



ZOOLOGY

Pathologist searches for viruses to reduce brown tree snake population

By Mike Morgan
National Zoological Park

Guam lies in the Pacific Ocean west of the international date line. People in this U.S. territory articulate their national ties by saying: "Day begins for America on Guam." At one time, that new day was greeted by a chorus of thousands of singing birds, rising from the tropical forests. But sunrise on Guam is not as it used to be. This island has suffered an ecological disaster that has all but eliminated its bird life. And now, day breaks on Guam in silence.

The culprit is an efficient predator of birds, the brown tree snake (*Boiga irregularis*), which was most likely introduced to the island from New Guinea or Australia in the late 1940s. It is estimated that a half million to 2 million of these nocturnal, slightly venomous reptiles occupy the island.

It is well documented that island bird species are particularly susceptible to environmental change, such as the introduction of predators. "Of the 240 species and subspecies of birds that have disappeared since 1600, 95 percent were island natives," Warren King of the International Council for Bird Preservation says. Snakes are not indigenous to Guam, and the birds are easy prey for the brown tree snake.

Half a world away from Guam, in a National Zoological Park laboratory in Washington, D.C., Pathologist Don Nichols is attempting to do what no one so far has been able to accomplish—to find a strain of paramyxovirus fatal to the brown tree snake. The veterinarian, who spends most of his time working to cure the ills of National Zoo animals, has launched a promising research effort.

If Nichols is successful in developing such a biological control, what remains of Guam's natural ecosystem might recover, and the snake will be prevented from inflicting its severe wounds on other rich, but susceptible island bird populations, such as those of Hawaii.

As a resident in the National Zoo's Pathology Department from 1984 to 1986, Nichols became acquainted with ophidian paramyxoviruses, which were known to cause disease outbreaks in snake collections at zoos in North America and Europe. He also became familiar with the problems caused on Guam by the brown tree snake.

"Two species of birds, the Guam rail and

snakes that were going to be used in another project at NIH. He organized a pilot study to see if these viruses might hold promise for controlling the snake population.

"Like most other viruses, ophidian paramyxoviruses have a very narrow range of hosts and cannot infect mammals or birds," Nichols says. In fact, the viruses are known to be snake specific, and only certain snake taxa seem to be susceptible.

The infection is spread between snakes by inhaling the virus from the air or from contaminated surfaces where infected snakes have been." Nichols believes that these modes of transmission are well suited to have an impact on the brown tree snake on Guam, where the population is dense and increasingly stressed by the snakes' competition for food.

The reptiles in Nichols' pilot study at NIH were divided into two groups, and each group was inoculated with either a paramyxovirus isolated from rattlesnakes at the Toledo Zoo or one from vipers at the Baltimore Zoo. He noticed that the snakes inoculated with the "Toledo virus" showed no clinical signs of disease but developed high antibody

titers, indicating they had been infected. The snakes that received the "Baltimore virus" developed a severe, but nonfatal respiratory disease. It was clear that the paramyxoviruses were affecting the snakes differently.

While Nichols believed that the results of the pilot study "demonstrated that the virus had potential for controlling the brown tree snake," he realized that in order for the virus to be effective, a more pathogenic form of the paramyxovirus would have to be discovered.

Later in 1991, Nichols left NIH and

returned to the National Zoo to work with Richard Montali, his former adviser and chief of the Pathology Department. After learning about the project that Nichols had begun at NIH, Montali gave him the approval and support to continue it at the National Zoo.

In 1992, Nichols was awarded a grant from the U.S. Department of Defense to continue his work on the brown tree snake problem. The U.S. military has spent millions of dollars in efforts to control the snakes around Andersen Air Force Base on Guam.

When Nichols traveled to Guam to collect snakes for his study, he was surprised by what he found. "These snakes are nocturnal and arboreal," he says, "so I was expecting to go into the jungle at night with big flashlights and knock them out of trees. But the snakes are so plentiful that we just drove along and pulled all we needed off the chain-link fence surrounding the base."

On the military base, the snakes have invaded homes and bitten children, gotten into and damaged expensive equipment, and short-circuited electrical transmission lines. In addition, time-consuming inspections have to be conducted to ensure that the snakes are not stowed away in cargo that could introduce them to other islands.

Nichols' research has produced encouraging results. From July 1992 through May 1996, 10 inoculation trials were conducted on the snakes, using seven previously untested viral isolates. Each test group consisted of four to 12 snakes. Most of the groups included both adults and juveniles.

Three of the viruses caused no illness, and four caused varying degrees of respiratory infection. Of these four disease-causing viruses, two induced mortality rates of either 44 percent or 50 percent. The two most effective viruses were re-tested four

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Brown tree snakes are so plentiful on Guam that Don Nichols, shown here holding samples that he collected, is able to pull all he needs off of the fence that surrounds the military base there. (Photo by Robert Mason)

the Micronesian kingfisher," Nichols says, "had already become extinct on Guam as a result of predation by the snake." The island's few remaining rails and kingfishers were found only in zoos and breeding centers and were the subjects of an intensive zoo-based breeding program run by National Zoo Ornithologist Scott Derrickson.

By 1988, Nichols was a board-certified pathologist and working at the National Institutes of Health in Maryland. In 1991, he took advantage of an opportunity to use the paramyxoviruses on six brown tree

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A certain amount of institutional reckoning is inevitable in this, the final year of the 1900s. At the Smithsonian, we measure our success against a standard rooted in the last century, in the charge of our benefactor that we exist "for the increase and diffusion of knowledge." So when we look back, we are inclined to ask: What do we know this year that we did not know last year?

Here are representative—if by no means exhaustive—samples of the new knowledge uncovered by Smithsonian researchers in 1998:

First, the rate of expansion in the universe since the Big Bang is accelerating, not slowing down, as previously believed. By observing the dimming of exploding stars billions of light-years distant from the Earth, two teams of astronomers, including staff from the Smithsonian Astrophysical Observatory in Cambridge, Mass., concluded that the universe will expand forever under the influence of an unknown driving force. Science magazine dubbed this finding the "Breakthrough of the Year for 1998." Scientists at SAO also are credited with one of the top developments in physics for 1998: extending the diagnostic capabilities of magnetic resonance imaging to include gas-filled areas of the human body, such as the lungs. Their process is contributing to the development of simpler MRI units in hospitals, as well as low-cost, portable MRI instruments for imaging of lungs and sinuses.

At the Smithsonian Environmental Research Center in Edgewater, Md., scientists have been involved for more than a decade in collaborative research into the ecological, economic and health effects of non-native marine organisms introduced into coastal and estuarine ecosystems around the world from the ballast water of ships. A recent study by the center uncovered in ships on the Chesapeake Bay the bacterium that causes the disease cholera.

Researchers at the Smithsonian's National Zoological Park discovered that two previously unrecognized viruses were responsible for at least 10 unexplained deaths among young elephants in North American zoos since 1983. These herpes viruses are distantly related to the virus that causes cold sores, chickenpox and mononucleosis in humans. The one that can be lethal to Asian elephants is carried by African elephants, in which it causes only mild symptoms. Conversely, the researchers suspect that Asian elephants may harbor a similar but distinct herpes virus that is lethal to African elephants. The finding has tremendous implications for maintaining elephant populations in captivity as they dwindle in the wild.

