



Photo by Jonny Keeling

Kristofer Helgen of the Smithsonian's National Museum of Natural History discovered a new species of giant rat while on a filmmaking expedition with the BBC to a remote rainforest in Papua New Guinea. This photo shows BBC cameraman Gordon Buchanan with the 3.5-pound rodent.

Annual Report to the Regents Fiscal Year 2009



Smithsonian Institution

Prepared by
Office of Policy and Analysis

Public Impact



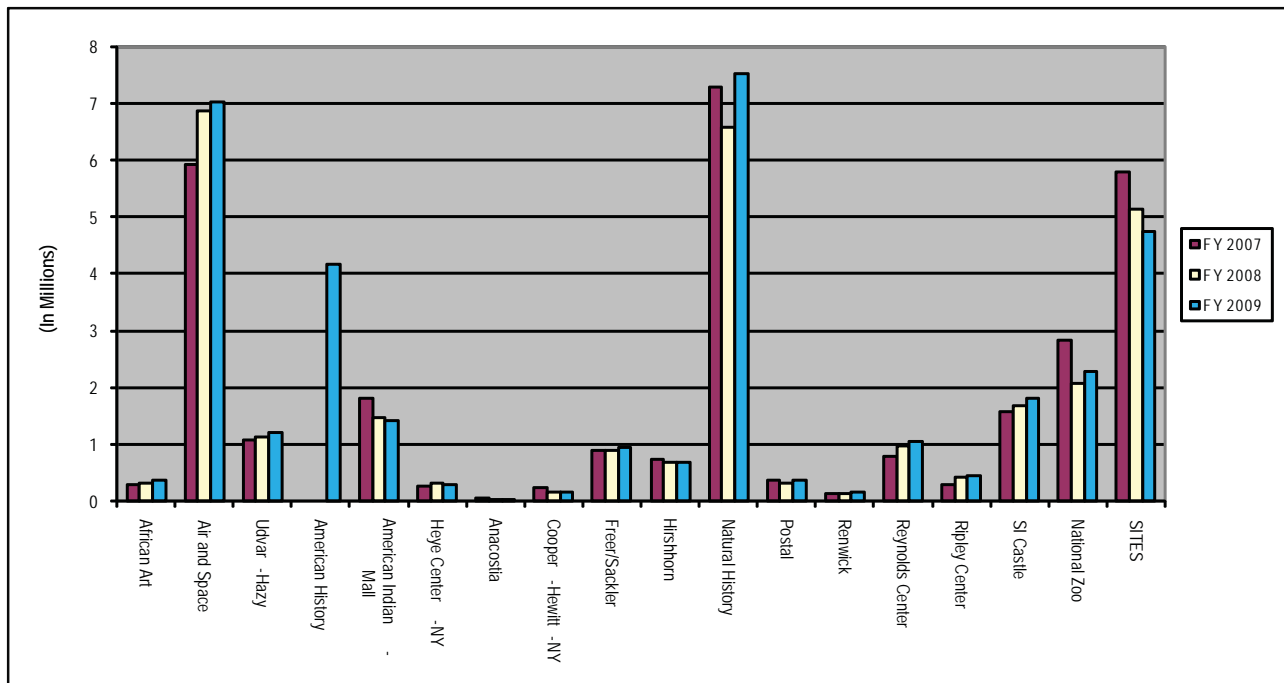
Visits to the Smithsonian

In fiscal year 2009, the Institution counted **30.0 million** visits to its museums in Washington, D.C., and New York, plus the National Zoo and Steven F. Udvar-Hazy Center—up almost **25 percent** from fiscal year 2008. This significant jump in visitation was largely attributable to the reopening of the National Museum of American History, which saw nearly 4.2 million visitors after being closed for extensive renovations throughout fiscal year 2008.

The Smithsonian also counted approximately **4.75 million** visits to 52 traveling exhibitions mounted by the Smithsonian Institution Traveling Exhibition Service. The exhibitions were on view in 697 venues in all 50 states plus the District of Columbia, Guam, and American Samoa. These figures include *The Mask of Lincoln*, a portfolio created for widespread distribution to schools, libraries, and museums across the country.

Visits to Smithsonian Museums and Traveling Exhibitions

Fiscal Years 2007, 2008, and 2009



Smithsonian Online

Smithsonian Web sites logged more than **188 million** visits in fiscal year 2009, up **9 percent** from the fiscal year 2008 figure. Among the online highlights for the fiscal year were the following:

- The **Encyclopedia of Life (EOL)**, a consortium including the Smithsonian that seeks to make extensive information on all known species easily accessible online through a single Web site, now

features 170,000 expert-reviewed species pages. The public used tools such as Flickr to upload over 30,000 images, videos, and other data into EOL by the public.

- The Smithsonian’s central online education portal **SmithsonianEducation.org** was selected as a Landmark Website on the inaugural list of the American Association of School Librarians’ Best Websites for Teaching and Learning.
- “**Ghosts of a Chance**,” an alternative reality game from the Smithsonian American Art Museum, attracted thousands of players online and hundreds to the finale at the Museum on October 25, 2008. It received coverage in several national news outlets and was an Official Honoree in the new Interactive Advertising category at the 13th Annual Webby Awards.
- “**The Secret in the Cellar**,” an interactive, graphic novel–style Webcomic companion to the National Museum of Natural History exhibition *Written in Bone*, was chosen by the U.S. Distance Learning Association to receive a 2009 Best Practices in Distance Learning Programming Gold Award.
- The Smithsonian Photography Initiative launched the second version of its *click! photography changes everything* Web site, which includes mini-documentaries on the power of photography featuring Smithsonian experts. The Initiative also launched a blog, *The Bigger Picture*.
- The Smithsonian Institution Scholarly Press and Smithsonian Institution Libraries completed the digitization of legacy volumes of the **Smithsonian Contributions Series**—a total of 1,072 volumes (more than 107,000 pages) of research in a wide range of subject areas—and posted PDFs online.
- The Archives of American Art’s **Oscar Bluemner Collections Online** Web site won the Fredric M. Miller Finding Aid Award of the Mid-Atlantic Archives Conference. The Archives Web site also won an Honorable Mention in the 2009 Best on the Web Awards sponsored by the Archives Next blog.



