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In the Field

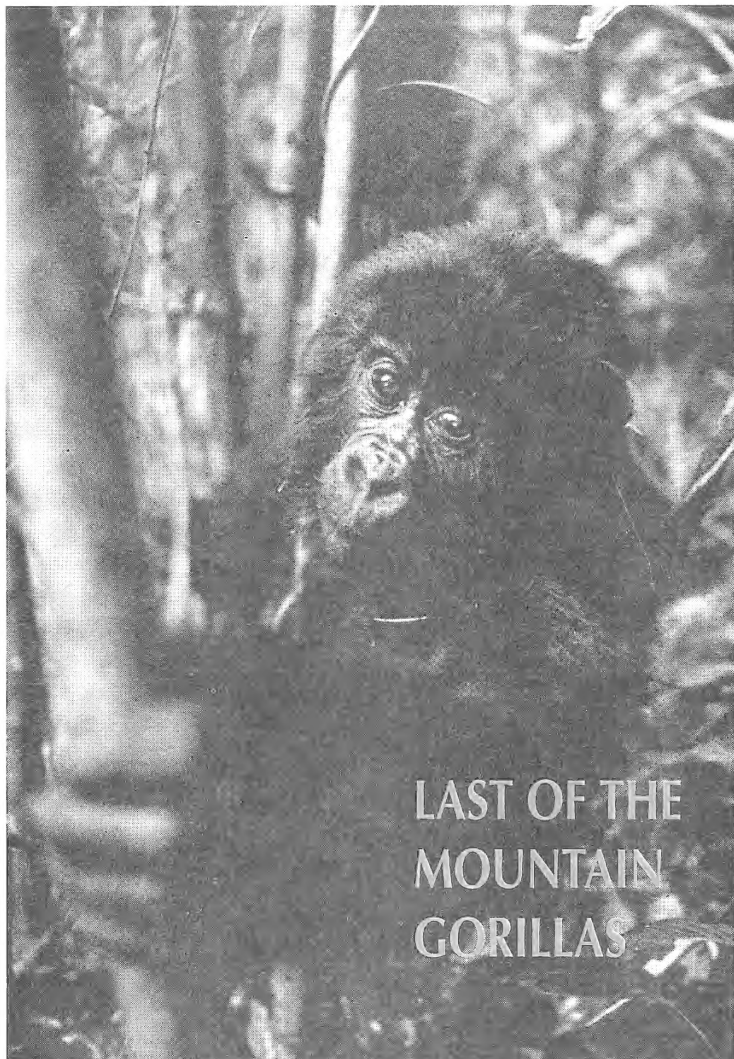
The Bulletin of the Field Museum of Natural History

May/June 1991

IN A
PERUVIAN
CLOUD
FOREST:
BOSQUE
MONTESECO

40TH ANNUAL
MEMBERS'
NIGHT:
MAY 3

COMPLETE
SCHEDULE
OF SUMMER
PROGRAMS
& FIELD TRIPS



LAST OF THE
MOUNTAIN
GORILLAS

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In the Field

The Bulletin of the Field Museum of Natural History

May/June 1991

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Hundreds of volunteers perform vital functions for the Museum. President Boyd pays tribute.

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During June, four Tibetan monks will create a sand mandala called "The Wheel of Time."

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Complete summer schedule of courses and field trips for adults, families, and children.

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How Costa Rica integrates economic development and conservation of natural resources.

RESCUING ENDANGERED PHOTOS

Some 20,000 of the Museum's photographs, taken on unstable film between 1920 and 1950, are being transferred to safety film in a two-year project funded by the National Endowment for the Humanities.

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BOSQUE MONTESECO: A CLOUD FOREST ABOVE THE PERUVIAN DESERT

By Michael O. Dillon
Department of Botany, Field Museum
and John E. Cadle
Department of Herpetology
Academy of Natural Sciences, Philadelphia

While international attention has focused on rain forest destruction in the Amazon basin, the humid forests on the western slopes of the Andes are among the most threatened habitats in South America. One such forest, Bosque Monteseuco in northwestern Peru, has been the focus of a cooperative project between Peruvian and Field Museum-sponsored scientists since 1985, and we've documented the presence of a unique assemblage of plants and animals not found anywhere else.

Bosque Monteseuco and other montane forests like it are but fragments of a huge forest that stretched through Colombia, Ecuador, and Peru until about 30 thousand years ago. Long-term climatic change and mountain-building, including the 6.9-magnitude earthquake that

Río de Saña, one of several small rivers that originate high in the Andes and flow across the arid coast on their way to the Pacific. Its broad alluvial plain is dotted by desert vegetation, with stands of giant saguaro-like cactus, dwarf acacia trees, and mixed seasonal grasses and shrubs. Irrigation, however, permits cultivation of crops including rice, sugar cane, and cotton.

If you follow the valley of the Río de Saña east and up into the foothills, between 500 and 1,000 meters (1,600 to 3,300 feet), the dry scrub gives way to more seasonally moist formations. Near the river you find large stands of bamboo-like grass, which is harvested and used in housing construction. Above 1,200 meters (4,000 feet), nearly all forest has been cut and suitable land has been converted for agriculture — bananas, coffee, and corn — or used as pasture for cattle.

But about 150 kilometers inland (100 miles), just north of the village of Monteseuco, there exists a small pocket of humid forest clinging to a steep escarpment between 1,500 and 2,000 meters above sea level (5,000 to 6,600 feet). This is Bosque Monteseuco, where the dry season lasts only a few weeks and strong seasonal rains, combined with continuous cloud cover for several months each year, produce a dense tropical woodland. The trees are covered with epiphytes including moss, ferns, bromeliads, orchids, and the Tarzan-like vines called lianas. Occasional waterfalls and small ponds provide additional moist habitats.

It's difficult to estimate the extent of the forest but it ranges uninterrupted only from Cerro Hierba Buena to Cerro El Palmo, a distance of less than 15 kilometers (nine miles). The area is 2,500 hectares at most (6,000 acres or so) and shrinking. Since there has been extensive logging in the surrounding Udima basin, this remaining forest is of particular interest biologically. We've been fortunate to be able to work there with the distinguished Peruvian botanist and Field Museum research associate Abundio Sagástegui Alva, and doubly fortunate that Jack C. Staehle, a longtime friend of the Museum with longstanding family ties to Peru, has seen fit to support our work financially.

Our preliminary inventory of the vegetation in Bosque Monteseuco has documented 326 species of flowering plants and ferns; these belong to 200 genera in 88 families. At least

eight of these species are new to science, including members of the pineapple, begonia, sunflower, and carrot families.

Finding



the closest relatives of these endemic species is important in reconstructing the biogeographic origins of the forest. It appears likely that the forest has its origins in Ecuador and Colombia, to the north, but there are also elements from the Amazon Basin to the east, and in subtropical Peruvian communities to the south.

For example, one new species, *Hydrocotyle sagasteguii*, a member of the carrot family, Umbelliferae, was found to be more closely related to Ecuadorian species than to its nearest geographic neighbor, *H. globiflora*, another Peruvian endemic. The distributions of various tropical tree species and a palm, *Geonoma densa*, suggest affinities with communities in southern Ecuador and/or Amazonian Peru, on

(Continued on page 14)

At left, Abundio Sagástegui Alva shows off one of Monteseuco's flashier orchids; above, an iguanid lizard, one of six lizard species found in Bosque Monteseuco.



struck northwestern Peru in April, are responsible for much of the fragmentation. But the remaining forests are now being eliminated at an accelerated pace by human activity. Patterns are emerging from our data on Bosque Monteseuco, however, that will allow us not only to test hypotheses about the forest's biogeographic history, but to assess its importance for potential conservation efforts.

Travel along the northern coast of Peru and you are unmistakably in the middle of a desert. Near Mocupe, some 770 kilometers (460 miles) north of Lima, the capital, only scattered cactus and scrub punctuate the barren terrain. A few kilometers south of the town is the mouth of the





THE GIFT OF TIME

By Willard L. Boyd
President, Field Museum

I once visited a wonderful children's area in the Museum of Science in Tokyo — which was closed because the museum could not afford to staff it. In London, I was astonished that there was organized staff opposition to recruiting volunteers to work in museums. In 1981, I was interested to go with members of the Australian Arts Council when they first called upon a corporation to secure private funding.

In most of the world, museums are primarily governmental responsibilities. In the United States, however, most museums and other cultural institutions are organized and supported by public-spirited private citizens. The Field Museum, in particular, exists because of the gift of time by many volunteers, and each year we pay tribute to them; this year's Volunteer Recognition Day was held April 18.

The gift of time takes many forms. Some 384 volunteers work in all departments of the Museum. Of these, 206 provide public education programs. They staff the Pawnee Earth Lodge, the Webber Resource Center, and the Place for Wonder; they provide tours for visitors and they plan and staff the weekend programs. We also have 148 volunteers working actively in the collections and in research departments. In addition to these two large cadres are a number of gifted volunteers engaged in developing, designing, and completing exhibits, participating on the Museum's several governing boards, raising funds to support the Museum, and actively helping in

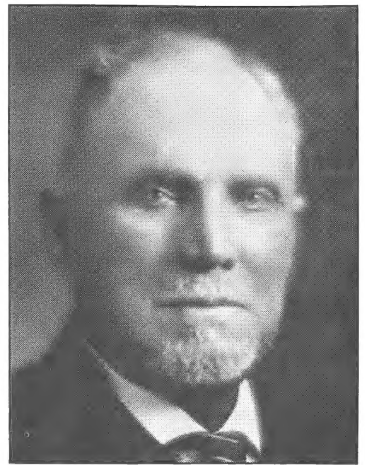


ethnologist of the World Columbian Exposition, Frederick Ward Putnam, to form a museum at the conclusion of the Fair. Ayer saw the importance of Putnam's vision and convinced Chicago's civic leaders that they should organize and fund the Columbian Museum. His most famous solicitation visit was to Marshall Field. Later, Ayer not only served as the first volunteer president of the volunteer Board of Trustees, but gave generously of his exceptional collections to augment those from the Columbian Exposition.

