

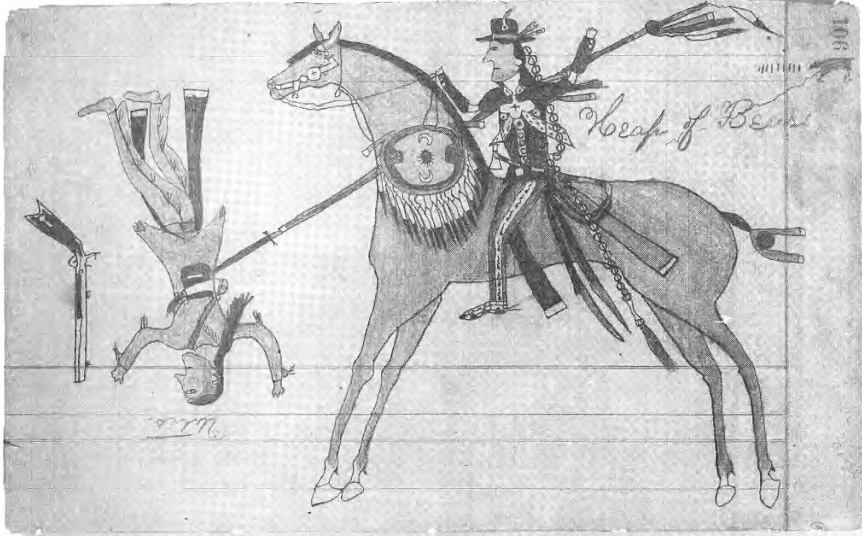
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# In the Field

The Bulletin of the Field Museum of Natural History

September/October 1992



## FOLK ART BY ARAPAHO WARRIORS

REVIVAL OF  
OUTRIGGER  
TRADITION  
IN THE  
MARSHALLS

SCENES  
FROM  
SENEGAL:  
A PHOTO  
ESSAY

HERPETOLOGISTS  
ON THE PROWL  
IN BORNEO'S  
RAIN FOREST

COURSES &  
LECTURES ON  
EGYPT AND  
SUB-SAHARAN  
AFRICA

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# In the Field

The Bulletin of the Field Museum of Natural History

September/October 1992

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Two-for-one tickets for acclaimed film, *A Brief History of Time*, available to members

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"The Edwards Ledger Drawings: Folk art by Arapaho Warriors," in the Webber Gallery

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A complete schedule of music, dance, storytelling, and other free programs for Museum visitors

## SCENES FROM SENEGAL

Members of the team developing the Museum's major new exhibit on Africa were in West Africa recently collecting materials for display. Staff photographer James Balodimas documented contemporary life in Senegal. A selection of his scenes and portraits.

Picture story, Page 3



## STALKING THE BORNEAN GECKO

By John C. Murphy  
Division of Amphibians and Reptiles

My first chance to see the Borneo countryside came on the ride from Lahad Datu to the Danum Valley Field Center, which would be my base for a survey that would help gauge the impact of logging on the local ecology.

The small airport at Lahad Datu on the Malaysian side of the island was crowded and the distinctive odors of grease and curry filled the air. Several of us climbed into the passenger van from the Field Center and within a few minutes we were passing through plantations on the outskirts of Lahad Datu. As the van stopped at a vegetable stand, Hans, a Swedish geologist and geographer, lectured me on the economic botany of Sabah Province. My employees for the next two months — Paul Yanbun, Freddie Paulus, and Frederic Francis — were asleep in the back seat. My immediate concern was how to communicate with these young Dusun men; of the three, only Paul had shown an interest in speaking to me in English. The trio spoke their tribal language and Bahasa Malay, and I knew only a few words of the latter. The success of my endeavor depended heavily on the three and on my ability to follow them through the forest, recording data on the amphibians and reptiles they collected.

The scenery was reminiscent of places I had been in the neotropics but the roadside fauna indicated I was in the Old World. A short-tailed macaque sauntered across the road and a large water monitor lizard slid into the underbrush as we passed. Before the three-hour trip was over all of us were ankle-deep in mud, piling rocks and branches under the wheels of the van to free it from a mud hole — one which I would come to know on a personal basis in the weeks ahead.

My purpose in traveling to the Danum Valley was to conduct part of a study comparing the amphibian and reptile communities of unlogged rain forest with those of logged rain forest. The results of this study, funded by the National Geographic Society through a grant to the Field Museum, will allow an assessment of the impact of logging on amphibian and reptile communities. Robert Inger and Harold Voris of the Museum's Division of Amphibians and Reptiles had visited Danum in 1986 and 1987 and done some preliminary collecting, accompanied by Sharon Emerson of the University of Utah. Voris was to help me set up the study sites and establish a work routine on this trip.

Danum was chosen as part of this study because it sits at a boundary between secondary forest, which had been selectively logged decades ago, and a large tract of almost untouched primary rain forest. I say almost untouched because it contains a network of trails that are maintained by Field Center personnel, and also contains some experimental plots at its perimeter that have had vegetation



John C. Murphy

A cat gecko clammers over a leaf

removed. However, most of the 450-square-mile primary forest area is undisturbed by humans and there are no tribal people currently living within its borders. Unfortunately, this piece of pristine tropical real estate is protected from logging only until 1995, when it will be reviewed for possible logging concessions.

The site currently harbors an excellent population of orangutans, and probably at least a few very rare Sumatran rhinoceros. Anticipating the opportunity to see these and other tropi-

cal forest mammals added to the excitement of the possibility of encountering king cobras and reticulated pythons. Both of these snake species are known to inhabit the Danum Valley around the Field Center.

I discovered that living conditions at Danum were quite comfortable for the tropics. The guest house was built into a hillside overlooking the Segama River, which flows eastward into the Sulu Sea at Lahad Datu. The five bedrooms had screened windows, ceiling fans run by an electric generator during waking hours, and private showers. There was a living room/library/dining-room area and a kitchen; outside, under an attached roof, was a laundry. The guest house also had a large population of very vocal chic-chacs, or house geckos, lizards that usually made their presence known after dark. The rooms were elevated about a meter and accessible by a covered wooden walkway that was open on one side.

At night the walkway was lighted and bats would patrol the airspace for insects. It was not uncommon to have them brush your shoulder

(Continued on page 11)

## CANOE REVIVAL IN THE MARSHALLS

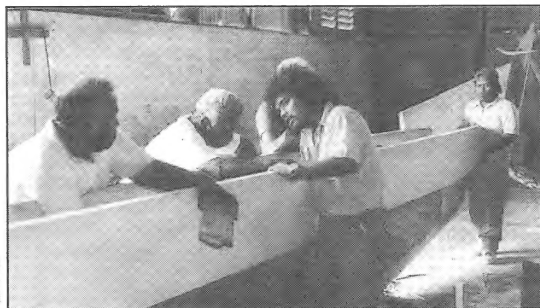
By Giff Johnson

Dennis Alessio was line-fishing off the stern of a large sailing ship anchored in Ailinglaplap Atoll's vast lagoon in 1989 when a group of six young lads paddled a small outrigger out to the ship. Hopping aboard, the young Marshall Islanders clustered around Alessio, an American and a boat builder by trade, who admired their canoe. But the boys weren't impressed when he told them their canoe looked great. Alessio recalls he asked the oldest boy, who was about 13, if he liked the canoe. "No," came the reply. Why? Alessio asked. "An outboard-engine boat is the best to have," the boy said. Why? Alessio asked again. "Because it is."

Alessio didn't let it go. If you were sitting on the beach with an outrigger on one side of you and a motor boat on the other, he asked them, and you spotted a school of fish in the lagoon, which would you use? And, he added, there's no gasoline in the boat and none on the atoll and there hasn't been any for months. How are you going to get out and get the fish? The boys put their heads together, arguing among themselves over the two boats. Finally, Alessio says, the leader turned to him and said, "Emnan karkar" ("the canoe is best").

