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**Southeast Asian ceramics.** Versatile, round-bottomed cooking pots made of earthenware clay have been used for generations in Southeast Asia to simmer herbal medicine, prepare dyes and even bury cremated remains. Before the introduction of glass, metal and plastic, small stoneware jars were used to hold tea, salt and cooking sauces. Lidded stoneware boxes served as protective containers for perfumed wax, cosmetics, medicine and jewelry. “Taking Shape: Ceramics in Southeast Asia” is a new Web site from the Smithsonian’s Freer and Sackler galleries that presents ceramics made during the last 4,000 years in the region that today comprises Vietnam, Cambodia, Laos, Thailand and Burma. Potters typically reproduced shapes, textures and patterns handed down in their communities from generation to generation, along with the methods for preparing, shaping and firing clay. Archaeologists studying ancient settlements can gauge exchanges among communities by the mixture of local and exotic pots found in excavation sites. Together, these vessels illustrate the movements of pots from their makers to their users, whether between two villages, along rivers or across oceans.

—[www.asia.si.edu/exhibitions/current/takingshape.htm](http://www.asia.si.edu/exhibitions/current/takingshape.htm)



**Jingdezhen ware water bottle made for the court of King Rama V, late 19th century**

**Code talkers.** In the radio communications conducted by Native American code talkers during World War II, army tanks were called “wakaree’ e,” a Comanche word for turtle; transport planes were “atsá,” the Navajo word for eagle; and “paaki,” a Hopi word meaning houses on water, was a name for ships. Hundreds of

American Indians joined the armed forces during World Wars I and II and, at the behest of the U.S. military, developed secret battle communications based on Native languages. America’s enemies were never able to decipher these codes. Code talkers, as they came to be known after World War II, are 20th-century American Indian warriors and heroes. “Native Words, Native Warriors,” a new Web site from the Smithsonian’s National Museum of the American Indian, pays homage to the lives and experiences of Native American code talkers during both world wars and also explores their prewar and postwar lives. This Web site is a companion to a Smithsonian Institution Traveling Exhibition Service exhibition of the same name.

**Navajo code talkers in the South Pacific, December 1943. (National Archives photo)**

—[www.nmai.si.edu/education/codetalkers](http://www.nmai.si.edu/education/codetalkers)



**Correction:** An article in the Autumn 2007 issue of Inside Smithsonian Research indicated 45 astronauts had flown in Apollo spacecraft. The correct number is 38.

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*On the cover: Paul Chan’s 2005 artwork “1st Eight,” shown here at the Whitney Museum of American Art, is one of the works featured in the exhibition “The Cinema Effect: Illusion, Reality and the Moving Image,” opening at the Smithsonian’s Hirshhorn Museum and Sculpture Garden in February. This installation consists of a video projection on the floor showing moving figures in silhouettes and blurred shadows. During the artwork’s 14-minute running time, colors shift according to the time of day, debris floats into space, humans fall through the air, and birds disappear and reappear on a light pole. (Image Courtesy Greene Naftali Gallery)*



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# ‘The Cinema Effect’: moving image as fine art

By Topper Sherwood

Special to Inside Smithsonian Research



London-based video artist Runa Islam's 1998 work "Tuin," shown here as it appears in a gallery installation, is one of the artworks featured in "The Cinema Effect" at the Hirshhorn. (Image courtesy of Jay Joplin/White Cube, photo by Gerry Hohansson)

**I**n the fifth century B.C., a contest was staged by two rival Ephesian artists. Each would render a single work of art to see who was the greater painter. The first artist, Zeuxis, unveiled his work, a beautiful still life of grapes. The fruit looked so ripe and luscious that birds flew down to peck at the canvas. Zeuxis then challenged Parrhasius to pull aside the curtain and show his painting, whereupon Parrhasius informed the master that there was no curtain, that, in fact, Zeuxis was looking at Parrhasius's contest entry, the painting of a curtain. Zeuxis was forced to admit defeat.

Kristen Hileman describes this ancient Mediterranean contest as she walks through an exhibition of contemporary acrylics in the second-floor gallery of the Smithsonian's Hirshhorn Museum and

Sculpture Garden. She tells the story to illustrate the expectation that art reflect physical reality. And as the story suggests, sometimes we like being fooled.

Questions of reality and illusion lie at the center of "The Cinema Effect: Illusion, Reality and the Moving Image," two back-to-back exhibitions that will be on view at the Hirshhorn Museum this year. Comprising multiple installations of artwork in video and film, these ambitious exhibitions will allow visitors to move through a series of black-box theaters where they will encounter artistic illusion, documentary-style reality and some surprising gray areas in between.

"It's exciting, because this is something of a hybrid experience," says Hileman, a Hirshhorn curator. "It's seeing work in a museum space that you would normally

experience on a television screen or in a movie theater; but these artists have conceptualized their pieces so that they're meant for a museum space."

Hileman and Curator Anne Ellegood are curating "Realisms," the second part of "The Cinema Effect." The first installment, called "Dreams," opens in February and is curated by Hirshhorn Chief Curator Kerry Brougher, working with Kelly Gordon, the museum's associate curator.

## Dreams and 'Sleep'

"We are creating individual spaces for pretty much every single work in the exhibition," Brougher explains. "We want, in the first show, for people to enter the exhibition and feel as if they are in a labyrinth, that they are going through a

*(continued)*



night of dreaming...”

Dreaming, of course, requires maintaining some level of darkness, an unusual undertaking for a staff whose priorities usually include making sure that an exhibition’s objets d’art are well lit. Aside from meeting fire and accessibility codes—ensuring that all visitors have good access to exits, even in low light—the Hirshhorn’s design crews also are wrestling with the challenges of an ever-changing high-tech marketplace.

“Technology changes so fast,” says Al Masino, director of exhibitions, design and special projects. “Even something that we researched eight months ago may be no longer available, so we have to find a comparable piece of equipment.”

Yet technological advance also is a large part of what makes “The Cinema Effect” possible. A little more than 100 years old, cinema has always been a complicated and high-tech art form. Only during the last 15 years or so has digital filmmaking technology become easy and cheap enough to draw the interest of a critical mass of artists.