Our first volunteer educator started his work in the halls without consulting anybody. Word came to Museum Director Clifford Gregg of a man, Paul Dallwig, who was lecturing in the halls every weekend — and who furthermore brought his own group with him to listen. Museum Security wanted to know whether they should throw him out. Gregg recalled his response:

"I didn't know why we should throw a man out. I said, 'No, have him come and see me.' And so Dallwig came to see me. I could see him trembling. I told him I heard he had been bringing in his own people and lecturing to them. Yes, he said. How did he get started? Well, he was just interested. I said, 'Well, if you like to do that, if you are really serious about that, we will let you lecture for the Museum as a volunteer and will help you get a crowd.' He jumped at the idea. But I said, 'I have to put one restriction on you. I have to see your manuscripts and they must be approved by our experts so that you are not giving out misinformation.' And he agreed to that and those grew over a number of years."

At the same time, volunteers were helping in research. Ellen Thorne Smith is a legend at the Field Museum. In 1936, she became a volunteer in the Division of Birds, spending three to five days a week in research and collection activities. During the Second World War, she was in charge of our Bird Division and at that time had a young volunteer assistant, a high school student named James Dewey Watson who went on to win the Nobel Prize as the co-discoverer of DNA. Mrs. Smith published a scientific monograph in *Fieldiana*, and a general book entitled *Chicagoland Birds — Where and When to Find Them*. She also planned and supervised the preparation of the exhibit "Resident Birds of



Chicago." When the Museum decided to trade 1,900 specimens of North American birds for a single specimen of the long-extinct auk, Mrs. Smith personally selected the birds that would be sent to Brussels for exchange. Her final major contribution to ornithology was to take measurements of a long series of all the ducks and geese of North America for inclusion in Volumes 2 and 3 of the *Handbook of North American Birds*. Mrs. Smith became the first woman trustee of the Field Museum and she organized our extraordinary Women's Board.

Much volunteer time and effort goes into the Museum's various governing boards. Recognizing the importance of volunteerism, Bill Searle, a veteran member of the Board of



Trustees, has urged us to take long-term steps to enlist and maintain greater volunteer support for the future. Our first step in that direction has been to establish the Searle Volunteer Award, which goes to each volunteer who has served for 20 years at the Museum.

Bill Searle's vision must be our reality for the future. Now more than ever the Museum depends on volunteers, whose gifts of time become ever more crucial.

Givers of the gift:
Clockwise from
upper right, Edward
Ayer, Ellen Thorne
Smith, William
Searle, and
Paul G. Dallwig.



housekeeping, photography, and archives.

Without volunteers, the Museum could not function. Four individuals from the Museum's past and present typify the commitment of Field Museum volunteers: a collector, Edward Ayer; an educator, Paul Dallwig; a researcher, Ellen Thorne Smith; and a trustee, William Searle.

In the beginning, it was Edward Ayer, a collector of birds and of material culture, who seized upon the vision articulated by the chief

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Editor:
Ron Dorfman

Art Director:
Shi Yung

Editorial Assistant:
Steve Crescenzo

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'WHEEL OF TIME' SAND MANDALA

Four Tibetan monks from the Namgyal Monastery in Dharamsala, India will create a sand mandala called the "Wheel of Time" at Field Museum. The work will be done in the North Lounge on the second floor between June 4 and June 29.

Sand mandalas are circular diagrams containing thousands of sacred symbols drawn with fine, colored grains of sand. They are created for Buddhist initiation rituals and also to purify the environment and promote harmony in the world. According to a Namgyal monk, the Venerable Lobsang Samten, "The sand mandala is an ancient tradition. Working on it manifests peace and even a person who simply sees it may feel peace from deep inside . . . on many levels."

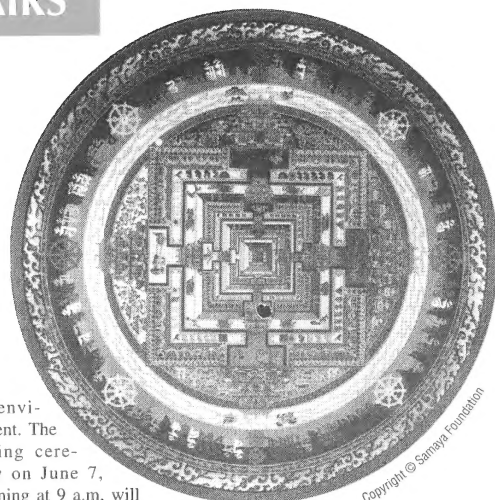
The "Wheel of Time" mandala is a formal geometric design representing the ground-floor plan of a sacred mansion, with a foundation, four entrances, walls and other architectural elements. The design, taken from ancient Buddhist texts, will be drawn on a hard surface and colored sand will be applied through the end of a metal funnel. In the hands of a Namgyal monk, the funnel is rasped, releasing a controlled, fine stream of sand into the design.

The four monks will spend six hours a day (except Mondays) working on the design. They will begin at the center and work outward. The concentric circles — the largest six feet in diameter, protect the palace, and, from the

outer edge in, represent fire, water, earth and wind. Within the smallest circle, a dozen gateways lead deeper into the palace — three from each direction, symbolizing body, speech, and mind. When the sand mandala is completed, the senior monk will sweep the sand into containers and offer it to Lake Michigan, the nearest body of water, for the benefit of marine life and



Jeff Hoyle



Copyright © Samaya Foundation

the environment. The opening ceremony on June 7, beginning at 9 a.m., will include an hour of chanting, a few words from the senior monk, and then application of the fine colored sand to the mandala base.

A closing ceremony on June 29, beginning at 9 a.m., will consist of a short talk by one of the monks; chanting; the senior monk dismantling the mandala (sweeping sand into containers); more chanting; and offering of the sand mandala to Lake Michigan.

The monks' daily schedule will be:

Tuesday – Sunday

9 – 10: Daily chanting and meditation

10 – 1: Creating the sand mandala, greeting visitors & answering questions

1 – 2: Break

2 – 4: Creating the mandala

40TH ANNUAL MEMBERS' NIGHT — MAY 3

The Museum's 40th Annual Members' Night is an opportunity to look behind and beyond the exhibits and learn about its multifaceted work — in research, education, conservation, collections management, exhibit development, and other fields.

On any other day of the year, the areas where most of this work takes place are off limits to the public. On Members' Night, however, the doors are flung open and Museum staffers welcome visitors to their offices, laboratories, and storerooms. For almost one hun-

dred years, Field Museum's scientists have traveled the planet, studying its myriad cultures and species and exploring its ever-changing physical environment. Members' Night offers guests the opportunity to talk with the scientists and researchers, find out what's new in their respective fields, and learn about their current work.

Visitors also get to examine each phase of the development of an exhibit. People involved in all phases of creating of an exhibit will be available to answer questions: scientists, preparators, conservators, designers, developers — everyone who figures in the final outcome will be on hand to talk with members.

Demonstrations scheduled for Members' Night include:

- How plants make the journey from the tropics to the Museum herbarium where they are used for research.

- The many shapes, sizes, and uses of teeth.
- How the Museum's dioramas are created.

Cocktails and soft drinks will be available at a cash bar, and both McDonald's and the Picnic in the Field restaurants will be open from 5:00 until 9:30 p.m. There will also be entertainment, including the Nordic Folk Dancers of Chicago and the Mexican Folkloric Dance Company of Chicago.

Members may bring two guests, and special arrangements for handicapped persons can be made by calling (312) 922-9410, ext. 453.

Shuttle bus service will run every 20 minutes beginning at 4:45 p.m. between the Museum and Union Station, with stops at Northwestern Station, State and Washington, Michigan and Washington, Adams and Michigan, and Balbo and Michigan.

EXPLORE THE PLANET — WHILE YOU EXPLORE THE FIELD MUSEUM!

A once-a-year opportunity for members only. See how scientific discoveries from all over the world become exhibits and public programs.



Get an inside look behind the scenes at the Museum. Talk with scientists, exhibit developers, researchers, educators, and other staff members.

40th ANNUAL MEMBERS' NIGHT

FRIDAY, MAY 3, 1991

5:00 UNTIL 10:00 P.M.

Present your Members' Night Invitation or membership card at any entrance for admission.

PLANTS ON THE MOVE

Major new exhibit programs, coupled with changes in structural engineering standards, have combined to force the reorganization of our Plants of the World and Useful Plants exhibits. These halls contain plant models crafted at Field Museum from 1910 to 1970. The models are built of glass, metal, high-melting-point parafins, plastics, and natural materials. The product of artistic craftsmanship and scientific accuracy, they constitute the largest such collection of plant models in the world and are one of the Field Museum's most unique holdings.

Originally, Life Over Time, a new exhibit on evolution and the history of life, was planned for the northeast area of the second

become the future home of the Museum's dinosaurs. Of the three dioramas located at the north end of the Plants of the World hall, two (the Illinois woodland and North Atlantic seacoast) are becoming part of the new Nature Walk exhibit on the first floor, while the Rocky Mountain Alpine diorama is being stored for future use.

The reorganization of the botanical exhibits is an interim arrangement, serving to keep these fine materials on exhibit until the present series of new exhibit programs is completed. All the fine plant models from the vacated Plants of the World area will be retained on public view. A new entry area on the balcony between Jades and Families at Work will house some of our most colorful models, as well as the exotic palms. A number of plant-family cases will be placed close to similar exhibits showing how these plants are used. All told, only four cases of wood exhibits will have to be put into storage. This arrangement should serve us until we are prepared to build a unified new exhibit focused on the diversity of the world's plant life.

—William Burger
and Robert Feldman



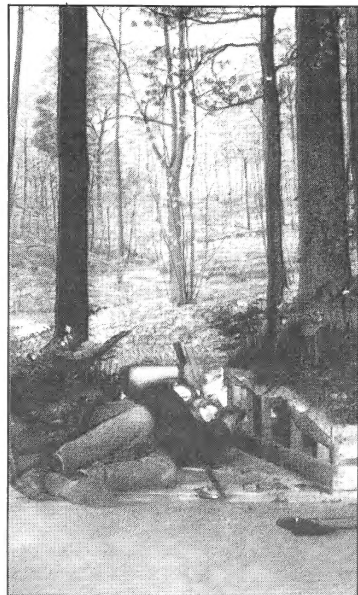
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The Illinois woodlands diorama being dismantled for re-installation in the Nature Walk section of the new Animal Kingdom exhibit. Above, from left, Martin Giese, Bill Driscoll, and Tamara Biggs are the loggers. Top right, a masked worker moves the earth. Photographs by John Weinstein.

floor. To provide the large area needed for this major exhibit a new floor was to be constructed in what is now an open light well. The light wells were originally designed to allow daylight to illuminate the exhibit halls. But natural light can damage museum materials, so the light wells have had their windows and skylights covered for many years. Of the six light wells in the building, four have been filled with as many as four floors of specimen storage space and now hold collections of the Geology, Zoology, and Anthropology departments, as well as the library, Advanced Technology Labs and the central part of the Traveling Pacific exhibit. Of the remaining two light wells, one will be used for additional Botany and Geology specimen storage. The other was intended to house part of the new Life Over Time exhibit.

