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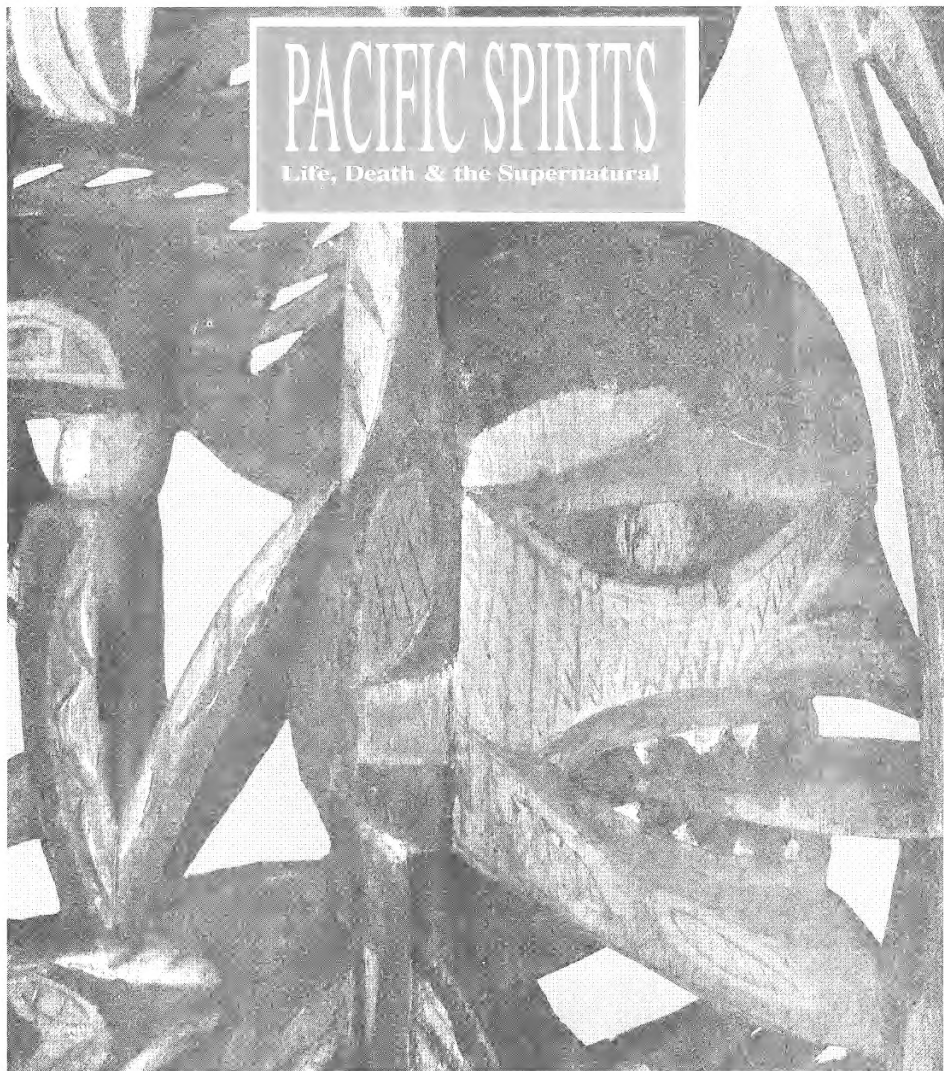
In the Field

The Bulletin of the Field Museum of Natural History

November/December 1990

PACIFIC SPIRITS

Life, Death & the Supernatural



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It's time to revive the Burnham plan for museums in a park, by re-routing Lake Shore Drive.

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A \$1.4 million Kellogg Foundation grant will support the new 'Animal Kingdom' exhibit.

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In a remote corner of Borneo, curator Robert Inger notes the effects of logging on local fauna.



THE FIRST MODERN BIRD

A Chinese fossil, 135 million years old, is being prepared in a Field Museum laboratory. The creature, as yet unnamed, is believed to be the first modern bird, but still bears unmistakable features associated with its dinosaur ancestors.

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PACIFIC SPIRITS

By Susan Nelson

When the yellow tape and construction barricades come down on November 10, all of us will be able to step inside the religious and ceremonial worlds of Pacific islanders as the Museum opens "Pacific Spirits: Life, Death & the Supernatural," the second and final part of its new permanent exhibit on the Pacific islands.

Multi-faceted exhibition areas have transformed a long, narrow hall into seven different but connecting galleries, each with its own theme and interior configuration. Angled walls, freestanding displays, and imaginative uses of vertical space stretching 18 feet or so to the ceiling envelop the visitor and work a little magic of their own in explaining the religious beliefs of diverse Pacific islanders around 1910.

The date is significant. It was then that Albert Buell Lewis, a newly hired curator of anthropology, was dispatched to Melanesia to study island culture and bring back dazzling artifacts that would fill the new museum's halls.

Focusing on the time of the Lewis expedition, "Pacific Spirits" highlights artifacts from the Museum's world-renowned Oceanic collection. Those early objects reflect the diverse artistic styles of Pacific islanders before their societies were heavily influenced by European and American colonialism. For that reason, the objects may be considered especially valuable.

The artifacts in "Pacific Spirits" are from the Field Museum's 55,000-object collection from the island groups of Melanesia, Micronesia, and Polynesia. The Melanesian portion alone numbers some 36,500 items and is among the most important in the world. "Pacific Spirits" presents great objects of ceremony, ritual, and war from Melanesia and Polynesia — masks, memorial sculptures, musical instru-

ments, weapons, and personal ornaments. But it does more than just display exceptional objects. The 7,200-square-foot exhibit introduces many of the themes important to Oceanic ritual life and explores them in the context of specific cultures.

Above all, "Pacific Spirits" honors the religious traditions of Pacific islanders and shows that within the diversity of their cultures runs a common thread of belief: that living people and their departed ancestors are intertwined with supernatural spirits in important and complex ways.

The objects themselves are sometimes amazingly intricate. Single masks may be made of as many as a dozen different materials, from wood and various natural pigments to spiderweb or pigs' tusks and leaves. Many objects are just plain amazing, such as one of the largest, a mask from New Britain that denotes a giant praying mantis and measures eight feet across and six feet high, or a memorial figure from Vanuatu called a *rambaramp*.

The items are not merely arranged in cases with labels to explain them. Like "Inside Ancient Egypt," which opened in November of 1988, and last November's 11,000-square-foot "Traveling the Pacific," this exhibit continues the new philosophy of the Field Museum to conserve and reinterpret its greatest collections for today's audiences.

"Pacific Spirits" was designed to guide the visitor from topic to topic and place to place, exploring these diverse cultures on their own terms and noting parallel forms and experiences in the Western culture more familiar to most Museum visitors. To enhance the sense of presence, the setting uses blue-green walls that nearly vanish in the relatively

dim light required to protect the artifacts. The exhibit consists of seven sections:

THE MASK GALLERY presents more than two dozen magnificent Melanesian masks that show the exceptional artistry of the region. Two mannequins are shown in masks, one from the early 1900s and the other a modern mask, demonstrating that there is continuity as well as change in Pacific island cultures. The contents of the Gallery will change from time to time so that more of the Museum's extensive collection can be exhibited.

SPIRIT HOUSES depicts two men's ceremonial houses with masks and other objects from the Gulf of Papua and the Sepik River areas of New Guinea. In these houses, which could tower 80 feet and extend 200 feet in length, men of a clan met to create masks and ritual objects and plan ceremonies that would be watched by the entire village. The men's houses were used for initiation rites for boys; women and children were not permitted inside.

MASKED DANCE, focusing on New Britain, includes the giant, brilliantly colored praying mantis and other distinctive masks from the Sulka people, as well as masks from the Tolai and the Baining people.

