the Department of Photography archives.]

In 1936, however, the famous paleontologist Edwin H. Colbert reinterpreted the figurine as a representation of an extinct fossil giraffe, a Sivatherium; he suggested that it lived beyond the Pleistocene period (from about three million to 10,000 years ago) and was familiar to the people of ancient Mesopotamia. Colbert was led to this speculation by what appear to be two small ossicones, bony structures on the forehead of the figurine. Sivatherium had two sets of horncones, a relatively small conical pair directly over the eyes and a large branching pair at the base of the skull. Colbert explained the depiction of the nasal area as representing either the abbreviated nasal bones of the sivathere or a halter through its muzzle (and thus a tame sivathere?).

Zoologists and paleontologists considered

Colbert's work to be a very good example of the use of an archaeological artifact to demonstrate that a species had lived longer than previously thought; it was cited as such in various publications up to 1988.

But most of the researchers who published these papers were unaware of a short anonymous note that appeared with a photograph in the Field Museum of Natural History Bulletin of November 1977:

Holding his remarkable discovery, University of Heidelberg graduate student Michael Müller-Karpe, 22, displays the antlers of a 5,000-year-old Sumerian copper stag he uncovered in a small box of dried mud in a Field Museum storeroom. Müller-Karpe was examining hundreds of metal vessels from the ancient Near East when he came across the box with its precious contents which "looked like green coral." He had no idea what he'd found until he recalled a world-famous, mainly antler-less stag decorating a rein-holder elsewhere in the Museum. His keen mind suddenly identified the "coral" as the corroded antlers of the 71/2-inch stag. The stag is a very rare example of decorative Sumerian art created 1,000 years before the art of Egypt's Tutankhamun.

In 1991 the Museum's conservator, Catherine Sease, rejoined the pieces. The head of the restored figurine is pictured above. The small knobs above the eyes are more likely the sculptor's embellishments than depictions of horncones.

We have actual bone evidence of the presence of *Dama mesopotamica* at a number of Mesopotamian sites (Tell Abqa, Tell al-Hiba, Tell as-Sawwan, Nippur, Tell Taya), though always in very small numbers and none from

Kish. Still, to me it is much easier to see the Kish figurine as an artistic representation of a contemporary fallow deer than to force it to be an extinct sivathere unknown by osteolological remains anywhere in the Near East.

We must, I think, now return to the suggestion that the rein-ring depicts a tame or domestic Dama mesopotamica. It is one of only a few artifacts indicating that these deer may have been controlled by humans. Another is a ceramic vessel in a private collection in England, of the type made during the Middle Bronze Age on the eastern Mediterranean island of Cyprus. The decoration depicts what has been interpreted as a deermilking scene.

he Kish rein-ring sits among many magnificent objects from Kish in the Field Museum's storerooms; many of them have never been studied or described in scholarly publications. This Dama figurine was once on public display, and I hope that at some future date it and some of the other objects from Kish can be exhibited here in the Museum. Currently one must go to the Oriental Institute of the University of Chicago or to the Metropolitan Museum of Art in New York to see artifacts from our Kish collections on exhibit



EXHIBIT SPOTLIGHTS WORK OF MUSEUM PALEONTOLOGISTS

NA to Dinosaurs," the Museum's extraordinary new exhibit about the early history of life on Earth, builds on the massive collections of the Museum's Department of Geology and highlights the research and field work of its scientists. Department of Geology scientists and staff were involved in

every stage of the exhibit's development, from inception to installation.

The Department of Geology is widely regarded as one of the world's premier centers for paleontological research, based on the excellence of its fossil collections (which contain more than 550,000 specimens) and the quality of research by its scientific staff. The department is distinguished by specialists who are world leaders in the study of fossil plants, invertebrates, and vertebrates (including fish, amphibians, reptiles, and mammals). The department's collections are a major international resource for

exploring and explaining the history of plant and animal life and provide baseline data from which the Earth's environmental history may be interpreted.