Exhibition Highlights

The National Museum of American History reopened on November 21, 2008, after its most extensive renovations in over 40 years. New highlights include a popular permanent exhibition, *The Star-Spangled Banner: The Flag That Inspired the National Anthem*, and the 3,500-square-foot Lemelson Hall of Invention, which made its debut with an exhibition titled *Invention at Play*.

The 2009 **Smithsonian Folklife Festival** (June 24–July 5), spearheaded by the Center for Folklife and Cultural Heritage, attracted over one million visitors. It included three major programs:

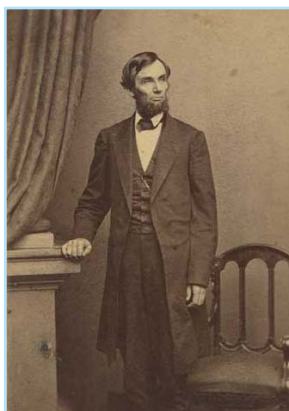
- *Wales Smithsonian Cymru*, showcasing traditional and contemporary Welsh culture;
- *Giving Voice: The Power of Words in African American Culture* (with the National Museum of African American History and Culture); and
- *Las Américas: Un Mundo Musical/The Americas: A Musical World* (with the Smithsonian Latino Center).



Among the new exhibitions at the National Museum of Natural History were *Written in Bone: Forensic Files of the 17th-Century Chesapeake* (opened February 7, 2009); *Orchids through Darwin's Eyes* (January 24–April 26, 2009), a collaboration between the Smithsonian Horticulture Services Division and U.S. Botanic Garden; and *Since Darwin: The Evolution of Evolution* (September 12, 2009–July 18, 2010) to mark the 200th anniversary of Charles Darwin's birth.

The Smithsonian American Art Museum offered a number of new exhibitions, including *1934: A New Deal for Artists* (February 27, 2009–January 3, 2010), in honor of the 75th anniversary of the first Federal program to support the arts, and *Georgia O'Keeffe and Ansel Adams: Natural Affinities* (September 26, 2008–January 4, 2009), which highlighted these two influential artists' appreciation of the natural world.

Among exhibition highlights at the National Air and Space Museum were *Painted Apollo: The Art of Alan Bean* (July 2009–mid-January 2010), which gives visitors a chance to see the moon through the eyes of an artist who walked on the lunar surface, and the opening of a public observatory on the southeast terrace of the Museum's Mall building.



The National Portrait Gallery featured several new exhibitions, including the much-discussed *One Life: The Mask of Lincoln* (November 7, 2008–July 5, 2009), which chronicled Lincoln's presidency and the use of photography to shape his identity as a national leader, and *Inventing Marcel Duchamp: The Dynamics of Portraiture* (March 27–August 2, 2009), which cast new light upon one of the most influential artists of the recent past.

The Panza Collection (October 23, 2008–January 11, 2009) at the Hirshhorn Museum and Sculpture Garden presented 39 important artworks from the late 1960s and early 1970s recently acquired by the Museum. Also at the Museum, *Louise Bourgeois* (February 26–May 17, 2009) presented a major retrospective of the works of a leading figure in 20th-century art.



The National Museum of African American History and Culture presented *Road to Freedom: Photographs of the Civil Rights Movement, 1956–1968* in the International Gallery of the Ripley Center (November 8, 2008–March 9, 2009) and *The Scurlock Studio and Black Washington: Picturing the Promise* (opened January 30, 2009) at the National Museum of American History.

The Freer and Sackler Galleries opened several new exhibitions, including *The Tsars and the East: Gifts from Turkey and Iran in the Moscow Kremlin* (May 9–September 13, 2009) and *Garden and Cosmos: The Royal Paintings of Jodhpur* (October 11, 2008–January 4, 2009), which showcased newly discovered paintings from the court collection of Marwar-Jodhpur.



Fritz Scholder: Indian/Not Indian, on display at both the National Museum of the American Indian's facility on the Mall and its George Gustav Heye Center in New York City (October 29, 2008–August 16, 2009), presented works from one of the most influential American artists of the 20th century. Also at the Museum, *Ramp It Up: Skateboard Culture in Native America* (June 12–September 13, 2009) celebrated American Indian skate culture.

At the National Museum of African Art, *Desert Jewels: North African Jewelry and Photography from the Xavier Guerrand-Hermès Collection* (October 8, 2008–January 11, 2009) offered striking displays of jewelry and photographs. The Museum also launched *Artful Animals* (July 1, 2009–July 2010), part of a collaborative project with performances,

storytelling, and other activities at the National Postal Museum, National Zoo, Discovery Theater, and National Museum of Natural History.

Staged Stories: Renwick Craft Invitational 2009 (August 7, 2009–January 3, 2010) at the Renwick Gallery celebrates the work of four artists whose work illuminates the shift in contemporary studio craft from functionality to narrative.

The Anacostia Community Museum presented *Jubilee: African American Celebration* (December 7, 2008–September 20, 2009), which explored a wide variety of distinctive African American holidays and celebrations through images, artifacts, traditional songs and music, and folklore.

Cooper-Hewitt, National Design Museum was the debut venue for the national tour of *Design for a Living World* (May 14, 2009–January 4, 2010), which features works that use sustainable materials. It also unveiled several other new exhibitions, including *Wall Stories: Children's Wallpaper and Books* (October 3, 2008–April 5, 2009) and *Fashioning Felt* (March 16–September 7, 2009).

The National Postal Museum exhibition *Delivering Hope: FDR and Stamps of the Great Depression* (June 9, 2009–June 6, 2010) shows how Franklin D. Roosevelt communicated with the American people through stamps, using them to convey messages of hope, optimism, and solidarity.

The Smithsonian Institution Libraries exhibition *Darwin's Legacy*, on display at the National Museum of Natural History (September 10, 2009–September 12, 2010), features the first edition of Charles Darwin's *On the Origin of Species* (1859), a book that changed the course of modern science.



Collections Highlights

New acquisitions this year included the following:

- The portrait that came to symbolize the historic campaign of **President Barack Obama** found a permanent home at the National Portrait Gallery. Shepard Fairey's iconic image was installed at the Gallery on January 17, 2009. The Gallery also unveiled portraits of **President and Mrs. George W. Bush** to wide acclaim.