"Western ideology has conditioned people in the Marshalls to believe that Western things are better," Alessio says. "Most people don't realize how perfectly designed a canoe is for these atolls."

MAJURO



Giff Johnson

Since 1989, Alessio has directed the Waan Aelōn Kein [Canoes of These Islands] Project for the Alele Museum, the national museum of the Marshall Islands. The Marshallese outrigger canoe at the center of the Pacific exhibit in the Field Museum served to launch the Waan Aelōn Kein Project. The trustees and staff of the Alele asked Alessio to head a project to replace the canoe that was sent to Chicago for exhibit. What started as a one-canoe project quickly developed into an expansive canoe-documenting process. "There was no information written anywhere about Marshall Islands canoe designs," Alessio says. During the time the initial canoe was being built, the project took on a life of its own as people saw the potential for the program, he says.

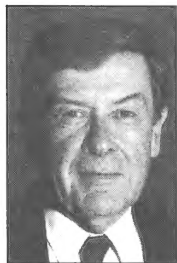
"Western boat designers still haven't caught on to the ingenuity and genius of the design of Marshallese outrigger canoes,"

(Continued on page 10)

The 50-foot "walap" (voyaging) canoe taking shape in the Majuro workshop. In trial runs at the end of July, the canoe reached cruising speed of 12 knots while carrying a full crew and observers.

The Western sailors and explorers who first encountered the Marshallese wrote glowingly of the speed and grace of their canoes, but modern boat designers have been slow to learn from them.

## WORKING FOR THE FUTURE



By Willard L. Boyd  
President, Field Museum

As the nation is suffering from a severe shortage of scientists and other trained museum personnel, the Field Museum is working to counter the spiraling downward trend. We are providing intensive programming to stimulate the interest of college, high school and junior high students in science and museum careers.

Recent studies by the National Science Foundation and others have helped to identify reasons why young people are reluctant to pursue science careers. A lack of scientific experience and a rift between science education and the everyday activities of scientists are foremost among these.

By being exposed to hands-on experiences, college and pre-college students begin to see biological sciences and other museum careers as attractive options. The learning experience the Museum offers varies according to each student's educational preparation and area of interest. However, whether the trainee chooses to work on a scientific research project, the curation and management of a particular col-

lection, participation on an exhibit development team, or a public education program, each is given specific responsibilities and placed under the guidance of a museum professional.

There are several on-going programs at the Field which offer opportunities for educational and career training: internships, fellowships, special projects linked to exhibits or research, work study, cooperative education, and the volunteer program. Some initiatives are sponsored solely by the Field Museum, others are in partnership with other educational institutions.

This summer, we were fortunate to receive funding from the National Science Foundation that enabled us to involve seventeen minority and women undergraduate life-science majors in a collections program. Working side by side with curators and collection managers in botany, geology, and zoology, the trainees gained first-hand experience in the use of collections and our unique interdisciplinary program.

Also this summer, in cooperation with the University of Chicago and supported by a grant from the Illinois Board of Higher Education, we were able to bring five undergraduate students to the Museum to pursue research in biology, anthropology, and geology. Under the

direction of a curator the students gained experience in collections-based inquiry.

Students from both of these programs joined other interns in bi-weekly seminars and collections tours. The curators designed the seminars to introduce students to the breadth of collection-based research at the Field Museum. Exposure to the range of scientific disciplines to which systematic collections contribute, and to modern methods of field research, encourages a greater appreciation of the value of museum science and careers.

These programs were just a few of the many offered at the Field this summer to attract and retain students in scientific study. The Field Museum is taking steps to offset the critical shortage of trained scientists and other professionals crucial to the museum world. We will continue to provide hands-on museum training. By doing so, we hope ultimately to attract a rich pool of museum professionals who will work to address and communicate the critical issues concerning global conservation, biodiversity, and human cultures.

GIFT  
TO COLLECTIONS

A recent donation of wooden artifacts from Papua New Guinea and Vanuatu helps fill a gap in the Museum's collection, according to Robert Welsch, visiting associate curator of anthropology. The fourteen objects, most of them from the Sepik River area of New Guinea, date from the 1950s, '60s, and early '70s. The Museum's world-renowned collection of Sepik River materials was mainly gathered by curators A.B. Lewis and George A. Dorsey in the period before World War I, by the Crane Expedition in the late 1920s, and in the past two years by Welsch, who has been comparing contemporary crafts, technology, and trading patterns with those observed by Lewis in 1909-13.

The new collection is a gift from Dorothy Goldberg of Des Moines in memory of her husband, Dr. Louis Goldberg, who died in 1975. The Goldbergs acquired the objects from the late Karol LaCasse, who was for many years associated with the Roman Catholic mission in Wewak. Among the artifacts are a slit gong, a suspension hook, a shield, and numerous carved and painted objects including a six-foot-four-inch figure that may have served as a house post.

Connie Crane, an Associate of the Department of Anthropology and a member of the steering committee of the Collections Committee, a donor group interested in the Museum's ethnographic collections, said Mrs. Goldberg's gift is "just the kind of thing we want to encourage: important pieces that fit well into the Museum's holdings."



Robert L. Welsch (left) and Jack MacDonald, a Museum volunteer, unwrap carved figures from New Guinea donated by Dorothy Goldberg of Des Moines.

Heather Bilandic (left), Women's Board president, and Mary Kay Eyerman and Diane Dean, benefit co-chairs, meet with Dan Skoda (center), president of Marshall Field's, and Sandy Boyd, president of Field Museum, to plan the fashion show being held September 11 at Field Museum. For further information call the Women's Board office at (312) 322-8870.

## FIELD'S FASHIONS, SEPT. 11



Joan Hecker

## ERRATA

The July/August issue of *In the Field* went to press with some information missing from the obituary of Edna Staehle, a Sustaining Benefactor of the Museum and a charter member of both the Founders' Council and the Women's Board. Mrs. Staehle died May 13 at the age of 84.

NOTE TO LIBRARIANS: 1992 numbers of *In the Field: The Bulletin of the Field Museum of Natural History* are Volume 63. Numbers 2, 3, and 4 (March/April, May/June, and July/August 1992) were mistakenly marked Volume 62.

## In the Field

September/October 1992  
Vol. 63, No. 5

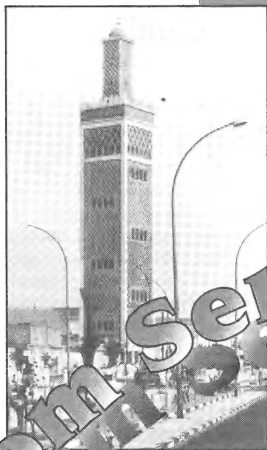
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Art Director:  
Shi Yung

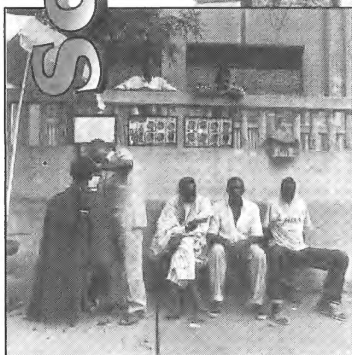
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Jessica Clark

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Photographs by James Balodimas



*Celebration of Tabaski: For this important feast day, fathers and sons attend prayers at the Grand Mosque in Dakar (top left). Preparing for the holiday are (clockwise from left) four generations of women; Issa, Ibrahema, and Iddi Diallo in traditional dress; Issa tending the family sheep that will be slaughtered for the feast.*



*Above: Haircuts al fresco. Barbers on Dakar street corners charge about \$3.*

*Right: This young musician makes the rounds of Dakar hotels every night singing and playing the cora.*