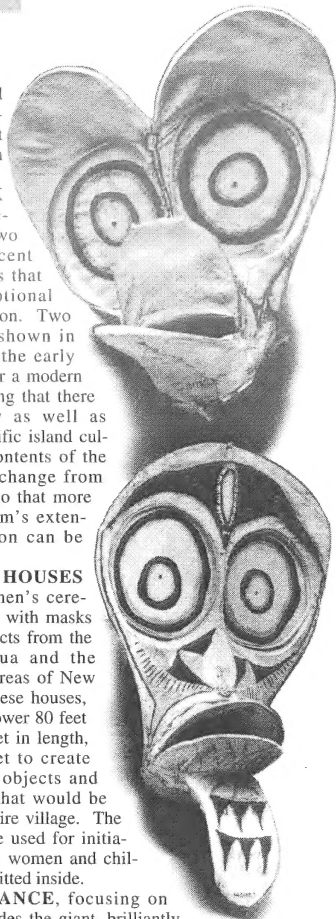
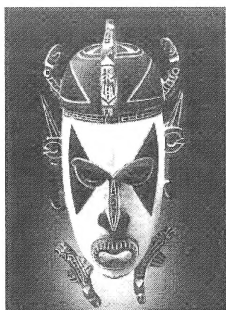
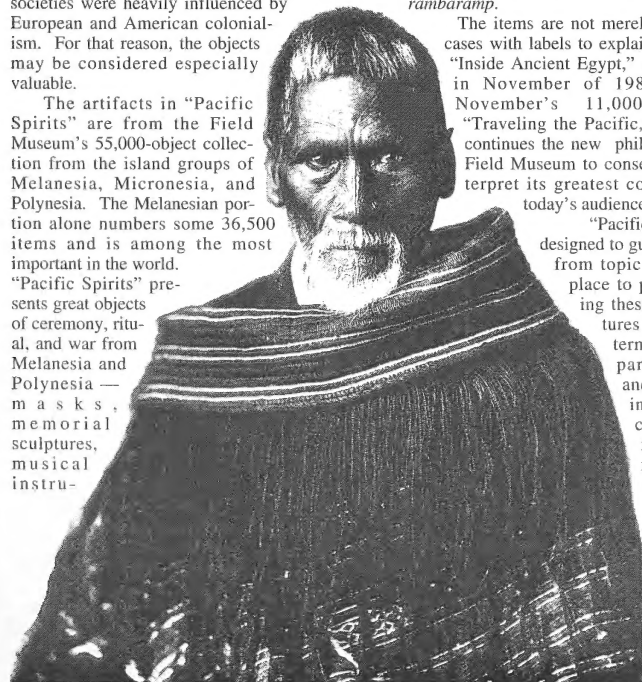
HONORING THE DEAD is the theme for New Ireland, which has a history of rich memorial, or *malanggan*, carvings and ceremonies. A reconstructed ceremonial setting displays the carvings as they would have been seen in 1910; a small area with benches nearby has videotapes that include a 1987 *malanggan* ceremony.

MAGIC FOR WAR uses dozens of clubs and spears, shields, and other weapons to explain the enormous role the supernatural played in warfare and the ways in which men called forth spirits' powers for protection and to make themselves successful in battle.

PIGS AND PRESTIGE examines the role of pigs, a symbol of wealth throughout Oceania, through the lens of the culture of Vanuatu (formerly New Hebrides), where men raise special

(Continued on Page 10)

Pictures from an exhibition: Left, a portrait of a Maori chief (neg. no. 72158). Above right, the wide-eyed expressions of these bark-cloth masks identify them immediately with the Baining people of the interior of New Britain's Gazelle Peninsula; the top mask represents a tree-fork spirit and the bottom a leaf spirit. (Photo by John Weinstein, neg. no. 111287.) Center, above, is a painted wooden mask from Tami Island in the Morobe Province of Papua New Guinea. The mask was included in the groundbreaking 1946 exhibition "Art of the South Seas" at the Museum of Modern Art in New York. (Photo by John Weinstein, neg. no. 111521).



A PARK FOR OUR MUSEUMS



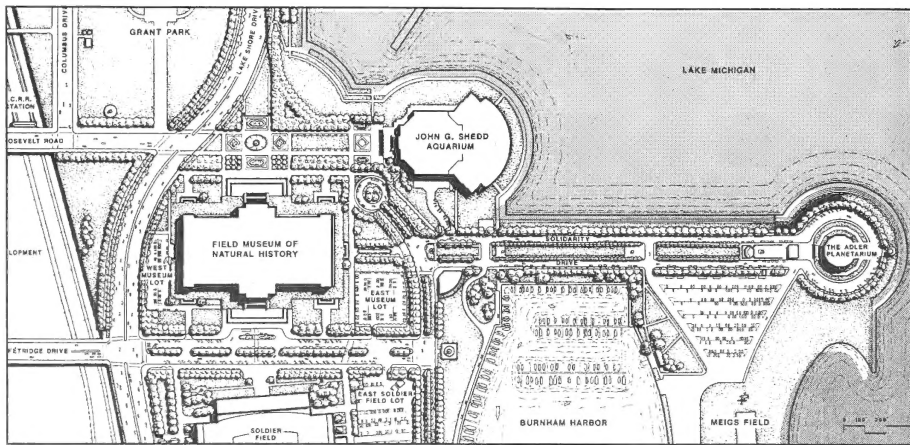
By Willard L. Boyd
President, Field Museum of Natural History

The Field Museum, like museums all over the world, was planned for a park. Great park planners have envisioned public spaces as places where people could find renewal for the body, mind, and spirit. The Museum was indeed built in a park. But today that park has become, in effect, the median strip of a busy highway. As a result, the Field Museum is probably the most visible museum in America — and among the least accessible.

The Museum's first home, the former Palace of Fine Arts in Jackson Park on the South Side (where the Museum of Science and Industry now resides), was not designed for a research institution with huge collections, and Marshall Field I provided in his will for a more suitable building. In his elegant 1909 design for Grant Park on the downtown lakefront, Daniel Burnham considered Field Museum to be a central element. Montgomery Ward, who fought to keep the lakefront "forever open, clear, and free," agreed that the Museum should be located there. But the city's civic and political leaders would not accept other building limits; Ward fought on and prevailed. Ultimately, the Museum was built between 12th and 14th Streets on land donated to the South Park Commission by the Illinois Central Railroad, between Grant Park and what would become Burnham Park.

The Museum opened its doors in 1921. In 1930, with the opening of the Shedd Aquarium, whose design, facing the city at the foot of 12th Street (Roosevelt Road) matched that of the Field Museum, and the Adler Planetarium at the east end of a causeway leading to Northerly Island, the plan for a museum complex was complete.

Over the years, however, these museums and Burnham Park have fallen victim to the automobile and the steady expansion of Lake Shore Drive. What Burnham had envisioned as a meandering park boulevard is now an express-



The long-range plan for the museum complex prepared by Lohan Associates for the Field Museum, Adler Planetarium, and Shedd Aquarium.

and the lakefront. The automobile entrances and exits at the Field Museum are difficult and dangerous. Within the past year two Museum employees have been hit by cars while in crosswalks going from the Metra station at Roosevelt Road across Columbus Drive and Lake Shore Drive to the Museum. One staff member was injured while walking along the sidewalk adjacent to Columbus Drive. More than 200 automobile accidents occur each year at the intersections surrounding the Museum because of forced merging into high-speed traffic.

Several years ago, the trustees of the Adler Planetarium, the Shedd Aquarium, and the Field Museum decided it was imperative to present a positive proposal to the Chicago Park District, the city, and the state, and retained the firm of Lohan Associates to develop a comprehensive plan, which was completed in 1988. All three institutions have new and important plans for public exhibits, as attendance is rising from 3 million to 4.5 million in the next few years, and it made sense to try to deal with the site problem in that context. The commissioners and staff of the Chicago Park District — our supportive landlord — have been cooperating enthusiastically, and recently convened a joint task force with the Chicago Plan Commission on Burnham Park planning.

The key to revitalizing Burnham Park is to reroute Lake Shore Drive west of Soldier Field and the Field Museum and to provide pedestrian access over the drive between the city and the park. Numerous underpasses and overpasses make Lincoln Park and Lake Michigan an integral part of life on the North Side, and the same must be true for Burnham Park and the people of the South and West Sides.

Several developments make this a propitious time for action on this issue — the current discussions about the Central Station project immediately to the west of the Museum, the possible expansion of McCormick Place, and the proposed relocation of the Chicago Bears from Soldier Field to a new domed stadium near McCormick Place. In a restored Burnham Park, the Field Museum and its neighbor museums will have the environment and access necessary to do their vital work of teaching future generations about the great issues that confront our society in relation to the natural world. □

POLICY ON NEA GRANTS

The Field Museum's Board of Trustees in August voted not to apply for or accept grants from the National Endowment for the Arts that would be subject to content restrictions and guidelines recently imposed by the agency. The regulations reflect Congressional concern over NEA funding of controversial works, especially the traveling retrospective exhibit of Robert Mapplethorpe photographs.

The Board's policy would apply to potential grants for exhibits or publications but not to grants for conservation work, according to Museum President Willard L. Boyd, since the restrictions presumably cannot apply to activity not intended for public presentation.

The NEA requires applicants and grantees to certify that their proposed work is not "obscene" within the legal definition established by the Supreme Court, and establishes procedures for agency review to determine whether applicants and grantees are in compliance.

President Boyd said that in presenting the NEA issue to the Trustees, "I placed it in the general context of controversial ideas." Boyd cited instances in which Museum exhibits have been criticized by some visitors for alleged obscenity, sexism, violence, or ethnic insensitivity, and pointed out that other basic Museum research and exhibits, dealing with issues of the environment and the evolution of species, are also capable of generating controversy.