- Jao Chu, a female **clouded leopard** at the National Zoo's Conservation and Research Center, gave birth to two male cubs on March 24, 2009. On January 10, 2009, the Zoo's 26-year-old **western lowland gorilla**, Mandara, gave birth to a female baby sired by the Zoo's 16-year-old male gorilla, Baraka.
- The Smithsonian American Art Museum acquired the estate archive of **Nam June Paik** (1932–2006), who became one of the most influential artists of his generation by transforming television and video into artists' media. The Museum also installed the monumental sculpture *Modern Head* by Roy Lichtenstein outside the Donald W. Reynolds Center for American Art and Portraiture.

In other collections news, the National Museum of Natural History celebrated the 50th anniversary of the gift of the **Hope Diamond** to the Museum. To mark the occasion, the Museum commissioned three new temporary designs for the 45-carat blue diamond, which is the centerpiece of the National Gem Collection.

Education, Event, and Program Highlights

The **three-day reopening festival** for the National Museum of American History began with a ribbon-cutting ceremony featuring former Secretary of State **Colin Powell** reading the Gettysburg Address. The festivities, which featured performances, living history interpreters, and other events, drew over 77,000 people.

As part of the January 2009 celebrations surrounding the inauguration of Barack Obama as the 44th President of the United States, a number of units featured special programs, including:

- The National Museum of American History's **Renewing America's Promise**, a celebration with music, gallery talks, book signings, and actors portraying great Presidents of the past;
- **Out of Many**, a multicultural festival of music, dance, and storytelling spearheaded by the National Museum of the American Indian in collaboration with the Center for Folklife and Cultural Heritage, National Museum of African American History and Culture, Smithsonian Latino Center, and Asian Pacific American Program; and
- The debut of the Smithsonian Institution Traveling Exhibition Service's unique mobile exhibition, *Abraham Lincoln: Self-Made in America*, housed in a 53-foot, double expandable trailer.

The world premiere of *Night at the Museum: Battle of the Smithsonian* was held in May 2009 at the Lockheed Martin IMAX Theater at the National Air and Space Museum. The red carpet gala was attended by stars Ben Stiller, Amy Adams, Hank Azaria, Robin Williams, Owen Wilson, and Ricky Gervais, and was covered by a worldwide media contingent. The film went on to become a box-office hit.

Using a broad range of Smithsonian resources, the **National Science Resources Center** continued to expand its work to transform K–12 science education in the United States and the world. Highlights include the following:

- Developing **16 instructional units** in the life, earth, and physical sciences that school districts and states can use to construct a comprehensive science program at the 6th–10th grade levels;
- Sponsoring its first **National Science Education Leadership Forum** for national and state leaders to showcase current research and best practices in high school science education;
- Broadening work with university faculty and high school teachers through the **Geneticists' Educator Network Alliance**; and
- Sponsoring the annual meeting of presidents of the **National Academies of Sciences** from Canada, the United States, and South America, resulting in the development of a plan to transform K–16 science education programs in South America.



In collaboration with the Smithsonian Tropical Research Institute and Museo del Canal Interoceánico de Panamá (a Smithsonian Affiliate), the Smithsonian Latino Center launched **Panama at the Smithsonian**, a series of 21 programs examining Panama's social, cultural, and natural heritage.

Educators from the National Portrait Gallery and Smithsonian American Art Museum worked with the Smithsonian Center for Education and Museum Studies to host the annual **Smithsonian Teacher's Night** event at the Reynolds Center, which drew more than 2,800 teachers.



Among the activities held by the National Air and Space Museum to commemorate the 40th anniversary of the Apollo 11 moon landing was the Museum's annual John Glenn Space Lecture, which featured Apollo 11 astronauts **Buzz Aldrin, Neil Armstrong, and Mike Collins**.

A memorandum of understanding between the National Zoo and **George Mason University** was finalized in October 2008 to develop a comprehensive conservation education program for undergraduates, graduates, and professionals.

Cooper-Hewitt, National Design Museum welcomed 9,000 visitors during its 3rd annual **National Design Week** in October 2008, the highlight of which was the 9th annual National Design Awards gala.

First Lady Michelle Obama, who served as honorary patron for the 10th National Design Awards program, hosted a White House ceremony for the 2009 award winners and finalists in July 2009.



Among the highlights for **Smithsonian Folkways Recordings** this year were the following:

- Two Folkways albums were nominated for Grammy awards: *From Now On: Michael Doucet and Amor, Dolor Y Lagrimas: Musica Ranchera: Mariachi Los Camperos de Nati Cano*. The latter was a winner when the awards were announced in February 2009.
- Several Folkways recordings earned **Independent Music Awards**: *Territory*, by Tony Trischka; *On The Right Road Now*, by the Paschall Brothers; and *Ayombe! The Heart of Colombia's Música Vallenata*, by various Colombian artists.
- Nine Folkways albums were cited in Tom Moon's popular new book *1,000 Recordings to Hear Before You Die: A Listener's Life List*.

In May 2009, the redesigned *Archives of American Art Journal* was nominated by the Society of Publications Designers for the 2008 best redesign in the Non-Newstand category, and won inclusion in *Step Into Design* magazine's 2009 list of "100 Trend-setting Projects."

The Society for History in the Federal Government awarded the **Thomas Jefferson Prize for Documentary History** to the Smithsonian Institution Archives' Joseph Henry Papers Project.

Outreach

Smithsonian Affiliations offers museums, cultural institutions, and educational organizations access to Smithsonian collections and resources. Through the Affiliations program, the Smithsonian fulfills its outreach mission of sharing artifacts, programs, and expertise with the nation and beyond.

- In fiscal year 2009, the Smithsonian welcomed **10 new Affiliates**. There are currently **165 Affiliates** in 41 states, the District of Columbia, Puerto Rico, and Panama.
- Smithsonian units loaned **413 artifacts** to **15 Affiliates**. There are now 1,077 Smithsonian artifacts on view at Affiliates across the nation.

The **Smithsonian Institution Traveling Exhibition Service (SITES)** continued to sustain a high level of outreach activity. In fiscal year 2009, SITES put the following new shows on the road:



- **NASA | ART: 50 Years of Exploration** launched a national tour at the Art League of Bonita Springs, Florida.
- **Lasting Light: 125 Years of Grand Canyon Photography** had its debut in Phoenix, Arizona.
- **The Kennedys | Portrait of a Family: Photographs by Richard Avedon** premiered at the Riverside Metropolitan Museum in Riverside, California, a Smithsonian Affiliate.
- The newest Museum on Main Street exhibition, **Journey Stories**, opened in small towns in Illinois, Kansas, Mississippi, North Dakota, and Oklahoma.