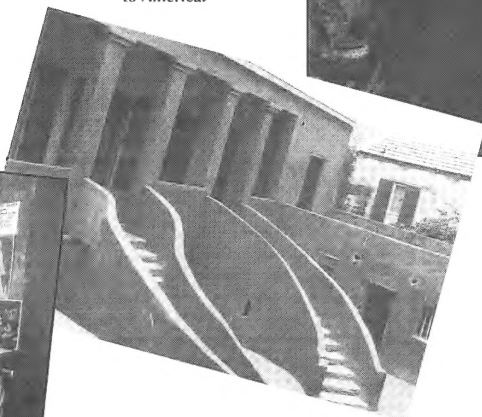
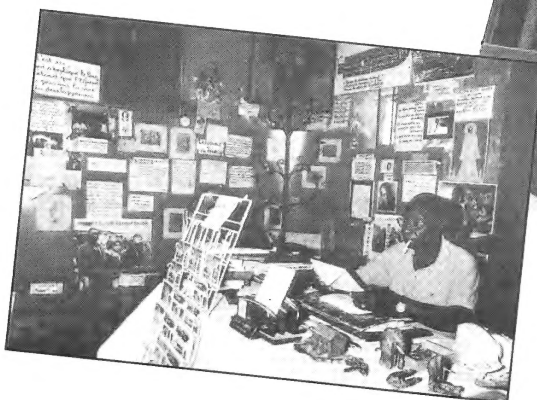
Staff photographer James Balodimas accompanied a Museum team collecting materials for display in the new multidisciplinary exhibit on Africa that will open next year. This selection of his photographs depicts aspects of life in contemporary Senegal.

*The Slave House on Gorée Island: Slaves were kept in rooms no larger than six by nine feet, with as many as 30 people to a room. The slaves were brought out into a courtyard (below) for auction while the bidders stood on the second-floor balcony.*



*"The Door of No Return" (right) led to a docked square-rigger waiting to transport the slaves to America.*

*The historic Slave House on Gorée Island. Joseph Ndiaye, below, curator of the house, conducts research and education programs on the slave trade.*



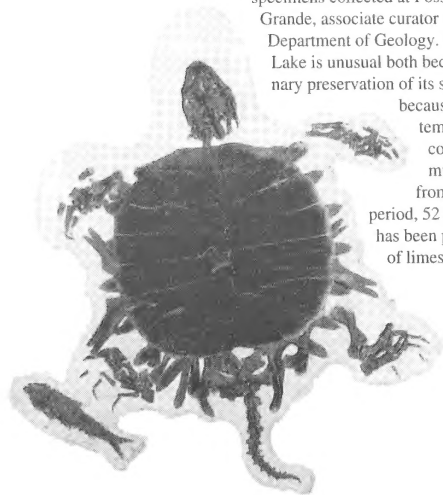
## SOUTH AFRICAN WOMEN'S GROUP



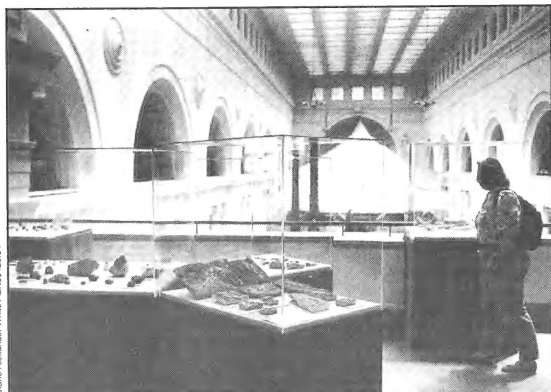
Jacqueline M. Carter, right, assistant to President Boyd, exchanges addresses with Manoko Leah Moleele of Seshego, South Africa. Ms. Moleele was among 132 South African women who visited the Field Museum during the 45th annual conference of the National Council of African Women, held in Chicago July 8 - 21. The women — educators, social workers, and health professionals — were interested in the Museum because of its use by teachers as a classroom resource. The Chicago meeting was the group's first in the United States.

## LOCKED IN STONE

**L**ocked in Stone: The Prehistoric Creatures of Fossil Lake" remains on view through November 15, featuring over 100 select examples of the specimens collected at Fossil Lake by Lance Grande, associate curator of fossil fishes in the Department of Geology. Wyoming's Fossil Lake is unusual both because of the extraordinary preservation of its specimens and because an entire lake system representing a contemporaneous community of organisms from the Early Eocene period, 52 million years ago, has been preserved in one layer of limestone.



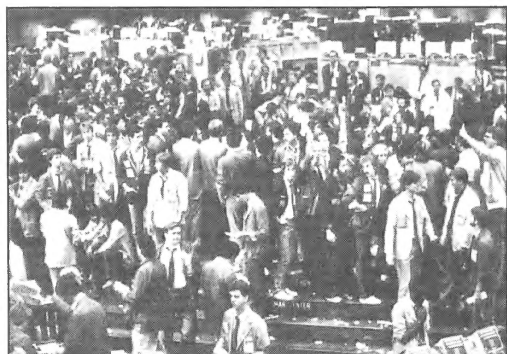
## NEWS FROM THE PAST



Diane Alexander White, CN86425-34

An array of fossils gathered by amateur paleontologists affiliated with the Mid-America Paleontological Society was displayed in the North Lounge during the June 28-July 1 meeting of the 5th North American Paleontological Convention (NAPC.V). The convention, held at Field Museum, attracted nearly 600 paleontologists from 18 countries.

## Trading in Futures?



Make a significant impact on Field Museum's future by trading in your appreciated stock today.

By contributing your highly appreciated/low-yielding stocks to the Museum's Pooled Income Fund, you can generate immediate benefits:

- Increase your annual income • Receive an income-tax deduction
- Avoid capital gains tax

At the same time, you'll join others committed to making Field Museum a community center for lifelong learning for future generations.

To find out more about the Museum's Pooled Income Fund, please call or write for your complimentary copy of "How the Pooled Income Fund Works for You, and Us . . ."

Contact Melinda Pruett-Jones  
Field Museum of Natural History • Roosevelt Rd. at Lake Shore Dr.  
Chicago, Illinois 60605  
(312) 322-8868

## Which came first, the chicken or the egg?

With that immortal question begins *A Brief History of Time*, Errol Morris's acclaimed film inspired by Stephen Hawking's worldwide bestseller of the same name. The film won the Grand Jury Prize for Best Documentary of 1992 at the Sundance Film Festival, where Errol Morris also won the Documentary Filmmakers Trophy.

Physicist Stephen Hawking has become perhaps the best-known scientific thinker today, his accomplishments all the more staggering given that he is confined to a wheelchair with the debilitating illness amyotrophic lateral sclerosis, which has left him unable to move or speak.

Field Museum members are invited to see *A Brief History of Time* when it opens its theatrical run in Chicago. Members can bring this ad (photocopies not accepted) to Loew's Fine Arts Theater for Monday through Thursday performances, September 8-24, and purchase two full admission tickets for the price of one.

Member Name \_\_\_\_\_

Address \_\_\_\_\_

Guest \_\_\_\_\_

## FOLK ART BY ARAPAHO WARRIORS

The Edwards Ledger Drawings: Folk Art by Arapaho Warriors will be on display from September 12 to October 25 in the Webber Gallery. An exhibition of rare 19th century colored-pencil depictions by Native American warriors of their battles and exploits, this collection of drawings illuminates then-vanishing traditions of Plains Indians pictography and warfare.

From symbols used on shields and clothing, to buffalo robes, to paintings on hides depicting history and important events, stylized drawings provided a non-verbal means of inter-tribal communication. The introduction of colored pencils and paper, however, presented the Arapaho and other Native Americans with a new medium for recording their brave deeds.

A picture like "Sitting Bull Encounters a Soldier" shows both the influence that settlers had on Native American lifestyle and the conflicts which arose between the two groups. Sitting Bull (an Arapaho warrior; not the famous

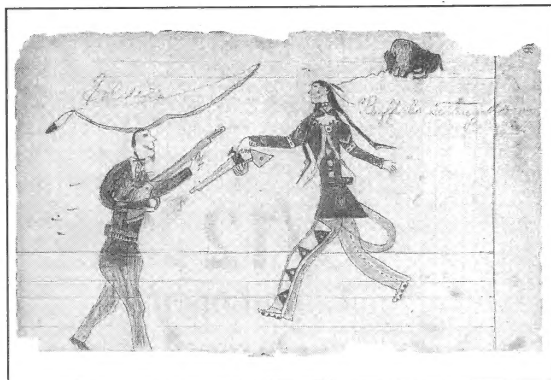
Sioux leader) is wearing a military blouse with chevrons as well as his traditional moccasins. He is wielding a pistol against the soldier, having first "counted coup" on him with his bow.