The meeting of ancient artifacts and modern technology often produces enlightening results as well, and nowhere is this more evident than in the collections-based research of the Smithsonian museums. At the Freer Gallery of Art and the Arthur M. Sackler Gallery, for example, an art historian and a mineralogist are collaborating with a Chinese archaeologist to uncover the entire history of Chinese jade, from 3500 B.C. through the 19th century. By comparing objects from the galleries' permanent collections of more than 1,000 jades with recently excavated materials, the team has been able to identify the age, geographic origin and uses of these precious natural specimens.

Archaeologists from the National Museum of Natural History and the Smithsonian Tropical Research Institute in Panama also applied new techniques to the ancient remnants of human activity, shattering long-held beliefs about the origins of agriculture. Their findings have pushed back the dates of first crop cultivation and livestock domestication by thousands of years, suggesting that the transition from hunting and gathering to the agrarian way of life was slow and did not necessarily coincide with the rise of villages.

While the Smithsonian justly enjoys a reputation as the trustee of our national treasures, the dramatic discoveries by Institution researchers in 1998 are a vivid reminder that the Smithsonian also is the nation's laboratory. For everything that is old here, there is always something new.

—Dennis O'Connor, Provost, Smithsonian Institution



The Patan Museum, which opened in Patan, Nepal, in 1997, contains artifacts and objects that tell the rich history of Hinduism and Buddhism in Nepal. (Photo by Mary Slusser)

ASIAN ART

Scholar sorts and identifies objects to prepare for new Nepalese museum

By Susan Bliss
Sackler and Freer Galleries

Many an adventurer is drawn to the Kingdom of Nepal for the challenge of its expansive Himalayan terrain. Mary Slusser, a research associate at the Freer Gallery of Art and the Arthur M. Sackler Gallery, is one of the few who goes to Nepal to examine its art.

Slusser, trained as an anthropologist, was introduced to the arts of Asia when she was a student at the Institute of Fine Arts in New York. With 30 years of research and fieldwork in the Himalayan region of South Asia, she is one of the world's few specialists in the history and connoisseurship of Nepalese art.

Slusser played a pivotal role in a project funded by the Austrian government to preserve Nepal's history and material culture by creating an art museum as part of the restoration of architecture and urban spaces of Patan—a city situated in central Nepal, just south of Kathmandu, the capital.

The Kathmandu Valley was first occupied by people known as Newars. Between about the 14th century and the mid-18th century, they were ruled by kings of the Malla dynasty, with capitals in three city-states: Kathmandu, Patan and Bhaktapur. Conquered in 1769 by Nepalese invaders, the cities became part of the Kingdom of Nepal, ruled, as it still is, by the Shah dynasty.

The Patan kings ruled from the Darbar Square, the city's central urban space. The royal square is occupied by an imposing palace and a variety of temples, some of which have suffered damage from earthquakes, wars, urban growth and benign neglect. The Austrian restoration project has brought one of the palaces back to its former condition, and its commanding façade complements the newly restored square, which Slusser calls an "architectural jewel."

Her assessment seconds that of an Ameri-

can journalist who, writing in 1928, remarked: "As an ensemble, the Darbar Square in Patan probably remains the most picturesque collection of buildings that has ever been set up in so small a space by the piety and pride of Oriental man."

Almost 50 years later, the square, with its 200-year-old former palace and striking temples, was designated as one of seven World Heritage sites in the Kathmandu

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Forest owllet thought to be extinct is spotted anew after 113 years

By Michael Lipske
Special to Research Reports

Ornithologist Pamela Rasmussen felt both panic and elation one morning in 1997 when she gazed, only half trusting her eyes, at a long-lost species of bird perched in a bare tree in western India.

Panic because *Athene blewitti*, the forest owllet that Rasmussen had sought for two weeks from one side of India to the other, might fly off before it could be positively identified and captured on film.

Elation because the chunky, 9-inch-long owl that she was staring at was a species that had gone unseen by any scientist for 113 years. Seven stuffed skins in a handful of museums were all that seemed to remain of a species that several experts had crossed off as extinct.

Fortunately, the forest owllet was not only alive but “absurdly cooperative,” says Rasmussen, a museum specialist in the Division of Birds at the National Museum of Natural History. “It just sat there,” she says, while she and a colleague videotaped it for half an hour before another bird finally chased it off. The next day, a second owllet, likely the first one’s mate, revealed itself in the same patch of forest.

Coming nose to beak with the long-absent species required days of difficult



Athene blewitti, the forest owllet that, until recently, had not been seen in 113 years (Illustration by Larry McQueen)

hunting along forest paths and stream beds. But before leaving for India, Rasmussen had already picked her way down another trail that led through a jungle of scientific deception.

She had been in the final stages of preparing a field guide to birds of the Indian subcontinent (a project initiated by Smithsonian Secretary Emeritus S. Dillon Ripley), when she read an article that raised questions about the accuracy of bird records made by Col. Richard Meinertzhagen. A British soldier, spy and noted ama-

teur ornithologist in the early part of this century, Meinertzhagen (who died in 1967) was long credited with creating one of the world’s best private collections of Old World bird specimens.

The 1993 article suggested, however, that labels on some of his birds were fraudulent. This was unsettling news for Rasmussen. There were more than a dozen kinds of birds for which Meinertzhagen was the only collector claiming to have found that species in India. “I had to know whether to include all these taxa” in the field guide or rule them out as Indian birds, she says.

To find out, she visited Britain’s Natural History Museum in London, where most of Meinertzhagen’s collection of tens of thousands of birds now resides. Working with ornithologists there, she examined the colonel’s unique India specimens. “Each was either clearly fraudulent or highly suspicious,” Rasmussen says.

She discovered that Meinertzhagen had done some of his most successful bird hunting not in the wild but in the museum’s specimen cabinets. He was known to boast of his collection’s “unique perfection,” she says. “One of the reasons that it was uniquely perfect was because he was stealing the best specimens” from other collectors’ museum contributions.

With Robert Prys-Jones, head of the Bird Section at Britain’s Natural History Museum, Rasmussen established that hundreds of Meinertzhagen specimens were birds he filched; some he restuffed and then relabeled with false information. Of all the ornithological treasures the colonel stole, the rarest was India’s forest owllet. Cracking the case required sophisticated detective work.

Rasmussen had found that, of seven known specimens of the owllet in museums, only one was said to have been collected in this century—in 1914 by Meinertzhagen. Most of the others had been collected in the 1880s by James Davidson, a British official and bird enthusiast stationed in western India.

Working with ornithologist Nigel Collar of BirdLife International in England, Rasmussen examined the Meinertzhagen owllet at the British Museum. Both experts could see that original stitching and stuffing had been removed from the skin and that new stuffing had been inserted and the bird resewn. Closer study of the specimen and X-ray photographs of it revealed characteristic preparation touches unique to Davidson, a self-taught worker with one-of-a-kind methods for handling bird skins.

Fairly certain that Meinertzhagen’s owllet actually had been collected by Davidson, the ornithologists still wanted more evidence. Even though the bird had been restuffed, Rasmussen remembers hoping “maybe, just maybe, there will be a fiber or something somewhere that will tie it to Davidson.” Luckily, there was.