- **American Letterpress: The Art of Hatch Show Print** opened at the Experience Music Project in Seattle, Washington.
- **Bittersweet Harvest: The Bracero Program, 1942–1964**, a bilingual collaboration between the National Museum of American History and the Smithsonian Latino Center, debuted in Washington, D.C. Secretary of Labor Hilda Solis, whose father was a *bracero*, spoke at the press event for the show's premiere.



The **Smithsonian Center for Education and Museum Studies (SCEMS)** presented *Abraham Lincoln* and *Climate Change*, its first online Webinars in a new series funded by the Office of the Chief Information Officer. Both featured live, participatory sessions (now archived for replay) with curators and educators from multiple Smithsonian units. Teachers and learners from every state and dozens of foreign countries participated.

The **Smithsonian Associates (TSA)** continued to present a wide array of education programs in Washington, D.C., and around the country.

- More than 55,000 children and adults attended **Discovery Theater** performances on the National Mall and in schools, libraries, theaters, and community centers.
- **Smithsonian Summer Camp** celebrated its 40th year with over 60 camps and 1,100 children who explored the museums and exhibits around the National Mall.
- TSA brought Smithsonian experts to **17 communities in 10 states** for a variety of programs in local schools, museums, and other cultural organizations.
- Three-day **Teaching American History workshops** were conducted in school districts in Louisiana, New York, and Michigan.

In December 2008, in the Bhutanese capital of Thimphu, the Royal Government of Bhutan restaged the Center for Folklife and Cultural Heritage's 2008 **Folklife Festival program** on the culture of Bhutan.



The National Zoo and the World Bank Group signed a memorandum of understanding to launch the **Global Tiger Initiative** to restore wild tiger populations. The Zoo also joined seven other organizations to form the **Panama Amphibian Rescue and Conservation Project**, which aims to save amphibians from the brink of extinction in the eastern region of Panama, an area rich with amphibian species.

The **Encyclopedia of Life (EOL)** signed a memorandum of understanding with the Chinese Academy of Sciences to initiate a regional EOL in China, bringing the number of regional EOLs to three. Discussions on other regional projects are under way in Central America, the Middle East, Indonesia, and South Africa.

In February 2009, the National Museum of Natural History welcomed participants from Brazil, Colombia, the Dominican Republic, Ecuador, Panama, Suriname, Uruguay, and Venezuela to its **Collections Management Training Program** for Latin American and Caribbean museum professionals.

In April 2009, the Smithsonian Accessibility Program, in partnership with the John Heinz History Center, an Affiliate in Pittsburgh, hosted more than 350 students at **Ability Pittsburgh**, an event modeled on the 2007 Individuals with Disabilities Education Act program at the National Air and Space Museum.



A new 2,500-square-foot interactive traveling exhibition created by educators and scientists at the Smithsonian Astrophysical Observatory, ***Black Holes: Space Warps and Time Shifts***, opened on June 21, 2009, at the Boston Museum of Science. It began a three-year national tour in September 2009.

In June 2009, Deputy Under Secretary for Science Scott Miller and Secretary Clough visited the **Mpala Research Center in Nairobi, Kenya**, to meet with Kenyan partners and to give the Secretary a first-hand glimpse of the world-class research being done by Smithsonian scientists and their collaborators.

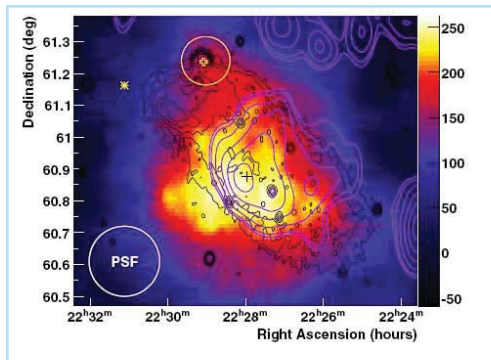
The Freer and Sackler Galleries launched **Asia After Dark**, an after-hours series designed to engage a new generation of young professional museumgoers and donors. The first two events on June 4 and September 3, 2009, were well-attended and garnered an exceptional amount of media attention.

Scholarship

Science Units

Smithsonian Astrophysical Observatory (SAO)

In fiscal year 2009, SAO scientists published **401 articles in peer-reviewed journals**, with another 558 articles in non-peer-reviewed journals, books, and conference proceedings. SAO research was the subject of 15 articles in *Nature* and 12 in the *New York Times*.



Gamma rays are the most energetic form of electromagnetic radiation known. SAO astronomers have used VERITAS (Very Energetic Radiation Imaging Telescope Array System), an array of four 12-meter telescopes at the Fred L. Whipple Observatory in Arizona, to obtain an image of gamma ray emission that provides deeper understanding of these rays' origins.

Dark energy is the name given to the mysterious process that drives the outward acceleration of the universe. By studying distant clusters of galaxies using the Chandra X-

ray Observatory administered by SAO, astronomers have provided the first direct evidence for cosmic acceleration since the original discovery of dark energy.

SAO's Submillimeter Array in Hawaii has brought a new level of precision to the study of **circumstellar disks**, the material surrounding young stars that have the potential to be converted into planets. With it has come a deeper understanding of how planets form.

SAO astronomers' high-precision measurements of the **Milky Way** have demonstrated that our galaxy is about 50 percent larger than had been believed, implying that it is rotating faster than previously thought and that the likelihood of collisions with other galaxies is greater than suspected.

National Zoological Park (NZIP)

NZIP scientists produced **114 publications** in fiscal year 2009, including 103 peer-reviewed journal articles (21 of which appeared in high-impact journals), five book chapters, and two books.

Scientists at the Zoo's Conservation and Research Center (CRC) successfully performed an artificial insemination on a **white-naped crane**. The resulting female chick is one of the most genetically valuable cranes in the North American Species Survival Program.



In May 2009, Dr. JoGayle Howard conducted five artificial inseminations on **black-footed ferrets** at the CRC using cryopreserved semen that was frozen 10–20 years ago. This resulted in the birth of a genetically valuable litter.

In June 2009, a group led by NZIP's Melissa Songer completed a highly successful **Przewalski's horse**–collaring mission in China, deploying satellite collars on four family groups that are being released from a new site in the Kalameili Nature Reserve.

National Air and Space Museum (NASM)

The second **Messenger Mission** flyby of Mercury on October 6, 2008, returned more than 1,200 images of a side of the planet not previously seen by spacecraft. Sarah Andre and Tom Watters of NASM's Center for Earth and Planetary Studies (CEPS) are involved in Messenger data analysis.