“Before, it was always very complicated to place moving-image works into a gallery space,” Brougher says. “They required 16-millimeter-loop projectors that broke down all the time.”

Before 1980, film was used by the rare gallery artist, such as Andy Warhol,

whose lengthy 1963 work “Sleep” is, fittingly, a part of “Dreams.” The great majority of work appearing in “The Cinema Effect” was produced during the last 20 years, and according to Brougher, the Hirshhorn is presenting and acquiring a growing number of works by artists working in film and video.

“It’s just come on extremely strong,” the curator says. “[Film and digital media] are probably used almost as much as photography and painting are today and it’s probably used even more than sculpture.”

### Cinema in art

Brougher becomes animated as he describes the influence of cinema in art and

in everyday life. A former director of the Museum of Modern Art in Oxford, England, Brougher has been observing and thinking about these issues since at least 1996, when he curated “Hall of Mirrors: Art and Film Since 1945” at the Los Angeles Museum of Contemporary Art. The curator remembers believing, at the time, that the medium had reached its pinnacle.

“Well, I was wrong,” he says with a smile. “Film and video took off even more after that!”

Brougher sits in his sparsely decorated office and speaks with passion about the many ways—in news, advertising, Web-based media, war propaganda, diplomacy and art—that film and television have ig-



nited our thinking and culture. Even architecture—what German architect Walter Gropius called “the final goal of all artistic activity”—has been embellished (or obscured) by cinema.

“Imagine walking through Times Square,” Brougner suggests. “You look up and see buildings whose facades have become digital billboards—projections of images. The buildings become almost liquid. They’re almost not there; they’re just big cinema screens.”

This is the stuff of art, food for thought for such artists as Anthony McCall, Candice Breitz and Douglas Gordon, all featured in “The Cinema Effect.” Like the ancient painting of Parrhasius, Gordon’s work, “Off Screen,” featured in “Dreams” will have visitors peeking around the edge of a cinematic curtain and wondering what part of their experience is real. Another piece, “Mother + Father,” by Candice Breitz, appropriates film clips of Julia Roberts, Steve Martin, Meryl Streep, Dustin Hoffman and other actors and actresses, all playing parents.

“You’re laughing along with them,” Hileman says. “And all of a sudden, you really see these gender stereotypes playing out. It spins you into this loop: Do movies create these portrayals based on our culture? Or do the movies infiltrate the culture, directing the ways that a mom or a dad can be?”

### Cohesive statement

The task of selecting artists and installing their art for the exhibition was similar to mounting a Hollywood production. The Hirshhorn curators and design staff worked closely with nearly 40 artists to create the sometimes elaborate gallery installations. The technology involved was daunting.

“It works best,” Masino explains, “when the designers and installation crew can work closely with the curators and the artists, and we produce the cohesive statement that the artist is trying to make. We’re most successful when all exhibition props and technology are invisible to the

viewer. We want our work to be totally invisible, so that people can appreciate the art.”

One piece, “You and I Horizontal,” by Anthony McCall, requires projecting images onto a manufactured vapor. Another, Stan Douglas’ “Overture,” employs the early Thomas Edison film of a moving train set to a recorded-voice reading of the opening to Marcel Proust’s *Remembrance of Things Past*.

Hileman is most interested in the different responses to each of the two parts of “The Cinema Effect.” Her proposal for the second exhibition, “Realisms,” was born out of her fascination with the growth of the reality-TV phenomenon.

“I really do think it represents the defining cultural trend of our time,” the associate curator says. “We’re now 10 years into the reality-TV phenomenon, and we’re at a moment when people are not just passively watching TV or film—they’re actually making their own movies and putting them on YouTube.”

One hope for “The Cinema Effect,” the curators say, is for visitors to leave the exhibition with a greater awareness of the ways that media makers work their “magic” on filmgoers and television viewers. They also want people to be conscious of the use of dramatic text, bold sound effects and evocative music in everything from commercials and reality shows to broadcast news.

“I think it’s because we desire this kind of drama to be presented to us,” Brougner says. “We don’t experience things as slowly now. We experience so much as moving images.... I will say, however, that these artists are using the medium to comment back on it again. They are raising certain issues about the cinema and about the whole nature of our contemporary culture.”

In effect, one might say, the artists of “The Cinema Effect” at the Hirshhorn are telling us something about the high-tech drapery that stands between us—the audience—and the “real thing.” ❖



**Above:** This still (detail) is from video artist Douglas Gordon’s 1998 video “Off Screen,” one of the works featured in “The Cinema Effect: Illusion, Reality and the Moving Image,” opening at the Smithsonian’s Hirshhorn Museum and Sculpture Garden in February. In “Off Screen,” an image of a curtain is projected onto a screen that is a curtain itself. “For me, the idea of the off-screen is as interesting, if not more so, than what is happening right in front of you,” Gordon has said. (Image courtesy of Gagolian Gallery, New York)

**Opposite top:** This still is from Siebren Versteeg’s 2005 “Neither Here Nor There,” a computer-driven installation in which Versteeg’s image dissolves, one pixel at a time, and moves from one flat LCD screen to another. (Photo courtesy of Rhona Hoffman Gallery).

**Opposite bottom:** Inhabiting a place between fantasy and reality, video artist Kelly Richardson’s “Exiles of the Shattered Star” presents a beautiful countryside showered with what appear to be remnants of another world. (Image courtesy of Kelly Richardson)

# Beneath Egypt's ancient city of Alexandria, evidence of an even older city is revealed

By Alan Cutler

Special to Inside Smithsonian Research

Alexander the Great's founding of his namesake city, Alexandria, on the sandy Egyptian coast in 332 B.C., is the stuff of legend. Among the stories that circulated for centuries after his death was that he was so thorough about checking to make certain it was a good location, he had himself lowered into the ocean in a glass box to look for sea monsters that might threaten his city.

Sea monsters turned out not to be a problem. Some two millennia later, however, researchers have returned to the underwater realm to discover that Alexander was not the first to build a city where Alexandria now stands. From the chips of pottery and other clues recovered in sediment cores deep below Alexandria's har-

bor, it appears Alexander the Great was beaten to the punch by at least 700 years.