Then came a serious structural collapse in a Kansas City hotel. This led to the institution of more stringent structural engineering standards and, suddenly, filling a light well required a lot more steel and a lot more money. Instead of occupying space in the light well, the new exhibit would have to be built into part of the space occupied by Plants of the World.

The area vacated by the plant exhibits will



GN 85728.7



GN 85755.4

ANIMALS TOO

Nick Silva, left, and George Chavez, below, remove critters from the salt marsh diorama to make way for a new exhibit on Africa. Photos by James Balodimas.



GN 85755.35

LAST OF THE MOUNTAIN GORILLAS

African mountain gorillas, unknown to outsiders until 1902, have become the subject of intensive research, countless stories and books, and many a movie.

Starting June 15, the Field Museum will be host to "Gorilla: Struggle for Survival in the Virungas," a traveling exhibit developed by the California Academy of Sciences that looks in detail at both the lifestyle of the gorillas and man's acute fascination with them.

There are only about 200 mountain gorillas alive today, living in 1,000 square miles of jungle in the central African kingdom of Rwanda. And even that range is being constantly diminished by an ever-increasing human population.

Daredevil photojournalist Mike (Nick) Nichols, called by some the "Indiana Jones of Photography," spent months living with the last of the mountain gorillas in Rwanda, capturing rare images of them at home in the jungle. Nichols also worked with and photographed the researchers who have been studying the gorillas on a daily basis for years, trying to learn as much as possible about these gentle creatures

and their complex social behavior.

Nichols' photos are the centerpiece of the exhibit, but are accompanied by objects that should help visitors understand the physical similarities and differences between the gorillas and humans, and also introduce them to the complex relationship that man has had with these closely-related animals.

For example, both human and gorilla skulls will be displayed, as well as hand- and footprints of gorillas, giving visitors an opportunity to see how they size up physically against their furry cousins. The exhibit features the equipment and the work of some of the scientists who have studied the gorillas over the years — people like George Schaller and Dian Fossey. Let us not forget, the exhibit will also show the traps used by poachers as they cruelly hunt this endangered species.

Bernie Krause, a noted acoustical technician, has put together a soundtrack to accompany the exhibit. It incorporates recordings of actual gorilla vocalizations, sounds of the rain forest, and native Rwandan music.



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FIELD MUSEUM
THE SMART WAY TO HAVE FUN.

WILDLIFE PHOTOS



A number of dramatic photographs of arctic wolves are among the 40 images from the career of National Geographic wildlife photographer Jim Brandenburg, on exhibit in the South Gallery on the First Floor through May 12.

MEXICAN RETABLOS

Mexican Retablo Painting: The Art of Private Devotion" opens May 11 in the Webber Gallery on the Ground Floor. The traveling exhibit marks the first time that *retablos*, vibrant Mexican religious oil paintings on tin, have been widely shown in the United States. Seventy-five *retablos*, culled from over 35 Mexican and American collections, will be on display, each one chosen for its refinement of style, technique, and condition, as well as iconographic and historic significance.

The name *retablo* is derived from the traditional large devotional altarpieces found in Mexican and Spanish churches. *Retablos* could perhaps best be described as miniature, take-home versions of those majestic works of art. They became immensely popular at the beginning of the 19th century when the devoutly Catholic Mexican common people had a need for accessible, yet individual, intimate religious symbols of their faith.

In fact, *retablos* became so important in Mexican cul-

ture that people came to believe that they possessed supernatural powers; by appealing directly to the saint or saints depicted in the painting, one could draw on profound spiritual resources.

Their deep religious significance aside, *retablos* also serve as a vital link to 19th century Mexican culture. They have come to symbolize Mexican indigenous expression in the 19th and early 20th centuries, and have influenced modern Mexican artists like Roberto Montenegro, Frida Kahlo, and Diego Rivera.

The Mexican folk artists who developed the *retablo* style combined Old World styles like Neoclassicism and Spanish Baroque, observed in popular lithographs, with the artists' indigenous cultural heritage.

The exhibit was organized by the Meadows Museum and Inter-Cultura of Fort Worth. It will be on display at the Field Museum until July 21.



5/3 Friday
Members' Night

40th Annual Members' Night from 5 p.m. to 10 p.m. Present your Members' Night invitation or membership card at any entrance.



5/8 Wednesday
Cave-in

Windy City Grotto of the National Speleological Society meets at 7:30 p.m. — use West Entrance.

5/11 Saturday
Symposium

Spring Systematics Symposium on "The Origin of Anatomically Modern Humans." Registration at 7:30 a.m.; symposium begins 8:25 a.m.

5/11 Saturday
Exhibit Opening

"Mexican Retablo Painting: The Art of the Devotion." 75 retablos from American and Mexican collections.

5/12 Sunday
Exhibit Closing

"Wildlife Photography of Jim Brandenburg," including dramatic pictures of a pack of wild arctic wolves on Ellesmere Island near the North Pole.

5/13 Monday
Camera Club

Nature Camera Club of Chicago meets in Lecture Hall 2 at 7:30 p.m. "Costa Rica's Natural History," a slide show by Bill Burger, Field Museum Department of Botany, depicts the rich biological diversity of this Central American republic.

Tree fern silhouette. San Vito, Costa Rica, March 19, 1987. Photo by William Burger.



5/18

5/24 Friday
Rafters

Colorado River Rafting Tour departs, returning Sunday, June 2.

5/27 Monday
Memorial Day

6/8 Saturday
Family Overnight

Sold out. Next available overnight is August 17.

6/10 Monday
Camera Club

Nature Camera Club of Chicago meets at 7:30 p.m. Contest night: abstracts and patterns in nature.

6/15 Saturday
Exhibit Opening

"Gorilla: Struggle for Survival in the Virungas." Spectacular color photographs recount the stange and powerful story of the African mountain gorillas of Rwanda, the last 200 members of their species.

6/23 Sunday
Summer Concert

"Folk Music from Around the World" features African, Mexican, Irish, and Polish folk music and Jamaican reggae. 2 p.m. to 4 p.m., free with regular Museum admission.



Programs Field Trips

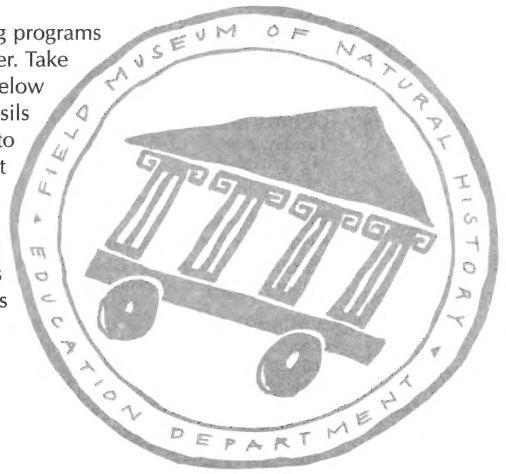
SUMMER FUN FOR ALL AGES - JUNE AND JULY 1991

Welcome! As the months unfold into summer we are busy planning programs which will lead you back to that sixth sense — the sense of wonder. Take the hand of a child, find your old binoculars and join us. Hike below the nighttime skies at Ryerson Conservation Area or gather 320-million-year-old fossils from Mazon Creek. Discover the miniature world of an insect and learn again to use your eyes, ears, nose and fingertips. Take the opportunity to learn more about Tibet while the Museum hosts a group of Tibetan monks during the month of June.

We are offering field trips for families and adults, children's and family workshops, adult courses, and our newest program, Camp Field. Courses and field trips begin June 1st and continue throughout the summer. Pre-registration is required and space is limited, so please register early. If you have any questions please call us at (312) 322-8854.

Katie Kinney

Katie Kinney
Program Developer
Adult, Family, and Children's Programs



SUMMERTIME!

Camp Field

Fifth through seventh graders: pack a lunch, wear trekking shoes, and bring your adventurous spirit to Field Museum. Camp Field consists of five days of in-depth exposure to various natural science topics. Campers will have the opportunity to meet specialists in Anthropology, Biology, Geology and Zoology and participate in a variety of workshops including: discovering fossils, earthquakes, exploring the insect world, and Indian clothing. Try ethnic foods and learn different games from around the world as we "travel" to different cultures and sciences. Venture behind-the-scenes on tours of exhibits not yet open to the public. Create and fill an expedition journal with your discoveries and experiences at Camp Field!

Grades 5-7
CC91040, Mon.-Fri., July 8-12,
10:00 a.m. - 3:00 p.m.
CC91041, Mon.-Fri., July 22-26,
10:00 a.m. - 3:00 p.m.
\$95 (\$80 members)

Children's Workshops

Please Note: Grade listings under each workshop description refer to the grade your child will complete this school year.

Shake, Rattle and Roll
Peter Laraba, Geology Specialist,
Education Department, Field Museum

What causes an earthquake and can scientists predict when they will happen? Here is your chance to work with a geologist to track real earthquakes using a computer. Learn why earthquakes occur and some techniques scientists use to study them.

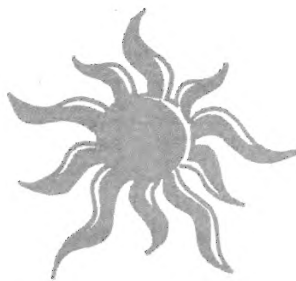
CC91035, Grades 5 and 6
Saturday, June 15, 10:00 a.m. - noon
\$12 (\$10 members)

Chinese Summer Celebration

Carol Carlson, Volunteer Coordinator,
Field Museum

Discover the traditions of Chinese culture by learning about their summer festivals such as the Dragon Boat Festival and Ghost Month. Listen to the stories behind some special Chinese symbols and learn to draw them. Make a festive "Chuen lien" symbol to take home.

CC91036, Grades K-2
Saturday, June 22, 10:00 a.m. - noon
\$12 (\$10 members)



Dig It!

Maureen Herencia, Anthropology Specialist,
Education Department, Field Museum

Join us for an archaeological adventure and find out why the job of an archaeologist is so important. Participate in a simulated dig and help solve mysteries of the past by examining the artifacts you discover.