CEPS tallied **41 peer-reviewed publications** in fiscal year 2009, four of which were published in the high-impact journals *Science* and *Nature*—including a cover story in the May 2009 issue of the former.

The Division of Space History published **six new books** (plus four new editions), while the Division of Aeronautics published **five new books**.

Roger Launius of NASM's Division of Space History won the American Astronautical Society's 2009 John F. Kennedy Astronautics Award for his "significant and impressive contributions to the enterprise of space exploration, both as an author and a positive influence on the public's understanding of the history of and rationale for today's space programs."



Smithsonian Tropical Research Institute (STRI)

Carlos Jaramillo and his colleagues discovered a fossil record of the "world's largest anaconda" (*Titanoboa cerrejonensis*) in Cerrejón, Colombia, publishing their results in *Nature*. The snake, which lived about 58–60 million years ago, reached 13 meters in length and weighed more than a ton.

STRI's **Latin American Plant Initiative (LAPI)** held its second annual meeting in Buenos Aires in November

2008. More than 138 botanists and bioinformatics specialists attended, representing 93 institutions and 44 countries.

Several STRI scientists were recognized for professional excellence:

- In January 2009, **Dolores R. Piperno**, a STRI-NMNH archaeologist, received the Pomerance Award for Scientific Contribution to Archaeology from the Archaeological Institute of America.
- Staff scientist **William F. Laurance** and research associate **Thomas E. Lovejoy** won the inaugural BBVA Foundation Frontiers of Knowledge Award in Ecology and Conservation Biology.
- Staff scientist **Stephen P. Hubbell** received the Eminent Ecologist Award from the Ecological Society of America.

National Museum of Natural History (NMNH)

During fiscal year 2009, NMNH-based scientists authored or coauthored **479 publications**, of which 200 appeared in high-impact scientific journals.



Kristofer Helgen of the Smithsonian's National Museum of Natural History discovered a **new species of giant rat** while on a filmmaking expedition with the BBC in Papua New Guinea. Among the other potentially new species discovered on the expedition were approximately 16 species of frogs, one species of gecko, three species of fish, and 20 species of insects and spiders.

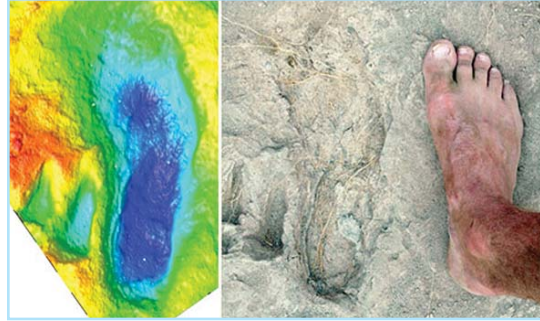
Using 200-million-year-old fossil leaves collected in Greenland, a team of researchers from NMNH, Oxford, and University College Dublin unearthed evidence of a **sudden collapse in plant**

biodiversity in the distant past, which raises new concerns about global warming. A likely culprit for this collapse, as reported in *Science*, was a relatively small rise in carbon dioxide.

The first results of the **Global Mammal Assessment**, a five-year effort to review the biology and conservation status of all mammal species worldwide, were summarized in an article published in *Science*. Among the coauthors were NMNH's Kristopher Helgen and Louise Emmons.

The new book *Flagship of a Fleet: A Korea Gallery Guide*, by Christopher Lotis and Paul Michael Taylor of the Anthropology Department, documents objects on display in the NMNH Korea Gallery.

A discovery of **1.5 million-year-old early human footprints**, recently described in *Science*, was made in the region of northern Kenya where NMNH paleobiologist Kay Behrensmeyer first found a fossilized trail of early human footprints in 1978. The new footprints indicate a fully bipedal gait, a long stride, and an arch much like that of the modern human foot.



Museum Conservation Institute (MCI)

In fiscal year 2009, MCI worked on **180 projects** with 38 Smithsonian museums, research centers, and offices, as well as the FBI, National Gallery of Art, Getty Conservation Institute, Library of Congress, National Park Service, U.S. House of Representatives, U.S. Senate Office of the Curator, U.S. Capitol, Walters Art Gallery, and Folger Shakespeare Library.

MCI researchers produced **26 publications in peer-reviewed journals**, plus three books and catalogues, 13 book chapters, and two edited books.



Using a new approach to surface imaging called **Reflectance Transformation Imaging (RTI)**, MCI staff helped decipher inscriptions on a unique stone tablet dating from the earliest English occupation of Jamestown in about 1600.

MCI is using non-destructive techniques to examine the **Janssen Shakespeare Portrait**, believed to be a 1610 work that was subsequently doctored to reflect the playwright's appearance in later life. These will yield information for dating the painting and its alterations without damaging or even touching the work.

MCI scientists, working with the National Zoo, National Museum of Natural History, Federal Aviation Administration, and National Transportation Safety Board, analyzed feather remains from the **January 2009 US Airways bird strike**. The results will help wildlife professionals develop techniques to reduce the risk of such collisions in the future.

Smithsonian Environmental Research Center (SERC)

SERC scientists published more than **110 papers in peer-reviewed journals and books** in January–September 2009, averaging an annual rate of 6.8 papers per lead scientist.

SERC has reported a **new invasive species** in San Francisco Bay—an algal kelp species from the western Pacific, *Undaria pinnatifida*. Scientists at SERC's satellite laboratory in Tiburon, California, were quoted in a story in the *New York Times* on the new invasion.

Microbial ecologist Cindy Gilmour has been awarded a two-year, \$900,000 contract for research on **mercury movement and accumulation** in coastal ecosystems in Maine.

Landscape ecologists Kathy Boomer, Tom Jordan, and Don Weller published a series of papers discussing **nutrient and sediment discharges** from Chesapeake Bay watersheds as major sources of environmental problems in the Bay. SERC scientists have also developed landscape models that greatly improve upon existing models' success in predicting such discharges.



Other Science Research

Smithsonian at the Poles, a symposium sponsored by the Office of the Under Secretary for Science with support from the National Science Foundation, was convened to celebrate the fourth International Polar Year. The proceedings, *Smithsonian at the Poles: Contributions to International Polar Year Science*, highlight contributions to polar research from the Smithsonian as well as collaborating organizations.