"Since we are engaged in research and exhibits sometimes deemed controversial by others," Boyd said, "we have an obligation to allow and encourage the presentation of other points of view. . . . But we should do so as a function of our own mission and professional judgment, not that of the government or a particular group." □

STATEMENT OF OWNERSHIP, MANAGEMENT, AND CIRCULATION

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Paid circulation (mail subscriptions)	24,939	24,428
Total paid circulation	24,939	24,428
Free distribution	744	764
Total distribution	25,683	25,192
Office use, copies left over	1,533	808
Return from news agents	none	none
Total	27,216	26,000

I certify that the statements made by me above are correct and complete.
Jimmie W. Croft, Vice President for Finance and Museum Services.

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Ron Dorfman

Art Director:
Shi Yang

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THE RAREST BIRD

William Simpson, Field Museum's chief preparator of fossil vertebrates, had to destroy the remains of the world's oldest bird in order to save it. But the result will be at least three hard and durable epoxy casts of the skeleton that scholars can study; the bird, as yet unnamed, has morphological links to both dinosaurs and modern birds.

Researchers at the University of Chicago and the Beijing Natural History Museum identified the fossil, found in China in 1987, as the earliest known modern bird, about 135 million years old.

The fossil and a portrait of the creature, believed to have lived 10 million years before any previously known modern bird, and some 10 million years after Archaeopteryx, a transitional form between dinosaurs and birds, was presented at the October meeting of the Society for Vertebrate Paleontology at the University of Kansas, Lawrence, by Paul Sereno, assistant professor of paleontology at the U. of C. Sereno has recently been appointed a research associate in the Field Museum's Department of Geology.

Sereno said that while Archaeopteryx could fly, "it's not clear how well." The new creature was well equipped for flight.

The fossil skeleton was flattened and preserved in a piece of shale-like rock, about four inches square and a quarter of an inch thick, that had fractured along a sagittal plane, exposing cross-sections of the bird on both pieces. Simpson worked with the larger of the two pieces, which carried a more complete portion

of the skeleton but which itself had broken in three.

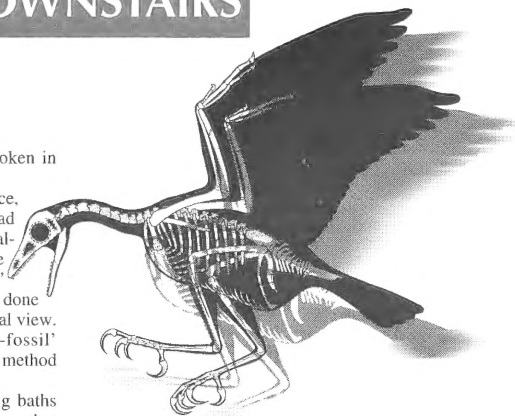
Both Simpson and Claire Vanderslice, a U. of C. illustrator and preparator, had tried to prepare the specimen mechanically, by scratching the rock away from the fossil. "But there wasn't much relief," Simpson said, "so the best that could be done was to outline the bones in cross-sectional view. I decided to try what I call the 'lost-fossil' method — on the model of the lost-wax method in bronze casting."

Soaking the specimen in alternating baths of acetone (to remove the glue holding together the three pieces) and a ten-percent solution of hydrochloric acid, Simpson dissolved the soft bones, which floated off as carbon dioxide gas, leaving a natural mold in the rock. Most of the work had to be done under a microscope.

Simpson glued the three pieces back together and laminated the back with epoxy and fiberglass, to strengthen it.

"What we have now is essentially a negative," Simpson said, "and the next move is to make a positive. I think what we'll do is use an airbrush to spray on natural latex rubber. The rubber will become what's called a 'latex peel,' and we'll use that to make another mold out of silicone rubber. From the silicone mold we'll make epoxy casts — the ultimate goal. They'll be hard and durable and won't change dimensions over time."

Sereno said the bird's skull bones were disturbed before being fossilized. "I wish the skull were intact," he said. "It looks as if the bones floated apart a little bit before it fossilized, and



Paul Sereno & Carol Abraczinskas / University of Chicago

that makes it difficult to interpret."

Sereno said that Simpson was "one of the few people who could have done the job — without him we wouldn't have known as much about the bird as we do."

The fossil and one of the casts will go on display in the Beijing Natural History Museum. Cheng-gang Rao, a curator at the Chinese museum who worked with Sereno on identifying the creature, said the fossil, found in a farmer's field in Liaoning Province (coincidentally Illinois's sister state), was "very important" and "will help us learn a lot about the evolution of birds."

A second cast will be kept at the University of Chicago and the third at Field Museum, for research purposes. The Museum is seeking permission from Beijing to display its cast. □

CURATORS APPOINTED IN ZOOLOGY

Scott Lanyon, associate curator and head of the Division of Birds, has been appointed chairman of the Department of Zoology. Dr. Lanyon is also head of the Museum's biochemical laboratories, and serves as a member of the Committee on Evolutionary Biology at the University of Chicago. His principal research interest is the evolution of New World blackbirds.

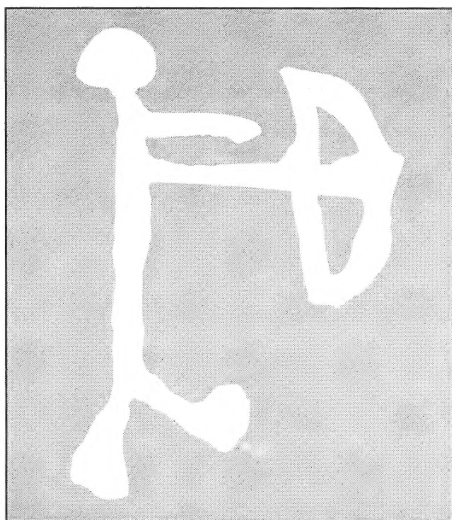
In addition to fieldwork in North, Central, and South America and the Caribbean, Dr. Lanyon has also worked in Kenya and in the Marshall Islands.

He did his undergraduate work at the State University of New York at Geneseo, his master's degree at Indiana University, and his Ph.D. at Louisiana State University (1985). Dr. Lanyon is a Councillor of the Wilson Ornithological Society, a member of the Membership Committee for the American Ornithologists' Union, and the AOU and Field Museum representative to the International Council for Bird Preservation, among other professional memberships and distinctions.

Rüdiger Bieler has joined the Department of Zoology as a curator in the Division of Invertebrates. He was previously assistant curator of malacology and head of the Curatorial and Research Division of the Delaware Museum of Natural History. At the Delaware museum, he was responsible for one of the major U.S. mollusk collections.

Dr. Bieler has both his master's degree (in biology, geography, and biology education) and his doctorate (1985, zoology) from the University of Hamburg, where his Ph.D. thesis focused on the taxonomy, comparative morphology, and zoogeography of Architectonicidae, a family of Indo-Pacific gastropods. His current research interest is the phylogenetic relationships, and thus the evolution, of the larger groups of gastropods.

Dr. Bieler is a research associate at the National Museum of Natural History and at the



An Anasazi petroglyph of a warrior, from the Kayenta region of northern Arizona, rendered by Katrina Lasko for the cover of *The Anthropology of War*.

The essays are the result of a week-long seminar at the School of American Research in 1986, sponsored by the school's Advanced Seminar program and the Harry Frank Guggenheim Foundation. The nine contributors represent a variety of theoretical perspectives and study of prestate societies in many parts of the world; the goal of the seminar, Haas writes in his preface, was "to arrive at a better understanding of the causes of both war and peace in prestate societies and the impact of war on the evolution of those societies."

DONALD W. LATHROP 1927-1990

Donald W. Lathrop, research associate in anthropology, died in May at the age of 63. His interests were wide-ranging, and colleagues described him as among the last hemispheric archaeologists, concerned with the history of culture throughout the Americas. In a eulogy at the University of Illinois in Urbana, where Dr. Lathrop taught for many years, Don Collier, curator emeritus of Middle and South American archaeology and ethnology, said:

"Don had a rare gift for spotting stylistic and technological connections and for gaining and applying insights from linguistics, mythology, and iconography to culture history; for example, in examining early connections between Chavin in Peru and Olmec in Mexico."

His greatest love and the field of his most original contributions was the ecology and culture history of the Amazon. The most important of his conclusions there was that before the rise of civilizations in Nuclear America, a relatively dense human population was present in Amazonia, probably before 7000 B.C., which depended on a productive root-crop horticulture and intensive exploitation of the resources of river and forest." □

Janet R. Voight has been appointed a curator in the Division of Invertebrates, Department of Zoology. She recently earned her Ph.D., for studies of the population biology and morphology of octopuses, in the Department of Ecology and Evolutionary Biology, University of Arizona, Tucson.

In recent years she was awarded a Conchologists of America Smithsonian Fellowship in Systematic Malacology and a Hawaiian Malacological Society research grant. Dr. Voight has published widely on both octopuses and owls.