CC91031, Grades 3 and 4
Saturday, June 29, 10:00 a.m. - noon
\$12 (\$10 members)

Animals with a Bad Reputation

Paul Adams, Program Facilitator,
Education Department, Field Museum

How can a bat or a spider benefit people? Why is a shark an important animal to have in the ocean? Discover why these animals with a bad reputation have developed unique adaptations for survival in their environment. Examine a live tarantula and tropical cockroaches up-close.

CC91037, Grades 3 and 4
Saturday, June 29, 10:00 a.m. - noon
\$12 (\$10 members)

String Games from Around the World

Joe Byrnes, Program Developer,
Education Department, Field Museum

If you like to play string games like Cat's Cradle, here is your chance to learn games from many different cultures — Double Diamonds, Witch's Broom and Grandpa's Overalls just to name a few. Children will work together to learn this international form of play.

CC91038, Grades 3 and 4
Sunday, June 30, 1:00 - 3:00 p.m.
CC91039, Grades 5 and 6
Thursday, July 18, 10:00 a.m. - noon
\$12 (\$10 members)



Children's Workshops

Making Medicine Wheels

Thea Tomaeno, Instructor, Field Museum

Have you ever had a good luck charm? For American Indian peoples, good luck is called "good medicine". Medicine wheels are symbols of good luck. Find out how Plains Indians make medicine wheels and create one of your own to take home to ensure your own "good medicine."

CC91032, Grades K - 2
Sunday, June 30, 10:00 a.m. - noon
CC91033, Grades 3 and 4
Tuesday, July 16, 10:00 a.m. - noon
\$12 (\$10 members)

Plant Explorers: Searching for Exotic Spices

Peggy Stewart, Director of Education,
Children's Expressways Museum

Would you sail across the ocean for a chocolate bar? Spices and foods such as cocoa and vanilla have drawn explorers to all corners of the globe for centuries. Set sail on your own expedition through the Museum's plant exhibits and test your sense of smell with a spicy guessing game. Make a fragrant pomander to take home.

CC91034, Grades 3 and 4
Saturday, July 20, 1:00 - 3:00 p.m.
\$12 (\$10 members)

What's New with Dinosaurs?

Dennis Kinzig, Instructor, Field Museum

Did you know there was a dinosaur no larger than a chicken? Learn the latest information and fascinating facts about dinosaurs as you tour the Dinosaur Hall and examine Museum specimens up-close. Make your own plaster cast of a Tyrannosaurus Rex tooth to take home.

CC91030, 5th and 6th grade
Saturday, July 27, 10:00 a.m. - noon
\$12 (\$10 members)

Adult-Toddler Workshops

Wings and Things

Patty Messersmith, Educational Consultant

Have you ever wondered how birds build a nest or find food? Adults and toddlers will discover fascinating facts about birds by constructing a nest, making a bird feeder, and creating a special bird puppet to take home.

FA91041, Adults and 3 and 4 year olds
Saturday, June 15, 10:00 - 11:00 a.m.
\$12 (\$10 members) for 1 parent and 1 child

Seed Sprouts

Peggy Stewart, Director of Education,
Children's Expressways Museum

Did you know a coconut is a seed? Children and their parent (or their grandparent) will pretend they are sprouting seeds while learning all the different parts of a seed and how it grows. Handle a variety of seeds and pot a seed sprout to grow.

FA91042, Adults and 3 and 4 year olds
Saturday, July 20, 10:00 - 11:00 a.m.
\$12 (\$10 members) for 1 parent and 1 child

Family Workshops

Exhibit Developers For A Day

Mary Jo Huck, Program Developer,
Education Department, Field Museum

What does it take to put together a museum display? Families will tour several exhibits in progress for a behind-the-scenes look at what goes into their planning and construction. After the tour, work together to create your own display from simple materials. Families are encouraged to bring in a few special materials such as stones, pictures or other small items to make a unique display.

FA91043, Parents and Children Grades 1 - 4
Sunday, July 21, 10:00 a.m. - noon
\$9 per participant (\$7 per member participant)

The Walls Call Out Their Names

Bob Cantu, Resource Coordinator,
Education Department, Field Museum

The walls of the temples and tombs of Egypt were covered with beautifully colored carvings and paintings that tell us about their daily lives of ancient Egyptians. The owners of these buildings wrote their names on the walls using symbols called "hieroglyphs". After exploring the hieroglyphs in our Ancient Egypt exhibit, learn to write your family name in this ancient writing style on a clay tablet to take home.

FA91044, Parents and Children Grades 1 - 4
Saturday, July 20, 10:00 a.m. - noon
\$9 per participant (\$7 per member participant)



Museum Safari

Mary Ann Bloom,
Coordinator of Interactive Exhibits,
Education Department, Field Museum

Families, explore Field Museum with a new twist as you discover a variety of natural science exhibits through the fun of games for all ages. Treasure hunt, measure-a-dino, color match, and make-a-menu are just a few of our museum safari activities—don't miss out!

FA91045, Parents and Children Grades K - 2
Saturday, June 29, 10:00 a.m. - noon
FA91046, Parents and Children Grades 3 - 4
Saturday, June 29, 1:00 - 3:00 p.m.
\$9 per participant (\$7 per member participant)

Adult Courses

Drawn from Nature

Sonya Baysinger, Freelance Artist

Learn the basic elements of drawing on Saturday mornings at Field Museum. Using natural subjects for inspiration, beginning and intermediate level students will learn the foundations of black and white sketching and two-dimensional techniques. Each class will include lecture, demonstration and workshop time. A supply list (costing approximately \$25) will be distributed and discussed at the first class. Supplies will be provided for an introductory exercise the first day.

AC91015, Saturdays, June 1 - July 13
(no class June 8), (6 sessions)
9:30 a.m. - noon
\$60 (\$48 members)

Egyptian Hieroglyphic Calligraphy

Frank Yurco, Egyptologist

Behind the mysterious symbols of Egyptian hieroglyphs lie clues to ancient Egypt's remarkable culture. Study the basics of this highly decorative style of ancient writing and discover some of the hidden meanings behind the symbols. Learn how to decipher and draw hieroglyphs through in-class exercises.

AC91016, Thursdays, June 6-July 18,
(no class July 4), (6 sessions)
7:00 - 9:00 p.m.
\$60 (\$48 members)



FEATURED COURSES

Kalachakra—The Wheel of Time

During June, four Buddhist Tibetan monks of the Nyamgyal monastery (now situated in Dharamsala, India) will be making a rare visit to Field Museum to create a Kalachakra sand mandala painting. The Kalachakra, a sacred initiation process for monks leading to their enlightenment, has as one of its rituals the making of the sand mandala painting. A sand mandala is created by finely grinding and applying brightly colored sand to the wooden mandala base. The Kalachakra mandala is the most complex of all and features intricate designs and patterns. Its creation is dedicated to peace and harmony for each person and the world at large. To complement this occasion, we are offering two programs on Tibet.

Visiting Scholar Seminar Context and Meaning of the Kalachakra Sand Mandala

Geshe Lhundrub Sopa, Professor,
Department of South Asian Studies,
University of Wisconsin—Madison

For many, Tibet remains a country and culture surrounded with a special mystique and a sense of intrigue. Take this opportunity to spend a day with Geshe Sopa, a Tibetan, to explore Tibet's rich traditions. During the morning lecture, you will be introduced to Tibet's history and culture and the role of Tibetan Buddhism. The afternoon's focus will be the Kalachakra (rituals and teachings leading to enlightenment) and the creation of the sand mandala. The mandala's symbolism and meaning, and the way in which a Tibetan uses it for spiritual growth will be addressed. An opportunity to watch the monks create the sand mandala at Field Museum will be included. Bring a lunch or buy one at the Museum.

AC91017, Saturday, June 15 (1 session)
10:00 a.m. - 3:00 p.m.
\$30 (\$25 members)

Tibet in Film: Past and Present

Spend a day exploring Tibet and Tibetans in exile as captured through a variety of films and documentaries. Unusual and rare footage of expeditions in the 1930s and '40s give a glimpse of traditional Tibet. More current films cover the events surrounding the dramatic changes during the late 1950s as the Dalai Lama fled the country. Surviving traditions of Tibetans in exile today and interviews with the Dalai Lama will also be seen. Brief film introductions will be given.

AC91014, Saturday, June 22 (1 session)
10:00 a.m. - 3:00 p.m. (12:00-1:00 p.m. break)
\$15 (\$12 members)
Tickets at the door *only* for the morning *or* afternoon films: \$9 (\$7 members)



Adult Field Trips

For all field trips please note the following:

Age: The minimum age for adult field trips is 18 years. Students 13-17 may attend trips only if accompanied by an adult.

Transportation: Most adult field trips leave the West Door of Field Museum and travel by chartered coach; family field trips will travel by school bus. See trip descriptions for exact departure times and specific details. All participants should be at the West Door at least 15 minutes prior to the departure time.

Trip Schedule: The trip route and/or schedule may vary slightly at the leader's discretion.

These field trips are funded in part by the Ray A. Kroc Environmental Fund.

Archaeology of Aztalan

Dr. Robert Sasso, Department of Anthropology, Northwestern University

Located in southeast Wisconsin, Aztalan was the site of a major village center between 1000 and 1300 A.D. Learn about the people of the late Woodland and Mississippian culture who lived in this area as you wander through history among the platform mounds that were once the center of this stockade settlement. Continue your exploration of this culture at a nearby effigy mound. Bring a lunch and beverage for this day-long hiking trip.

FT91013, Saturday, June 1,
8:00 a.m. - 5:00 p.m.
Departs from West Door
\$45 (\$38 members)

Indiana Dunes By Train

Dr. Thomas Antonio, Taxonomist,
Chicago Botanic Garden

Indiana Dunes, where the concept of North American plant ecology was developed by a University of Chicago botanist at the turn of the century, is our destination for this day-long hike. During our ride to the State Park on the Chicago South Shore Line, our leader will give you background information on the diversity of plants and habitats which we will see. Our hike will take us from the train station into the park and on to explore the forests, dunes, ridges and lakeshore. Please note that this is very strenuous walking (approximately 7 miles) and participants will be outdoors all day. We will meet at the Randolph Street Station at 7:45 a.m. (complete directions will be sent before the trip). Bring a lunch and beverage.