"Alexander the Great didn't just come through, spread his arms and say, 'We'll build here,'" observes Jean-Daniel Stanley, a geoarchaeologist from the Smithsonian's National Museum of Natural History who led the study. "He actually was expanding a previous settlement."

Stanley didn't originally go to Egypt to search for lost cities. For more than 20 years, he has studied sedimentation in the Nile Delta and has visited Alexandria numerous times to investigate two very real problems facing many coastal cities—subsidence and sea level rise. A large part of Greek and Roman Alexandria is now under water. Stanley was trying to learn how it happened.

"Did it occur slowly over time by natural processes as the land sank and the sea level rose?" Stanley asks. "Or did the influences of brief catastrophic events, such as tsunami or earthquakes, play a part? Did humans play a role by overloading water-saturated sediments with buildings to the point of failure?" Answering these questions may have implications for modern-day New Orleans and Venice, two cities that are similarly situated below sea level.

In 2001, Stanley and his team sank seven hollow metal tubes, just under 4 inches in diameter, as deep as 18 feet into the sediments of Alexandria's harbor. Radiocarbon dating revealed that the cores penetrated deposits laid down more than 7,000 years ago—millennia before



**Left:** This artist's concept shows how the city and harbor of Alexandria may have appeared some 2,000 years ago. (Illustration by IEASM, in Bernand and Goddio, 2002)

**Opposite top:** A diver encounters a stone sculpture of the god Hapi while surveying the bottom of Alexandria's harbor to determine the best spot to sink a metal tube to collect samples of sediments beneath the harbor floor.

**Opposite bottom:** A worker prepares to drill a core sample in the Harbor of Alexandria. (Photo by Jean-Daniel Stanley)



Alexandria was built.

Examining the cores of material pulled up inside the tubes, Stanley observed that the old deposits contained some surprising and unexpected features. Pebbles of igneous rock that could only have come from distant quarries in Middle and Upper Egypt were among the sediments.

"They weren't carried there by the Nile," Stanley says. "There's nothing else of their size in the channel. It's all fine sand."

Some layers were rich in organic material. But that didn't fit either. Organic-rich sediments of this type typically form in brackish marshes. "But there were no marshes along Alexandria's open marine bay," Stanley points out. "It's been marine from the word go."

Most striking, though, were the pottery fragments that Stanley found at levels in core samples dating as far back as 940 B.C. Was it possible that chips of pottery from later times, after the founding of Alexander the Great's city, had somehow become mixed into the older layers by movement of the sediment or by the operation of the coring drill?

Stanley consulted Gus Van Beek, a spe-

cialist on Greek pottery at the National Museum of Natural History, about the apparent anomaly. Van Beek confirmed that the pottery was locally fired, not imported, and typical of the region during the pre-Alexander era. So the fragment did appear at the correct level in the cores.

"The eureka point for this study came when I realized: I've got the radiocarbon dates, and there's stuff below the date of Alexander," Stanley says. "Doesn't that mean there was something there before he founded the city?"

There were the stones, probably imported for building material. The high or-



ganic content probably came from waste water. And of course, there was the pottery. When a colleague suggested that he analyze the sediment for its lead content, Stanley saw an opportunity to add another piece to the puzzle. "The Greeks used a lot of lead," he says.

With the help of geochemist Richard Carlson at the Carnegie Institution in Washington, D.C., Stanley determined that, sure enough, lead concentrations in the sediments increased long before Alexandria was founded.

Historians have generally believed that there was some kind of early settlement in the area before Alexandria. In *The Odyssey*, Homer praises the quality of the harbor's anchorage.

"When you look at the map of Egypt's Mediterranean coast, you can see that the most logical place to put a harbor is right there at Alexandria," Stanley says. "So it is not surprising that the place would have been known for a long time."

But until Stanley's discovery, there was no hard evidence that this early settlement, traditionally called Rhakotis, was anything more than a fishing village or that it had persisted for so many centuries.

Only so much can be learned from sediment cores, however. Stanley hopes that his discovery will be followed up by archaeologists working on dry land to locate stronger evidence of the old city of Rhakotis. "This would be a major logistical task as Alexandria today is a densely packed city of 4 million people," Stanley observes. "Everything is built up, and there aren't a lot of open areas to excavate."

Still, one area of the modern city of Alexandria bears the ancient name Rhakotis. Is it the original site of the pre-Alexandrian settlement? No one knows for certain, but Stanley believes it's the logical place for archaeologists to begin looking.

"I don't think they would be disappointed," he says. "I think they would find Rhakotis." ❖

# History of holiday displays illuminated in new book

By Michael Lipske

Special to Inside Smithsonian Research

Throughout much of the last century, Christmas in Washington, D.C., and other American cities drew more than shoppers downtown. Many of the people crowding the sidewalks during the holidays had come solely to view the festive displays that filled the windows of the downtown department stores.

On carefully lit stages behind the plate glass, Santa and his elves, reindeer, snowmen and fairy tale figures gestured and twirled—to the extent their mechanical innards allowed—across winter landscapes or in cheerful domestic interiors.

Washington, D.C.'s Woodward & Lothrop department store always seemed to have the best displays, and one of the children admiring Woodies' windows on F Street in the 1960s would do more than just fondly remember.

"I grew up here, and my store was Woodward & Lothrop," says William "Larry" Bird, a curator at the Smithsonian's National Museum of American History, Kenneth E. Behring Center, recalling the years when his family would come downtown to see the holiday displays.

"Garfinckel's had them, Kann's had them, Lansburgh's and the Hecht Co. had them," he says, reeling off the names of long-gone Washington, D.C., department stores. "But Woodies always seemed to go out of its way to have the most charming show."

Bird captures that charm in *Holidays on Display*, his lavishly illustrated new book about the behind-

the-scenes magicians who conjured up those shopper-stopping store windows, engineered the first outdoor Christmas lighting, and crafted the prize-winning floats for America's biggest Thanksgiving and New Years parades.

Published by the Smithsonian in association with Princeton Architectural Press, the book highlights how these commercially inspired displays created strong emotional bonds between stores

or other sponsors and the public who viewed them, bonds "that transcended commercial meaning," Bird says.