In addition to its paleontological collections, the department maintains substantial collections in meteoritics, mineralogy, and petrology. It also has state-of-the-art rock and fossil preparation laboratories, a Paleomagnetics Laboratory with a magnetically shielded lab room (the only laboratory of its kind housed in a museum), radiographic equipment, an x-ray diffraction laboratory, photographic and darkroom facilities, computerized collection management facilities, a reprint library of more than 20,000 separates, and a repository collec-



Ron Testa / GEO849680

tion of more than 100,000 U.S. Geological Survey topographic maps.

But the department's greatest assets are its people. On any given day the eight curators, seven career staff members, twenty-seven research associates, and numerous students, interns, and grant-supported Ph.D. scientists and technical staff in the department are engaged in projects that are making significant contributions to our understanding of Earth's development, its ecological history, and the evolution of our modern biota.

"DNA to Dinosaurs" highlights the significance of their behind-the-scenes work and places their contributions at the thematic center of the exhibit. Among the individuals whose work figures prominently in the exhibit are:

• John R. Bolt, curator of fossil reptiles and amphibians. Bolt is an expert on Paleozoic tetrapods (four-legged land vertebrates) and a featured scientist in the exhibit's Classification Lab — which is only appropriate, since this area is a scaled-down representation of Bolt's laboratory on the third floor of the Museum. A photograph shows Bolt working at his computer, sifting through data in his research on the interrelationships among living and fossil amphibians and reptiles — work that is crucial

for interpreting the evolution of frogs and salamanders. Employing computer-assisted techniques to construct family trees for these creatures, Bolt has focused on fossil specimens of amphibians and fish from the Upper Devonian, Mississippian, Pennsylvanian, and Permian periods of the Paleozoic, between 250 and 350



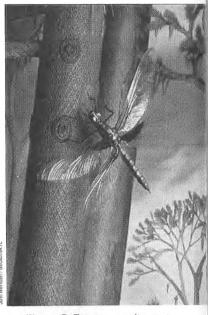
million years ago. Among these fossils are spectacular new specimens from Iowa that represent some of the oldest land vertebrates from North America. These discoveries substantially clarify our understanding of the early evolution of tetrapods, and provide new insights into the earliest stages of vertebrate life on land.

• PETER R. CRANE, MacArthur Curator of Fossil Plants; director of the Center for Evolutionary and Environmental Biology; and Vice President, Academic Affairs. An important component of Dinosaurs!, the final section of the exhibit, deals with the rise of angiosperms (flowering plants) and the origin of modern ecosystems, highlighting the work that Crane has done in this area. A major focus of these efforts has been the discovery and study of the earliest flowers, to identify the nearest living relatives of fossil groups and understand the ecology of these ancient angiosperms. Crane has made extensive use of the Museum's scanning electron microscope to examine Cretaceous fossils of flowering plants collected in both North America and Europe, Many of the fossil flowers contain pollen grains, and these together with a computerized compilation of data from all over the world have enabled Crane and his Field Museum colleagues Scott Lidgard and Patrick Herendeen to interpret the prehistoric rise of flowering plants between 120 and 90 million years ago. Results suggest that the early evolution of angiosperms may be tied to major changes in the dynamics of the planet, including the continents, oceans, and atmosphere. These studies give us a new appreciation of the potential long-term interactions of vegetation, climate, and geological pressure in

the history of our planet. · JOHN J. FLYNN, curator of fossil mammals and chair of the Department of Geology. "DNA to Dinosaurs" is concerned throughout with questions pertaining to the nature of - what time is, how time is measured, and the age of the fossils and geological events featured in the exhibit. Flynn's research in the realm of time involves reading paleomagnetic records of rocks in the Museum's Paleomagnetics Laboratory and developing geological time scales. His recent collaborative time