Art Units

Louise Cort, David Rehfuss, and George Williams of the **Freer and Sackler Galleries** led a worldwide Webinar on the ceramics of southeast Asia, which drew nearly 100 participants from as far away as India and Cambodia. The Galleries also hosted a symposium on medieval Japanese religious and narrative painting, organized in conjunction with the Sackler Gallery exhibition *The Tale of Shuten Doji*.



The **Archives of American Art** published *Speaking of Art: Selections from the Archives of American Art's Oral History Collection, 1958–2008* and cosponsored (with the City University of New York) a symposium on “Contemporary Art and the Archive” in New York City.

To complement its exhibition *One Life: The Mask of Lincoln*, the **National Portrait Gallery** presented a symposium consisting of four lectures that examined aspects of Lincoln and his times. Three books from Gallery scholars came out: *Inventing Marcel Duchamp: The Dynamics of Portraiture*, edited by Anne Collins Goodyear and James W. McManus; *Reflections/Refractions: Self-Portraiture in the Twentieth Century*, edited by Wendy Wick Reaves; and *Faces of the Frontier: Photographic Portraits from the American West, 1845–1924* by Frank H. Goodyear III.

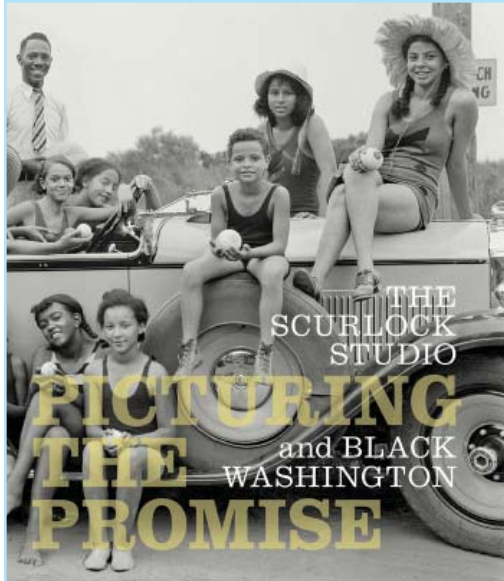


Cooper-Hewitt, National Design Museum published catalogues for its exhibitions *Fashioning Felt* and *Design for a Living World*.

A volume coauthored by Christine Mullen Kreamer of the **National Museum of African Art**, *Inscribing Meaning: Writing and Graphic Systems in African Art*, was recommended by the *New York Times's* art critic Holland Cotter in the newspaper's 2008 Holiday Guide as “art history for a globally tuned-in world.”

The **Hirshhorn Museum and Sculpture Garden** published *The Panza Collection*, a catalogue of artwork from the collection of Count Giuseppe Panza di Biumo.

Smithsonian American Art Museum staff gave more than 50 lectures, workshops, and panel discussions on scholarly and professional topics, and published three books: *1934: A New Deal for Artists*, by Ann Prentice Wagner; *Staged Stories: Renwick Craft Invitational 2009*, by Kate Bonansinga; and *Studio Furniture of the Renwick Gallery: Smithsonian American Art Museum*, by Oscar Fitzgerald.



History and Culture Units

The **National Museum of African American History and Culture** presented “1968 and Beyond: A Symposium on the Impact of the Black Power Movement on America.” Scholars from the Museum and the National Museum of American History contributed to *The Scurlock Studio and Black Washington: Picturing the Promise*, which was selected by *Booklist* as one of the 10 best black nonfiction titles of 2009 and nominated for the Smithsonian’s Scholarly Publication Award.

The **National Museum of the American Indian** Publications Department released five new titles in 2009: *The Land Has Memory*; *Most Serene Republics: Edgar Heap of Birds*; *Mother Earth, Father Skyline* (revised version); *NMAI Souvenir Book* (Spanish translation); and *IndiVisible: African-Native American Lives in the Americas*. The

Museum also hosted “Mother Earth: Confronting the Challenge of Climate Change,” a symposium exploring how indigenous peoples are responding to climate change. The Museum’s Heye Center hosted the symposium “Indian/Not Indian: Native Identity in the 21st Century” in collaboration with New York University and the Public Theater.

National Museum of American History scholars produced 48 print publications in fiscal year 2009, in addition to engaging in numerous other scholarly activities such as presentations and panel appearances. Among the highlights were Pete Daniel’s presidential address to the Organization of American Historians and Bart C. Hacker’s editing of “The Social History of Military Technology,” a special issue of *ICON: Journal of the International Committee for the History of Technology*.

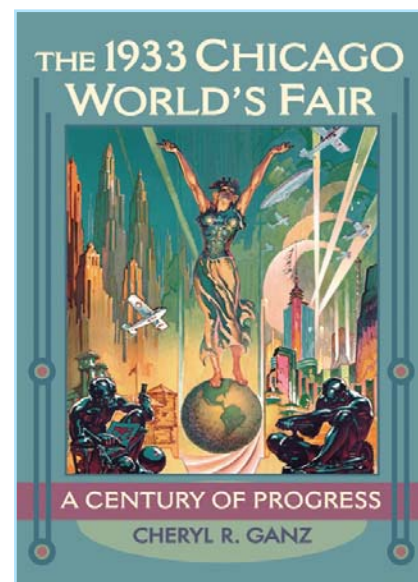
Marcel Chotkowski LaFollette, a research associate of the **Smithsonian Institution Archives**, published the book *Science on the Air: Popularizers and Personalities on Radio and Early Television*, based largely on the Archives’ collection of records of the Science Service.

Franklin Odo, director of the **Smithsonian Asian Pacific American Program**, is completing a book on Japanese immigrant folksongs of the late 19th and early 20th centuries. These “holehole bushi” were stark commentaries on life and work on Hawaii’s sugar plantations.

The **Smithsonian Center for Folklife and Cultural Heritage’s** Daniel Sheehy published “From Grants to Grammys: Leveraging Cultural Energy” in *Mid Atlantic Forum*, and the Center’s Jim Deutsch wrote an article for *The Jim Crow Encyclopedia* and penned a review that was published in the December 2008 issue of *Choice: Current Reviews for Academic Libraries*.

To launch of its Community Documentation Center initiative, the **Anacostia Community Museum** is undertaking a documentation project of religious institutions in Washington, D.C.’s Ward 8.

The 1933 Chicago World’s Fair: A Century of Progress by Cheryl Ganz, chief curator of philately at the **National Postal Museum**, was published by the University of Illinois Press.