Counting coup meant touching an enemy with a weapon without wounding him — it served as an insult, and conferred glory to the warrior. Native American artists strove to tell the entire story of an encounter in one drawing; the presence of both Sitting Bull's rifle and his bow in this picture exemplifies this tendency. Other techniques of storytelling included the tracing of the path of a warrior's horse, and the representation of multiple shots by multiple rifles floating in the air near the target.

One will not find the conventions of perspective here, or the view of a single instant in time. Instead, one will find a literal pictorial translation of encounters between Arapahos, Utes, Pawnees, Crows, Mexicans, and Americans. Such art has all but disappeared, and these drawings provide a record of an important period of transition in the history of Native Americans.

Pre-dating the 1870s, the drawings were assembled by Peter Edwards, a 19th century jeweler, settler and gold miner, and were originally published in book form.

A September 26 seminar (see box at left) complements the exhibit.



"Sitting Bull Encounters a Soldier." The soldier has fired over the warrior's head; Sitting Bull gets off six shots, wounding the soldier twice.

On the quarterfold cover: "Leading a War Party, Heap of Bears Finds His Victim." As a leader of a raid or war party against the Utes, Heap of Bears carries a tomahawk decorated with otter furs.

### Seminar: American Indians of the Plains: A Cultural Overview

Contrary to popular perceptions, Plains culture comprises very diverse American Indian nations. This day-long seminar offers a unique overview of this culture area, and complements the "Ledger" exhibit.

Speakers will include: Ray De Mallie, professor of anthropology at Indiana University; Mavis Blacker, who studies Plains clothing; Father Peter Powell, spiritual director of the St. Augustine Center for American Indians; and Terry Strauss, Ph.D., who will focus on contemporary issues facing the Arapaho and Cheyenne. Francis Yellow, a contemporary Lakota ledger artist, will also be on hand to demonstrate his work.

September 26, 9:30 a.m.-3:30 p.m. \$45 (\$38 members).  
Call (312) 322-8854.

FIELD MUSEUM  
THE SMART WAY TO HAVE FUN.

## CALL OF THE WILD

On November 14, the Field Museum will open a new permanent exhibit that spotlights collections from the Museum's past and merges them with research from the Museum's present to create a timely message concerning the future of our world. "Messages from the Wilderness" completes the animal-kingdom exhibits in the Daniel F. and Ada L. Rice Wing off Stanley Field Hall.

"Messages," which depicts North and South American mammals and their habitats, does not argue that the earth's damaged ecosystems are beyond repair. But the exhibit does present images of the Americas under siege, and uses these images to encourage people to take a greater responsibility for the natural world.

Central to the exhibit are 18 habitat groups featuring scenes from the Americas — from the icy waters of the arctic circle, to tropical jungles in Venezuela, to the windswept grasslands of extreme southern Argentina. These exhibits were created early in this century, when many of the world's best taxidermists worked at Field Museum.

To complement the artistry of these scenes, and to give the animals and habitats a voice, "Messages from the Wilderness" transforms the visual context of the hall. Rustic park signs, cedar shingle roofs, and notes from "park rangers" greet visitors at each diorama. At several stops, recorded messages allow visitors to

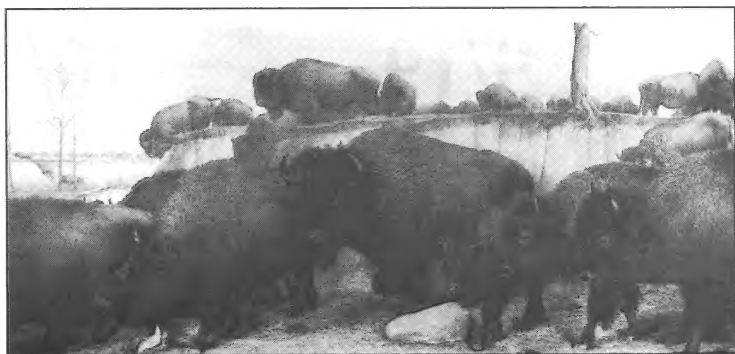
hear rangers explain the behaviors of mammals in the displays.

Suggestive scenery placed throughout the hall enhances the experience of visiting wilderness parks: craggy rocks hide a cougar's lair; Northwest rain forest canopy extends beyond a scene of resting and foraging elk; palm trees connect displays of tapirs and marsh deer to mimic Brazil's huge Pantanal wetland. These scenic elements and new interpretive material invite visitors to step beyond the Museum and into the living world of each diorama.

The underlying message of the exhibit is that all life is interconnected. Animals, plants, and many inanimate features in the environment depend on, and affect each other, in ways we often do not fully understand. In keeping with this message, specific habitats become as much a part of each diorama's story as the animals themselves through labels, photographs, videos, and hands-on activities. With the help of these devices, visitors can explore the intriguing relationships among plants, animals, and habitats that are responsible for so much of the diversity in nature.

No exhibit about the environment could be complete without a discussion of the major threat facing our planet: human overpopulation. A centrally located station explores this issue with photographs, statistics, and activities inviting visitor participation. A second station engages visitors in contemplating "Why should we care?" — emphasizing that we all share one ecosystem, and depend on it for our most basic needs. "Messages from the Wilderness" will help visitors understand and appreciate these dynamic interrelationships and recognize that humans are an integral part of the ecosystem.

The bison diorama in "Messages from the Wilderness." Once numbering in the millions, the bison was nearly exterminated — and with it the entire prairie ecosystem.



**9/5** Saturday  
**World Music**

Performance of folk music from Bolivia, featuring Raices del Andes. 1 p.m.

**9/12** Saturday  
**Exhibit opens**

"The Edwards Ledger Drawings: Folk Art by Arapaho Warriors" opens in the Webber Gallery. (See article overleaf.)

**9/14** Monday  
**Camera Club**

The regular monthly meeting of the Camera Club will begin at 7:45 p.m. All are welcome. Please enter by the West Door.

**9/14** Monday  
**Collectors**

The Collections Committee hosts "Conversing with Collectors: A Panel Discussion." Four members of the group will discuss how they built their personal collections; African, Asian and Native American materials will be represented. The moderator will be Bennet Bronson, chairman of the Department of Anthropology and curator of Asian archaeology and ethnology. 5:30-7:30 p.m. Call (312) 322-8874.



**9/19** Saturday  
**Family Overnight**

Bring the kids (grades 1-6) and sleep over at the Field Museum. Natural science workshops, flashlight tours, entertainment, an evening snack, and Continental breakfast Sunday morning. \$35 per adult, \$30 per child. Pre-registration required. Call (312) 322-8854.

**9/27** Sunday  
**Chicago Waterways**

Our 70-mile guided boat tour along Chicago's inland waterways provides a unique perspective on the ecological, economic, and communal history of greater Chicago. 8:45 a.m.-4 p.m. \$42 (\$35 for members) Pre-registration required. Call (312) 322-8854.

**9/30** Wednesday  
**Herpetologists**

General meeting — Chicago Herpetological Society. Gary Ferguson of Texas Christian University will discuss the biology of true (Old World) chameleons. James Simpson Theater, 7 p.m.-10 p.m.



**10/4** Sunday  
**Masquerades**

People have made masks for over 30,000 years and they can be found on almost every continent on earth. Adults and children grades K-4 can see a variety of masks from Field Museum's and Mask Artist and instructor Lea Atiq's collections. After a performance featuring masks from around the world, create a mask of your own. 10 a.m.-noon \$18 covers one adult and one child (\$14 for members). Pre-registration is required. Call (312) 322-8854.