HAAS BOOK PUBLISHED

Cambridge University Press has recently published *The Anthropology of War*, a collection of essays on the role of warfare in prestate, "tribal" societies, edited by **Jonathan Hass**, Field Museum curator of anthropology and vice president for collections and research.

Lucille Long, a Pawnee from Stillwater, Oklahoma, stopped at the Museum as part of a visit to her family in Racine, Wisconsin. Ms. Long was surprised to find, in this photomural, a picture of her own grandfather, Roam Chief.



Sophie Ann Brunner, a volunteer in the Division of Amphibians and Reptiles, has logged more than 5,500 hours over the past 12 years, preparing study skeletons of lizards, turtles, land snakes, and, especially, marine snakes. With the aid of legions of dermestid beetles, she has prepared more than 750 marine snake skeletons, making the Museum's collection the most important in the world. In recognition of her work, the marine snake osteological collection has been named for her. Harold K. Voris, curator, presents the plaque.



\$1.4 MILLION KELLOGG FOUNDATION GRANT FOR 'ANIMAL KINGDOM'

A grant of \$1,468,000 from the W.K. Kellogg Foundation will support development of the Animal Resource Center, the educational centerpiece of the new permanent exhibit "Diversity and Survival in the Animal Kingdom," opening in November 1991.

The exhibit will include an introductory-level exhibit, the Nature Walk, and the major thematic exhibit, which reorganizes the Museum's extraordinary collections of bird and animal mounts and dioramas into a rich, multi-dimensional experience in animal biology, ecology, and conservation.

The Animal Resource Center, which will occupy nearly half the exhibit's 32,500 square feet, will offer opportunities for pursuing individual interests; visitors will have access to books, periodicals, videotapes, activity kits, and interactive computer units.

"Diversity and Survival" will be housed in the Museum's first-floor west wing.

The wing will be renamed the Daniel F. and Ada L. Rice

Wing in recognition of a major gift totaling \$5 million from the Daniel F. and Ada L. Rice Foundation announced in April, which included \$1 million for the



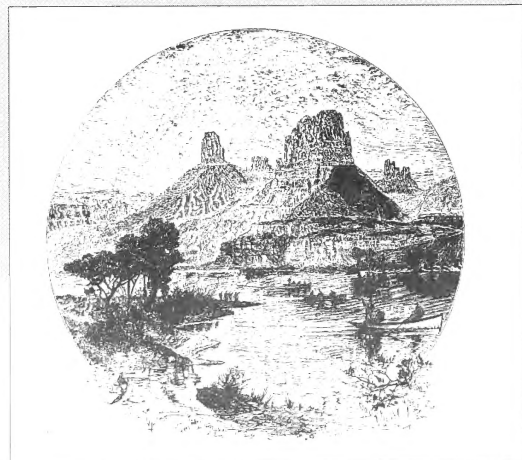
Among the Museum's priceless collection of animal mounts and dioramas is this one, of the greater kudu. Many will be refurbished and reinstalled for "Diversity and Survival in the Animal Kingdom."

exhibit. The exhibit is also supported by a grant of \$1.2 million from the National Science Foundation.

Reworking the zoology mounts and dioramas into this major new exhibit is the next step in the Museum's plan to refurbish some 60 percent of its exhibit space by the time of its centennial celebrations in 1993-94. Still to come are major new exhibits on natural history and social change in Africa, and on geology and evolution.

The Kellogg Foundation, in Battle Creek, Michigan, is among the world's largest private philanthropies, supporting programs in agriculture, education, and health in the Americas and in southern Africa. □

Exploring Gift Opportunities?



Field Museum's guides can help you chart your course. When planning your gift to Field Museum, why not let our experts guide you through the dozens of giving opportunities to the one best suited to your needs? Write or call for your free *Guide to Giving in the 1990s*.

Call Melinda Pruett-Jones / (312) 322-8868
Your Guide to Gift and Estate Planning

AUDUBON PREVIEW RAISES \$3,000 FOR LIBRARY

A preview showing of original oil paintings and watercolors by John James Audubon and his son, John Woodhouse Audubon, raised some \$3,000 for the Field Museum Library.

Sponsored by Friends of the Library, the September 21 preview reception was held at the Douglas Kenyon Gallery (pictured here), where guests were able to visit the garden and state-of-the-art restoration workshops as well as the showrooms.

Among the guests were several descendants of the Audubons and a delegation of Soviet publishing executives. □



CALENDAR OF EVENTS



PACIFIC SPIRITS OPENING CELEBRATIONS

There are special events for everyone with the opening of Field Museum's major new exhibit, "Pacific Spirits: Life, Death & the Supernatural." Whether your interests lean more toward a lecture on religious masks or an island food fest, you'll find something of value in the schedule below.

FIELD MUSEUM
THE SMART WAY TO HAVE FUN

'PACIFIC SPIRITS' SPECIAL EVENTS

Friday, Nov. 2 — 6:30 p.m.

WOMEN'S BOARD GALA — Cocktails, dinner, and dancing to the music of the Scott Olson Orchestra, in Stanley Field Hall; tour of the exhibit follows. Underwritten by Kraft Inc. By invitation.

Monday, Nov. 5 — 5:30 to 7:30 p.m.

SPECIAL PREVIEW — For Field Contributors, Adventurers, Naturalists, and Explorers and their families. Light refreshments served. Enter the Pacific Sweepstakes (see below) and win a trip to New Zealand or Hawaii.

Wednesday & Thursday, Nov. 7 & 8 — 5 to 8 p.m.

MEMBERS' PREVIEW NIGHTS — Visit the Museum either night and enter the Pacific Sweepstakes. (Details below.)

Saturday, November 10 — 2 p.m.

LECTURE: "Masked Spirits of the Pacific" — Lawrence E. Sullivan, Ph.D., director of the Center for the Study of World Religions, Harvard University, will give a historical and geographical overview of Pacific masking traditions, using examples from the Museum's collection. Supported by the National Endowment for the Humanities. (\$5 per person; members \$3.) Call the department of education, (312) 322-8854, Monday through Friday, for more information.

Saturday & Sunday, November 17 & 18 — 11 a.m. to 4 p.m.

TASTE OF THE PACIFIC FESTIVAL —
• Authentic foods and beverages of the Pacific islands, prepared by O'Hare Marriott's Kona Kai restaurant, served from thatched-roof kiosks in Stanley Field Hall. (Priced per item.)
• Music, dance, storytelling, and traditional arts and crafts by performers from Hawaii, Palau, and the Solomon Islands. (Free with reg-

ular Museum admission or membership card.)

• "Family Feature Workshops" at 2 p.m. both days, to introduce children (accompanied by an adult) to hands-on activities related to the Pacific islands. (\$2 per person; children under two free; limited to 50 people; register during Museum visit.)

Tuesday, November 20 — 7 to 9 p.m.

SPECIAL TOUR — Master Exhibit Developer Phyllis Rabineau leads a special after-hours tour of "Pacific Spirits." (\$10; \$8 members)

Thursdays & Saturdays throughout November — 2 to 3 p.m.

FAMILY FEATURE WORKSHOPS — brief geographical/historical introduction to the Pacific followed by four hands-on learning activities (playing musical instruments, masking, wearing a *pareu*, hearing myths of the Pacific); a take-home craft project; and receipt of a hand-out to help explore "Pacific Spirits." Supported by a grant from the National Endowment for the Humanities. (\$2 per person; children under 2 free; call the department of education, (312) 322-8854, Monday through Friday.)

Monday, November 26 — 4 to 6 p.m.

FREE EDUCATORS' VIEWING — a special program for Chicago-area educators introduces topics presented in "Pacific Spirits: Life, Death & the Supernatural" and suggests ways to incorporate study of the Pacific region into the curriculum. Advance reservations required by Friday, November 23; RSVP to mailed invitation or send a note to Education Department, Field Museum, Roosevelt Road and Lake Shore Drive, Chicago, IL 60605. Light refreshments served.

New Educational Materials

• The Harris Educational Loan Center has

prepared a collection of "experience boxes" and printed materials related to "Pacific Spirits" to lend to teachers. The center is open to educators every Tuesday and Thursday from 2:30 to 5 p.m. and Saturday from 9 a.m. to 5 p.m.; for information, call the Harris Center at (312) 922-9410, ext. 361.

Private Viewings

Private viewing for groups of 15 to 50 people may be arranged during regular public hours and include a lecture, exhibit tour, and continental breakfast, luncheon, or refreshments; rates and information at (312) 322-8864. • Private viewing is also included in rates for reserving the Field Museum for cocktail and dinner receptions by businesses and organizations; information at (312) 322-8864. □

PACIFIC SWEEPSTAKES

• **FOR FIELD MUSEUM MEMBERS, CONTRIBUTORS, ADVENTURERS, NATURALISTS, AND EXPLORERS** — Grand-prize trip for two to New Zealand; second-prize trip for two to Hawaii.

• **FOR THE GENERAL PUBLIC** — Five trips for two to Hawaii.