Inside a wing, stuffed around a joint, there remained some raw cotton that had turned yellow from fat. Checking the wing



Pamela Rasmussen, shown here in her office in the National Museum of Natural History, examines a specimen of a forest owllet that scientists feared was extinct. (Photo by Carl Hansen)

of an owl of another species Davidson collected in India, the sleuths found what looked like similar cotton. They sent both samples to the Federal Bureau of Investigation in Washington, D.C., where forensic tests indicated that the two bits of cotton were virtually identical.

“That, along with other clues, just basically put the nail in the coffin,” Rasmussen says, noting the improbability that Meinertzhagen would have had access to the same kind of rough cotton Davidson used 30 years earlier. The owllet was a previously unknown, fifth Davidson specimen, presumably stolen from Britain’s Natural History Museum by Meinertzhagen and decades later returned to it as part of the colonel’s rich collection.

Meanwhile, Rasmussen studied scientific literature on the owllet, including accounts of several searches for the living bird. She concluded that none of those owllet hunts had occurred in the four places where the bird had been collected. One well-intentioned but pointless search had focused on the area where Meinertzhagen claimed—falsely—that he had collected the bird.

If nobody had looked in the right places, maybe the owllet still existed, Rasmussen reasoned. In November 1997, she headed for India with Asian owl expert Ben King of the American Museum of Natural History in New York and with Virginia birder David Abbott. The owllet hunters concentrated on forests near sites where the bird had been collected by Davidson and others more than a century before.

Near the end of their stay, they were searching in foothills of the Satpura Range, northeast of Bombay. By 8:30 a.m. on Nov. 25, they had been in the forest for hours. It was hot, and Rasmussen was uncapping a

water bottle when King quietly said, “Look at that owllet.”

“And terror struck,” she recalls. She dropped the bottle. For a split second, she struggled to decide whether to aim her binoculars or video camera at the bird. “It was like this huge decision—what am I going to do first?” But there was time to do both, as the forest owllet, missing no more after 113 years, sat tamely in the sun flicking its tail for 30 minutes.

Last summer, Rasmussen returned to India and revisited the discovery site. She relocated what she believes are both birds seen the previous November. She also obtained the first recording of the owllet’s distinctive call—the species had been one of the last Indian birds whose vocalizations were unknown—and even watched one bird eat a lizard.

With support from the National Museum of Natural History’s Office of Biodiversity Programs, Rasmussen also launched a project with India’s Bombay Natural History Society to study the behavior and ecology of *Athene blewitti*. In June 1998, she returned to the re-discovery site in India to do an emergency follow-up survey of the forest owllet. The survey, conducted primarily by the Bombay Natural History Society, resulted in the location of eight different individual owllets within a 30-mile area.

But nothing she learns about the species seems to top the thrill of finding the bird itself. “It is certainly the most exciting bird-related experience I’ve ever had,” she says.

“It was incomparable. And afterwards, we were all just grinning,” Rasmussen says, still smiling at the memory of the tail-wagging owllet that flew back from oblivion. ■

Astronomers find that SWAS opens window on a 'hidden universe'

By Megan Watzke
Smithsonian Astrophysical Observatory

As with people, stars are born, live for a period of time and eventually die. Looking at the approximately hundred billion stars that inhabit just our own galaxy, astronomers see stars of all ages, from infants to golden agers, even some in their death throes.

However, the birth of stars remains a mystery to astronomers. Starbirth has been difficult to study, in part, because light-blocking clouds of gas and dust enshroud most of the activity, making the birth of a star invisible to normal optical telescopes. The processes involved do, however, emit radiation at submillimeter wavelengths, a narrow band of emission that lies between the infrared and radio in the electromagnetic spectrum.

Scientists at the Smithsonian Astrophysical Observatory in Cambridge, Mass., have recently made a major advance in the effort to explore this previously hidden "submillimeter universe." The new Submillimeter Wave Astronomy Satellite, or SWAS, is

to pervade the interstellar medium, or the space between stars.

"We have observed water in the interstellar medium before, but only in very hot regions," says Gary Melnick, a senior astronomer at SAO and SWAS principal investigator. "SWAS, on the other hand, has found water in much cooler regions, and that's important because most of the interstellar medium is cold. In other words, water may be more prevalent than previously thought."

While the notion of water existing in the relative emptiness of space may seem strange, its presence is critical to a better understanding of molecular clouds—one of SWAS' main goals. These molecular clouds can be thought of as "stellar nurseries," that is, reservoirs of gas and dust from which stars and planets, such as our sun and solar system, are born.

If stars are like bread, then astronomers generally understand the basic recipe for "cooking up" stars and planets. However,

strange, excessive heat must be removed from the system if the cloud is to collapse into stars and planets. Failure to radiate away this energy would result in a buildup of heat within the still tenuous cloud that would halt its collapse long before stars and planets could form.

"We think water may be the answer to that problem, because water is a very efficient coolant," Melnick says. "The widespread nature of the water emission validates chemical models of interstellar clouds that have been developed over the last 20 to 30 years but, until now, have not been entirely testable. The data from the SWAS mission add missing key information."

Equally exciting and revealing as the observations of water is that SWAS has so far failed to detect molecular oxygen in those same interstellar clouds. In this case, no news may be perceived as good news. The apparent absence of molecular oxygen may actually help astronomers pinpoint the age of the molecular clouds.

"Molecular clouds are like chemical laboratories," Melnick says. "Our theories tell us that the chemical reactions that lead to the formation of molecular oxygen are slow, requiring about 1 million years to build up a significant abundance. Thus far, SWAS has observed relatively young regions, and so it is not entirely surprising that the abundance of molecular oxygen is low."

"During the next few months, SWAS will observe what are believed to be older clouds," Melnick adds. "These observations will provide a more rigorous test of our understanding of the chemical evolution of these stellar factories." Even though it is early in the mission, SWAS has already set the most stringent limits to date on the amount of molecular oxygen needed in star-forming clouds.

Melnick and his colleagues also are looking forward to using SWAS to make large-scale maps of different molecules in space. Unlike water and molecular oxygen, astronomers already know that carbon atoms and carbon-bearing molecules, including carbon monoxide, are abundant in the galaxy. SWAS will be able to make maps in the line emission, or an identifying signature of radiation, of atomic carbon and isotopic carbon monoxide molecules across vast swaths of the sky. Obtaining such wide-angle "big pictures" in these lines is very difficult—and most time-consuming—when using large, ground-based telescopes with their small fields of view.

As with most modern space experiments, SWAS is the result of a collaboration between several institutions, including the University of Massachusetts at Amherst, Cornell University, NASA's Ames Research Center and Goddard Space Flight Center, Johns Hopkins University and the University of Cologne in Germany.

In fact, SWAS is only one part of SAO's coordinated efforts to study the relatively unexplored realm of submillimeter radiation. For example, SAO's Project AST/RO observes the sky in the submillimeter waves from an unusual, even unique, vantage point: the South Pole. However, the major ground-based initiative is the Submillimeter Array, or SMA, now under construction on Mauna Kea, Hawaii, in a joint effort with the Institute of Astronomy and Astrophysics of Taiwan's Academia Sinica.