**10/10** Saturday  
**Marsh bird-watching**

Fall brings a variety of migrating shore and song birds to the 31,000 acre Horicon Marsh in east-central Wisconsin, including sandpipers, plovers, and warblers. Learn about the marsh ecosystem and enjoy a day of bird-watching. 9 a.m.-9 p.m. \$42 (\$36 for members). Pre-registration is required. Call (312) 322-8854.

**10/11** Sunday  
**Birds program**

"Behind the Scenes with the Division of Birds." Bird Collection Manager Dave Willard will lead families through the museum's bird collection (third-largest in the U.S.) to examine some of the world's most colorful and spectacular avian species. 7-9 p.m. Admission is \$9 per person (\$7 for members). Pre-registration is required. Call (312) 322-8854.

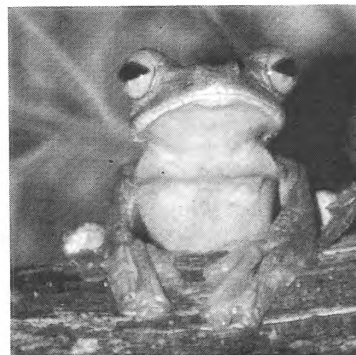


**10/17** Saturday  
**Geography activities**

Geography Quiz Computer Game, *Passports* exhibit self-guided tours, *Earthquakes and Plate Tectonics* activity and others. 10 a.m.-3 p.m.

**10/28** Wednesday  
**Herpetologists**

General Meeting — Chicago Herpetological Society. James Vial of the Environmental Protection Agency's Declining Frog Task Force explains why some scientists believe the world's frogs are disappearing. Simpson Theater, 7 p.m.-10 p.m.



John C. Murphy



## FALL PROGRAMS FEATURE EGYPT AND SUB-SAHARAN AFRICA

**J**oin the Museum's Department of Education in exploring Africa this fall. Take this opportunity to hear guest lecturers, learn about Field Museum's upcoming Africa exhibit, explore Egyptian history — and don't miss the jazzy sounds of Gurrufio, a group of Venezuelan musicians with a strong African influence. For a complete schedule of fall programs, call (312) 322-8854.

### Lectures:

#### The Royal Art of Benin

Kate Ezra, Ph.D., Associate Curator, Dept. of the Arts of Africa, Oceania, and the Americas, Metropolitan Museum of Art, New York  
Friday, October 9 at 7 p.m.  
\$9 (\$7 for members)

From the 1300s through the 1800s, the royal court artists of the Kingdom of Benin expertly created exquisite brass, ivory, terra cotta, and wood objects to honor the king and adorn his palace. Kate Ezra will present a slide-illustrated lecture focusing on the history, culture, and art of Benin, based on pieces in the collection of the Metropolitan Museum.

#### Africa's Legacy in Mexico

Tony Gleaton, photographer, Los Angeles  
Saturday, October 24 at 2 p.m.  
\$9 (\$7 for members)

After the Spaniards conquered the Aztec Empire in 1521, millions of enslaved Africans were brought to Mexico. Photographer Tony Gleaton will present a slide-illustrated lecture on the history, lives, traditions, and culture of these Mexican people with an African heritage. He will focus on the people living in the states of Guerrero, Oaxaca, and Veracruz where he has spent the last five years sharing and documenting their daily lives.

### Adult Courses:

#### "Africa": Introduction to an Exhibit

Deborah Mack, Ph.D.  
Senior Exhibit Co-Developer, Field Museum

Saturdays, Sept. 19–Oct. 3, 10 a.m.–noon  
\$35 (\$30 for members)

Caravans across the Sahara, a museum situated in the "House of the People" in Cameroon and the historic dispersal of Africans to the Americas are three "stories" addressed in the Museum's Africa exhibit scheduled to open in 1993; Dr. Mack will present a model of the exhibit, slides, video, and artifacts to highlight these "stories."

#### In Preparation for "Africa"

Deborah Mack, Ph.D.  
Saturday, October 3, 2–4 p.m.  
\$12 (\$10 for members)

Dr. Mack will describe her recent collecting trip to Senegal to obtain materials for the section on contemporary Senegalese family life. Video, slides, a model of the Africa exhibit, artifacts and collected objects will illustrate the lecture.

#### New Kingdom II: The Ramesside Era

Frank Yurco, Egyptologist  
Tuesdays, Sept. 22–Oct. 27, 7–9 p.m.  
\$65 (\$55 for members)

This course continues from the spring New Kingdom course and will focus on and complete the political history of Egypt in the age of the Ramesside kings of the 19th and 20th dynasties (1371–1070 B.C.).

#### Royal Women of Ancient Egypt

Kathleen Picken, Historian and Lecturer  
Thursdays, Oct. 8–Nov. 12, 7–9 p.m.  
\$65 (\$55 for members)

Cleopatra and Nefertiti are but two of the many famous women in Egyptian history who were instrumental in building a nation. The class will combine gallery visits, slides, readings and lectures to produce a picture of the life, times and expectations of royal women of ancient Egypt.



Art objects from the royal court of Benin. The head, below, is in memory of a queen-mother. These pieces are from the Perls Collection in the Metropolitan Museum.



### PERFORMING ARTS

## GURRUFIO

Venezuela, a country characterized by diverse geography, climates, and people, has a rich indigenous culture that has been strongly influenced by Spanish and African cultures. Gurrufio, a group of four virtuoso musicians from Venezuela, is making its second tour of the United States — appearing in Chicago for a performance at the Field Museum. Their music reflects an exciting diversity of rhythms, instruments, and ways of singing and playing. Members of the ensemble travel throughout Venezuela gathering music and folklore that they interpret through their own compositions and those of other Venezuelan composers. Instruments featured are the cuatro, bandola, mandolin, guitar, flute, maracas, and harp.

Sunday, October 4 at 4 p.m.  
\$15 (\$12 members)  
\$10 seniors and students

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Send form to:  
Field Museum of Natural History, Roosevelt Rd.  
at Lake Shore Dr., Chicago, IL 60605

# VISITOR PROGRAMS

Saturday, September 5  
10am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.  
11am-4pm **Insect Specimen Preparation** Watch as museum scientists prepare insects for the research collection.  
1pm World Music performance of folk music from **Bolivia** featuring **Raices Del Andes**.

Sunday, September 27  
11am-2pm **Ledger Art Demonstration** by Lakota artist, **Francis Yellow**.  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.  
Thursday, October 1  
10am-1pm **Weaving Demonstration** by the North Shore Weaver's Guild.

Saturday, October 17  
10am-1pm **Weaving Demonstration** by the North Shore Weaver's Guild.  
10am-3pm **Geography Quiz Computer Game, Passports** exhibit self-guided tours, **Earthquakes and Plate Tectonics**, and other geography activities.  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.

Friday, October 30  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.  
Saturday, October 31  
10am-1pm **Weaving Demonstration** by the North Shore Weaver's Guild.  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.



September 19:  
"Tibet Today" and  
(right) Fan Wei-tsu

Sunday, September 6  
10am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.  
11am-4pm **Insect Specimen Preparation** Watch as museum scientists prepare insects for the research collection.

Friday, September 11  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.

Saturday, September 12  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.  
1pm World Music performance of jazz saxophone by **Ari Brown**.

Sunday, September 13  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.  
1pm World Music performance of **Latin American music** by **Maya Marimba**.

Friday, September 18  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.

Saturday, September 19  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.  
1pm World Music performance of the **zheng, (the Chinese zither)** by **Fan Wei-Tsu**.  
1:30pm **Tibet Today & A Faith in Exile**-A slide presentation.

Sunday, September 20  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.  
1pm World Music performance of **African and Carribean dance** by **Darlene Blackburn**.

Friday, September 25  
11am-3pm **Arthro-cart:** Insect, arachnid, & arthropod activities.  
Saturday, September 26  
11am-3pm **Arthro-cart:** Insect, arachnid, & arthropod activities.  
1pm World Music performance of **Indonesian Dance** courtesy of the Indonesian Consulate in Chicago.