Management Excellence

Leadership Milestones



David M. Rubenstein, Cofounder and Managing Director of The Carlyle Group, was appointed a citizen member of the Board of Regents in May 2009. Rubenstein also serves on the boards of the Johns Hopkins University, Lincoln Center for the Performing Arts, Kennedy Center for the Performing Arts, Dance Theatre of Harlem, and Duke University, as well as the boards of the Smithsonian's National Museum of American History and National Museum of Natural History.



France A. Córdova, President of Purdue University in Indiana, was appointed a citizen member of the Board of Regents in September 2009. Dr. Córdova is an internationally recognized astrophysicist, and a national leader in postsecondary education. She also serves on numerous state and national boards, including the Board of Trustees for Mayo Clinic and the National Science Board.



Eva J. Pell was named Under Secretary for Science, and will start in January 2010. She comes to the Smithsonian from Pennsylvania State University, where she was senior vice president and dean of the Graduate School, spearheading the development of cross-disciplinary centers for life sciences, materials, energy and the environment, social sciences, cyber science, and arts and humanities.

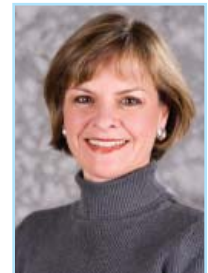
Alison McNally agreed in January 2009 to remain a permanent part of the Castle management team as Under Secretary for Finance and Administration. She had been serving as Acting Under Secretary since October 2007.



Johnnetta Cole became Director of the National Museum of African Art. She had been serving as Board Chair of the Johnnetta B. Cole Global Diversity and Inclusion Institute at Bennett College for Women, where she was President from 2002 to 2007. Previously, she served as Presidential Distinguished Professor at Emory University and as President of Spelman College.

Richard Koshalek became Director of the Hirshhorn Museum and Sculpture Garden. Previously he was President of the Art Center College of Design in Pasadena, California; before that, he served as Director of the Museum of Contemporary Art in Los Angeles.

Eduardo Díaz became Director of the Smithsonian Latino Center. Díaz previously served as Executive Director of the National Hispanic Cultural Center in Albuquerque, New Mexico—the largest Latino cultural center in the United States.





Judith E. Leonard became General Counsel in June 2009. She previously served as Vice President for Legal Affairs and General Counsel at the University of Arizona. Prior to this, she spent 10 years in Washington, D.C., at posts in the U.S. Department of Education and the Office of National Drug Control Policy.

Tom Ott was named President of Smithsonian Enterprises. Ott had been serving as Acting Chief Executive Officer of Smithsonian Enterprises since August 2007, during which time he oversaw a thorough reorganization of the unit formerly known as Smithsonian Business Ventures.



Information Technology

To complement the Smithsonian-wide Strategic Plan, strategic plans in two key areas of information technology were crafted by Smithsonian personnel in fiscal year 2009:

- A **Web and new media strategic plan** was finalized after gathering input from 55 units in a series of five moderated workshops and building on ideas generated at a “Smithsonian 2.0” conference.
- The final draft of a **digitization strategic plan** was submitted to the Secretary. It defines a mission and vision for digitization across the Institution, with strategic goals and accompanying objectives.

The development of the **Enterprise Digital Asset Net (EDAN)** is complete. EDAN provides a common set of Web services for accessing digital images and metadata, thus enabling increased reuse and reducing the strain on enterprise storage and backup requirements.

The Smithsonian implemented **Cisco MeetingPlace** so that staff may conduct virtual meetings from their computers, reducing the need to travel—whether across the Mall or across the country.

Visitors to Smithsonian Institution museums on the Mall now have cellular telephone coverage with the completion of the **Common Wireless Access System**. The project was funded by wireless cell phone providers AT&T, Verizon Wireless, and Sprint/Nextel. T-Mobile, the last major carrier, recently confirmed that it will participate in the program as well.

Major Construction, Renovation, and Facilities Projects

Arts and Industries Building (AIB)

\$75 million estimated cost for roof and window replacement and structural upgrades

Current planning is focused on developing programmatic uses for AIB that will support the Institution’s Strategic Plan and fit the building’s architecture, history, and floor plan. In the meantime, planning for \$75 million in roof and window replacement, structural upgrades, and selective interior demolition is proceeding. An historic structure report and existing conditions investigation have been completed. Design of the roof and windows has begun, with construction to start in fiscal year 2010. Thanks to funding received through the American Recovery and Reinvestment Act, construction has begun on masonry repairs and interior demolition and hazmat removal.

National Museum of African American History and Culture

\$500 million total estimated project cost

In April 2009, the team of Freelon Adjaye Bond/SmithGroup was selected to design the newest Smithsonian museum from a field of six renowned architects. The selected architects will be under contract by the second quarter of fiscal year 2010, at which time the conceptual design of the museum building and second phase of the Environmental Impact Statement will begin. The new Museum is scheduled to open to the public in December 2015.



National Museum of American History, Kenneth E. Behring Center

Revitalization of west wing public space, package III: \$60 million total project cost

With the completion and reopening of the Museum's central core in November 2008, the focus of public space renewal will shift to modernization of the three floors of the west wing. A contract for this project with an architect/engineer firm was signed in September 2009, and schematic design began in November 2009. The Federal appropriation for design is approximately \$6 million in fiscal years 2009–2010, with multiyear construction funding in fiscal years 2011–2013.

National Zoological Park, Seal / Sea Lion Exhibit

\$40.0 million total estimated project cost

The Zoo's seal /sea lion exhibit, which dates from 1987, is in need of major revitalization to meet current standards of the U.S. Department of Agriculture and the Association of Zoos and Aquariums. Further, the pathway through the exhibit area is difficult for strollers and people with disabilities. In addition to bringing the facility into compliance with codes and standards for animal care and accessibility, this project will upgrade underground utilities. It received final design approvals from both the U.S. Commission of Fine Arts and the National Capital Planning Commission in 2009. A construction contract was awarded in September 2009. The non-capital, interpretive component of the project will be funded with \$1 million in Trust funds; the Federal capital component is approximately \$39 million, with multi-year construction funding in fiscal years 2009–2011.