scale was used as the standard for the Geo-

logical Society of America and hundreds of scientific studies. These paleomagnetic records are the faint signatures of Earth's magnetic field at the time and place a particular rock was formed, which can be used to tell geologic time and ancient geographic positions of continents and oceans. Flynn combines information from paleomagnetic, fossil, and radiometric dating to reach ever more precise - and important conclusions in a number of fields, including evolutionary biology, climatic change, and plate tectonics ("continental drift"). This research yields a better understanding of the formation of mountains, polar ice caps, shifting habitats and ecological communities of plants and animals, global climate change, and shifting oceanic circulation throughout Earth's history - which in turn can help illuminate current debates on global warming, tropical deforestation, and other environmental concerns



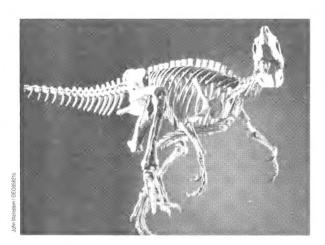
WILLIAM D. TURNBULL, emeritus curator of fossil mammals. A corner of Dinosaurs! is devoted to Turnbull's annual fossil collecting expeditions to the deserts of North America. John Flynn often accompanies him on these trips, undertaken to find the fossilized remains of mammals that lived in the Mesozoic Era (contemporaneously with dinosaurs) and the Cenozoic Era, when mammals radiated following the extinction of dinosaurs. Turnbull and Flynn have enjoyed considerable success at this endeavor. In particular, Turnbull's activities in the Cretaceous (100 million years ago) deposits of Texas and joint work with Flynn in

the Eocene (50 million years ago) deposits of the Washakie Basin, Wyoming, have resulted in many notable additions to the Museum's fossil vertebrate collections. These discoveries have shed much light on the origin of mammals, the early divergence between marsupial and placental mammals, and how mammals diversified and responded to continuing changes in the Earth's climate and environments both before and after the dinosaurs died out 65 million years ago.

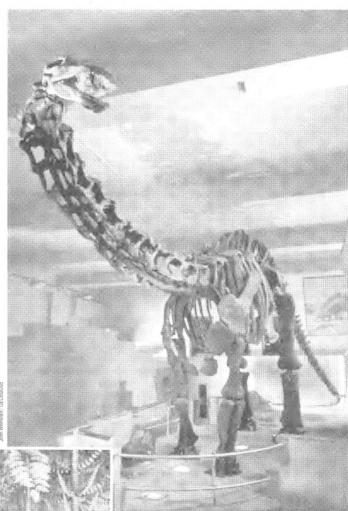
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DNA TO DINOSAURS

PICTURES FROM AN EXHIBITION



Among the fossils, dioramas, and models featured in "DNA to Dinosaurs" are, this page: above, Herrerasaurus, rampant; right, Apatosaurus in a new attitude; below, the updated 300-million-year-old Coal Forest; and bottom, a marine environment from the Cretaceous Period. Opposite page, clockwise from top: A Silurian sea, a giant dragonfly from the Carboniferous, a Mesozoic ammonite, and an ichthyosaur.



MEMBERS' PREVIEWS JUNE 7 - 9

Three special previews of "DNA to Dinosaurs" have been scheduled for members of the Museum and their guests. Because of the anticipated crowds, the Membership Department has asked that members attend the evening previews alphabetically by last name, it possible:

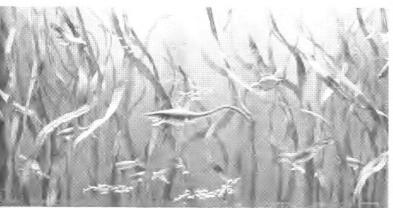
A - I on June 7; J - Q on June 8; and R - Z on June 9. Hours are 5 p.m. to 10 p.m.

Individual members may bring one guest. Family members may bring their immediate household family members. All entrances to the Museum will be open. Visitors will be asked to present their membership cards or mailed invitations at the door, and to pick up a ticket at the ticket booth for timed entry to the exhibit.