Bird's own vivid childhood memories of the animated displays that Woodward & Lothrop staged are one measure of that bond. In *Holidays on Display*, he notes that, in several cities where department stores have gone out of business, their beloved Christmas displays have been kept alive by nonprofit groups or city governments and are faithfully rolled out for public viewing during the holidays.

Bird works in the American History Museum's Division of Politics and Reform and he explains that his scholarly interest in the long tradition of American political campaign parades, as well as in the history of advertising, also brought him, in a roundabout way, to the subject of his book.

"The more I looked at the trade press on parade-float building, the more I came to have an appreciation for float construction as a business, as a commercial enterprise," Bird says. Study-

ing old magazines devoted to float making that he found among the Smithsonian Institution Libraries holdings eventually led him to other specialized publications, such as *Show Window* magazine, a trade journal for window trimmers that in its early years was edited by L. Frank Baum.

Before becoming famous for writing *The Wonderful Wizard of Oz*, Baum was an avid chronicler and booster of the window decorator's trade, awarding prizes for the

most artfully trimmed store windows and noting approvingly in 1899 that "every village and hamlet in the land has had some sort of a window display of unusual merit to attract the public and further the sale of Christmas wares."

To research *Holidays on Display*, Bird also embarked on a listening tour of display old-timers, sitting down with float builders such as Earl Hargrove, whose Lanham, Md., company has made





floats for every presidential inaugural parade since Harry Truman's, as well as for a host of other events ranging from Virginia tobacco festivals to the New Orleans Mardi Gras. "He told me great stories about the float builders that he knew," Bird says. Hargrove, who started out trimming liquor store windows with his father in Washington, D.C., during the Depression, also brought Bird up to speed on the ins and outs of the float-building business.

In Pasadena, Calif., Bird interviewed David Coleman, a retired physician who was the son of the late Isabella Coleman, a legendary creator of floats for that city's New Year's Tournament of Roses Parade. "He told me this incredible story of how his mother started decorating floats for the parade. Her parents encouraged her to do it one year because she couldn't find a ride on a school float."

That was in 1910, and the teenage Coleman's marigold-be-decked, horse-drawn float won a prize. She went on to design more than 300 floats for the Tournament of Roses Parade for chambers of commerce, oil companies, evangelists and other sponsors. The parade's greatest float builder, she never lost a certain homespun approach to the craft.

In Cleveland, Bird pored through business records at Nela Park, the corporate headquarters of the General Electric Co.'s Incandescent Lamp Division. Also known as the "University of Light," this is where, beginning in the 1920s, General Electric lamping application engineers developed and tested Christmas lighting products. A laboratory for outdoor lighting effects, the business campus erected holiday displays that drew an average of 300,000 drive-through visitors a year.

"I was given free run of the history-file room," Bird recalls. "I asked, 'Has anybody published these photos?' and was told, 'No, no one has ever come here for that.' That's what you want as a historian—first crack."

Bird says he wanted to "put a book together that talked about

holiday display as a business, focusing on the creative people who were drawn to it."

Asked how the float builders, window decorators and lamping engineers he tracked down felt about his scholarly interest in their work, he says, "They're shocked that somebody from the Smithsonian is interested in them, in what they're doing. They understand what the Smithsonian is and they're delighted to talk to us." Many of them willingly shared tales of their trade and made available photographs and other material that Bird used to illustrate his book.

Bird's first interview for *Holidays on Display* opened a door in his own memory. From Roland Leimbach, a retired Woodward & Lothrop executive in the store's display department, Bird learned the details behind one of the department store's most lavish holiday productions, "A Window on Williamsburg."

The display was a painstakingly accurate evocation of Colonial Williamsburg by the store's craftsmen, who even "counted and faithfully reproduced the number of bricks on building exteriors and recreated in miniature the moldings in the [Governor's] Palace supper room." According to *Holidays on Display*, "The display became so popular that it attracted an average of 50,000 visitors per day."

As Leimbach described the display, which opened in eight sidewalk windows on Thanksgiving Day 1966, "In my mind, I could kind of see it," Bird says. "I could

remember something like that. It was a big deal, the coolest thing that they ever did." And for just a second or two, the historian has a faraway gaze in his eyes, as if part of him is back on a wintry sidewalk on F Street in the 1960s, taking in the free holiday show behind the plate glass. ❖



**Opposite bottom:** The New York display studio of Landy Hales, circa 1923, who was the innovator of many animated window displays. Here Hales, seated at the table facing camera, and his staff are preparing stage props for a theatrical performance of "Parade of the Wooden Soldiers." (Photo courtesy National Museum of American History)

**Opposite top:** A display float in the Schenectady County Sesquicentennial Parade, 1959, created from a kit by the well-known float-making company Vaughn Displays, Inc.

**Above:** Holiday decorations fill the main aisle of the Marshall Field & Co. department store, circa 1956. (Image courtesy of Macy's)

# Appalachian Trail survey aims hidden cameras at large predators



By Michael Lipske  
Special to Inside Smithsonian Research

Describing his project of counting bears, bobcats and other predatory mammals along the Appalachian Trail, National Zoological Park wildlife ecologist William McShea looks to American literature for a comparison. “This is a big Tom Sawyer-type thing, where I want all this work done, and I want to get volunteers to do it for me,” he says with a chuckle. “So far, it’s working.”

Like Mark Twain’s fictional Tom Sawyer—who, when faced with the burden of whitewashing 30 yards of board fence, persuaded other boys to paint it for him—McShea has rounded up 100 eager volunteers (“who are totally jazzed,” according to the scientist) to collect data for him in the woods along the famous footpath that runs from Georgia to Maine.

For now, McShea’s project covers just a portion of the trail, a 570-mile stretch from the southern border of Virginia to the northern boundary of Maryland. His volunteers, most of them recruited from hiking clubs that maintain the trail, are

responsible for setting up some 50 cameras at predetermined points along the route, leaving them in place for a month, and then moving each camera to a new spot.

Infrared sensors allow the cameras to take a photograph whenever an animal strays within range of the lens. The project’s first phase ran from April through November, during which time McShea’s volunteers set up cameras to take animal snapshots at about 350 locations along the Appalachian Trail.