"Whereas SWAS is studying emission from certain submillimeter wavelengths not

A new detector

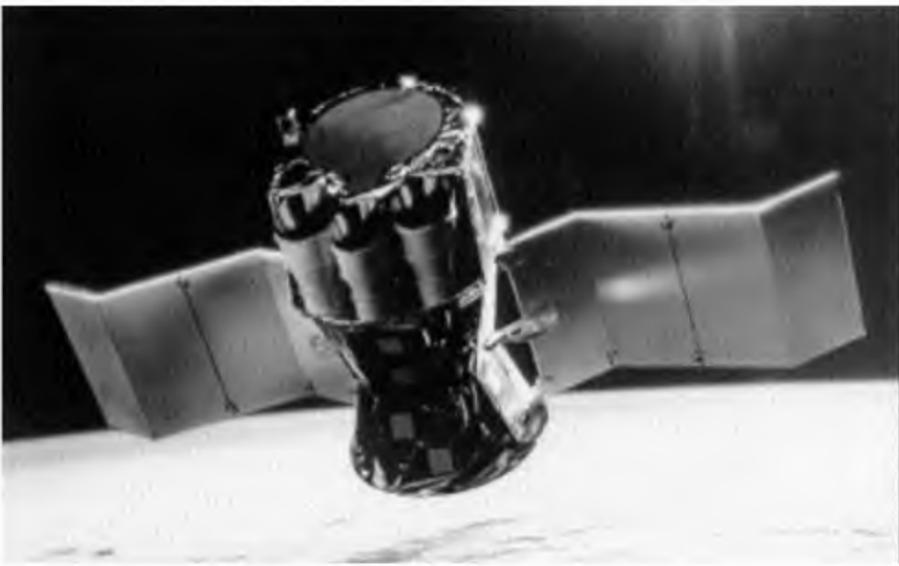
A new type of submillimeter detector, built at the Smithsonian Astrophysical Observatory in Cambridge, Mass., is getting a test run on a mountaintop in Arizona. According to Thomas Wilson, director of the Submillimeter Telescope Observatory on Mount Graham, "The scientific results have been exciting."

Developed in SAO's Submillimeter Receiver Laboratory, the Superconducting Hot Electron Bolometer Mixer Receiver was installed on the telescope last November. Its goal is to detect the shortest, highest frequency submillimeter radiation so far observed from the ground.

University of Arizona astronomers have since used the detector to map the amounts and densities of molecular hydrogen via carbon monoxide transitions in a variety of nearby galaxies, including Messier 82, a well-known, dust-enshrouded, star-forming galaxy; IC342, a Milky Way look-alike; and Maffei 2, a galaxy nearly hidden behind the dust and gas of our own galaxy. Mapping carbon monoxide emission allows astronomers to track the motions of molecular gas within the galaxies and thus trace their shapes and sizes with great accuracy.

The ability to detect submillimeter radiation—both day and night—maximizes the use astronomers can make of the great observing weather at high, dry sites like Arizona's Mount Graham and Hawaii's Mauna Kea, eventual home of the Submillimeter Array.

—James Cornell



This is an artist's conception of the Submillimeter Wave Astronomy Satellite, or SWAS. The satellite was successfully launched on Dec. 5, 1998, and is now orbiting some 650 kilometers (390 miles) above the Earth. (Courtesy of the National Aeronautics and Space Administration)

now in Earth orbit and is giving SAO astronomers and their colleagues the potential to solve many cosmic mysteries, including how stars and their accompanying planets are born.

Launched from a Pegasus XL vehicle on Dec. 5, 1998, SWAS is the first spaceborne observatory to operate at submillimeter wavelengths. Selected after an intense competition, SWAS is part of the National Aeronautics and Space Administration's Small Explorer Program, known as SMEX, which provides frequent flight opportunities for highly focused and moderately sized space missions.

In its brief time of operation, the SAO-led SWAS project has already produced some very exciting results, including the discovery that large amounts of water seem

the details, such as how much of each ingredient to use, continue to elude astronomers. Water—at least in its gaseous form—may be one such critical ingredient.

Most astronomers believe that stars form when one of these enormous, but extremely tenuous, molecular clouds of gas and dust begins to collapse. Triggered by processes that remain poorly understood, gravity ensnares this diffuse gas and attracts it toward a common center. This contraction continues until the atoms are packed so closely together and with a temperature sufficiently high that nuclear fusion begins, thus starting the engine that powers all stars.

While this basic model is widely accepted, scientists have long been confused about how a cloud regulates its temperature as it contracts. Although it seems

visible from the ground and has a wide field of view," Irwin Shapiro, director of SAO, explains, "the Submillimeter Array will study emission from a broader range of wavelengths and with much higher angular resolution. These two major instruments thus complement each other quite nicely."

When completed, the SMA will consist of eight 6-meter-diameter, movable antennas capable of being positioned by a wheeled transporter to create an interferometer with various configurations, ranging from a tight cluster to a high-resolution configuration some 500 meters wide (1,640 feet wide).

In addition to observing the same type of stellar nurseries seen by its space-borne counterpart, the SMA will be used to study a host of other astronomical objects and phenomena, all emitting prominently in the submillimeter range.

For example, the SMA's unusual sensitivity to radiation from molecules of gas and dust will allow it to make detailed maps of other galaxies. The SMA also will be able to study quasars, the most distant and powerful objects in the universe that emit as much energy as an entire galaxy. And SMA will be able to image many "cool" objects within the solar system, such as planetary surfaces and atmospheres, as well as comets, all of which emit significant amounts of submillimeter radiation.

Whether soaring above the Earth's atmosphere or firmly planted on its surface, SAO projects promise to expand our knowledge of the submillimeter universe. Indeed, the Smithsonian Institution looks to be a leader in the exploration of this, astronomy's "final frontier." ■

Images of the black female body reflect and affect society's opinions

By Ana Acosta Larkin
Smithsonian Office of Public Affairs

Many researchers have personal reasons for pursuing a particular area of study. But Deborah Willis' new book, *The Black Female Body in Photography*, scheduled for release this fall, hits particularly close to home for this curator at the Smithsonian's Anacostia Museum and Center for African American History and Culture.

As an African American woman, Willis was intrigued by the depiction and interpretation of the black female form in photography. As a photographer in her own right, she was attracted by the power of the photographic image to reflect and affect opinions.

Willis came up with the idea for the book and its companion exhibition, which will open in 2001 at the Smithsonian's Arts and Industries Building, in Washington, D.C., after reading an article about the "Hottentot Venus." The Hottentot Venus was a black woman named Saartjie Baartman who was put on display in France and other parts of Europe beginning in 1810. "She was considered a curiosity because of her ample buttocks," says Willis, who goes on to explain how Baartman was objectified and ridiculed.

"The stereotypical caricatures of Baartman portrayed her as entertainment while also sexualizing her image," Willis says. Despite the negative and stereotypical nature of Baartman's images, "the bustle soon became very stylish in Europe and later in America, and this may have been the result of the popularity of her images," Willis adds.