All trips are sponsored by United Vacations and United Airlines, "Field Museum's Official Airline for Traveling the Pacific." (For more information, call the department of public relations, (312) 322-8859, Monday through Friday.)

The Women's Board of Field Museum of Natural History cordially invites you and your family to Christmas Tea

**A family Celebration
Wednesday, December 5, 1990
from 4:30 to 6:30 p.m.**

1990 Family Christmas Tea Committee

- | | |
|---|--|
| Mrs. Andrew McKenna
Chairman | Mrs. Howard J. Trienens
Women's Board President |
| Mrs. Hope Haywood Paul
Vice Chairman | |
| Mrs. Stephen M. Bartman | Mrs. Brian Jerome |
| Mrs. Theodore A. Bell | Mrs. S. Curtis Johnson III |
| Mrs. Willard L. Boyd | Mrs. John J. Kinsella |
| Mrs. Douglas H. Cameron | Mrs. John W. Madigan |
| Mrs. Stanton R. Cook | Mrs. William Putze |
| Mrs. Howard M. Dean, Jr. | Mrs. Charles E. Schroeder |
| Mrs. Charles Harold III | Mrs. Stephen Byron Smith |
| Mrs. Duncan Y. Henderson | Mrs. Harlan F. Stanley |
| Mrs. David Horn | |

The Family Christmas Tea is the Women's Board gift to the children of Chicago

*Bozo the Clown and his pal Cooky
The Stu Hirsh Orchestra
The Jesse White Tumblers
A Special Arrival by Santa Claus
Costumed Characters and assorted entertainments
Dino the dinosaur
Activities by the Museum's Education Staff
An Assortment of Christmas Tea Refreshments*

Reservations are limited and will be accepted in the order received. Party attire is encouraged. No early admission to the party. No tickets will be sold at the door.



**11/16
TEACH ME TONIGHT**

Educators! Take a flashlight tour of Egypt! Do plastic bottle activities! A Museum overnight for educators only. Bring your own sleeping bag. Registration fee of \$35 covers activities, snack, and breakfast. For more info, call (312) 322-8854.

11/11 Chicago BEARS 1990 SCHEDULE

Present your Bears ticket at Field Museum on game day and receive a "Field Goal" ticket, entitling you to half-price admission and free re-admission to Field Museum on game day. Home schedule:

- | | |
|---------|-------------|
| Nov. 11 | ATLANTA |
| Dec. 2 | DETROIT |
| Dec. 23 | TAMPA BAY |
| Dec. 29 | KANSAS CITY |

RSVP

FIELD MUSEUM CHRISTMAS TEA
at Field Museum
Wednesday, December 5, 1990

___ Adult tickets at \$10 each for members, \$15 each for non-members
___ Children's tickets (age 13 and under) at \$5 each for members and non-members

I wish to become a member of Field Museum.
___ \$30 Individual Membership
___ \$35 Family Membership

Reservations are limited and will be accepted in the order received.
No early admission to the party. No tickets will be sold at the door. For further information, please call the Women's Board Office, 312/322-8870

Name _____
Address _____
City _____ State _____ Zip _____
Telephone _____

I am unable to attend, but wish to contribute \$ _____
Enclosed is my check for \$ _____

Please enclose a self-addressed, stamped envelope for your tickets, which will be mailed upon receipt of check. Please make check payable to Field Museum.

	S	M	T	W	T	F	S
NOVEMBER					1	2 Women's Board Gala: "Jewels of the Pacific" (By invitation)	3 Stories Around the World — Museum tours, 11 and 11:30 am World Music: 1 pm & 3 pm
	4 World music 1:00 pm 3:00 pm	5 Special preview of "Pacific Spirits" for Field Contributors, Adventurers, Naturalists & Explorers	6	7 Members only preview of "Pacific Spirits"	8 Members only preview of "Pacific Spirits"	9 Lecture: African Ark: Peoples of the Horn, 7 pm	10 Museum safari — 12:30 pm World Music, 1 pm & 3 pm
	11 World Music, 1 pm & 3 pm	12	13	14	15	16 Teachers' Overnight (Advance registration)	17 Taste of the Pacific, 11 am - 4 pm Stories Around the World, 11 & 11:30 am World Music, 1 pm & 3 pm
	18 Taste of the Pacific, 11 am - 4 pm World Music, 1 pm & 3 pm	19	20	21	22 Thanksgiving — Museum closed Costa Rica tour departs	23 World Music, 1 pm & 3 pm	24 What's new with dinosaurs? Museum tour, noon Fireballs & shooting stars — Museum tour, 1:30 pm World Music, 1 pm & 3 pm
	25 World Music, 1 pm & 3 pm	26	27	28	29	30	

12/29

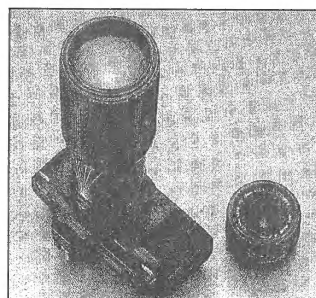
A GUIDE TO THE ORCHESTRA

The Chinese Music Society of North America introduces the instruments of the Chinese orchestra for the World Music Program. 1 p.m.



12/10

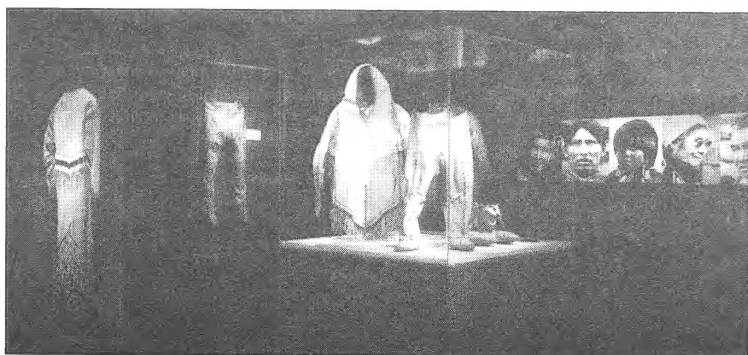
PICTURE THIS




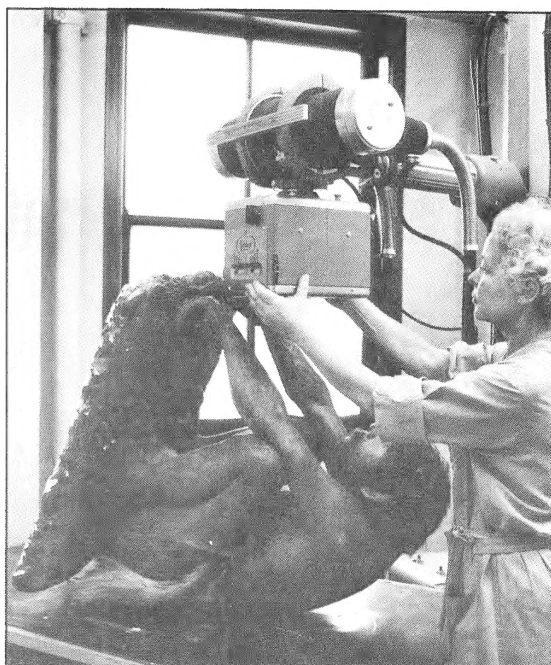
The Nature Camera Club of Chicago has been meeting at Field Museum for over forty years. Meetings are open to everyone and held on the second Monday evening of every month, except July and August. Programs by experienced nature photographers and naturalists alternate with slide competitions during which color slides are evaluated and criticized by visiting judges. The subject of the slide competition on the 10th of December will be Autumn. The program for January the 14th is "Yellowstone in Winter" by Ronald Kurowski. The club meets at 7:30 in Lecture Hall 2; parking is in the west lot and entry by the west door.

CONTINUING:

Among the Museum's continuing special exhibits are "From Old to New: Crafts of Alaska's Indians" (below); "In Shadows Ancient: Life Amid Mayan Ruins," which features photographs of the contemporary people who live with that past; and "Who'd a Thought It: Improvisation in African-American Quiltmaking."



S	M	T	W	T	F	S			
						1	DECEMBER		
						2		Stories Around the World — Museum tours, 11 & 11:30 a.m. Museum safari, 12:30 pm World Music, 1 pm & 3 pm	
						3			
						4			
						5		Women's Board Christmas Tea Museum closes 3 pm	
						6			
						7		8	Dinosaur Lifestyles, noon Tibet & Bhutan, slide program, 1:30 pm World Music, 1 pm & 3 pm
						9			
						10		Nature Camera Club of Chicago meets in Lecture Hall 2, 7:30 pm.	
						11			
						12		Hanukkah World Music, 1 pm & 3 pm	
						13			
						14			
						15	Stones Around the World, Museum tours, 11 & 11:30 am World Music, 1 pm & 3 pm		
						16			
						17			
						18			
						19			
						20			
						21			
						22	World Music, 1 pm & 3 pm		
						23/30	30 World Music, 1 pm & 3 pm		
						24/31			
						25	Christmas Museum closed		
						26	World Music, 1 pm & 3 pm		
						27	World Music, 1 pm & 3 pm		
						28			
						29	World Music, 1 pm & 3 pm		



THE RECORD IN THE ROCKS

By Peter Laraba
Department of Education

The earth is 4.5 billion years old, and people have been writing history for only the tiniest fraction of that time, a few thousand years. Still, we can discover what the world was like before people were around to see it, or able to describe what they saw.