With luck, the photo-shoot project should do more than tally wild carnivores across a ribbon of eastern woodland; it also should tell McShea something about the condition of the landscape those animals roam.

“The Appalachian Trail really doesn’t change that much from Georgia to Maine,” explains McShea, who works at the National Zoo’s Conservation and Research Center, in Front Royal, Va. “It’s mature oak forest up on the top of a ridge, and it just keeps going and going.

But what changes is the surrounding landscape. The trail goes through suburbia, through national forest; it passes major highway systems.”

Because predators, especially larger ones, need to cover lots of territory to get an adequate diet, recording their presence or absence as the trail snakes across the varied habitats of the eastern United States measures the fitness of those habitats for wildlife, providing what McShea calls “an index of wildness along the trail.”

The project came about when McShea attended a 2006 conference at which officials from the National Park Service were seeking ways to use volunteers to gather environmental data about the trail. McShea suggested the predator survey, modeled after ones he has done in China and Malaysia, where he trained staff at wildlife reserves to set up and use cameras to take a census of animal populations.

By early 2007, McShea was training volunteers in this country in the fine points of automated wildlife photography. He taught them to strap cameras to trees at

These after-dark images of forest predators were taken along the Appalachian Trail in Virginia and Maryland during 2007 by hidden cameras. Infrared sensors allow the cameras to snap a digital image whenever an animal strays within range. From far left, a bobcat, coyote, raccoon, black bear, gray fox and feral cat.



about knee height. “Most animals are shorter than you think they are,” he explains, and the camera’s infrared sensor needs to be low enough to be triggered, not just by bears but by foxes and raccoons.

To avoid creating a gallery of hiker portraits, cameras were set up away from the Appalachian Trail itself but along nearby animal trails. Volunteers also were given directional coordinates within a predetermined segment of the Appalachian Trail and instructed to set up their camera within 100 meters of that location.

In addition to cameras, “the stink” was provided to aid McShea’s helpers. “That’s what we call it,” says Ricki Ashcraft, an education specialist at the Conservation and Research Center, who as a volunteer is helping to manage three cameras along a stretch of the Appalachian Trail in Shenandoah National Park. This scent lure, extracted from animal musk glands, is obtained from trapping-supply companies. “It smells to high heaven,” she says. But a drop left on a stick or stone in front

of a camera will make a passing predator pause just long enough for the project’s digital cameras to wake up from “sleep mode” and get the picture.

McShea says his volunteers are enthusiastic about the work because “they maintain sections of the trail and they’re always wondering, ‘What’s here? Do they have bobcats on their section of trail, or bears or weasels?’ Some are even doing it because they hope they may photograph a mountain lion.”

For the record, McShea does not believe wild cougars still roam the Appalachians. But perhaps with a nod to Tom Sawyer, he says he’s promised “a bonus” to the first volunteer who records one.

What the project’s cameras have captured is an abundance of bears, bobcats and coyotes; a handful of startled hikers; both red and gray foxes; and a surprisingly small number of raccoons, opossums and skunks.

After shutting down for the winter, McShea intends to resume his experiment in what he calls “citizen science” for another

seven months beginning in the spring. Then, having honed procedures for using trail-club volunteers to set up cameras, record habitat information and sprinkle stink, he hopes “to talk someone into letting me do the entire trail.”

That “megatranssect” along the entire 2,175-mile Appalachian Trail would, like the current project, seek to determine how the East’s wild carnivores are coping within the variety of natural and highly developed landscapes that bracket the trail through 14 states. Like much of McShea’s research, whether studying giant pandas in China or deer in Virginia, the work has a practical bent.

“I’m trying to be helpful to land managers,” McShea says, “trying to give the guys who work in the Park Service and the Forest Service and the state game agencies information that helps them do their jobs better. And I think this distribution-of-predators study is something they can use to say whether they’re doing a good job or not.” ❖

**Hobbit wrists.** An international team of researchers led by Smithsonian National Museum of Natural History Paleo-anthropologist Matt Tocheri has determined that *Homo floresiensis*, a 3-foot-tall, 18,000-year-old hominin skeleton discovered four years ago on the Indonesian island of Flores, has a wrist shaped quite differently than the wrists of both modern humans and Neandertals, our closest fossil relatives. This finding demonstrates that *Homo floresiensis*, commonly called the “hobbit,” represents a



**Matt Tocheri studies the wrist bones of *Homo floresiensis* in the Museum of Natural History. (Photo by Christian Tryon)**

different species of human and that modern humans and Neandertals share an earlier human ancestor that the hobbits do not. “Hobbit wrist bones do not look anything like those of modern humans. They’re not even close,” Tocheri says.

**Kogod Courtyard.** The Robert and Arlene Kogod Courtyard, a striking element of the Smithsonian’s Donald W. Reynolds Center for American Art and Portraiture, opened to the public in November. Designed by architects Foster + Partners, the enclosed courtyard with its elegant glass canopy provides a distinctive, contemporary accent to the museum’s Greek Revival building. The roof structure is com-

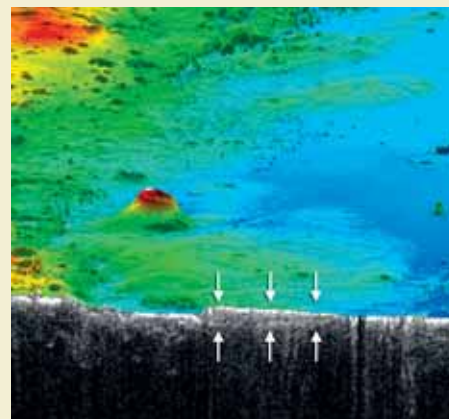
posed of three interconnected vaults that flow into one another through softly curved valleys.

**Castelli Gallery.** The Smithsonian’s Archives of American Art recently acquired the records of The Leo Castelli Gallery in New York City. The collection holds extensive files of newspaper clippings and correspondence Castelli had with artists he nurtured and whose work he championed, including Richard Artschwager, Lee Bontecou, Jasper Johns, Ellsworth Kelly, Roy Lichtenstein, Bruce Nauman, Robert Rauschenberg, Richard Serra and Frank Stella. The records cover the gallery’s history, from its founding in 1957 until Leo Castelli’s death in 1999. The collection includes art registry books; auction and sales history information; exhibition records; photographs of artists and of works of art; ephemera; and correspondence with collectors, curators and dealers.