Friday, October 2  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.

Saturday, October 3  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.  
1pm World Music performance featuring **flutes from Australia and Japan** by **Douglas Ewart**.

Sunday, October 4  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.

Thursday, October 8  
10am-1pm **Weaving Demonstration** by the North Shore Weaver's Guild.

Friday, October 9  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.

Saturday, October 10  
10am-1pm **Weaving Demonstration** by the North Shore Weaver's Guild.  
10am-3pm **Geography Quiz Computer Game, Passports** exhibit self-guided tours, **Earthquakes and Plate Tectonics** and other geography activities.  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.

Sunday, October 11  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.  
1-4pm **Weaving Demonstration** by the North Shore Weaver's Guild.

Wednesday, October 14  
10am-1pm **Geography Quiz Computer Games, Passports** exhibit self-guided tours, **Maps** and other geography activities.

Thursday, October 15  
10am-1pm **Weaving Demonstration** by the North Shore Weaver's Guild.

Friday, October 16  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.

Sunday, October 18  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.  
1-4pm **Weaving Demonstration** by the North Shore Weaver's Guild.

Wednesday, October 21  
10am-1pm **Geography Quiz Computer Games, Passports** exhibit self-guided tours, **Maps** and other geography activities.

Thursday, October 22  
10am-1pm **Weaving Demonstration** by the North Shore Weaver's Guild.

Friday, October 23  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.

Saturday, October 24  
10am-1pm **Weaving Demonstration** by the North Shore Weaver's Guild.

10am-3pm **Geography Quiz Computer Game, Passports** exhibit self-guided tours, **Earthquakes and Plate Tectonics, Flag Display** and other geography activities to celebrate United Nations Day.  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.



Darlene Blackburn,  
September 20

Sunday, October 25  
11am-3pm **Arthro-cart:** Insect, arachnid and arthropod activities.  
1-4pm **Weaving Demonstration** by the North Shore Weaver's Guild.

Wednesday, October 28  
10am-3pm **Geography Quiz Computer Games, Passports** exhibit self-guided tours, **Maps** and other geography activities.

Thursday, October 29  
10am-1pm **Weaving Demonstration** by the North Shore Weaver's Guild.

**Webber 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 & 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. Free program tickets available from the Information Desk in Stanley Field Hall.  
Weekdays: 1pm program  
Saturdays: 10am-4:30pm;  
Free ticketed programs at 11, 12, 2 & 3. Sundays: 10am-4:30pm

Craftspeople, demonstrators, storytellers and performers are sought to participate in a variety of programs in 1993. To be considered, please send a resume, photographs or tape cassettes of your work, and a self-addressed, stamped, return envelope to Visitor Program Manager, Department of Education, Field Museum of Natural History, Roosevelt Road at Lake Shore Drive, Chicago, Illinois 60605. The deadline for submission is November 1, 1992.

Volunteers are needed for group and public programs in "Ruatepupuke: A Maori Meeting House," an exhibit scheduled to open in March 1993. Training begins in early January. For more information, please contact the Museum Volunteer Coordinator, (312) 922-9410, extension 360.

Arthro-cart



WORTH  
ANOTHER  
VISIT

The Museum is home to a significant number of permanent exhibits. Since it may be some time since you last visited one or more of them, we are listing them here as a reminder.

## On the Main Level

- "Into the Wild" features mammalian evolution, a field guide to birds, and nature dioramas, with environmental sound and hands-on activities.
- "Indians of the Woodlands and Prairies" is highlighted by the great Pawnee Earth Lodge and the magnificent American bison looking alive and ready to roam.
- "Mexico and Central America" displays indigenous pottery, statues, and costumes as well as reproductions of ancient architecture.
- "Indians Before Columbus" highlights the tools, pottery, sculpture, jewelry, and costumes of America's indigenous peoples.
- "Maritime Peoples of the Arctic and Northwest Coast" describes the lives of Eskimos and Northwest Coast Indians and is highlighted by an array of handsome totem poles.
- "Inside Ancient Egypt" lets you enter a life-sized Old Kingdom tomb, explore a tomb robbers' tunnel, examine the funerary boat of a pharaoh, and conclude your journey in an Egyptian marketplace.

## On the Second Floor

- "Gems" — the science and social history of precious stones.
- "China" includes case after case of beautiful pottery, ceremonial objects, clay figures, musical instruments, and a very special case depicting the Ten Courts of Purgatory.
- "Traveling the Pacific" and "Pacific Spirits," two of the Museum's newest exhibits, feature artifacts and specially-painted dioramas of exotic Pacific islands. A replica of a contemporary Polynesian marketplace adds to the realism of the exhibit.
- "Tibet" is a small, impressive exhibit of the jewelry, artifacts, costumes, and prayer emblems of this ancient civilization.
- "Jade" displays an historical survey of Chinese jade carving in a specially lighted gallery.
- "Plants of the World" explores the biology, variety, and economic significance of members of the plant kingdom.
- "Families at Work" includes touchable playthings for children under five.
- "Earth Sciences" features a diverse group of fossils and minerals.

## On the Lower Level

- Bushman, the wonderfully displayed African lowlands gorilla, is the single most popular display in the Museum, a truly outstanding example of the taxidermist's art.
- "Sea Mammals" is actually two exhibits on either side of the Children's Gift Shop, featuring life-size displays of these fascinating animals.



## BOOKS ON NATURAL HISTORY

Recent books on natural history topics for adults and children:

**John and Julie Batchelor,**  
*In Stanley's Footsteps:  
Across Africa from West to East*  
New York: Sterling Publishing, 1990

The Batchelors retraced the journey of famed newspaper reporter and explorer Henry Morton Stanley — who found the missing Dr. Livingstone — in his attempt to rescue Emin Pasha. The authors chronicle both Stanley's journey and their own; the book includes contemporary color photographs and period engravings.

**John Cassidy, Explorabook: A Kid's Science Museum in a Book**  
Palo Alto: Klutz Press, 1991

A very amusing book from the Exploratorium in San Francisco with instructions for simple science experiments, as well as scientific tools like a mirror, magnifying glass, and a diffraction grating right between its covers.

**Arthur C. Clarke, How the World Was One: Beyond the Global Village**  
New York: Bantam Books, 1992

This newest release from the author of *2001: A Space Odyssey* offers Clarke's personal history of the field of telecommunications and his predictions about the ways in which developments in communications technology will change the interactions of humans around the world.

**Paul Ehrlich, David Dobkin and Darryl Wheye, Birds in Jeopardy**  
Palo Alto: Stanford University Press, 1992

Reviews the status of birds currently federally listed as Endangered or Threatened, or listed by the National Audubon Society as suffering local or widespread decline, as well as providing pictures and stories about birds that have been driven to extinction in the past two centuries in the United States and Canada.

**G.E. Fogg and David Smith,**  
*Explorations of Antarctica:  
The Last Unspoilt Continent*  
New York: Sterling Publishing, 1991

A combination of Fogg's scholarship and Smith's unusual oil and water-color paintings represent the ecology and history of exploration of, and controversy surrounding, this harsh and mainly unknown continent.

**Hilary Dole Klein and Adrian M. Wenner,**  
*Tiny Game Hunting*  
New York: Bantam, 1991

A paperback about environmentally healthy ways to trap and kill the pests in your home and garden, this book discourages the use of pesticides, and describes ways to encourage "good bugs" to eat "bad bugs," and other natural repellent methods.

**Don Lessem, Kings of Creation**  
New York: Simon and Schuster, 1992

Lessem examines the ways in which a new generation of paleontologists are debunking older theories about the physiology, behavior and demise of the dinosaurs.

**Lynn Margulis and Dorion Sagan,**  
*Microcosmos: Four Billion Years of  
Microbial Evolution*

New York: Touchstone Books, 1991  
This controversial book, reprinted in paperback, claims that the evolution of human life is based on, and subject to, cooperation between microbes. Described as "knocking humankind off its transcendental pedestal," it presents a vivid new theory of the process of evolution.