After reading about Baartman, Willis contacted Carla Williams, a longtime friend and fellow photographer, to discuss the possibility of a book on the black female body in photography. Williams, a photo historian at the Getty Museum in Los Angeles, had been focusing on her own body in her photographs. Because of the 17-year difference in the women's ages, Willis thought that their personal experiences with body image in photography would give additional perspectives to the research.

In 1996, Willis received a grant from a group called Anonymous Was a Woman that allowed her to travel to France to conduct research in 10 museums and the National Library. Her research trip and previous experience as a photography curator at the Schomburg Center for Research in Black Culture in New York City gave shape to the book and exhibition. In addition, both their personal photographic experiences and Williams' expertise in the history of photography contributed to the project.

Most of the images of black women produced in the decades after the Baartman images were exotic shots of African women in tribal attire or were of slaves working in the fields or taking care of white children and babies. The latter images, according to Willis, provide a counterpoint to the earlier

sexualized images of black women. "They were images of 'neutered' black females instead," Willis explains. These new images of slaves and "mammies" robbed black women of their femininity and portrayed them more as genderless workers.

A recent advertisement for Benetton, an international clothing store chain, featured a black woman with a white baby at her breast and was considered controversial when it debuted, Willis says. "But I loved the imagery, because it provided a counterpoint to that neutered black female aesthetic."

She wanted to further explore the idea that photographs send messages that reflect and affect society, so she searched for more alternative images of black women. She found that nonstereotypical photographs of black females were rare finds indeed.

Willis explains that, near the end of slavery, the world of photography gradually opened up to women who "wanted to be photographed and who had the desire to



Nancy Lewis, a female bodybuilder, is the subject of a series of photographs featured in *The Black Female Body in Photography*. (Photo by Deborah Willis)

preserve their own image." Most notably, Willis says, images of figures such as abolitionist Sojourner Truth began appearing. "Truth sold photographs of herself to the public in the mid-1800s to sustain her work," Willis says. Truth's control over her own image, however, was not a common phenomenon among black women.

Around the same time that Truth was successfully using her photographic image, a French photographer named Nadar (his real name was Gaspard-Felix Tournachon) began his portraiture work. He photographed many people, including a black woman named Maria. In one image of Maria, Willis points out, a velvet shawl is elegantly draped over her shoulders, covering her chest. Viewers are drawn to her face, which wears a noble and pensive expression.

But in another photograph he took of Maria, she is bare-breasted, with the draping framing her nakedness. The eye is drawn to the breasts, while Maria's expression is one of awkwardness. "This image disturbed me," Willis says, "because it was so striking and by such a famous portraitist, yet it objectified the black female image."

The two Nadar images of Maria illustrate the contrasting opinions of that time about the beauty and value of black women, Willis says. While some people believed in the sexualized stereotypes and thought there was really no reason to celebrate black women in society, others believed that there was elegance and beauty in the black female form. "Black women," Willis notes, "were simultaneously lusted after and despised."

Once slaves in the United States were freed, a handful of black male photographers began to work in portrait studios. Because of their more familiar perspectives, their images of black women were strikingly different from those that had been previously seen.

"These photographers themselves were confronting racism," Willis explains, so they produced elegant, posed studio shots of women with their families. "There was, in this context, a real sense of respect for women. However, when these images were made, they were not necessarily considered art and were hard to find."

In their research, Willis and Williams also uncovered images by photographer James Van Der Zee that glorified the black female form. One photograph of a reclining nude, modeled after Edouard Manet's painting "Olympia," portrayed a black female as an example of classical beauty, Willis notes.

In addition, legendary singer and actress Josephine Baker "was a trendsetter in the popularization of more positive photographic images of black females," Willis adds. In essence, Baker had more control over her own image and its use than others before her.

Baker's self-determination has inspired modern black female photographers who are largely turning to their own bodies and those of the women around them. Rénee Cox's "Yo Mama," a nude image of a pregnant woman, was selected for the book, Willis says, because it "communicates a celebration of the physical beauty of life and birth."

Coreen Simpson's humorous photograph of one black woman observing, with a look of amazement, another black woman's ample posterior in a snug sweater dress,



Many of the early photographs of black women, such as this one, were exotic pictures of African women wearing tribal attire.

"shows that there is a humorous side to these issues of self-image as well," Willis notes.

Other contemporary black women photographers are consciously making personal and political statements, Willis says. For example, photographer Lorna Simpson created a photo history of her application for a job as a receptionist. "Before she was given the job, she was required to take a drug test, a blood test and a full physical exam," Willis says. Simpson's work, which is included in the book, reveals that, after she was hired, she learned she was the first African American hired by the company and that no other previous employees were put under such scrutiny.

The book also features a photograph of a whimsical display of stereotypical clothing and beauty products, such as fake eyelashes, jewelry and high-heels, by Joy Gregory, a black British photographer. The photograph, Willis says, makes a political statement about the role of women and the physical expectations of society.

Other modern photographs with black women as the subject take their cue from the earlier sexualized or genderless images. For example, a Stephen Marc image of an African woman with natural hair walking by a Revlon poster that features a black model with relaxed hair explores notions of beauty and how it is defined by and for black women, Willis says.

The scope of these contrasting images in her research led Willis to begin exploring the black female body in her own photography. For one series of photographs featured in the book, Willis chose a female bodybuilder as her model. "I was interested in this idea that women could make a conscious decision to build specific parts of their bodies to create a different aesthetic of black female beauty," she says.

The ever-changing dynamic of the messages and meanings of the black female body in photography is one of the things that keeps Willis clicking the camera and researching historical photographs. ■

'Snakes,' continued from Page 1

times, and again, the mortality rates were between 44 and 50 percent. Nichols continued searching for a strain of the virus that would be 80 to 90 percent effective.

When the Department of Defense grant ran out, the study was continued under a new grant from the U.S. Department of the Interior. This grant made it possible to hire Elaine Lamirande, a full-time biologist, who cared for the snakes, cultured the viruses and collected data.

Two additional viral strains were tested and eliminated when found to be ineffective. Nichols and Lamirande also discovered that when the virus that had been 50 percent effective was re-isolated from a sick snake and used to infect another, it increased in virulence.

In the laboratory, all the viruses were initially only grown in the heart cell tissue of vipers. Lamirande now cultivates the

viruses in vitro in cell lines developed from the brown tree snakes' lung, kidney, heart and splenopancreas tissues. Nichols believes that by cultivating the pathogen in the cells of the snakes, the virus will become more lethal as it adapts to its host.

Nichols' research made an important stride after contacting Winfried Ahne, a professor at the University of Munich who had stored paramyxoviruses from outbreaks at zoos in Europe. With Ahne's stored specimens, Nichols had discovered a treasure-trove of new possibilities to explore.

Another important advance in the study came by way of Jim Winton, a specialist in fish viruses at the U.S. Geological Survey. Winton performed ribonucleic acid, known as RNA, analysis on the ophidian paramyxoviruses on which Nichols was working. The result has provided a road map that may point the way to the most effective strains of the virus.

The Department of the Interior has now

hired a mathematician to develop a model that will help predict the impact of viruses on Guam's brown tree snake population. This should give Nichols a realistic target for the refinement of his snake pathogen.