**Martian deposits.** Radar soundings by the European Space Agency’s Mars Express orbiter have taken the first depth measurements of mysterious deposits found at the Medusae Fossae Formation on Mars. Located on a divide between the Martian highlands and lowlands, the



**The Kogod Courtyard of the Smithsonian’s Donald W. Reynolds Center for American Art and Portraiture**



**Arrows in this radar image of Mars show surface and subsurface echoes of a hill in the Medusae Fossae Formation deposits. (Image courtesy ESA/ASI/ NASA/University of Rome/JPL/Smithsonian)**

radar revealed these deposits to be at least 1.4 miles thick at some spots. The findings were reported in the journal *Science* in a paper by Tom Watters, a geologist at the Smithsonian’s National Air and Space Museum, and colleagues. The Medusae Fossae deposits intrigue scientists because they have no echo from certain Earth-based radar wavelengths and may be composed of volcanic ash, wind-blown material or even ice-rich deposits.

**Sitting Bull.** A lock of hair and wool leggings belonging to Sitting Bull, the Hunkpapa Lakota Sioux leader, was repatriated to Ernie LaPointe, Sitting Bull’s great-grandson, in December by the Smithsonian’s National Museum of Natural History. After Sitting Bull was killed in 1890 while being arrested, his body was in the temporary custody of Horace Deeble, a U.S. Army doctor. Deeble obtained a lock of hair and the leggings from Sitting Bull’s body and later sent the items to the Smithsonian in 1896. Museum staff became aware of the circumstances surrounding the acquisition of the materials in 1999.

## Zoo researchers propagate endangered elkhorn coral in laboratory aquariums

Rising water temperatures, pollution and other adverse conditions caused primarily by humans are pushing the Caribbean's magnificent elkhorn coral (*Acropora palmate*) to the brink of extinction. It is the first coral listed under the Endangered Species Act as threatened. Since the 1980s, populations of this once pervasive marine invertebrate have declined by nearly 99 percent.

At the Smithsonian's National Zoological Park, Reproductive Scientist Mary Hagedorn and Invertebrates Keeper Mike Henley are working to protect elkhorn coral by establishing genetically diverse reproducing colonies of this marine animal in laboratory aquariums in Washington, D.C.

In August, the scientists netted some 12,000 spawning elkhorn gametes in Puerto Rico during nighttime dives. The gametes were transferred to a laboratory on the beach for artificial insemination and then transported to the National Zoo.

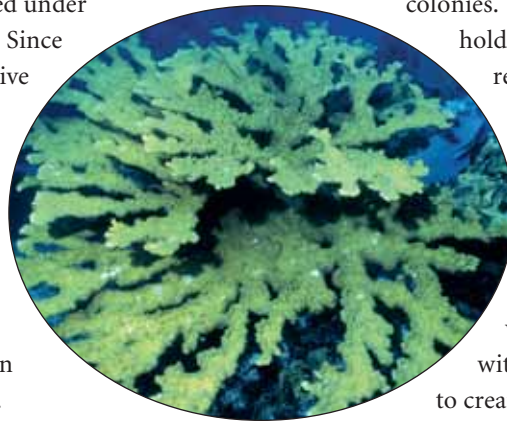
At the Zoo, Henley has been coaxing the coral larvae to settle onto special tiles in a 90-gallon, saltwater tank outfitted with high-wattage lights and a custom-built surge device that mimics

the movement of the surf. From the original 12,000 gametes, only 158 larvae have developed to settle on the tiles, forming millimeter-sized polyps that may eventually grow into thriving colonies. The small percentage of elkhorn taking hold as polyps underscores the difficulty of rearing such species in captivity.

"We achieved some important milestones this year, including learning more about the larvae-rearing process, and we were able to cryopreserve—freeze, store and thaw—coral sperm," Hagedorn says.

Hagedorn, a pioneer in the cryopreservation of coral sperm and eggs, is working with the Sexual Coral Reproduction Program to create a genome resource bank to help preserve the elkhorn's genetic diversity. Preserving the elkhorn's existing genetic diversity is essential to giving this coral the best possible chance of survival following reintroduction to its natural habitat in the future.

—Sarah Taylor



**Elkhorn coral in the Florida Keys (Photo courtesy of the National Oceanic and Atmospheric Administration)**

## Global Earth Observatories are a critical tool for monitoring carbon emissions

To better understand the role that the world's forests play in sequestering and releasing atmospheric carbon and how this process is linked to global climate change, the Smithsonian Tropical Research Institute Center for Tropical Forest Science is planning to expand the number of forest research plots it maintains around the world under its Global Earth Observatories program.

At present, the Smithsonian maintains some 20 forest plots in 15 tropical countries in Latin America, Africa and Asia, and two plots in the temperate United States. Under this new initiative, the number of forest plots would be expanded by as many as 12 in five to 10 new countries. The Tropical Research Institute's first large-scale forest research plot was established in 1980 on Barro Colorado Island in the Panama Canal. Every free-standing tree in this 120-acre area with a diameter at breast height of at least 1 centimeter was

tagged, measured, mapped and identified by species. A census is conducted on the plot every five years. The sixth census was completed in 2006.