**Chris Mattison, A-Z of Snake Keeping**  
New York: Sterling Publishing, 1991

Herpetologist Chris Mattison provides tips for the care and feeding of snakes in one's home, and describes the habits and habitats of an array of serpents, from albinos to sand snakes.

**Theodore Roszak, The Voice of the Earth**  
New York: Simon & Schuster, 1992

Cultural critic and history professor Roszak's previous works include *Where the Wasteland Ends* and *The Making of a Counterculture*. In this book, Roszak creates an "ecopsychology," claiming that human mental and physical well-being is linked to the well-being of the biosphere.

**Tony Soper, Oceans of Birds**  
New York: Sterling Publishing, 1990

Describes and illustrates the habits and habitats of coastal and sea birds rarely seen by anyone but sailors.

**David Suzuki and Peter Knudtson,**  
*Wisdom of the Elders*

New York: Bantam Books, 1992  
In an attempt to provide "the foundations for a new global environmental ethic," Suzuki and Knudtson explore beliefs about the interrelationship between humans and nature shared by Western science and the wisdom and stories of native peoples from around the world.

**Peter Ward, On Methuselah's Trail: Living Fossils and the Great Extinctions**  
New York: W.H. Freeman and Co., 1992

Ward examines animals and plants from around the world which have survived with little or no change for millions of years and which have become a focal point in the discussion of the causes of the "great extinctions."



## CONFERENCE ON CHINESE CELADON

Zhejiang province in China has been famous for the delicate grey-green glazed ceramics known as "celadon wares" for over 2,000 years. There are two kinds of Zhejiang celadon: Yue ware — the older of the two, favored by 8th and 9th century tea drinkers because of the contrast it made with the tea — and Longquan ware, dating from the 11th century, prized for its jade-like qualities. Shards of both types of pottery have been found in East Africa and Madagascar, making celadon ware a useful index to understanding early East-West communication and trade.

Because the Field Museum has a substantial collection of both types of ceramics, the

Anthropology Department has jointly sponsored an international conference in Hong Kong, August 24–26, on Yue and Longquan ware with the Centre of Asian Studies at the University of Hong Kong. Other sponsors include the T.T. Tsui Museum, Mr. Joseph Hotung, and Arts and Education, Ltd. Archaeologists and ceramic specialists from China, Japan, Sri Lanka, Indonesia, Thailand, Malaysia, the Philippines and the United States were scheduled to attend.

## CANOES . . .

*(Continued from page 1)*

Alessio says. "Marshallese are among the most advanced engineers in hydrodynamic design. Over the centuries they fine-tuned the craft." Paradoxically, while outsiders have failed to recognize the value of Marshall Islands canoes, so too have islanders themselves. Until recently, that is.

The project kicked off in 1989 on a shoestring budget but with an ambitious agenda: to document the five major outrigger canoe designs in the Marshall Islands for the benefit of future generations. Filming, photographing, and recording every phase of building different style outriggers furnished the project with a wealth of information. But perhaps more important, it sparked a remarkable outpouring of enthusiasm and pride from the builders and the communities involved in the projects.

The Marshall Islands is a watery nation of low-lying coral atolls sprinkled across 500,000 square miles of Pacific Ocean about ten degrees north of the equator, with a population of about 49,000. Prior to World War II and the arrival of the Americans, outrigger canoes were the preferred — indeed the only practical — mode of travel for islanders: The total land area on many islands doesn't approach the size of an average city block. For hundreds of years, Marshall Islanders were among the leading Pacific voyagers and navigators, sailing scores of miles on the open ocean with nothing to guide them but their knowledge of the stars, the waves, and ocean swells and currents.

Since the 1950s there has been a steady decline in the use of outriggers, a pattern that has closely paralleled the wholesale disruption of island people's identity and customs by rapid modernization. Some remote outer atolls still rely on outriggers, but the extent of use is nothing compared to the pre-World War II period.

The Alele Museum launched the Waan Aelōn Kein Project hoping to prevent the total loss of knowledge at the very heart of Marshall Islands society. Alessio recalls that as the project began documenting canoes, everyone was supportive and interested because canoe building is "all Marshallese."

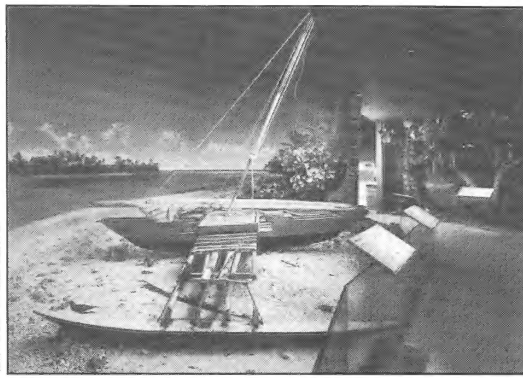
Yet what really stimulated a resurgence of demand for outriggers was the Persian Gulf crisis. Within days of the outbreak of war in the Middle East, gas prices in the Marshalls' capital city, Majuro, shot up. And the far-flung outer islanders suddenly found themselves paying \$4 a gallon for gas.

"Within a week we had about seventy calls from the people all over the Marshall Islands wanting to buy outrigger canoes," Alessio says. This confirmed his thesis that the outrigger canoe can, especially in modern times, serve a practical economic function. Most outer islanders survive on what is basically a subsistence diet. "There's no way most people can afford to buy outboard engines and pay for gas," Alessio says.

Times have changed, however, since the

19th century. No longer are people growing breadfruit trees specifically for building canoes. For canoe building to remain viable today, the main hull of the traditionally designed canoes must be built using contemporary materials such as plywood, Alessio says. All of the other parts can be taken from the limbs of trees — a sustainable use of natural materials. Integrating modern materials with traditional designs is one of the aims of the Waan Aelōn Kein Project.

Since 1989, the project has helped to build and documented four different canoes on different atolls with different builders. Several of these have employed plywood for the hull, while the outriggers and masts have been made



John Winsten and James Backhaus

from local materials.

The project's most ambitious canoe project was launched in February: the building of the country's first voyaging canoe in more than 30 years. Impetus for the voyaging canoe was provided by the VI Festival of Pacific Arts — the cultural Olympics for the Pacific — in Rarotonga, Cook Islands in October.

Unlike most of the previous canoes, which were constructed on the isolated outer atoll homes of the master builders, this 50-foot *walap* or voyaging canoe was built in the heart of downtown Majuro, the capital and urban center (population 23,000) of the Marshalls. Eight men from Enewetak Atoll — the farthest of the far-flung atolls in this nation — worked feverishly to get the outrigger in the water in time for a race to the Festival site against the famed Hawaiian sailing canoe *Hokule'a*. Their work did not go unnoticed.

A constant flow of school classes, youth and elders by the dozen, tourists, and members of the news media stopped by the old warehouse where the canoe was being built to watch the canoe take shape. Many stayed for hours, watching the progress. "The exciting thing for me is to see Majuro youth, who have never been exposed to traditional canoes, get so excited," Alessio says. "To see their enthusiasm makes it all worthwhile." The canoe appears anachronistic in Majuro's modernized social environment where more than 2,000 vehicles ply the roads day and night, discos and bars are a preferred entertainment, and nine-to-five jobs are the rule. But precisely because there are so few things that are truly Marshallese in this small city, it isn't dismissed by the younger generation as old and outdated. "There is an intangible quotient to the canoe in Majuro," Alessio says. "It is building a sense of pride and status. It is much more meaningful than a video because it is all Marshallese. The earrings and ponytails that boys wear nowadays are not Marshallese. But a canoe takes knowledge to accomplish; there's a sense of accomplishment."

"If you're a young person with a sense of accomplishment in your culture everything in your life is easier."

As the date for the South Pacific Festival of Arts drew nearer, the support for the project grew. Government agencies and private businesses donated funds and services. Where once Alessio had to scrounge for every nickel, the

project was now able to hold its own financially because of its community and international support. In addition to the Marshall Islands government, grants came from the U.S. and Australian governments as well as private groups and local businesses.