FT91014, Saturday, June 8,
7:45 a.m. - 5:30 p.m.
Meet at the Randolph Street Station
\$38 (\$32 members)

Family Field Trips

Family Fossil Collecting at Mazon Creek

Peter Laraba, Geology Specialist,
Education Department, Field Museum

Families, discover Northern Illinois as it existed in the Coal Age (300 million years ago). We will visit Braidwood, Illinois where strip mining has unearthed an area rich in fossils. A marine area during the Coal Age, fossils of jellyfish, shrimp, amphibians, and fish are common as well as plants including horsetails and ferns. Discussions of local geology and demonstrations of collecting techniques will assist beginning collectors in their search for fossils. Bring a lunch and beverage and be prepared for wet, muddy areas. Boots are recommended.

FT91015, Saturday, June 1,
8:00 a.m.-5:00 p.m.
Parents and Children Grades 3 - 8
Departs from West Door
\$25 per participant (\$20 per member participant)



Beetles, Bugs and Butterflies

Phil Parello, Curatorial Assistant, and Betsy Starinchalk, Technical Assistant, Division of Insects, Field Museum

Join us for this introductory field study of insects at Little Red Schoolhouse Nature Center. Parents and children will hike the trails and observe insects in their natural habitats. After our expedition in the field, we will return to the Museum for a behind-the-scenes visit to the Division of Insects.

FT91016, Saturday, July 20,
9:00 a.m. - 3:00 p.m.
Parents and Children Grades 3 - 8
\$20 per participant (\$15 per member participant)

Night Hike at Ryerson Conservation Area

Ryerson Staff

Subtle yet exciting changes occur in the natural world after the sun goes down. Under the full moon, hike into the woods to watch, listen, and smell for nocturnal creatures as you learn how night animals adapt to darkness.

FT91017, Friday, July 26, 6:30 - 10:30 p.m.
Parents and Children grades 3-8
Departs from West Door
\$18 per participant (\$15 per member participant)

Summer Prairies

Phil Hanson, Division Head, School and Community Outreach, Education Department, Field Museum

Enjoy an early summer walk through two prairies, Lockport Prairie and Goose Lake Prairie, to see the diversity of plants before the grasses of late fall dominate the vista. Smaller plants such as shooting star, spiderwort and Indian paintbrush create a colorful display as they flower and set seed before being overshadowed by the steadily growing bluestems and panic grasses. Bring a lunch and beverage and wear good walking shoes. Please note, this will be a strenuous four-mile walk.

FT91019, Saturday, June 8,
9:00 a.m. - 5:00 p.m.
Departs from West Door
\$30 (\$25 members)

Chicago's Ethnic Neighborhoods

Irving Cutler, Professor Emeritus, Department of Geography, Chicago State University

Tour some of Chicago's most interesting ethnic communities, past and present—including Maxwell Street, Little Italy, Old Town, Greek Town, Bridgeport, Chinatown, Pilsen, Ukraina, Old Polonia, Little Sicily, Little Serbia, Germantown and Wicker Park. Stops will be made at interesting sites providing an opportunity for walking. Enjoy an ethnic lunch at the Old Prague Restaurant.

FT91018, Sunday, June 9,
9:00 a.m. - 4:00 p.m.
Departs from West Door
\$42 (\$35 members)

Exploring Lake County

Irving Cutler, Professor Emeritus, Department of Geography, Chicago State University

Experience the fascinating contrasts of Lake County, Illinois. Our travels will take us along the magnificent Lake Michigan Shoreline with its affluent communities such as Highland Park, Lake Forest and Lake Bluff, and through Highwood with its large Italian community and historic military bases. Continuing north we will see industrialized North Chicago and Waukegan, religious-founded Zion, and the rugged beauty of the North Shore ravines and Illinois Beach State Park. Turning inland, see the lake communities, a seminary, and the village of Long Grove. Our tour includes stops at interesting sites along the way and lunch at a scenic restaurant.

FT91012, Sunday, July 14,
9:00 a.m. - 5:00 p.m.
Departs from West Door
\$42 (\$35 members)



To Register:

Clip the completed registration form and mail with payment to: Field Museum of Natural History, Department of Education, Program Registration, Roosevelt Road at Lake Shore Drive, Chicago, IL 60605-2497. Please include a self-addressed, stamped envelope. Registrations are confirmed by mail. Participants who withdraw from a program prior to the first session can receive a refund less a \$10 processing fee. Questions? Call (312) 322-8854.

Registration Form

For Ed. Dept. use only: Date received:

Date mailed

| Name | | Membership # | | |
|--|------------------|---|--------------|--------|
| Address | | City | State Zip | |
| Telephone: Daytime | | Evening: | | |
| Program No. | Program Name | # Members | # Nonmembers | Amount |
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| | | | | |
| <input type="checkbox"/> Scholarship requested <input type="checkbox"/> AMEX <input type="checkbox"/> VISA | | <input type="checkbox"/> Check enclosed <input type="checkbox"/> MasterCard <input type="checkbox"/> Discover (Check one) | | |
| Card # | Expiration date: | Signature | | |



Visitor Programs for May & June, 1991

World Music

Saturday, May 4 & Sunday, May 5

1:00 The Chinese Music Society of North America demonstrates instruments of the Chinese orchestra.
3:00 Gideon Foli Alorwoye demonstrates African drums and dancing.

Saturday, May 11 & Sunday, May 12

1:00 Eli Hoenai performs African Percussion.
3:00 Raices del Ande performs Bolivian and Latin American folk music.

Saturday, May 18 & Sunday, May 19

1:00 Shanta discover Africa through the stories and music of Shanta.
3:00 Librado Salazar performs classical and flamenco guitar.

Saturday, May 25 & Sunday, May 26

1:00 The Chinese Music Society of North America demonstrates instruments of the Chinese orchestra.
3:00 Henry Huff demonstrates a variety of musical styles on the harp.

Saturday, June 1 & Sunday, June 2

1:00 Ari Brown demonstrates a variety of musical styles on the saxophone.
3:00 Librado Salazar performs classical and flamenco guitar.

Saturday, June 8 & Sunday, June 9

1:00 Raices del Ande performs Bolivian and Latin American folk music.
3:00 The Chinese Music Society of North America demonstrates instruments of the Chinese orchestra.

Saturday, June 15 & Sunday, June 16

1:00 Maya Marimba performs Latin American music on the marimba.
3:00 Discover Africa through the stories and music of Shanta.

Saturday, June 22

1:00 & 3:00 Douglas Ewart performs Japanese flute.

Sunday, June 23

No World Music

Saturday, June 29 & Sunday, June 30

1:00 Listen to the rhythms of African drums with Prince Ravanna Bey.
3:00 Join Mwata Bowden to experience the sounds of unusual wind instruments from around the world

Weekend Activities

Weekend tours, presentations, and demonstrations on a wide range of topics are offered to visitors free with Museum admission. Most tours meet at the North fountain in Stanley Field Hall. Check the weekend Field Notes Sheet for more details.

Stories From Around the World

Saturdays, 11:00 and 11:30
May 4, 18, June 1, and 15
Listen to an interesting collection of folktales from around the world.

Dinosaur Lifestyles

Saturday, May 4, 12:00
Where did dinosaurs live? How did they act? Why did they become extinct? Come investigate some of the latest theories on dinosaurs.

Museum Safari

Sunday, May 5, 12:30
A trek through the four corners of the Museum to see the seven continents. See antiquities from the Amazon, big game from Africa and seals from the Arctic.

What's New With Dinosaurs

Saturday, May 11, 11:00
What do you want to know about dinosaurs? Come ask questions and learn about the latest dinosaur discoveries, research and theories.

Hieroglyphs

Saturdays, 12:00-2:00
May 11, 25, and June 8
Ancient Egyptians used a type of picture writing called hieroglyphs. Have our scribe write your name in this ancient alphabet.

Fireballs And Shooting Stars

Saturday, May 11, 12:30
Meteorites are keys to understanding our universe. Explore the secrets locked in these mysterious objects from outer space.

Brontosaurus Story

Sunday, May 12, 12:00
Journey back in time 140,000,000 years to learn about the often misunderstood "thunder lizard".

Welcome to Field Museum

Sunday, May 12, 12:30
Enjoy a sampling of our most significant exhibits.

Geology in Action

Coral reefs in Chicago? Rocks that float on water? Come to participate in hands-on geology activities.
Saturdays, 1:00 - 3:00
May 18, June 8, and 15
Sundays, 1:00 - 3:00
May 12, 19, June 9, and 16

Fireballs & Shooting Stars

Sunday, May 12, 1:30
Meteorites are keys to understanding our universe. Explore the secrets locked in these mysterious objects from outer space.

Dinosaur Lifestyles

Saturday, May 18, 12:00
Where did dinosaurs live? How did they act? Why did they become extinct? Come investigate some of the latest theories on dinosaurs.

Treasures from the Totem Forests

Saturday, May 18, 12:30
A walk through Museum exhibits introduces the world of the Northwest Coast Indians.

Welcome to Field Museum

Sunday, May 19, 12:00
Enjoy a sampling of our most significant exhibits.

Museum Safari

Sunday, May 19, 12:30
A trek through the four corners of the Museum to see the seven continents. See antiquities from the Amazon, big game from Africa and seals from the Arctic.

Plains Indian Beading Demonstration

May 26, and June 9, 1:00 - 3:00
Edgarita Long will demonstrate traditional Pawnee Indian beading patterns and techniques handed down from her grandmother and mother.

Tibet Today & Bhutan, Land of the Thunder Dragon

Saturday, May 25, 1:30
See Lhasa and other places in Tibet through this slide presentation. Visit another small Himalayan country, Bhutan.

Tibet Today And A Faith In Exile

Saturday, June 1, and 22, 1:30
Celebrate the "International Year of Tibet," the Tibetan Royal Year of 2115 or 1991 at this slide presentation on Lhasa and other places now open to tourists in Tibet. The focus will be upon Tibetan refugees in India, Sikkim, and Nepal. Of special interest are slides of the dedication ceremony of a Himalayan Buddhist chorten in Indiana by His Holiness, the Dalai Lama.

Museum Safari

Sunday, June 2, 12:30
A trek through the four corners of the Museum to see the seven continents. See antiquities from the Amazon, big game from Africa and seals from the Arctic.

Dinosaur Lifestyles

Saturday, June 8, 12:00
Where did dinosaurs live? How did they act? Why did they become extinct? Come investigate some of the latest theories on dinosaurs.

Treasures from the Totem Forests

Saturday, June 8, 12:30
A walk through Museum exhibits introduces the world of the Northwest Coast Indians.

Museum Safari

Sunday, June 9, 12:30
A trek through the four corners of the Museum to see the seven continents. See antiquities from the Amazon, big game from Africa and seals from the Arctic.