Despite a belief that rising amounts of atmospheric carbon dioxide being added



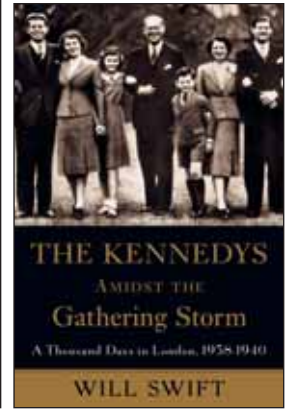
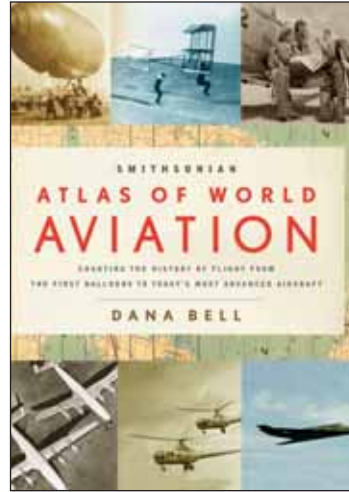
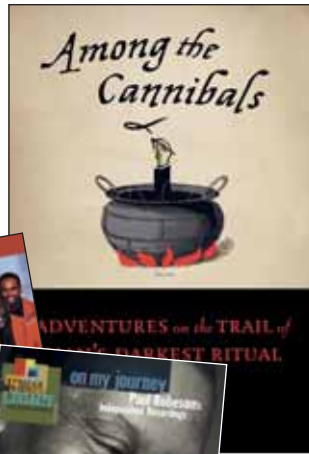
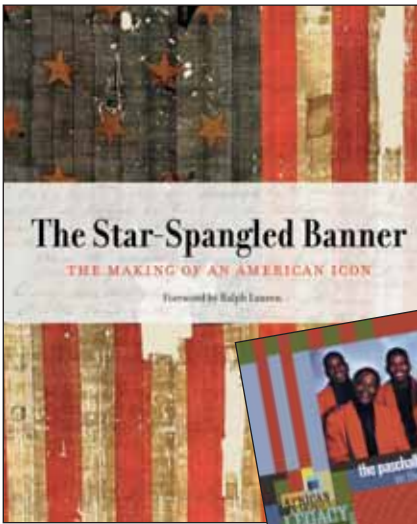
**A flowering guayacan tree on Barro Colorado Island (Photo by Chelina Batista)**

to the atmosphere by human activity would have a growth-boosting "fertilizer effect" on tropical plants, studies of Global Earth Observatory forest plots in

Panama and Malaysia have revealed a decrease in the growth rate of tropical trees in recent years. This finding suggests complex interactions between carbon dioxide enrichment, global temperature and tree growth, and offers a warning about the rate at which the world's forests can absorb atmospheric carbon.

To fully assess the impact of global climate change on forests and the role that forests play in absorbing and holding carbon at local, regional and global scales, more Forest Dynamics Plots are needed in both tropical and temperate regions. Long-term analysis of global forests can fill gaps in our knowledge, and data collected from the Global Earth Observatory network of forest plots will be critical for modeling carbon dynamics in the future. It also can provide a direct measurement of the effectiveness of efforts to reduce carbon emissions.

—John Barrat



**Reinventing Gravity: A Physicist Dares to Challenge Einstein**, by John W. Moffat (Collins, 2007, \$27.95). A bold revision of one of the most successful theories of all time: Einstein's theory of relativity.

**How Math Explains the World: A Beginner's Guide to the Power of Numbers, From Car Repair to Modern Physics**, by James D. Stein (Collins, 2007, \$24.95). The story of how math weaves the world together and the unexpected ways discovery leads to innovation.

**Contributions to Zoology, Number 625, A Revision of the New World Plant-Mining Moths of the Family Opostegidae (Lepidoptera: Nepticuloidea)**, by Donald R. Davis and Jonas R. Stonis (Smithsonian Institution Scholarly Press; Nov. 13, 2007; 212 pages, 522 figures). Systematics, morphology and distribution for the 91 species and two sub-species of New World Opostegidae.

**Among the Cannibals: Adventures on the Trail of Man's Darkest Ritual**, by Paul Raffael (Collins, 2007, \$25.95). A mix of armchair travel, history and an anthropological look at cannibalism.



**The Star-Spangled Banner: The Making of an American Icon**,

by Lonn Taylor with Kathleen Kendrick and Jeffrey Brodie (Collins, 2007, \$29.95). The story of the flag that inspired the national anthem and became an unparalleled national treasure.

**The Kennedys Amidst the Gathering Storm: A Thousand Days in London, 1938-1940**, by Will Swift (Collins, 2007, \$26.95). A dramatic look at Ambassador Joseph Kennedy and his family's years in England.

**Smithsonian Atlas of World Aviation: Charting the History of Flight From the First Balloons to Today's Most Advanced Aircraft**, by Dana Bell (Collins, 2007, \$39.95). An oversized, full-color book filled with the greatest stories in aviation history that offers a unique look into the complete world history of flight.

**On My Journey: Paul Robeson's Independent Recordings** (Smithsonian Folkways Recordings, 2007, \$15). Recorded on his own Othello label in the 1950s, Robeson's voice rings out in these

traditional spirituals and folk melodies.

**On the Right Road Now, The Paschall Brothers** (Smithsonian Folkways Recordings, 2007, \$15). Silken voices, intricate harmonies and divinely inspired passion mark the sound of this classic Virginia Tidewater quartet.

**The Country Gentlemen: Going Back to the Blue Ridge Mountains** (Smithsonian Folkways Recordings, 2007, \$15). This reissue of the Country Gentlemen's 1973 album catches the band—Charlie Waller, John Duffey, Eddie Adcock and Tom Gray—in its prime.

*Books listed on pages 14 and 15 can be ordered through online book vendors or purchased in bookstores nationwide. Contributions Series volumes are free online at the Web address [www.sil.si.edu/smithsoniancontributions](http://www.sil.si.edu/smithsoniancontributions), and print versions can be requested by e-mail to [schol.press@si.edu](mailto:schol.press@si.edu).*

*Recordings can be ordered from Smithsonian Folkways Mail Order, Smithsonian Folkways Recordings Dept. 0607, Washington, D.C. 20073-0607. To order by phone, call (800) 410-9815 or (202) 275-1143.*

## *Do All Indians Live in Tipis? Questions & Answers from the National Museum of the American Indian*

(Collins, 2007, \$14.95)

Is it true that Indians sold Manhattan for \$24 worth of beads and trinkets?

According to the new book *Do All Indians Live in Tipis? Questions & Answers from the National Museum of the American Indian*, that 1626 “exchange” was a misunderstanding between Dutch settler Peter Minuit and a group of Indians who did not believe that land could be privately owned. The Indians also did not realize the Dutch meant to hold the island of Manhattan for their exclusive use.

The \$24 sale of Manhattan is an example of a persistent popular myth based loosely on fact. It represents one of the many common misconceptions about American Indians that perpetuate a distorted stereotype.