The Marshall Islands voyaging canoe will be transported to Aitutake Island in the Cook Islands in September, where it will join *Hokule'a* and other traditional canoes for a 140-mile sail into Rarotonga for the opening of the Festival of Pacific Arts.

The Waan Aelōn Kein project isn't closing up shop with the completion of this voyaging canoe. "We'll build and document two more on two outer atolls after the Rarotonga project is finished," Alessio says. "We've got so much information on canoe designs. We'll put it in the archives, but I've never wanted it to sit on the shelf."

The spin-off benefits of the documentation process are almost limitless, he believes. He's hoping the information they have developed can be used for vocational education and training programs for students

and out-of-school youth. Incorporating canoe building into established vocational training programs could get canoes into daily use in the urban centers. "If every school had an outrigger canoe, there could be local and national races," he says. "Basketball and baseball are great games, but they're not Marshallese. Canoe racing is more Pacific than any other sport in the region."

Similarly, written and videotaped programs from the project can be used as a base for Marshallese history courses in the schools. Economically, Alessio says that a canoe costs only a fourth to a third as much as an outboard-engine boat to operate. In Kiribati, the closest neighbor of the Marshalls to the south, a recent study showed that 72 percent of all the commercially caught fish was brought in by traditional outrigger canoes, he says. That nation has more than 5,000 canoes still in operation. "Kiribati didn't have the money to develop rapidly. The Marshalls did and it threw away the old for the new," he says. In Namdrik and Ailuk, two atolls where the project documented canoe building, outriggers were bringing in two tons of fish per week. "If people are eating well, their outlook on life is different," he says.

Alessio observes that canoes are the most appropriate vehicle for transportation within atoll lagoons that are as large as 30 miles across and dotted with small islands. "You always get there on a canoe," he says. "With a motor boat, you may not if the engine goes down. You almost never hear about anyone getting lost at sea in a canoe; it's always in motor boats."

The boat builder says that taking pride in canoe building and sailing doesn't mean you have to live in a traditional house and eat all traditional foods. "People don't want to go back," he says. "But knowledge of canoes and sailing sets a Marshallese aside from every other culture. It identifies who they are." Giving young islanders a strong sense of identity provides a base of accomplishment from which Marshall Islanders can participate in — and not be overwhelmed by — the Western economies and urban ways of life.

*Giff Johnson was editor of the weekly Marshall Islands Journal for more than seven years and is now a freelance writer based in Majuro.*

**Right:** The outrigger in the Field Museum exhibit was owned by Jima Jimna, who built it in 1977. Its outrigger float was salvaged from an older canoe that washed up on the beach. Jimna and Jennade Leon came to Chicago to prepare the canoe for exhibit.

**Below:** Visitors frequented the workshop in Majuro where the "walap" was being built. The race against *Hokule'a* is in September.



Duff Johnson

BORNEO . . .

(Continued from page 1)

or face as they foraged along the walkway. Morning wake-ups in Danum are spectacular. Because the valley is only six degrees north of the equator the sun rises about 6 a.m. every day of the year and sets about 6 p.m. The pre-sunrise noise is mostly birds, but gibbons quickly add their unforgettable, reverberating calls. When these are combined with the five species of hornbills that are all calling simultaneously, sleeping-in is impossible.

The first morning in the field, we set up a half-kilometer transect along a stream draining a secondary forest. Its boulder-studded gravel bottom, torrents, and waterfalls made walking and climbing difficult on some parts of the transect, but as long as we moved slowly and watched the footing it was relatively safe. Paul, Freddie, and Frederic did not seem to be bothered by the footing or the slippery rocks and they moved as comfortably up and down the stream as the rock-skipping frogs.

Our first night's work was on a trail



John C. Murphy

grabbed a frog it was likely to result in a spine under a fingernail or in a knuckle.

Despite these hardships, field work at the Danum study sites has produced almost 40 species of frogs — about equal to the total number of frog species found in the entire state of Illinois. What makes this number impressive is that the Danum study sites were all within 15 miles of each other.

One of the greatest disappointments of my trip was not seeing any really large snakes. The largest snake we observed during this trip was on a night transect on a stream in a bit of secondary forest; Paul was working upstream about 50 feet from me. As I looked upstream the beam of his headlamp was bouncing toward me and in his excitement he was having difficulty telling me he wanted my thick leather gloves. We returned to his original position, and gliding across the stream in front of us was a large mangrove snake. It was at least six feet long and Paul was anxious to grab



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it, but hesitant to do so without gloves. I was mildly amused by this situation since I had seen him pick up, bare-handed, a small Wagler's pit viper a few weeks before. At that time we had a serious discussion about taking risks that could lead to injury or death. Within moments of my giving him the gloves he had the snake in hand and in a bag.

Although we were actively searching for snakes — spending at least five hours in the field daily, and recruiting help from the people at the field station — we collected only 50 snakes in 50 days of work. Nineteen species were represented among these 50 snakes, and most of them were small fossorial forms or the young of moderate-sized species. Only two of the fifty were venomous. Our most common finds were black collared snakes, a tiny species with a pointed nose and, surprisingly, no collar (at least not on any of the specimens we collected). All of these were found by sorting through leaf litter. Snakes are difficult to find in tropical rain forests; their cryptic coloration, secretive habits, and perhaps-low population densities decrease the opportunities for encounters with humans.

As we neared the end of our stay at Danum, I still had not seen an orangutan despite the fact that almost everyone else at the

Field Station had seen one or more of the red apes. I blamed this ill fortune on my three workers. As we would enter the forest for the morning's work, these guys would move as fast as possible toward our destination, singing all the way. In fact, the most English I could ever elicit from Frederic at one time was lyrics to old rock and roll songs. "Do-ah didee didee dum didee do" was his favorite, but I am not sure this passes for English.

On the day before we were to leave, however, Theo DeVries, a Dutch ecologist who had been studying leaf-litter arthropods at Danum for the past two years, showed up and told us of a large male orangutan on the west trail. He was in a small tree, feeding on green fruits, and seemed undisturbed by our arrival, but eventually

realized that we were blocking his escape, and showed his agitation by attempting to urinate on us. Eventually he decided that he would not tolerate our presence any longer, and as he descended all of our hearts started to beat a little more rapidly. As we backed away, however, so did the orang.

The next morning we left Danum. The roads in Sabah are poor by American standards and for much of the drive we could not exceed five miles per hour. The scenery was quite depressing; oil palm plantations have replaced much of the tropical rain forest. Borneo is no longer a wilderness — Danum Valley and a few other locations are the last large expanses of primary forest remaining in Sabah. The good news is that if areas of secondary forest are allowed to regrow, with some nearby patches of primary rain forest, most or at least many of the rain forest flora and fauna may survive the massive deforestation. However, there is no doubt humans have done some serious environmental damage to the island.

Studies like the one being carried out at Danum and another in southeast Asia by Inger and Voris will provide the information needed by governmental agencies to make sound management decisions on logging. Critical questions — where not to cut trees, how large an area needs to remain uncut to maintain the species found in it, and what species can and cannot survive logging operations — are important in managing the region's biodiversity.

John C. Murphy is an Associate of the Museum's Division of Amphibians and Reptiles, teaches biology and geology at Plainfield High School in Plainfield, Illinois, and is active in the Chicago Herpetological Society.



Top: A side pool of water along a larger stream provides an excellent egg-laying site for several different kinds of frogs. Pictured are Harold Voris (left) and Paul Yanbun.

Left: The Oriental whip snake is common in the Danum Valley but is difficult to find because of its thin green body that resembles a plant stem.

Bottom: Hose's tree toad, a common toad that breeds along streams and spends its time in trees and bushes.



John C. Murphy

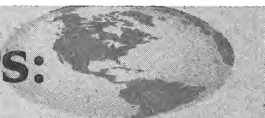


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