Dinosaur Lifestyles

Saturday, June 22, 12:00
Where did dinosaurs live? How did they act? Why did they become extinct? Come investigate some of the latest theories on dinosaurs.

Tibet Today, A Faith In Exile and Tour of Museum Collection

Saturday, June 29, 1:30
Celebrate the "International Year of Tibet," the Tibetan Royal Year of 2115 or 1991 at this slide presentation on Lhasa and other places now open to tourists in Tibet. The focus will be upon Tibetan refugees in India, Sikkim, and Nepal. Of special interest are slides of the dedication ceremony of a Himalayan Buddhist chorten in Indiana by His Holiness, the Dalai Lama.

Dinosaur Wagon Activities

Learn about dinosaurs and prehistoric life at the Dinosaur Wagon in Field Museum's Dinosaur Hall. See a dinosaur tooth, discover what dinosaurs ate, take a short hall tour and participate in a variety of hands-on activities.
Saturdays 1:00 - 3:00
May 18 and June 8
Sundays, 1:00 - 3:00
May 5 and June 16

Specimen Preparation

Meet Field Museum Botany Department preparator Ralph Rogers and Zoology Department Division preparators Tom Gnoske and Sandy Willmore as they show how specimens are prepared for Field Museum's research collection. How these items are used for scientific study will also be discussed during the demonstration.
Bird Preparation
Saturdays, 11:30 - 4:30
May 4, 25, June 22, July 13, and August 10

Herbarium Specimen Preparation

Saturdays, 11:30 - 4:30
May 18, June 15, July 13, and August 10

Webber Resource Center

Native Cultures of the Americas
Visitor Hours: May 1 - 31
Weekdays: 12:00 - 5:00
Weekends: 10:00 - 5:00
New Visitor Hours effective: June 1
Daily 10:00 - 4:30
Webber Resource Center offers books, newspapers, video and audio tapes, and teacher resource materials about Native Peoples of the Americas.

Pawnee Earth Lodge

Visitor Hours: May 1 - June 16
Weekdays: 1:00 program
Weekends: 10:30 - 4:30
Summer Visitor Hours: June 17 - August 30
Weekdays: 11:00, 11:30, 1:00 & 1:30 programs
Weekends: 10:30 - 4:30
Visit the earth lodge and walk into a traditional home of the Pawnee Indians. Handle objects and learn about the mid-19th century daily life of the Pawnee Indians of the Great Plains. Free tickets for programs are available from the South Information desk.

Place For Wonder

Visitor Hours: May 1 - June 16
Weekdays: 12:30 - 4:30
Weekends: 10:00 - 4:30
Extended Summer Visitor Hours: June 17- August 30
Weekdays: 11:00 - 4:30
Weekends: 10:00 - 4:30
Place For Wonder is a special exhibit with touchable objects. Become a naturalist and examine an array of plants, bugs, rocks and fossils. See how you measure-up to a dinosaur thigh bone. Peer into the live insect cases to watch the behavior of backyard crickets or tropical cockroaches. Take a trip to Mexico, in Place for Wonder's Culture area to find clothing, cooking items, books and toys. Visit Place For Wonder today and get involved in an exciting hands-on approach to science. Place For Wonder has moved and is now located in the Webber Resource Center Gallery on the first floor.

CRUISES TO THE ARCTIC AND JAPAN

GREENLAND & THE CANADIAN ARCTIC

August 14–26, 1991. Aboard the *Illiria*. Cruise and land fares range from \$4,595 - \$5,745 per person.

Wednesday, Aug. 14

Chicago/Montreal, Canada. Overnight at deluxe Hotel Grande, Montreal.

Thursday, Aug. 15

Montreal/Sondre Stromfjord, Greenland. Depart Montreal on a chartered Canadian Airlines flight to the U.S. air base in Sondre Stromfjord on Greenland's west coast. Transfer to the *Illiria* to navigate the long fjord that leads to the Davis Strait.

Friday, Aug. 16

Itivdleq Fjord/Holsteinborg, Greenland. In the morning the *Illiria* cruises the impressive Itivdleq Fjord. Weather permitting, disembark for a nature walk to the "Lake of Strange Salmon." Later, arrive at Holsteinborg, 30 miles north of the Arctic Circle. Known locally as Sisimuit, this second largest city of Greenland was founded as a trading center in 1756. Visit the Knud Rasmussen Cultural Center and take an excursion to Ikerasak, an abandoned town that was established on an ancient burial ground.

Saturday, Aug. 17

Disko Bay and Jakobshavn, Greenland. The *Illiria* now enters Disko Bay, navigating a spectacular field of sparkling icebergs. Weather permitting, cruise by Zodiac landing craft through this icy labyrinth. Continue on to the town of Jakobshavn, birthplace of Danish explorer Knud Rasmussen, a renowned Eskimo ethnologist and the first man to journey through the Northwest Passage by sleigh. Visit his house, now a museum, and Zion Church, a traditional Danish timber structure built in 1779.

Sunday, Aug. 18

Umanak, Greenland. The *Illiria* visits the village of Umanak, a collection of turf houses and early Danish buildings. Visit a 500-year-old Thule burial ground — a cave where eight mummies were discovered, and more than 100 graves are carved into the cave's walls.

Monday, Aug. 19

At Sea. Spend the day crossing Baffin Bay and attending presentations on the indigenous cultures, wildlife, and ecology of the Canadian Arctic.

Tuesday, Aug. 20

Bylot Island, Northwest Territories. Arrive in Cape Hay on Bylot Island, named for the 17th Century explorer Robert Bylot, who navigated the Davis Strait and Baffin Bay. The island is home to more than a half million thick-billed murres, and this bird's unusual habitat will be explored under the guidance of Field Museum naturalists.

Wednesday, Aug. 21

Pond Inlet, Baffin Island, Northwest Territories. Traverse the dramatic fjords of Eclipse Sound en route to Pond Inlet on Baffin Island. Discoveries may include the coveted spiral tusk of the narwhal or the "coat of arms" markings of the harp seal. Dock in Pond Inlet, meeting the local inhabitants and touring this remote outpost.

Thursday, Aug. 22

Sam Ford Fjord, Baffin Island. Explore the fjord as the *Illiria* cruises the east coast of Baffin Island.

Friday, Aug. 23

Auyuittuq National Park Reserve, Broughton Island. Explore the Auyuittuq's series of fjords that cuts into the land and forms a region of unparalleled beauty. Towering cliffs, some 3,000 to 4,000 feet high, surround the fjords, while glaciers frame valleys intersected by streams. After exploring the Reserve, make a stop at Broughton Island.

Saturday, Aug. 24

At Sea. Cross the Davis Strait en route to Greenland.

Sunday, August 25

Sondre Stromfjord, Greenland/Montreal, Canada

Monday, Aug. 26

Montreal/USA. Return flight to Chicago.

ISLAND HERITAGE OF JAPAN

September 21–October 6, 1991. Aboard the new, all suite *Renaissance*. Cruise and land fares range from \$5,895 to \$6,695 per person. Optional post-cruise extension to Hong Kong, October 6–10, 1991

Saturday, Sept. 21

Chicago/Tokyo, Japan

Sunday, Sept. 22, and Monday, Sept. 23

Tokyo, Japan. Upon arrival Sunday, transfer to the Imperial Hotel, and spend the rest of the day at leisure. Monday, a morning tour of Tokyo includes a visit to the Asakusa Temple (said to have been founded by three fishermen in the 7th century), the Tokyo Stock Exchange, and the lively Tsukji Fish Market. Spend the afternoon at leisure, with a welcoming cocktail reception at the hotel in the evening.

Tuesday, Sept. 24

Tokyo/Kamakura/Hakone. Depart for Kamakura, Japan's political and military center from 1192 to 1333. This historic city of 65 temples and 19 shrines is home to the statue of Dai Butsu, or Great Buddha, a 93 ton bronze image that has looked down upon the city since 1252. Also at Kamakura is the 13th century Zen monastery of Engaku-ji, the finest example of the vigorous architecture of the Kamakura period. Continue through Hakone National Park to Hakone, spending the night at the Fujiya Hotel. Dinner at the hotel is included.

Wednesday, Sept. 25, to Saturday, Sept. 28

Hakone/Kyoto. Travel to the ancient city of Kyoto via bullet train, spending four nights at the Miyaka Hotel. Kyoto, a city that served as the capital of Japan from 794 to 1868, is the principal cultural center where architecture, painting, sculpture, and the arts have flourished. More than 2,000 temples, shrines, sites and museums beckon the visitor. The tour of Kyoto includes the Golden Pavilion, an exact replica of the magnificent 14th century retirement villa of the shogun Yoshimitsu. Also included will be a guided visit to the Kyoto National Museum, home to one of Japan's greatest collections of traditional painting and sculpture. Enjoy Japanese-style dining, a cultural performance, and leisure time to explore this enchanting city.

Sunday, Sept. 29

Kyoto/Nara/Osaka/Embarkation. From Kyoto, travel to the town of Nara. Japan's first capital and a cradle of Japanese art and literature. Visit Horyu-ji, the oldest temple in Japan and the center from which Buddhist scholarship and culture emerged. Also visit the 8th century Temple of Todai-ji, home of the largest wooden construction in the world. Embark the *Renaissance* in Osaka and prepare to sail.

Monday, Sept. 30

Toba. Arrive at Toba for a drive along the coast to Ise, where a tour will be taken of Niaku, one of the Great Shrines of Ise, the most venerated palaces of the Shinto religion. From Ise, continue to Pearl Island and visit Japan's first pearl culture farm, established in 1893.

Tuesday, Oct. 1

Uno/Kurashiki. After a morning at sea, arrive at Uno for a trip to the town of Kurashiki, famous for its whitewashed, black-tiled kura, or warehouses, which have been converted into shops, tea houses, and excellent museums. The tour includes a trip along the lovely canals lined with golden willows to the old quarter of town.

Wednesday, Oct. 2

Inland Sea/Hiroshima/Miyajima. Spend the morning sailing among the fishing villages, islands and beaches of the Inland Sea. In the afternoon, cruise along one of Japan's most scenic coastlines en route to Hiroshima. Visit this rebuilt village and the Peace Memorial Park and Museum, commemorating the August 8, 1945 atomic bombing of Hiroshima, or choose instead an excursion to Miyajima, a tiny island at the entrance to Hiroshima Harbor. Since the 9th century the Itsukushima shrine, dedicated to the daughters of Susanoo, the Shinto wind god, has stood on this sacred island. At high tide, the entire edifice floats over the water, creating a scene of striking beauty.

