

Josh Carter of the Harvard-Smithsonian Center for Astrophysics was an author of a study in Science announcing the discovery of Kepler-16b, the first confirmed example of a circumbinary planet—a planet orbiting not one, but two stars.

Report to the Regents Fourth Quarter, Fiscal Year 2011

Prepared by
Office of Policy and Analysis

Broadening Access: Visitation Summary

In fiscal year 2011, the Smithsonian counted 29.2 million visits to its museums in Washington, D.C. and New York, plus the **National Zoological Park** and **Steven F. Udvar-Hazy Center**—very similar to the fiscal year 2010 figure of 29.9 million.

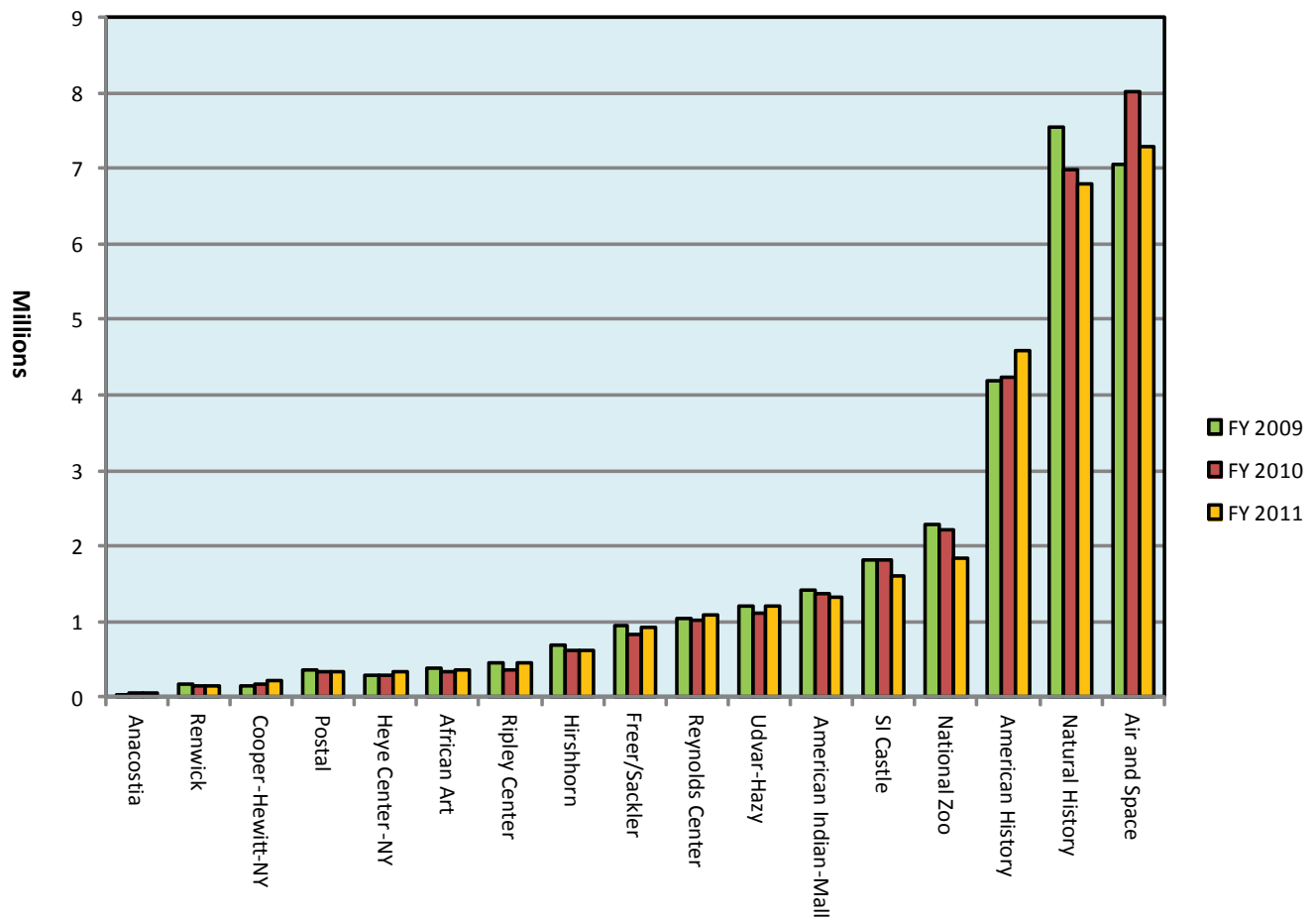
The Smithsonian Redesign project has identified “unique visitors” as the key Smithsonian-wide web visitation metric to be tracked going forward. In fiscal year 2011, the Smithsonian counted approximately 79 million unique visitors to its numerous websites. Because this metric differs from the web “visits” metric reported previously, this figure cannot be directly compared with the figures given in previous Reports to the Regents.



