And now, day breaks on Guam in silence.

Pathologist searches for viruses to reduce brown tree snake population

By Mike Morgan
National Zoological Park

G uam 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 more 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," War- ren 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 Zoological Park 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 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 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.

"Like most other viruses, ophidian paramyxoviruses are extremely contagious and can be transmitted from one infected individual to another at a high rate," Nichols says. In fact, the viruses are airborne and can be spread from snake to snake in the air or from contaminated surfaces on which the snakes are not stowed away in cargo containers. The infection is dense and increasing on Guam, where the snakes are not stowed away in cargo containers. Ten 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. Of either 44 percent or 50 percent. The four most effective viruses were re-tested four times.

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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 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 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 justify earns 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
Forest owlet thought to be extinct is spotted anew after 113 years

By Michael Lipske

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.

Panicked because Athene blewitti, the forest owlet 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 owlet 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 owl, likely the first one's mate, revealed itself in the same patch of forest.

Rasmussen was not only the first to see the owl in its natural habitat but also the first to find it a second time, in March 1998, in the same area near the Bed or the Red Hills of western India. Working with ornithologist Nigel Collar of BirdLife International in England, Rasmussen examined the Meinertzhagen owlet at the British Museum. Both experts could see that original stitching and 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's method for handling bird skins.

Fairly certain that Meinertzhagen's specimen 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 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 a similar kind of rough cotton Davidson used 50 years earlier. The owl 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.

"Another clue" with ornithologist Michael Lipske of BirdLife International in England, Rasmussen examined the Meinertzhagen owl at the British Museum. Both experts could see that original stitching and stuffing had been removed and the bird resewn. Closer study of the specimen and X-ray photographs of it revealed characteristic preparation touches unique to Davidson's method for handling bird skins.

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Meanwhile, Rasmussen studied scientific literature on the owl, including accounts of several searches for the living bird. She concluded that none of those owl 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—incorrectly—that he had collected the bird.

If nobody had looked in the right places, maybe the owl 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 owl 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 owl!" "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 owl, misting 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 owl'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 owl. The survey, conducted primarily by the Bombay Natural History Society, resulted in the location of eight different individual owls 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 owl that flew back from oblivion.
Astronomers find that SWAS opens window on a ‘hidden universe’

By Megan Watzke
Smithsonian Astrophysical Observatory

A s with people, stars are born, live for a period of time and eventually die. Looking at the approxi-

mately hundred billion stars that inhabit our own galaxy, astronomers see stars of all ages, from infants to golden ages, 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 thwart 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 "submil-

limeter universe." The new Submillimeter Wave Astronomy Satellite, or SWAS, is now in Earth orbit and is giving SAO, explains, "the Submillimeter Array (SMA) will consist of an 860-kilometer (535-mile) above the Earth. (Courtesy of the National Aeronautics and Space Administration)
Images of the black female body reflect and affect society's opinions

By Ana Contra Larkins
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, is 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 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 Anacostia Museum and Center for African American History and Culture. After reading an article about the "Hottentot Venus," the Bartman Venus, Willis says, "I became fascinated by the image, because it provided a counterpoint to that neutralized black female aesthetic."

Willis wanted to further explore the idea that photographers 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 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-1860s 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 portrait 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.

In another portrait 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 portrait artist, 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 the black female body was elegance and beauty in the black female form. "Black women," Willis notes, "were simultaneously hated after and desired."

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.

"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 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. Renee 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."