Thursday, Oct. 3

Hagi. Built at the mouth of the Abu River, the town of Hagi is a delightful remnant of old Japan, its narrow streets and old samurai houses preserving the atmosphere of another age. Explore Shizuki Park, a 17th century fortress, as well as the fascinating district of Horluchu, once the residential area of upper class samurai. View the famous Hagi-yaki porcelains.

Friday, Oct. 4

Kanazawa, spared the bombings of World War II, preserves many fine examples of architecture dating from the 16th and early 17th centuries. In 1583, the city was captured by the powerful Maeda clan, establishing Kanazawa as a center of learning and culture.

Saturday, Oct. 5

Sakaiminato/Matsue. Dock at Sakaiminato for an excursion to Matsue, a charming city of canals, old houses, and temples. Atop a wooded hill stands one of the few original castles surviving in Japan, dating from 1607–11. Also visit the old samurai house that was once home to Lafcadio Hearn, one of the first Western writers to interpret Japanese culture. An option for the remainder of the day is to visit Daisen-oki National Park, a striking region of rugged coastline, volcanoes, and numerous lakes.

Sunday, Oct. 6

Disembarkation/Pusan, South Korea/United States.

PAPUA NEW GUINEA

Sepik river Cruise by Yacht and Australia's Great Barrier Reef January 17–31, 1992

Explore the Reef in the world's largest sailing catamaran, and take a leisurely trip down the ever-changing Sepik River aboard the *Melanesian Discoverer*. Price is \$6,850 per person. (Double occupancy)

EGYPT AND THE NILE BY YACHT

January 26–February 15, 1992

Highlights include excursions to the great pyramids of Cheops, exploring the valley temple guarded by the Sphinx, and visits to Saqqara, the vast necropolis of ancient Memphis, and one of the most important archaeological sites in the Nile Valley. Highlights of the cruise down the Nile include a visit to Abydos, the traditional center of worship for the cult of Osiris, two days exploring ancient Thebes (now the city of Luxor), and a stopover at Karnak to view the massive stone ruins there. Price is \$5,890 per person. (Double occupancy)

Please request itineraries for these additional 1992 programs:

THE GALAPAGOS ISLANDS – Including visits to Quito and Cuenca. Aboard the *Santa Cruz*. January 24–February 6. Prices range from \$3,482 – \$4,227.

WEST AFRICA CULTURAL TOUR

February 22 - March 14, 1992

(312) 322-8862

NEW BOOK ON PACIFIC COLLECTIONS

Pacific: A Companion to the Regenstein Halls of the Pacific was published in April, the first of a new series of volumes devoted to the Museum's principal collections on exhibit.

In addition to reprising the themes of "Traveling the Pacific" and "Pacific Spirits," the handsomely illustrated paperback book has an essay on the social and cultural roots of Pacific islanders' art by Phillip Lewis, curator of Melanesian ethnology, and a history of the Oceanic collections by Susan Nelson, a frequent contributor to Museum publications.

Illustrations include both dramatic, full-color studio photographs of artifacts in the exhibit by Museum photographers John Weinstein, Diane Alexander White, and Ron Testa, and curators' on-scene pictures of island

life, including many taken by A.B. Lewis during his 1909-13 expedition to Melanesia. The 52-page book is available in the Museum stores for \$7.95.



John Weinstein 111521

AWARDS FOR 'PACIFIC'

The Field Museum's Pacific exhibit has been cited for excellence in concept and execution in the Curators' Committee Exhibit Competition of the American Association of Museums. "Pacific" is one of four exhibits chosen in the juried competition to be recognized in a special session at the Association's annual meeting in May and featured in the autumn issue of the *Museum News*.

The "Traveling the Pacific" component of the exhibit has also been awarded a certificate of excellence for exhibition design in the 1990-91 Print Casebook competition, and will be featured this summer in 1990-91 *Print Casebook* #9.



A.B. Lewis P265

Left, man and boy in Siar, New Guinea, ca. 1910. Above, mask from Tami Island, Morobe Province, Papua New Guinea.

Sale

You are cordially invited to
our largest clearance sale ever!

From May 4 to May 12, selected merchandise is

50-75% OFF!

Choose from a wide variety of discontinued
and one-of-a-kind items including jewelry, books, posters,
decorative accessories, and more!

Special members' preview on Members' Night
May 3

Special Sale location East Side Ground Floor

THE FIELD MUSEUM STORE



ANTHROPOLOGY IN MELANESIA

'SO MUCH TO BE DONE,
AND THE TIME SO SHORT AND CRITICAL'

By Ron Dorfman

Although early anthropological studies in Melanesia were chiefly concerned with how the region's many island cultures interacted with one another in such matters as trade relations, migration, and warfare, after about 1920 the focus shifted to documentary accounts of culture and kinship in individual villages.

There is now renewed interest in regional studies in Melanesia, not least because nation-building in the post-colonial world creates new facts and requires new understanding of the ways in which local communities are linked socially, economically, and politically. In April, 12 scholars from around the world attended a conference at the Field Museum to explore "the conceptual tools and methodological skills needed to analyze and interpret the remarkable sociocultural and linguistic diversity of Melanesia 'beyond the village.'"

As nations like Papua New Guinea have gained political independence in recent years, their governing élites — often educated abroad in the 1960s and '70s — tended to share a critique of traditional ethnographic studies that Americans would identify with the New Left. Social scientists study the powerless on behalf of the powerful, but never vice-versa, went the argument; in Third World terms this meant that American and European researchers were in effect handmaidens of colonialism and imperialism. In developing countries, moreover, "village studies," as ethnographic accounts are sometimes called, are often seen as being irrelevant to the practical needs of the people, and some local governments have banned such work by foreigners.

But indigenous anthropologists can see both sides of this dispute. Soroi Eoe, director of the National Museum of Papua New Guinea, interviewed after the April conference at Field

Museum, put it this way: "The question is, is there a need to document [what remains of traditional culture], or can we ignore that and look [only] at present culture? How can we link present change to what has happened? The people with unique knowledge of certain subjects, of technology, of ways of doing certain things, are slowly dying out. . . . There are very few people who are alive and passing on that knowledge. The challenge then is not only for foreign anthropologists but for Papua New Guineans, whether they are anthropologists or whether they are ordinary people, to document this unique knowledge."

Currently, scholars applying for permission to conduct research in Papua New Guinea are often required to incorporate into their proposals some activity that is of demonstrable utility to the community being studied. Archaeologists may survey areas targeted for mining or other development projects; social and cultural anthropologists may contribute studies of the potential impact on traditional cultures of proposed development ventures.

Eoe noted that "Given the fact that there's so much to be done and not very many people to do it and the time period is so short and critical," both foreign and indigenous anthropologists, historians, and other social scientists are needed for the task.

Regional studies, he suggested, apart from their intrinsic interest, might be a means of overcoming the hostility of provincial authorities.

"You cannot do regional studies without village studies," he said, and regional studies that "develop a wider picture of traditional contact, traditional exchange, and traditional migrations" might be "some of the things that politicians can recognize as important contributions" to political and economic development.

The conference on regional studies was organized by Field Museum curator John Terrell and funded by the Museum and the Wenner-Gren Foundation for Anthropological Research.

Participants in the conference on regional studies in Melanesia gather for a portrait. Seated (L-R) are Sydel Silverman, president of the Wenner-Gren Foundation; Terence Hays, Rhode Island College; Margaret Rodman, York University; Soroi Eoe, National Museum,

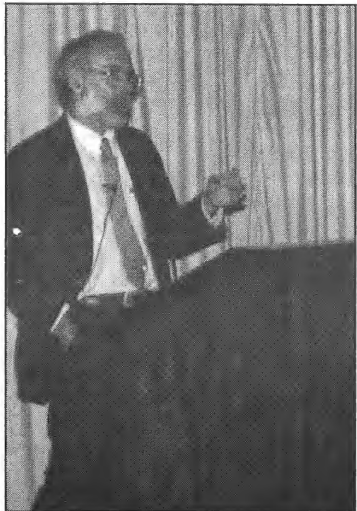


John Weinstein ON85783.21

Papua New Guinea; and John Terrell, Field Museum. Standing (L-R) are Chris Gosden, Cambridge University; Robert Welsch, Field Museum; Frederick Damon, University of Virginia; Markus Schindlbeck, Museum für Volkerkunde, Berlin; James Watson, University of Washington; Deborah Gewertz, Amherst College; and Geoffrey Irwin, University of Auckland.

THE COSTA RICAN MODEL
FOR PRESERVING BIODIVERSITY

Costa Rica is becoming a model for third-world conservation efforts by integrating management of its nature reserves into its development plans, and by placing responsibility for environmental con-



trol on indigenous people who have to live with its consequences, according to Daniel H. Janzen, who received the Field Museum Founders' Council Award of Merit on April 10.

Janzen, a University of Pennsylvania biologist who is also a member of the board of directors of Costa Rica's National Institute of Biodiversity (INBio), received the award, a crystal globe, for his pioneering work in tropical ecology.

In a talk accompanied by slides prior to the Founders' Council dinner, Janzen compared Costa Rica to a "corporation" with three million citizen-shareholders. The corporation's major asset is its 50,000 square kilometers of land devoted to a "mosaic" of productive uses, including some 12,000 square kilometers treated as a "greenhouse" — the national parks and forests — with an inventory of perhaps 500,000 species of plants and animals.

INBio runs a vocational school for "parataxonomists," rural people from a variety of former occupations who are trained to do field work in systematics. They observe, collect, preserve, and label specimens of "greenhouse" life, work that has typically been performed by graduate students. The indige-

nous parataxonomists, however, work at this job full time; Janzen said there are now 30 of them in the field and ultimately there will be 200, and they expect to have a computerized catalog of all 500,000 species in about ten years.

By contracting with industry to exploit renewable rain forest resources, INBio expects to make maintenance of the forest's biodiversity a profitable enterprise. Janzen offered the example of a chemical company that might ask for "three species of plant that caterpillars don't eat" in order to develop a pesticide — "and there's somebody [an INBio parataxonomist] who's been looking at those plants for ten years."

Costa Rican conservation efforts, Janzen said, "could easily be in the black within ten to fifteen years."

James Balodimas ON85785.29

PERU . . .