The Museum store and Dinostore will be open from 5 p.m. to 9:45 p.m. Refreshments will be available for purchase in McDonald's, Picnic in the Field, and at the cash bar until 9:30 p.m.

Disabled persons may make special arrangements by calling (312) 922-9410, ext. 453. Bus service to the Museum is available on the CTA Marine/Michigan No. 146. For schedule information call the CTA at (312) 836-7000. Parking is free in the Museum lots.





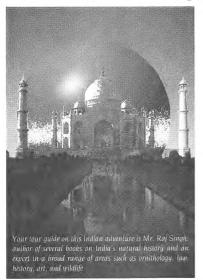
James Balorimas / GEO85734 11c





India!

October 19 - November 2, 1995 Temples, Tigers, Palaces, and a Solar Eclipse



Fly Royal Jordanian Airlines via Amman to Delhi. In the 17th-century confines of Old Delhi you'll explore the Red Fort, a magnificent royal palace surrounded by formidable battlements; and the Jamma Mosque, the largest Muslim house of worship in India and the centerpiece of a bustling bazaar district. An all-day tour of New Delhi includes a visit to Cannaught Place, the center of New Delhi shopping and entertainment.

From Delhi you'll be driven to Bharatpur to explore the nearby Keoladeo Ghana Sanctuary, which has the largest and most diverse concentration of bird species in Asia. Highlighting your stay is the solar eclipse occuring at 8:35 a.m. or 25 October. You'll view the eclipse from a secluded spot with a resident expert on hand to discuss the religious and cultural significance of this spectacular event.

Leaving Bharatpur, you'll proceed to Agra, site of the famed Taj Mahal. In addition to this remarkable structure, you'll visit the Agra Fort, a massive 16th century-stronghold. A special feature of your stay here is a day excursion to the Bateshwar Cattle Fair, a combination holy-festival-and-cattle-show rarely seen by tourists. From Agra you'll proceed to Jaipur, the rose-pink capital of Rajasthan. Excursion in and around this city includes stops at the Jaipur family palace complex, a hilltop citadel called the Amber Fort, and the Jantar Manta, an openair observatory built in 1716.

After Jaipur you'll travel to the Ranthambhore National Park, a densely forested area inhabited by tigers, leopards, gazelles, wild pigs, and many other species. You'll also visit Ranthambhore Fort, a thousand-year-old stronghold in the heart of the preserve. From the park you'll take a train to Delhi, where you'll spend the night before boarding a Royal Jordanian Airlines for the flight back to Chicago.

Arctic Watch: Face to Face with 1,000 Belugas July 15-24, 1994 • via Edmonton to Resolute Bay on Cornwallis Island

Fly to Edmonton, Canada, where you'll spend the night in the Nisku Inn. The next morning you'll fly first to Resolute on Cornwallis Island, then on to the Arctic Watch lodge on Somerset Island. Immediately upon your arrival, you'll take a short walk to the mouth of the Cunningham River to see beluga whales in their natural habitat. Using the lodge as your base in the days to come, you'll explore the surrounding area. Highlights include day trips to the spectacularly scenic Prince Leopold Island, home to thousands of seabirds; and to historic Beechey Island to explore the still-intact camp of nineteenth century Arctic explorers. En route you'll fly over pack ice, keeping an eye out for polar bears, walrus, and narwhals.

You'll also journey by inflatable raft up the Cunningham River and hike into the hills and across the tundras of Somerset Island, where you may come across musk ox, Arctic hares and foxes, terns, and snowy owls. There will be additional opportunities to view and photograph the belugas, and to hike, fish, and — for the very hardy — even go swimming!

A free trip orientation meeting will be held at the Field Museum on Monday, May 23, at 7 p.m. At the meeting you'll have an opportunity to meet Dave Willard of the Division of Birds, who will be leading the trip. If you would like to attend, call Dorothy Roder at (312) 322-8862.