Experience has shown that the biological control of pest species works better if more than one agent is used as part of a control plan. With this in mind, Nichols has now become interested in the potential of a blood parasite of the brown tree snake that seems to be absent from the Guam population.

There is a growing sense of urgency to find ways of curbing the spread of the brown tree snake. In Hawaii, there already have been eight sightings of brown tree snakes, and people there are fearful of the consequences.

Last July, Sen. Daniel Akaka of Hawaii, Assistant Secretary of the Interior John Berry and staff members from the office of Sen. Daniel Inouye of Hawaii visited the



Don Nichols has launched a research effort to develop a virus fatal to this predator, the brown tree snake. (Photo by Don Nichols)

National Zoo's Pathology Department to be briefed on progress with paramyxoviruses.

Nichols, along with a growing number of conservationists, believes that the snake eventually could have as serious an impact on Hawaii as it has had on Guam. ■

'Nepal,' continued from Page 2

Valley of the United Nations Educational, Scientific and Cultural Organization, or UNESCO. Work on the distinctive building, home to numerous 17th- and 18th-century rulers, and known for its magnificent "Golden Window" and "Golden Door" of gilt copper, began in 1983.

After being vacated by royalty, the palace served as a primary school, housing for government offices and a warehouse for a collection of some 1,500 objects belonging to Nepal's Department of Archaeology. The "collection," Slusser explains, was actually a hodge-podge ranging from bazaar souvenirs to rare 1,000-year-old stone and bronze sculptures, some of which had been seized by Nepalese customs agents from people leaving the country.

Some of the sculptures had been displayed in a small museum in the palace prior to its restoration. Project managers came up with the idea of replacing it with a "world-class museum," to be a collaboration between the Austrian Institute of International Cooperation and the Nepalese Department of Archaeology.

In 1990, Slusser was invited to join the project. Her assignment was to sort and identify the huge cache of objects that had been stored in the palace for the dozen years of renovation and to select those that would best present more than a millennium of Nepalese artistic, spiritual and cultural history.

Knowing the difficulties ahead and to save time, she asked for photographs of the objects to see whether the project would interest her. "When they came, they were black-and-white, postage-stamp-size things," Slusser says, but the project already had captured her imagination, and she accepted. On arrival in Patan, she was nevertheless surprised at the enormity of the task. A lifelong outdoors enthusiast in a country of marvelous mountain vistas, Slusser found herself about to embark on five years worth of lengthy visits tucked away in a dim and dusty storage room.

"I never dreamed I would be tied up for years," she says, recalling that, in a time before Patan had e-mail, her baggage allowance was pushed to the limit by heavy reference books and photographs. One of these books, the 10-pound "bible" of the field, *Indo-Tibetan Bronzes*, by Ulrich von Schroeder, was invaluable in one of Slusser's important discoveries and re-attributions.

Every object she studied took a long time. Her hosts had thought that all of the

ern India that was destroyed by Muslim invaders in the 11th century.

Restoration on the palace proceeded while a blue-jean-clad Slusser worked. Housekeeping was a major part of her daily routine, as she attempted to study the objects through the layers of dust that covered both her and her subjects.

Her environment even verged on the risky. "Sometimes, I was sitting there examining a sculpture," she says, "and I'd see bricks falling out of the walls around me."

Part of being a scholar is learning to be patient and to thrive on the promise of discovery. For a worthy project, even discomfort and inconvenience can be overlooked. Slusser designed a template with questions to ask about each object and to help her sort them. With perseverance, knowledge and a practiced eye, she succeeded in selecting 200 choice objects in stone and bronze—the majority Nepalese but also including Tibetan and Indian art—for display in the museum.

Slusser's most spectacular find was a gilded throne made in 1666 by local artisans for a Patan ruler. The King of Nepal is considered an incarnation of the Hindu god Vishnu, traditionally protected by nine serpents. The back of the throne is embellished with the nine serpents, and sacred trees sprout from its base. "It had been stored in the palace all these years," she says. "It's amazing that the throne survived without being melted down."

"One of the most interesting things is its inscription," Slusser continues. "It is written in Newari, the language of the Malla kingdoms, and contains an amusing line of advertising by the artisans who made it: 'Anyone can hire this throne on payment of two rupees to the families of the copper-smith and carpenter.'"

With 1,500 sculptures to identify, many of little or no interest, Slusser's job was sometimes tedious. "I could be working along on items 30, 31, 32 and 33, and every one is awful. The agents who confiscated some of them rarely knew old from



This gilt-copper seated Buddha, circa 12th century, is among the most important objects in the Patan Museum in Nepal. (Rupert Steiner photo)

art had been made in Nepal, "yet, I found a number of sculptures I classified as folk art," Slusser says. "I felt there was one that didn't belong to the group, though, so I kept examining it." Paging through the von Schroeder volume, she stumbled upon examples that confirmed the source of the sculpture as Western Tibet and dated it to the 11th or 12th century. She identified several other images that came from Nalanda, a Buddhist monastery in north-

new or good from bad. I move on to item 34 and ask, 'Why am I here?' It's the same thing with items 35 and 36.... Then comes number 37, and under the dust, it's a fabulous 12th-century, gilt-copper seated Buddha. 'Oh, that's why I'm here,' I say, 'to restore these things to their dignity.'"

Writing in the November 1997 issue of *Orientations* magazine, Slusser called the Buddha "an epitome of the Nepalese achievement in the metallurgical arts."

"I was only supposed to identify the objects," Slusser says, "but then the project managers realized the next problem—how are you going to display them? So my job expanded, and I had a brainstorm. The museum could be a microcosm of the Kathmandu Valley surrounding it," with objects from every region.

"And furthermore," she adds, "there was nobody around to say my labels were too long. So, for example, you have a sculpture of this god Ganesha, with a fat man's body and an elephant's head. If you're from Chicago, how will you understand why this creature is one of the most popular Hindu deities? So I wrote labels explaining about Ganesha and his parents, Parvati and Shiva. I told the story of Hinduism and Buddhism in Nepal, and I told about the history and culture of the Kathmandu Valley."

Slusser called in Patrick Sears, associate director of the Freer and Sackler galleries, to advise on everything, from where exhibition cases should be located and how visitors should enter and exit to how lighting should be handled so as not to damage the art. Paul Jett, head of the galleries' Conservation and Scientific Research Department, shared his expertise on the care of bronze sculpture and restored some of the most damaged but artistically important objects.

The Patan Museum opened in the spring of 1997. Displays, shown in seven galleries on two floors, present various aspects of Hindu and Buddhist art; the technology of lost-wax casting and repoussé; important Nepalese metalworking techniques; a selection of inscribed stone stelae; and historic photographs of the Kathmandu Valley.

Slusser is delighted with the new museum and the didactic nature of the displays. With 6,000 visitors to the museum in its first three months (compared with a total of 1,000 visitors to all other Nepalese museums), she has proof that visitors are discovering that Nepal's natural wonders co-exist with a human culture that is also beautiful and worth preserving. ■

SERIES PUBLICATIONS

The following publications on research in various fields were issued during the period Nov. 1, 1998, through Jan. 31, 1999, by Smithsonian Institution Press in the regular Smithsonian series. Diane Tyler is managing editor. Requests for series publications should be addressed to Smithsonian Institution Press, Series Division, 470 L'Enfant Plaza, Suite 7100, Washington, D.C. 20560-0950.