National Zoological Park, Asia Trail II: Elephant Trails

\$52.4 million estimated total project and program cost

The second phase of the Asia Trail project will renovate the historic elephant house and enlarge yard space at a projected cost of \$52.4 million—\$37.6 million Federal (received in fiscal years 2006–2010) and \$14.8 million Trust. Construction began in March 2008 and is scheduled for completion in April 2011. Phase One is substantially complete, and the elephants will move into their new holding area (elephant barn) in early January 2010. Phase Two, including renovation of the Elephant Community Center, will commence after the elephants have acclimated to their new barn and a determination has been made about how to proceed with a new contractor, given the quality of the current contractor's performance.

National Zoological Park, General Services Building

\$28.4 million total estimated project cost

Design is continuing for structural repairs, fire-protection improvements, and safety upgrades at the Zoo's General Services Building, which houses vital functions (such as the animal nutrition commissary, FONZ merchandise warehouse, shops, and offices) that must remain operational throughout construction. The phased project will entail the permanent relocation of the vehicle maintenance branch to the Smithsonian's Suitland Collections Center and the temporary relocation of other units to swing space. Construction authorization request for a new vehicle maintenance facility in Suitland has been approved by the House and is currently under review by the Senate. Project design will be complete by April 2010, and structural renovation is expected to begin in 2012. Federal funding has been requested for fiscal years 2012–2014.

Donald W. Reynolds Center for American Art and Portraiture

\$19.5 million total estimated project cost

By agreement with the National Capital Planning Commission, the Smithsonian will complete the renovation of the Reynolds Center with the reconstruction of the F Street stairs and the addition of landscaping and security. Fiscal year 2016 estimates for the associated costs are \$9.5 million in Federal funds and \$10.0 million in Trust funds.

Cooper-Hewitt, National Design Museum

\$57 million total estimated project cost

Transfer of collections to a storage facility was completed in March 2009. Design for the Fox-Miller townhouses renovation is complete, but questions about scope and budget have delayed the project award, with construction now expected to start in January 2010. Design for the Carnegie Mansion renovation is scheduled for completion in March 2010, with its construction contract expected to be awarded in March 2011. Of the \$21 million requirement for Federal funds, \$2.9 million has been received and spent on design and collections storage, \$1.7 million was appropriated in fiscal year 2009 for the Fox-Miller work, and the balance is programmed in fiscal years 2011–2013. Of the \$36 million in required private funds, over \$28 million has been identified in gifts and pledges.

National Air and Space Museum—Steven F. Udvar-Hazy Center, Phase 2

\$80.9 million total project cost

Phase 2 of the Udvar-Hazy Center at Dulles International Airport is under construction. It will add 237,000 square feet of collections care space to the current facility, including a restoration hangar, storage and processing space, conservation laboratory, and archives. Completion is expected in mid-2011; total project costs include \$67.8 million Trust and \$13.1 million Federal.

Museum Support Center of the National Museum of Natural History, Pod 3

\$42.6 million total estimated project cost

In July 2008, the Smithsonian awarded a \$22.6 million construction contract for renovations to Pod 3 in Suitland, Maryland. The renovated Pod 3, on schedule for completion in March 2010, will provide a consolidated site for frozen, refrigerated, gas-preserved, and dry collections, allowing the Smithsonian to vacate leased properties and free up congested space in several museums. With 85 percent of construction completed in September 2009, more than \$15 million of shelving/racking, collections and

meteorite cases, and freezers are now being installed. Transfers of collections from the Mall are expected to be completed after July 2011; estimated moving costs are \$5 million.

Smithsonian Environmental Research Center, Mathias Replacement Laboratory Project

\$41.5 million total estimated project cost

The Smithsonian Environmental Research Center is eliminating unsafe trailers (which currently house 25 percent of its lab space and 65 percent of its office space), renovating and reconfiguring the



existing Mathias Lab, and creating replacement laboratories to meet nationally recognized standards. The 85,000 square-foot laboratory and support space will employ sustainable technologies and building materials that will yield substantial reductions in energy and maintenance costs. Schematic design was completed in September 2009, with final design completion scheduled for mid-2010. Construction is scheduled to commence in early 2011 and to be completed in 2013.

Permanent Physical Security Barriers

\$55 million total project cost

The first phase of construction of security barriers at the National Museum of Natural History is complete, and the final phase will be awarded for construction in fiscal year 2010. Construction of barriers for all sides of the National Museum of American History is complete except the south side, where it will be completed in spring 2010. Construction on security barriers for the Castle and Quadrangle is scheduled to start in fiscal year 2013. Design and construction of off-Mall barriers will follow in order of priority.

Smithsonian Tropical Research Institute, Gamboa Laboratory Facilities

\$19.1 million total estimated project cost

With the acquisition of 172.5 acres in Gamboa from the Republic of Panama in 2007, the Smithsonian Tropical Research Institute is proceeding with the replacement of existing laboratory and office facilities that have outgrown their space and would need major infrastructure adjustments to support modern terrestrial tropical science. A new facility on the Gamboa site, funded with \$15.67 million in Federal and \$3.46 million in Trust funds, will be dedicated to terrestrial science. Programming and design of the laboratory are under way, with the first construction procurement actions scheduled for fiscal year 2010.

American Recovery and Reinvestment Act of 2009 Projects

\$25.0 million total project cost

The American Recovery and Reinvestment Act, signed into law on February 17, 2009, provides \$25 million for urgently needed repair and revitalization projects throughout the Smithsonian that are not covered by anticipated fiscal year 2009 funding. Most of these projects involve safety/code compliance or sustainability and energy efficiency. By the end of fiscal year 2009, 22 of 23 project contract actions totaling \$20.78 million (more than 83 percent of the total) were under contract. The

award of the final contract in October 2009 completed these actions. Construction on all projects is scheduled to be finished by early fiscal year 2011. In compliance with the Act, the Smithsonian is reporting on jobs created and expenditure of funds.

Sustainability

Around the Smithsonian, 17 green building projects are in progress or planned. Thirty-two staff from the Office of Planning and Project Management and the Office of Engineering, Design and Construction (both within the Office of Facilities Engineering and Operations, or OFEO) have earned the distinction of becoming Leadership in Energy and Environmental Design (LEED)–accredited professionals, based on the internationally recognized rating system of the U.S. Green Building Council. In August 2009, OFEO published a Sustainable Buildings Implementation Plan that responds to a Federal environmental stewardship goal and identifies a path to greening 15 percent of the eligible Smithsonian building inventory by 2015. The plan focuses on earning LEED certifications not only for new construction and renovation projects, but also for existing buildings.