The record is written in the rocks, in a kind of code that scientists have learned to read.

From rocks and fossils we know that Chicago was once covered by warm shallow seas, that insects flew on wings 12 inches long just southwest of the city, and at one time Chicago was on the equator. (Of course, Chicago hadn't been built yet.) The rocks also tell us of recent ice ages and changing lake levels.

You can sometimes see the pages on which the geological history is written. Look at the marble, granite, limestone, and other decorative

stones on buildings in your neighborhood, or natural rock formations outside the city. There may be different minerals, fossils, layering, or other structures in the rock which each add a page to the story. One such story is the making of sandstone.

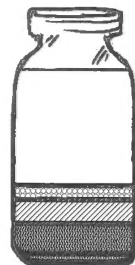
Most of the earth's surface is covered with loose material called sediment. It may be soil in a garden, mud in a river, or the sand and pebbles on a beach. Geological processes turn these loose materials into sedimentary rock.

Sandstone may start out as beach or river sands or as desert sand dunes. After millions of years, new minerals develop between the grains of sand and cement them into solid rock. Many sandstones are made of layers or beds of sediment, an important feature of sedimentary rocks.

Here's an experiment you can do that will show how grains of different sizes form different layers when deposited in water:

Fill a large jar about 1/3 full with garden soil or some other type of mixed sediment. Slowly add water to the top of the jar. Stir well and leave it to settle.

In a few days you will have layers of different sediment in your jar. On the bottom will be a very thin layer of black carbon from plant remains. Next will be a layer of fine mud, then some fine sand, and nestled on top will be small stones. □



WHAT'S UP, DOC?

That's what we'd like to know, and we'll send a copy of *The Greenpeace Book of Dolphins* to the author of the most interesting guess. The winning entry will be published in *In the Field*. 100 words or less, please; deadline is December 1. Send your essay to Editor, *In the Field*, Field Museum of Natural History, Roosevelt Rd. and Lake Shore Dr., Chicago, IL 60605.

Drumming at the Edge of Magic

By Mickey Hart with Jay Stevens

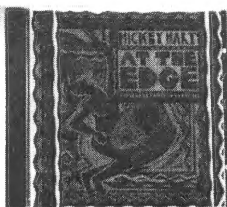


Mickey Hart, virtuoso percussionist of The Grateful Dead, tells the compelling story of his quest to unlock the power, myths, and legends of percussion.

\$19.95 at the Field Museum Stores. To order by telephone, call (312) 922-9410 ext. 236, Mon-Fri from 10 am to 4 pm.



Also available, in both CD and cassette, is *At the Edge*, conceived as a companion album to the book. With a host of international stars, including Jerry Garcia and Babatunde Olatunji.

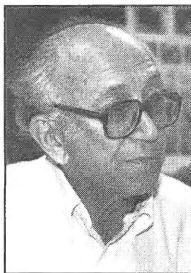


ECOLOGICAL PUZZLE IN BORNEO

Don't bother to look for this place on a map. It's in the southwestern corner of Sabah, not far from where Sabah meets Sarawak (the other Malaysian state on Borneo) and the sultanate of Brunei. This is an area of low mountains — at least geologists would call them mountains, though no one from Colorado would. The highest is Mt. Lumaku, 5,500 feet. Originally, the hilly region was covered with tropical forest, like the rest of Borneo. It is being logged at a great rate. In fact, when I first came here in 1987, most of the reachable terrain had been selectively logged, leaving only a small part of the forest intact. I was very disappointed by that, as I had come here to get a sample of the herpetofauna (frogs, lizards, snakes) from primary tropical forest. To my surprise, 95 percent of the species I caught then were typical inhabitants of undisturbed primary forest. Obviously, they represented the original fauna of the site.

That observation led Harold Voris and me to wonder how long that fauna could hang on in logged forest. (None of these species lives in cleared areas — agricultural fields, villages, towns, etc.) That, in turn, led to our present interest in measuring the effects of selective logging on natural communities of amphibians and reptiles in Bornean forests.

Maybe I should explain that term "selective logging." Strictly speaking, it means the cutting only of trees above a certain size (about one and one half feet in diameter). But big trees can't be removed with surgical neatness. When one of them comes down, its 100- to 175-foot length takes a lot with it. Then there's the



Curator Robert Inger. The Illinois chapter of The Nature Conservancy recently announced Dr. Inger's election to the organization's board of trustees.

business of getting the log out: Bulldozers cut wide drag roads for timber trucks, and in the end the forest is a mess. Of course, opening a forest this way changes its microclimate drastically — there's more air movement (reducing general humidity); more sunlight reaches the ground (reducing humidity and increasing temperature).

Despite these gross changes, there must be many nooks and crannies retaining the old microclimate, because we have found the same species we find in undisturbed forest. Can these populations continue to survive, barring further destruction of the forest?

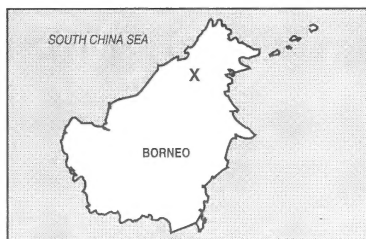
We have noticed that streams flowing through logged forest differ in the amount of silt they carry. Since about half of the frogs here have tadpoles that live in streams, water quality may be the ultimate factor determining whether *Amolops cavitypanum* and *Rhacophorus gauri* continue to survive in these forests. The existing population of adults may survive for a while, but unless enough tadpoles complete development, the show is over.

By the time we measure oxygen content, acidity, and current, and filter water to measure turbidity at each riffle and pool where we look for tadpoles, well, the sun has moved appreciably.

So far, this trip has differed from those of recent years, in an odd way — we have no funny snake story, like the one about the night in Sarawak when we were wading up a stream and a small python fell out of a tree; Harold and three of the local men simultaneously broke the world record in the standing broad jump.

But last night, Paul Yambun, a 20-year-old who has worked for me each of the past three years, allowed himself to be fooled by a frog in a plastic bag. Paul is as good as anyone I have seen at tracking frogs by their calls — an important collecting procedure. Paul heard a frog calling and turned every which way to locate it, only to realize it was one of those he was carrying in his bag. He won't live that down for a while.

What else? Well, the frogs are beautiful, the data interesting, and the weather warm. □



PUBLICATIONS OF INTEREST

The following papers, by Field Museum scientists and other experts, were published in 1990 in *Fieldiana*, the Museum's monograph series. Copies are available for purchase. Address inquiries and correspondence to Field Museum Library — Publications Division, Roosevelt Rd. at Lake Shore Dr., Chicago, IL 60605-2498.

Geology

CARMAN, M.R. Catalog of Type, Figured, and Referred Mazon Creek Fossils in Private Collections. 29 pp. Pub. No. 1407, n.s. 19.

Botany

FRANQUEMONT, C., PLOWMAN, T., FRANQUEMONT, E., KING, S.R., NIEZGODA, C., DAVIS, W., AND SPERLING, C.R. The Ethnobotany of Chinchero, an Andean Community in Southern Peru. 126 pp., 34 illus., 3 tables, erratum. Pub. No. 1408, n.s. 24.

BURGER, W., AND VAN DER WERFF, H. Edited by William Burger. Flora Costaricensis [Families 80 and 81]. 138 pp., 23 illus., index. Pub. No. 1406, n.s. 23.

Zoology

GRITTS, PAUL, AND VORIS, H.K. Variability and Significance of Parietal and Ventral Scales in the Marine Snakes of the Genus *Lapemis* (Serpentes: Hydrophiidae), with Comments on the Occurrence of Spiny Scales in the Genus. 13 pp., 8 illus., 1 table. Pub. No. 1410, n.s. 56.

INGER, R.F., ZHAO, E., SHAFFER, H.B., AND WU, G. Report on a Collection of Amphibians and Reptiles from Sichuan, China. 24 pp., 5 illus. Pub. No. 1413, n.s. 58.

GOODMAN, S.M., AND GONZALES, P.C. The Birds of Mt. Isarog National Park, Southern Luzon, Philippines, with Particular Reference to Altitudinal Distribution. 39 pp., 6 illus., 5 tables. Pub. No. 1415, n.s. 60.