Smithsonian Contributions to Botany

• 88 *Opal Phytoliths in Southeast Asian Flora*, by Lisa Kealhofer and Dolores R. Piperno, 39 pages, 49 figures, 5 tables.

Smithsonian Contributions to Zoology

• 602 *Eumeli Expeditions, Part I: Tetragonodon rex, New Species, and General Reproductive Biology of the Myodocopina*, by Louis S. Kornicker and Elizabeth Harrison-Nelson, 55 pages, 25 figures, 11 tables.

RESEARCH HIGHLIGHTS

Tokyo strikes gold. A giant sea-floor deposit, rich in gold and silver, has been found in an underwater volcano 250 miles south of Tokyo. Richard Fiske, a volcanologist at the National Museum of Natural History, and colleagues at the Japan Marine Science and Technology Center are exploring the region. Fiske and the research team have been visiting the volcano in a research submersible craft since 1991. He plans to return this summer for more dives. The deposit, according to Fiske, is as large as the Pentagon building and twice as high and may contain more than a billion dollars worth of gold.

Understanding 'solar weather.' The Smithsonian Astrophysical Observatory in Cambridge, Mass., was selected as one of the experimenters that will have an instrument aboard the planned Solar-B spacecraft, an international collaboration involving Japan, Germany, the United Kingdom and the United States. The mission's coordinated set of optical, ultraviolet and X-ray instruments, including one contributed by SAO, will study interactions between the sun's magnetic field and its hot, ionized atmosphere in an attempt to better understand what forces produce "solar weather."

New radio series funded. Two new radio series, which will be produced by Smithsonian Productions, have been awarded major grant funding from the Corporation for Public Broadcasting. "The Jazz Singers," based on the Grammy-nominated compact disc set created by Smithsonian Recordings, will present a fresh understanding of the foundation of jazz through song. Consisting of 13 one-hour programs, the series will make substantial use of restored performances and historical interviews. "Memphis: Cradle of Rock 'n' Soul," which will be developed in partnership with the Smithsonian's National Museum of Ameri-

can History, is the 13-part story of how rural blues and country music were forged into rock 'n' soul. The series will explore how this music became the vehicle for cultural expression and racial tolerance in Memphis, Tenn., and around the world. Both series will air on public radio stations nationwide in 2000.

Daguerreotypes identified. Two previously unidentified daguerreotypes from the Rochester Museum and Science Center have been identified as images of an 1851-1852 Omaha delegation, a Native American group that left Council Bluffs, Neb., in September 1851 on their way to Washington, D.C., to meet with President Fillmore. They wanted the federal government's protection from depredations and to request assistance in agricultural and associated technologies. The images are the earliest known of this delegation, which finally arrived in Washington on Jan. 21, 1852. The daguerreotypes had not been identified until Anthropologist Joanna Scherer, with the Smithsonian's National Museum of Natural History, was able to compare members in the delegation with already identified images.

New partnership. The Smithsonian Center for Materials Research and Education and Santa Clara University in Santa Clara, Calif., have formed a partnership to jointly develop research and education programs focusing on California's rich Hispanic, Mexican American and Latino heritage. The partnership's first project will involve conducting research on archaeological materials recovered from the Mission Santa Clara de Asis, a 221-year-old mission site on the Santa Clara University campus. The research will be carried out in collaboration with the university's Department of Anthropology and Sociology. Among other things, the partnership calls for the development of educational materials for primary and secondary schools that will use technical studies of cultural materials and artifacts to teach students about California's multicultural traditions.

Controlling invading organisms. Researchers in the Smithsonian Environmental Research Center's Invasion Biology Program have taken a lead role in national and international efforts to slow the invasion of non-native species in the Chesapeake Bay. The program is the largest group in the United States to focus on marine and estuarine invasion biology. Researchers address fundamental questions about the patterns and impacts of coastal invasions, while seeking strategies to limit them. The Invasion Biology Program is headed by Gregory Ruiz, estuarine ecologist, and Anson "Tuck" Hines, assistant director of SERC.

Expanding universe. The discovery of the acceleration of the expansion in the universe by two teams of astronomers, including contributors from the Smithsonian Astrophysical Observatory in Cambridge, Mass., was named by Science magazine as the top scientific research advance of 1998. Using observations of supernovae in distant galaxies as cosmic measuring sticks, the two

groups concluded independently that we live in a universe that will expand forever under the influence of an unknown driving force. The expansion of the universe from the initial Big Bang has been known for decades. However, gravitational attraction between galaxies was expected to slow and, if the universe contained sufficient matter, eventually stop or even reverse the expansion. The new findings suggest that the universe does not contain enough matter to stop the expansion and, more surprisingly, that the expansion is speeding up.

BOOKS & RECORDINGS

Hans Namuth: Portraits, by Carolyn Kinder Carr (Smithsonian Institution Press, 1999, \$39.95). Seventy-five of Namuth's photographic portraits, taken between 1950 and 1989, provide insight into his 40-year career of photographing America's leading artists.

Backbeat: Earl Palmer's Story, by Tony Scherman (Smithsonian Institution Press, 1999, \$24.95). The book gives a first-



This photograph of Gian Carlo Menotti (detail), 1954, is among the 75 images that Hans Namuth took of America's leading artists.

person account of this New Orleans native who laid the rhythmic foundations of rock 'n' roll.

A WASP Among Eagles: A Woman Military Test Pilot in World War II, by Ann B. Carl (Smithsonian Institution Press, 1999, \$21.95). The author tells the story of how Ann Baumgartner, a member of the Women Airforce Service Pilots, became the first woman to test-fly experimental planes during World War II and to fly a jet.

Tales of a War Pilot, by Richard C. Kirkland (Smithsonian Institution Press, 1999, \$21.95). Vividly capturing the experiences of the author and his fellow airmen, these

stories focus on the people who served in the U.S. armed forces from World War II through the Korean War—their triumphs, humor, loves and sometimes violent deaths.

Flying Without Wings: NASA Lifting Bodies and the Birth of the Space Shuttle, by Milton O. Thompson and Curtis Peebles (Smithsonian Institution Press, 1999, \$27.95). Written by a pilot/engineer who participated in every phase of the National Aeronautics and Space Administration's lifting body program, the book documents the adventures, triumphs, setbacks and fun of pioneering a technology that allowed astronauts to accomplish lifting re-entries and precise runway landings.

Laboring in the Fields of the Lord: Spanish Missions and Southeastern Indians, by Jerald T. Milanich (Smithsonian Institution Press, 1999, \$26.95). Drawing upon archaeological and historical research over the last 20 years, the author documents one of the least-known colonial encounters in the history of the Americas.

Old Man Fog and the Last Aborigines of Barrow Point, by John B. Haviland, with Roger Hart (Smithsonian Institution Press, 1999, \$29.95). Weaving together Hart's childhood recollections, the myths of Old Man Fog and excerpts from government and missionary records, Haviland reconstructs the rich, complicated history of the Barrow Point people of far north-eastern Australia, during the period when traditional aboriginal life was being systematically dismantled.