In _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)

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Snakes’ continued from Page 1

times, and again, the mortality rates were between 44 and 50 percent. Nichols contin-
tinuously searching for strains 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 Lamont, 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 ineffec-
tive. Nichols and Lamont 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 ini-
tially only grown in the heart cell tissue of vipers. Lamont now cultivates the

"I never dreamed I would be tied up for years,” she says, recalling that, in a time before Patan had e-mailed, 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

vires in vitro in cell lines developed from the brown tree snake’s lung, kidney, heart and spleen but not from 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 Winston Ahne, a postdoc at the University of Munich who had stored paramyxoviruses from outbreaks at zoos in Europe. With Ahne’s stored spec-
iments, 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 ribonuclease A assay, known as RNA, analysis on the opaline 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

new grant from the U.S. Department of

"I was only supposed to identify the objects,” Slusser says, “but then the project manager 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 Ganesh, with a fat man’s body and an elephant’s head. If you’re from Nepal, you might not understand what this creature is one of the most popular Hindu deities!” So I wrote labels explaining about Ganesh and his parents, Parvati and Shiva. I told the story of Hinduism and Bud-
dhism in Nepal, and I told about the his-
tory 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 exhibits should enter and exit to how lighting should be used. Eventual design issues were scheduled by the galleries’ Conser-
ation and Scientific Research Department, and contained an amusing line of ad-
vertising by the artisans who made it: ‘Any visitor to all other

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 post-wax casting and repoussé, important Nepalese metalworking techniques; a selec-
tion 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 proved that visitors are discovering that Nepal’s natural wonders co-exist with a human culture that is also beautiful and worth preserving.

This gold-vermeil seated Buddha, circa 12th century, is among the most important objects in the Patan Museum in Nepal. (Reprint Steiner photo)
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, 670 Enid Avenue NE, Suite 7100, Washington, D.C. 20560-0950.

**Smithsonian Contributions to Botany**

**Smithsonian Contributions to Zoology**

**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 submarine since 1991. He plans to return this summer for more dives. The deposit, according to Fiske, is as large as the Pentagonal 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 ultraviolet, x-ray and optical instruments, including one contributed by SAO, will study interactions between the sun's magnetic field and its 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 grants 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 American History, is the 13-part story of how rural and country music were forged into rock 'n' roll. 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 Scherter, 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 at 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 partnerships 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 partnerships 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 Invasive 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 Invasions 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 contributions 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 Kindee 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-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, their trials, their humor, and sometimes violent deaths.

**Flying Without Wings: NASA Lifting Bodies and the Birth of the Space Shuttle,** by Milton O. Thompson and Curtis Pohley (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 lift-off entries and precise runway landings.

**Laboring in the Fields of the Lord: Spanish Missions and Southeastern Indians,** by Jerold T. Millerich (Smithsonian Institution Press, 1999, $26.25). 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 northeastern Australia, during the period when traditional aboriginal life was being systematically dismantled.

**Domesticating History: The Political Origins of America's House Museums,** by Patricia Wart (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 the lives and times of their famous inhabitants than the cultural pressures of the era during which the houses were transformed into museums.

**The Social Dynamics of Technological Practice, Politics and Political Worlds,** edited by Anne Dobres and Christopher R. Hensel (Smithsonian Institution Press, 1999, $45). Essays by sociocultural anthropologists, historians and prehistorians explore how technology, from prehistoric times to modern times, has expressed, reproduced or contested everyday social practices and cultural-bound beliefs.

**Chimayo Weaves: The Transformation of a Tradition,** by Helen R. Lucero and Suzanne Baisier (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 Río Grande, from its roots to the present. Copies of the book may be ordered from the University of New Mexico Press.
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 surpries 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 photos. "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 or 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 a lot of men."

Eight of the verbal portraits were contributed specifically for American Characters. "These are the special and unex- pected 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 Dusty Hoffman, John Guare on Eugene O'Neill, Edward Hoagland on John Muir, Russell Baker on H.L. Mencken, John Holland on Wallace Stevens and Irene Worth on Bruce Draper.

"Our hope," the Lewises say, "is that this book might really 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 208040, New Haven, Conn. 06520 or by calling 1 (800) 987-7323.

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 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. 20560-9953. To order by phone or for more information, call (202) 387-7297 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 proportion acquisitions. Portraits from the 20th century."