GALL, L.F., AND HAWKS, D.C. Systematics of Moths in the Genus *Catocala* (Lepidoptera: Noctuidae). I. Type Material in the Strecker Collection, with Lectotype Designation. 16 pp., 4 plates, 2 tables. Pub. No. 1415, n.s. 69.

HERSHKOVITZ, P. *Titis*, New World Monkeys of the Genus *Callicebus* (Cebidae, Platyrrhini): A Preliminary Taxonomic Review. 109 pp., 47 illus., 13 tables. Pub. No. 1410, n.s. 55.

HERSHKOVITZ, P. Mice of the *Akadon boliviensis* Size Class (Sigmondontinae, Cricetidae), with the Description of Two New Species from Brazil. 35 pp., 22 illus., 4 tables. Pub. No. 1412, n.s. 57.

ECONOMIC BOTANY

Among the Field Museum's most significant collections is a host of ordinary items — plants and products derived from them that are used in the domestic and working lives of people around the world. The Timothy Plowman Economic Botany Collection, named for the late ethnobotanist and chairman of the Department of Botany, has been accumulated since the Museum acquired items assembled for the World's Columbian Exposition in 1893. In recent years, thanks largely to Dr. Plowman's interest in it, the collection has been housed in proper quarters, thoroughly curated, and catalogued in a computer data base. Nancy Pliml, an assistant in the Department of Botany, writes in a recent issue of *The Herbalist* that it is now possible "to call up a list of specimens of medicinal roots from Bolivia, or a world-wide list of fiber products used as floor coverings." Shown here are a variety of objects carved from ivory nut palm nuts; an uncarved nut is at top, second from left. □

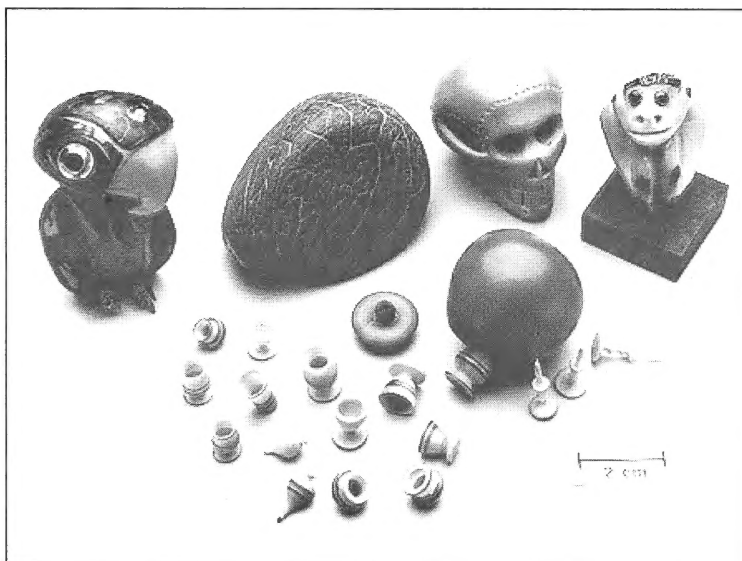


Photo by John Weinstein, Neg. No. BOT 83434

(Continued from Page 1)

boars with long, spiraling tusks that figure prominently in their art and in many aspects of daily life and ceremony.

CHIEFS AND GODS focuses on Polynesia, presenting not only deity images but also displays on fishing and food, tapa cloth, music and dance, and *tapu* (the source of our word *taboo*).

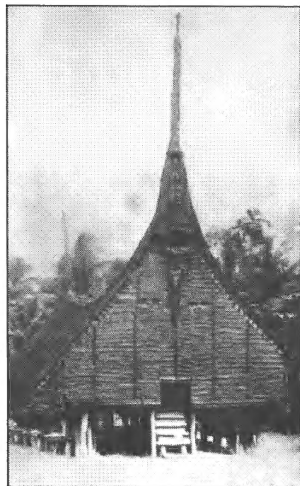


Fig. No. 76268

"Pacific Spirits" may be seen in tandem with or separately from "Traveling the Pacific," which introduces visitors to the geological forces that led to the creation of the Pacific's volcanic islands and coral atolls and the journeys of plants, animals, and humans that colonized and survived on these remote islands.

The multi-disciplinary, two-part exhibition in the newly renamed Regenstein Halls of the Pacific was more than four years in the making, cost \$4.2 million, and represents the work of some 100 persons. Development of the exhibit was made possible in part by a grant from the Regenstein Foundation, a

major supporter of Chicago cultural institutions, higher education, and medical research. Other major funding came from the National Endowment for the Humanities and the National Endowment for the Arts. The National Science Foundation provided additional support for "Traveling the Pacific."

Except for a case filled with some of the objects A.B. Lewis collected in a single day in a village in New Guinea, the display cases in "Pacific Spirits" do not contain only artifacts and small placards to identify them. Instead there are "exhibits within the exhibit" that advance each story. These are sometimes arranged in the same kind of old-fashioned glass-and-wood case, disguised by bamboo or thatching, and modified to control humidity and thus protect these fragile objects.

Other parts of the exhibit were designed to engage viewers in different ways.

For instance, large blowups of Museum expedition photographs show objects as they were originally worn and used by the people who created them. Video clips made from expedition films, including black-and-white silent footage of a Field Museum trip up New Guinea's Sepik River in 1929, may be seen in a small area. Recorded sounds recreate the swamps of New Guinea's Gulf of Papua where mosquitoes buzz, pigs forage, and water sloshes beneath the plank floor of a giant men's house.

Special panels recount myths that parents may want to read to small children, such as how the moon got its markings or a bird got its call. Displays on natural history, prepared with the cooperation of the Museum's departments of



Fig. No. 97545

The tree-fern carving, above, from North Ambrym, Vanuatu, is made from a single above-ground root, about six feet tall, and represents a clan figure. At left, a men's ceremonial house from the Sepik River area of New Guinea.

zoology and botany, tell about raw materials that were used in the objects — the spiders whose webs were used for masks in Vanuatu, the type of ferns that grow into giant tree ferns, the praying mantis portrayed in a colossal mask from New Britain, and the iconography of creatures portrayed in memorial *malanggan* carvings from New Ireland.

"Pacific Spirits" also emphasizes what Phyllis Rabineau, master exhibit developer, calls "correspondences."

"We have asked," she says, "how do we do the kinds of things that Pacific islanders do, that correspond in our culture to the things that these folks are doing?"

In New Ireland, for instance, "people make elaborate carvings and show them for a very brief time in an elaborate ceremony, and that's how they honor their ancestors. What do we do? Well . . . we put up a grave marker [and] . . . on the anniversary of someone's death we put a notice in the paper" or light a candle. These are among the things that will be seen in that "correspondence station," Rabineau says.

Men's roles, as suggested in the two men's houses in New Guinea — a third, from the Huon Gulf, is in "Traveling the Pacific" — will be treated this way. "What private organizations do we have?" Rabineau asks. "Well, in this area, we talk about Elks, Shriners, fraternities, clubs — we also have women's organizations."

The intention, clearly, is to get visitors who are not from Pacific cultures to reflect upon the ways in which they and the islanders are not so very different after all. That's why Rabineau says emphatically, "This is not just an art exhibit. At one point, we talked about making an art exhibit, and it would have been real easy to do that. [But] we think our job is to try to help people understand these cultures."

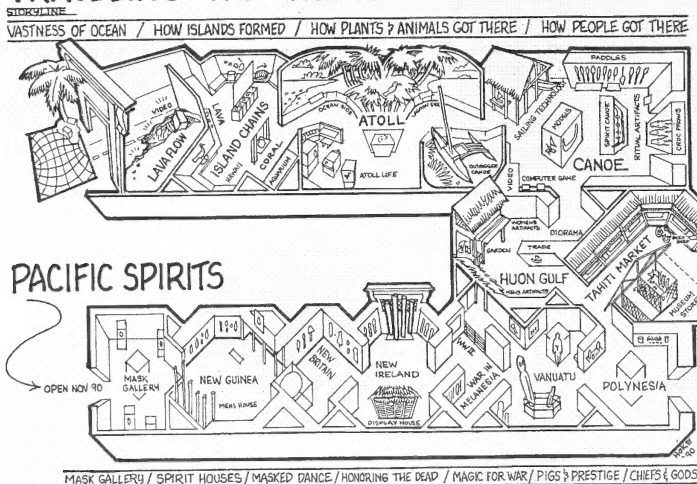
Within a few months, exhibit developers will interview a sampling of visitors to see if they were successful and to determine whether parts of the exhibit may require another look.

Contents of the Gallery will change periodically to allow more objects from the Museum's Oceanic collection to be displayed.

A resource center is planned that will incorporate books, videotapes, additional photographs, and other materials to allow interested visitors to make a more in-depth study of the Pacific and Asia. □

Susan Nelson is a Chicago-based freelance writer who has contributed frequently to Field Museum publications.