Domesticating History: The Political Origins of America's House Museums, by Patricia West (Smithsonian Institution Press, 1999, \$40 cloth; \$17.95 paper). Focusing on such house museums as George Washington's Mount Vernon and Thomas Jefferson's Monticello, the author shows how historic houses reflect less the lives and times of their famous inhabitants than the political pressures of the eras during which the houses were transformed into museums.

The Social Dynamics of Technology: Practice, Politics and World Views, edited by Marcia-Anne Dobres and Christopher R. Hoffman (Smithsonian Institution Press, 1999, \$45). Essays by sociocultural anthropologists, historians, ethnoarchaeologists and

prehistoric archaeologists explore how technology, from prehistoric times to modern times, has expressed, reproduced or contested everyday social practices and culture-bound beliefs.

Chimayó Weaving: The Transformation of a Tradition, by Helen R. Lucero and Suzanne Baizerman (University of New Mexico Press, 1999, \$80 cloth; \$39.95 paper). The authors, both of whom are weavers, explore the Hispanic weaving tradition of the Rio Grande, from 1870 to the present. Copies of the book may be ordered from the University of New Mex-

'Books,' continued on Page 8

'Books,' continued from Page 7

ico Press, Order Department, 1720 Lomas Blvd. N.E., Albuquerque, N.M. 87131-1591 or by calling 1 (800) 249-7737.

Going Underground: Tunneling Past, Present and Future, edited by Jeffrey Stine and Howard Rosen (American Public Works Association, 1998, \$60). This book covers past and present experiences in tunnels and tunneling and explores the possibilities for the future. The book may be ordered from the American Public Works

Association, P.O. Box 802296, Kansas City, Mo. 64108-2296 or by calling (816) 472-6100. E-mail requests may be sent to pubs@apwa.net. There is a shipping and handling fee.

Tuva, Among the Spirits: Sound, Music and Nature in Sakha and Tuva (Smithsonian Folkways Recordings, 1999, \$14 CD). This compact disc of 17 songs recorded throughout Tuva takes listeners on a sonic journey through the natural acoustic environment.

Praise the Lord: Gospel Music in Washington, D.C. (Smithsonian Folkways Recordings, in association with the Smithsonian Institution and the Anacostia Museum and Center for African American History and Culture, 1999, \$14 CD). The 15 songs on this inspirational compact disc include a range of contemporary performances drawing from traditions of African American religious music in the Washington, D.C., area.

Books published by Smithsonian Institution Press can be ordered from P.O. Box

960, Herndon, Va. 20172-0960. To order by phone or for more information, call 1 (800) 782-4612. There is a \$3.50 postage and handling fee for the first book ordered and \$1 for each additional book.

Smithsonian Folkways Recordings can be ordered by writing to Smithsonian Folkways Mail Order, 955 L'Enfant Plaza, Suite 7300, Washington, D.C. 20560-0953. To order by phone or for more information, call (202) 287-7297 or 1 (800) 410-9815. There is a \$4 fee for shipping and handling of the first three recordings ordered; call for other shipping prices.

Off the Shelf

American Characters

Edited by R.W.B. Lewis and Nancy Lewis
(Published by Yale University Press, 1999, \$45)

From Pocahontas to Louis Armstrong, *American Characters* brings together 160 famous figures, along with verbal portraits of each that illuminate their places in American life. Thus, the book will please not only art lovers but history buffs as well.

The images in the book are all from the National Portrait Gallery's collections. They reflect the range and variety of the gallery's holdings—from images of statesmen and outlaws, Indian chiefs and defense lawyers to those of artists and athletes, writers and performers.

R.W.B. Lewis, professor emeritus of English and of American studies at Yale University, writes in the preface that the idea for the book was the result of "several light-hearted exchanges between Alan Fern, director of the National Portrait Gallery, and me as a board member of that entity." Lewis, along with his wife, Nancy Lewis, edited the book and wrote commentaries for each entry. The process took about six years.

Lewis was appointed to the National Portrait Gallery's Board of Commissioners in 1986 to advise the museum on its proposed acquisitions related to American literature and cultural history. "For fun," he

says, "I began scribbling literary responses to some of the proposed acquisitions, and I'd often share them with Alan Fern and other board members. They found them quite amusing. One day, Alan asked me to think about doing a book on some of the museum's acquisitions and matching them with literary portraits. So that discussion gave birth to *American Characters*."

The book contains 13 chapters, each focusing on a different era in which these American characters lived. They begin with "Puritans and Colonials" and end with "Artists of Entertainment," from the 1920s to the 1970s. "We proceeded chronologically," Lewis explains.

The Lewises agree that selecting images was not an easy task. "No one," R.W.B. Lewis says, "is going to argue that characters such as George Washington, Abraham Lincoln and Benjamin Franklin shouldn't be in the book. But as it got closer to the 20th century, it became more difficult to select portraits for the book. Portraits from 1950 on are more arguable than those from the first 200 years.

"In general," he continues, "selections were the result of lots of ongoing discussions with friends and scholars and between Nancy and me."

The book was truly a joint effort. "Nancy Lewis began by directing her attention to women activists," Lewis says, "and then went on to work on other characters who particularly interested her, such as Jesse James, Thomas Edison, W.C. Handy and Bessie Smith. We went 50-50 on literary portraits from the 20th century."



Portraits of some 160 famous Americans, including first lady Eleanor Roosevelt, appear in *American Characters*.

While all of the subjects in the book played prominent roles in American history, some are more controversial than others. Among those portraits are the likenesses of Benedict Arnold, John Wilkes Booth, Jesse James, Al Capone and a few others.

Even though Lewis is a scholar in his own right, there were surprises as a result of the research. For example, he says, the portrait of Jesse James was actually taken after he had been shot by one of his own gang members. A national newspaper was so desperate to run a picture of James on its front

page that they propped him up, as if still alive, and took the photo. "This is a dead man!" Lewis says.

"It was really hard getting a decent verbal portrait of Benjamin Franklin," he adds. "Without question, he was one of the greatest figures of American history, yet he was not regarded that way in his own lifetime nor shortly after his death. He made a lot of enemies. From the outset, he was the target of resentment and derision. He was too versatile, thus, threatening to a lot of men."

Eight of the verbal portraits were contributed specifically for *American Characters*. "These are the special and unexpected features of the book," Lewis says. The verbal portraits include commentaries from John Updike on Ernest Hemingway, Harold Blume on Joseph Smith, Robert Parker on Dashiell Hammett, John Guare on Eugene O'Neill, Edward Hoagland on John Muir, Russell Baker on H.L. Mencken, John Hollander on Wallace Stevens and Irene Worth on Bruce Draper.

"Our hope," the Lewises say, "is that this book might truly expand readers' appreciation of the fabulous richness and diversity of experience in America." —Jo Ann Webb

This spring, Contributing Members will receive a copy of American Characters as a benefit of membership. However, for those other than Contributing Members, the book will not be available until September. At that time, it can be ordered from Yale University Press, P.O. Box 209040, New Haven, Conn. 06520 or by calling 1 (800) 987-7323.

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