(Continued from page 1)

Clockwise from top right: Bosque Monteseuco is below the low-lying clouds; view is from ca. 2,500-meter elevation. Post-graduate research assistant José Guevara displays a variety of Solanum, a relative of the tomato. Villagers in Monteseuco show off their spectacled bear pelt; the species is endangered, and the only hope of saving it and others is to educate the children of Monteseuco, below.

the other side of the mountains. Many other species have similar distributions north and south, but most often the forest is the southernmost outpost for Ecuadorian species of the Pacific slope.

This conclusion is reinforced by the inventory of reptiles and amphibians (herpetofauna) in the vicinity of Bosque Monteseuco. Although there are only about 34 known species — 13 snakes, six lizards, and about 15 frogs — an astounding 40 percent of them are new species, and several others have not previously been found in Peru. One species of snake, *Coniophanes longinguus*, is the southernmost representative of its genus; its closest relatives are in western Ecuador and eastern Panama. Two others have been previously reported east of the Andes in Peru but not on the western slopes. Several new species of iguanid lizards appear to be most closely related to species in northern Peru.



ber. The conversion of forest to pasture is perhaps a more persistent threat; it has created a patchwork of cleared terrain and second growth, grading into more pristine forest habitats on the slopes above Monteseuco.

According to local villagers, the valley of Udima just over the ridge north of Monteseuco was once forested. Today only remnants of forest remain on hillsides; the valley floor has been converted entirely to pasture. As recently as the 1950s Hans Wilhelm Koepcke, the German ornithologist, observed that Hacienda Udima was a "large area covered by . . . rain forest nearly unaltered by human activities." Sadly, this is no longer the case.

Bosque Monteseuco contains numerous plants and animals found nowhere else on earth. It is also home to several rare and endangered species — the spectacled bear, a prehensile-tailed porcupine, the ocelot, and several birds, including the blue and black tanager, the Andean guan, and the wattled guan.

Moreover, data on the distribution and diversity of flora and fauna provides an invaluable biological record that will be critical to understanding the climatic, geological, and evolutionary history of the region. Should these habitats disappear, we may never succeed in reconstructing that history. Worse, we will have lost the biological potential locked in the genes of this unique community.

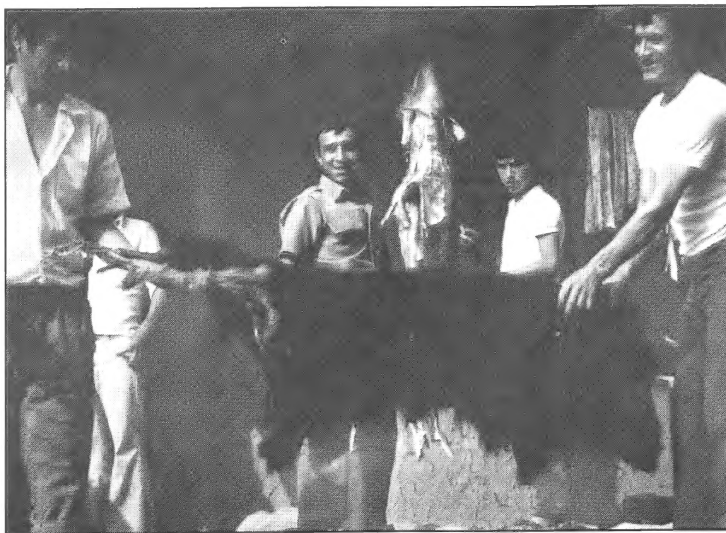
Peruvians who convert forest to pasture are no more hostile to the biosphere than are Americans who turn pastures into suburbs. Growing populations need places to live and the means of livelihood. There are alternatives to current trends, but the worst thing that could happen in Peru, in a practical sense, would be for foreigners to come in and start dictating how natural resources will be utilized or protected. In fact, it's the children of Monteseuco who will ultimately save or destroy this environment. We and our Peruvian colleagues have developed good relationships with the local schools and are attempting to provide information on the unique nature of the plants and animals of Bosque Monteseuco. It is our hope that a "grass-roots" approach will ensure the future existence of these unusual but threatened habitats.



So far we've been able to analyze the genetic histories of about half the Monteseuco reptiles and amphibians, and these generally fall into two patterns: 35 percent are related to species in arid areas of western Peru or montane areas of northern Peru and southern Ecuador; and 18 percent are related to species in western Ecuador.

Biological inventories have begun in several other forest areas and are being added to our data base. Ultimately, this information about the distribution of plants and animals will be important in conservation efforts that must be made in the region.

Wedged between the arid scrubland below and the open alpine formations (jalca), Bosque Monteseuco is a tempting target for development. It is capable of supporting coffee and other important crops. Although tree cutting has been curtailed in recent years, the forest continues to be exploited at a low level for tim-





FMNH 468919

PHOTO CONSERVATION PROJECT

By Steve Crescenzo

Among the Museum's most important collections are a half-million photographs dating back to the turn of the century. Until recently, the Museum was in danger of losing a large part of the collection, and thus a part of its history.

There was a period, from roughly 1920 to 1950, after glass negatives went out of use and before polyester-based, or "safety" film was invented, when all photographs taken for the Museum's collection were on nitrate-based film. In the 1940s, it was discovered that nitrate-based negatives are chemically unstable. They might last for fifty years, or they might crumble in your hand, but, in any case, they were not permanent. Not only that, but when they did break down, there was a good chance they would destroy all the negatives in close proximity, even those on safety film.

By 1950, the Museum was using only safety film, but there was still some 30 years' worth of valuable negatives on unstable film, much of it stored next to more recent work on safety film in steel filing cabinets, putting the whole collection at risk.

In 1989, the National Endowment for the Humanities awarded the Museum \$184,000 to undertake a rescue project. Nina Cummings, director of the project, engaged Chicago Albumen Works, a company specializing in large photo-conservation and -restoration projects, to do the bulk of the work. Altogether, about 20,000 images had to be transferred.

The film first had to be segregated; Cummings had to know which negatives were on nitrate and which were on safety film. The problem is that they look exactly alike, and since there was a period of about three years when the Museum was using both kinds of film, a lot of nitrate film was stored right next to safety film. Some of the nitrate film was

labeled, and some, because of the dates involved, could only be nitrate. But the rest of the film had to be identified through chemical analysis.

and is scheduled for completion next September. Staff members working on the project with

Cummings include John Weinstein, head photographer and photographic advisor for the project; Linda Dorman, darkroom technician in charge of the 2,000 or so photos the Museum is transferring in-house; and department clerk Mark Alvey, who is assisting with the project inventory.

Also involved in the project is Catherine Sease, head of the Division of Conservation, who will advise on the installation of climate-control technology for the photographic collection.

Top, jewelers' booths in Mosul, Iraq. From the Anne L. Fischer Collection.

Left, girls exercising with naginatas. Japan, ca. 1926. Photographer unknown. Note that the original nitrate negative's edges were curling, a sign of imminent deterioration.

Below, a porthole view of undersea life in the Bahamas by J.E. Williamson, ca. 1929.



FMNH 50302

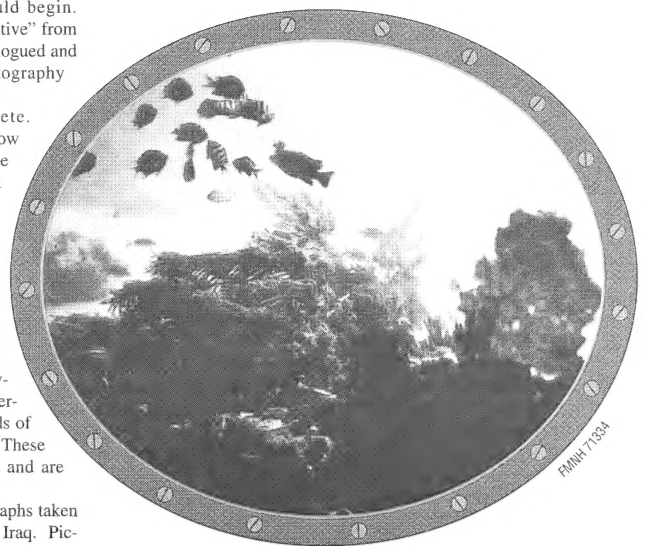
Once the nitrate film was separated and removed to a different area, the transfer process could begin. Albumen Works makes an "interpositive" from the nitrate-film image; these are catalogued and store, and the Department of Photography makes new negatives as needed.

The project is nearly complete. Some of the photographs that are now preserved for posterity are invaluable monuments to the Museum's work over the years.

For example, there is the collection of photos taken by Malvina Hoffman and her husband, S.B. Grimson. Hoffman is the artist who crafted many of the beautiful bronze sculptures on display throughout the Museum. For research, Hoffman and Grimson traveled around the world, taking wonderful photographs of people in hundreds of cultural groups — on nitrate film. These photographs have been transferred, and are now safe.

Also in danger were the photographs taken by Anne Fischer on her 1928 trip to Iraq. Pictures of the people, scenes of the countryside and the architecture, and many other rare photos are now on safety film.

The project was started in September 1989,



FMNH 71334




FIELD
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Costa Rica Tropical Adventure

November 27 – December 8, 1991

A land of unparalleled diversity, with lowland jungles, high-altitude cloud forests, black-sand and coral beaches, mountainous paramos, volcanoes, and some of the most beautiful tropical white-water rivers to be found anywhere, all preserved by the most remarkable national park system in the world. We'll be accompanied throughout by Dr. William C. Burger, Field Museum's curator of vascular plants, and Dr. Julio Sanchez, chief curator of birds at the National Museum of Costa Rica. Dr. Burger, a specialist in the flora of Costa Rica, is also a highly skilled nature photographer and will share that expertise with tour members as well.

The group is limited to 20 participants. Price is \$3,350 per person, and includes round-trip air transportation from Chicago. A deposit of \$250 per person will hold your reservation.



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a lifetime ...*

*and inner
peace
beyond
imagining.*

Travel all 300 miles of the Colorado through the Grand Canyon by motorized raft, and marvel at the mile-high canyon walls.

Colorado River Rafting Adventure



Only a few places remain open.

The price of \$2,145 per person covers all expenses except meals in Las Vegas. Our naturalist guide will be Barbara Harney.

We'll sleep on sandy beaches under the stars, swim in the Colorado's tributaries, and hike to places of unusual geological and anthropological interest. We'll ride nearly 200 rapids, in complete safety—you don't even have to know how to swim!

**May 24 –
June 2, 1991**

**See page 11 for information on
these 1991 tour programs:**

- Canadian Arctic and Greenland aboard *Illiria*, August 14–26, 1991
- Island Heritage of Japan, aboard *Renaissance*, September 21 – October 6, 1991