TRAVELING THE PACIFIC



FINDING YOUR WAY

The most dramatic way to see "Pacific Spirits" is to walk across the scale-model ceramic-tile floor map of the Pacific on the west balcony to the well-worn globe and then, destination fixed, stride north to the third archway, between the 1931 Malvina Hoffman bronze sculptures of "Pygmy Family" and "Japanese Woman."

There, in the Gallery section of "Pacific Spirits," you will see the two masker-mannequins and other spectacular masks. Or perhaps your eyes will be drawn first to the attention-getting masks in the room beyond. Either way, you're not likely to be disappointed by your first impression.

If you haven't yet seen "Traveling the Pacific" or want to see it again to get your bearings, cross the Pacific floor map, stop at the

globe, and then make your way past the lava flow and through the sections on island formation, habitation, and transportation. Then, when you're in the Huon Gulf area, either step through the door that opens in the men's house, which will lead you into Vanuatu, or proceed to the Museum store at the Tahitian market and wander round the corridor to Polynesia. If you reach Vanuatu first, you can turn left to Polynesia and then double back to Vanuatu and beyond — or turn right and limit this particular tour to Melanesia.

It's also possible to step from the Hall of Dinosaurs into Polynesia.

— S.N.

BEHIND THE SCENES OF EXHIBIT PREPARATION

By Susan Nelson

During the past year and a half, several hundred of the artifacts now on display in the "Pacific Spirits" exhibit have been X-rayed, vacuumed, and subjected to chemical analysis and other testing by Field Museum conservators, whose laboratory is a half-dozen rooms on the third floor of the Museum, not far from the Department of Anthropology, of which their division is a part.

It is expected that conservators, members of a profession that has existed only since the 1930s, will go into high gear when a major exhibition of anthropological artifacts is being prepared. But, unlike their counterparts at other natural history museums, Field Museum conservators see no time off ahead. The pace hasn't

must be used. And the materials used in these techniques must themselves not deteriorate as, for instance, cellophane tape yellows on the torn page of a treasured family book.

Because so many of the Pacific objects are made of plant materials, whose cell walls are formed of cellulose, a type of cellulose has been found to be compatible and effective in conserving them. Methyl cellulose, commonly used as a thickener in foods, is sprayed or brushed on to stabilize objects, such as flaking paint on *malanggangs*, or to add a bit of flexibility to brittle shredded leaves or the tiny aerial roots used on numerous carved figures and in such decorations as beards and mustaches on masks. And it can later be removed if necessary.

Feathers, as well as spiderweb and various grasses and fibers, have been cleaned his way. Because feathers degrade rapidly in heat and light, special care is taken with them. An easily removable acrylic resin is used to repair broken feather shafts.

The most pervasive enemy of all these fragile objects is ultraviolet light. It is also the most easily controlled. For this reason, "Pacific Spirits" (and parts of the Huon Gulf section of "Traveling the Pacific") may at first seem dimly to many visitors. It cannot be helped. Light levels will be those set in guidelines developed by the conservation profession, which has studied how quickly things fade.

To keep objects from becoming any more brittle, humidity is also controlled. In a system developed by Canadian researchers and refined by Sease at the Field Museum, displays are connected by plastic pipes that run across the tops of cases and are worked into their designs. Five systems, each run by a machine no visitor would be aware of, keep air moving in one direction, exerting a positive pressure and maintaining carefully monitored humidity.

Being sure that an object's mount properly supports it is also very important to conservators. Some of the artifacts in the Pacific collection were displayed years ago in ways no conservator would now countenance. A few objects had been nailed to the walls, and others had been wired for stability. (Today, knowing that metal wires corrode, conservators use a nylon filament for this purpose.)

Conservators occasionally must do a bit of detective work. A case in point is that of a beautiful brown and white coronet from the Marquesas Islands that is on display in the Polynesian section of "Pacific Spirits." Since it was acquired in 1912, the woman's crown had been described as being made of seashell and carved plaques of tortoise shell, both abundant in that part of the world at that time. But when conservator Berry ran routine tests on the object in the lab several months ago, she discovered that the brown plaques were not tortoise shell at all but instead were made of brown celluloid plastic. That material, she learned, had been developed in the middle 19th century in England and came into use in America in the late 1800s. Marquesan craftsmen would have found it much easier to carve than tortoise, she and her colleagues knew.

Something else, though, was far more exciting to people who work in a natural history museum. Use of this material established that the Marquesans who made and wore this coronet were already in trade with and somewhat influenced by Westerners.

□



let up since well before the opening of "Inside Ancient Egypt" two years ago. And, with the schedule the Museum has set for redoing its exhibits, there will be little rest for the weary after "Pacific Spirits." Work needs to be done on the Africa exhibit that is still being planned; one member of the division began last summer to treat some of the birds that will be part of the new Animal Kingdom exhibit, which is already under way in the first-floor zoology halls and scheduled to open next year.

Each exhibit is different, to be sure. Cap Sease, chief conservator, remembers that Egypt was more homogeneous. "In gross generalities," she says, "we were dealing with fewer categories of materials, both inorganic and organic — ceramics, wood, painted wood, mummies, textiles. It was a little more straightforward: You had a pot, say, or a wooden bowl." And, except for the tomb and the boat, most other objects were relatively small.

Objects examined and treated for the new Pacific exhibition, however, are anything but straightforward — or small. In nearly all cases, they are very fragile. Certainly the objects, most created long before power tools and commercial finishes reached the Pacific islands, are irreplaceable.

"In the Pacific collection," Sease continues, "we're dealing with mostly organic materials — wood, painted wood, leather, fibers of all kinds — and also weird things like cobwebs, sea sponges, beetle wings, that are part of the objects. A dance mask, for instance, might have 15 or 20 materials on it."

"Pacific Spirits" also has quite a few big objects — carved *malanggangs* that stand 18 feet tall, giant tree ferns, towering slit drums, a mask that is eight feet across and six feet high, to name just a few. And size alone can complicate a conservator's work. The giant mask, for instance, took Christine Del Re, conservator in charge of "Pacific Spirits," and conservator April Berry between 100 and 150 hours to prepare for display. The *rambaramp* figure from Vanuatu took Del Re nearly as long.

No single prescription could ever work for items so very different from one another, so a number of different conservation techniques

Another natural substance, wheat starch paste, is used, often over a backing of very thin "Japanese tissue," as an adhesive. It can very neatly put back together a large leaf that has broken, repair the decoration on a basket, or secure a sennit fiber wrapping that is falling off. It, too, can be removed.

The intention is to preserve the objects; it is not to restore them to what someone now believes or even knows was their original condition. This difference is important to conservators. "The sign of good conservation treatment is that it's not visible," explains Sease. "All of the hours and hours we've put in here won't necessarily be startlingly visible to anyone who goes through 'Pacific Spirits' — things aren't repainted; cracks haven't been filled. But, if you knew what to look for, you might notice that colors look a little brighter, because any dust has been removed."

After doing any work, a conservator will write a meticulous record of what was found and what work was done when. There are reasons for such caution. One mask from New Guinea, mounted in the Gallery of "Pacific Spirits," provides an example. It resembles a human head with a bunched-up, brimmed hat, all made of bark cloth. But when the mask was wheeled into the lab a few months ago, the hat looked very different.

Conservation student intern David Rasch thought it odd that bark cloth had been shaped to form a hat that looked like one Fred Astaire might have worn. He called a curator and the curator, using his knowledge of the Pacific collection, found an original drawing made by A.B. Lewis, who had collected the hat. In the sketch, the hat was almost bunched up into a ball. Also found was a note scribbled by someone years ago, who wrote of having straightened the top of the hat. In the Gallery, where the mask will now be on view, visitors will see the mask with its bowler-like hat, twisted and bunched as it was originally, thanks to the use of methyl cellulose — and considerable curiosity.

Cleaning objects of museum dust they have accumulated is done by vacuuming. For this, conservators use a device like those used by dentists, with a nozzle no bigger than 2 mm.

Patty Grewe-Mullins, below left, and April Berry basting the feathers of a New Caledonian sea-spirit mask to a cloth backing. Above, Chris Del Re (left) and April Berry strengthening the pith struts of a mantis dance mask from New Britain.



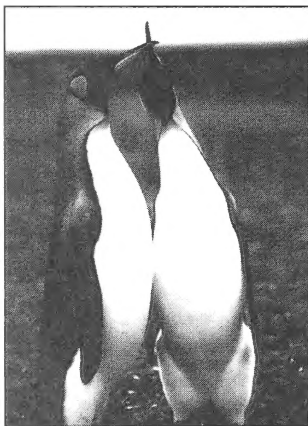
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Dr. Scott M. Lanyon, chairman of the Museum's Department of Zoology and head of the Division of Birds, will accompany the group throughout the tour. His research has taken him to South America frequently, and his knowledge of the birds and of the area in general will make this a truly rich experience.