With the publication of *Do All Indians Live in Tipis?* by the Smithsonian’s National Museum of the American Indian, the book’s authors are seeking to dispel some of these myths and address in plain language their fallacies.

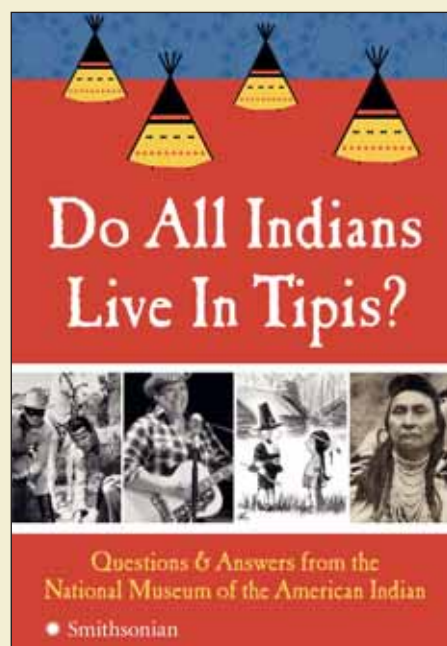
Leaders from many American Indian tribes collaborated on this 240-page work—which contains dozens of images, from archival photographs to political cartoons and TV stills—to give honest answers to dozens of questions. The authors take on all queries—from the boldly insensitive to the well-informed—judiciously and with a sense of humor.

For the most part, the questions in the book originated from letters, e-mails,

phone calls and queries by visitors to the American Indian Museum’s building in Washington, D.C., and its George Gustave Heye Center in lower Manhattan.

“Few groups have been as stereotyped as Native North Americans,” W. Richard West Jr. (Southern Cheyenne), director of the museum, writes in the book’s foreword. “From savage to Noble Savage, stoic to scalper, proto-environmentalist to casino millionaire, the image of Indians in American life has been subject to persistent mainstream distortions for 500 years.”

The 100 questions thoughtfully an-



swered in *Do All Indians Live in Tipis?* are organized under several headings. For example, under “Popular Myths” is the question, Was Tonto a real Indian?

The character of Tonto was portrayed by actor Jay Silverheels in “The Lone Ranger” television series of the 1950s. The book reveals that Silverheels was a successful actor and a real Indian—a member of the Mohawk tribe. But Tonto’s pidgin English, buckskin garb and submissiveness on the television program were not so authentic.

Why do American Indians run casinos? Do Indians have to pay taxes? and What happens to the revenue from Indian casinos? are three questions explored under the heading “Sovereignty.” The “Ceremony and Ritual” section includes such questions as Did any Indians practice cannibalism? and What did Indians really smoke in those peace pipes? In “Origins and Histories,” readers learn the answers to Where did Indians come from? Did Europeans purposely use smallpox to kill Indians? What happened to white people captured by Indians? and Did Native Americans own slaves?

A number of Native American writers provided the detailed, factual answers for this book. They include Mary Ahenakew (Cherokee), Stephanie Betancourt (Seneca), Miranda Belarde-Lewis (Tlingit/Zuni), Jennifer Erdrich of Turtle Mountain Chippewa descent, Liz Hill (Red Lake Band of Ojibwe), Nema Magovern (Osage), Rico Newman (Piscataway/Conoy), Arwen Nuttall (Cherokee), Edwin Schupman (Muscogee), Georgetta Stonefish Ryan (Delaware) and Tanya Thrasher (Cherokee Nation of Oklahoma).

Five hundred years of misinformation and ignorance of Native people “can be disheartening to confront,” West observes. “I, and my Native colleagues, am sometimes tempted to tune it out. Most often, however, we try to bring to the table a sense of humor, along with optimism in the ability of people to learn and change.”

*Do All Indians Live in Tipis?* should go a long way in helping Americans live up to that expectation. And in answer to the book’s title, not all Indians live in tipis. “Most American Indians live in contemporary homes, apartments, condos and co-ops, just like every other citizen of the 21st century,” the book reveals. “Most Indians have never used tipis at all.”

—Daniel Friend

## *Artist donates paintings of Christopher Reeve to National Portrait Gallery*

**D**espair, hope, strength and anger all simmer beneath his patient, otherworldly gaze. It's a startlingly new interpretation of the familiar face of actor-turned-activist Christopher Reeve. Large liquid blue eyes, angular chin, protruding brow—the portrait's perspective and masterful use of brush strokes, light and color give the artwork a penetrating intimacy.

It was painted in October 2004 by New York-based artist Sacha Newley, just months before Reeve died at age 52. Perhaps best known for his role in the "Superman" movies, Reeve became a powerful voice for people living with disabilities after a 1995 horse-riding accident left him paralyzed from the neck down.

Newley painted two close-up portraits of Reeve's face, as well as one full-length portrait of the actor strapped into his wheelchair. The paintings were completed from photographs and sketches taken by Newley during a visit to Reeve's house in Connecticut.

The wheelchair, Newley observes, "is an image both of Reeve's defeat and his heroic determination." All three portraits were recently donated to the Smithsonian's National Portrait Gallery by the artist. The wheelchair portrait is currently on view in the exhibition "Twentieth-Century Americans."



**Portraits of Christopher Reeve by Sacha Newley recently donated to the National Portrait Gallery**

"At the Portrait Gallery, we collect portraits based upon the importance of the subject," Brandon Fortune, a curator in the Department of Painting and Sculpture, explains. "Our historians made the determination to acquire these three portraits based on the fact that Christopher Reeve was a very important figure in our culture, not only as an actor but also primarily as an activist."

Reeve's advocacy efforts led to the passage of the 1999 Work Incentives Improvement Act, allowing people with disabilities to return to work and still receive disability benefits. He also served as chairman of the board of the Christopher Reeve Paralysis Foundation, which supports research to develop effective treatments and cures for paralysis caused by spinal cord injury and other central nervous system disorders. He lived his life according to his own definition of a hero: an ordinary individual who finds strength to persevere and endure in spite of overwhelming obstacles.

"The perfect acquisition for the Portrait Gallery is a vivid likeness of a prominent American by a talented artist," Fortune says. "This is one of those perfect acquisitions."

—John Barrat

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