A visitor in the Butterfly Pavilion of the National Museum of Natural History

Visits to Smithsonian Venues and Traveling Exhibitions

Fiscal Years 2009, 2010, and 2011



Grand Challenges Highlights

Understanding the American Experience

Research

This quarter saw the publication of *The Jefferson Bible: Smithsonian Edition*, a full-color facsimile of Thomas Jefferson's unique work *The Life and Morals of Jesus of Nazareth*, a rearranged and edited version of the New Testament gospels selected from printed texts in English, French, Latin, and Greek. This book was created from high-resolution digital photographs of Jefferson's original; it includes his handwritten notes and an introduction by National Museum of American History curators Harry R. Rubenstein and Barbara Clark Smith.

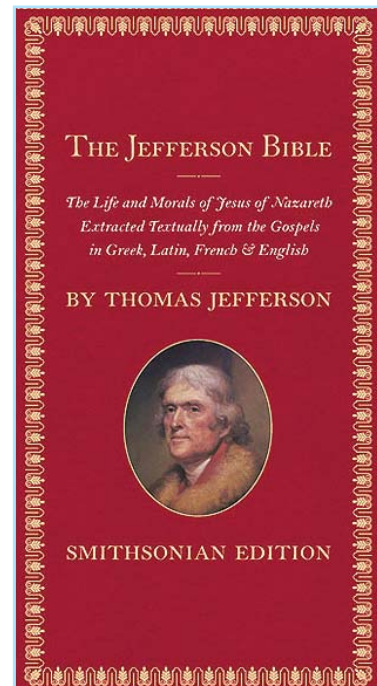
Unlike other ethnic minorities in the United States, American Indians are defined not solely by self-designation, but by Federal, state, and tribal laws that often trace their origins to archaic notions of biological race. The implications of this were addressed in a symposium at the National Museum of the American Indian, "Quantum Leap: Does 'Indian Blood' Still Matter?"

Award-winning biographer Meryle Secrest was the inaugural speaker at the Smithsonian American Art Museum's Clarice Smith Distinguished Lecture series. Her lecture, "Worlds Apart: Romaine Brooks and Amedeo Modigliani," was well-received by over 200 attendees.

The publications office of the National Museum of the American Indian issued the latest title in its NMAI Editions series, *Past, Present, and Future Challenges of the National Museum of the American Indian*, and reprinted the popular title *Living Homes for Cultural Expression: North American Native Perspectives on Creating Community Museums*.

Broadening Access

In 2002, Congress designated the National Museum of American History as the official repository for the material record of the September 11, 2001, terrorist attacks in New York, Virginia, and Pennsylvania. Objects, photographs, and documents related to the attacks are being permanently preserved in the museum's collections to help future generations comprehend these events. This year, the museum marked the 10th anniversary of the attacks with *September 11: Remembrance and Reflection*, a special short-term display of more than 50 objects from the three sites. Over 12,000 people viewed it in its nine-day run. To commemorate the occasion, the museum also hosted an online forum, "September 11: Conversations," which invited Americans to discuss how their lives have changed since that fateful day, and the Smithsonian Channel aired the program *9/11: Stories in Fragments*.



Crushed Brooklyn Squad 1 fire truck door from the 9/11 collections

The **National Museum of American History** also convened a two-day online teacher conference, “September 11: Teaching Contemporary History,” which counted over 4,000 registered participants from 500 sites across the country—the largest teacher professional development program ever at the museum.

The **National Air and Space Museum** turned 35 this year. On July 1, 1976, the museum welcomed the first visitors to its new building on the National Mall as part of the country’s bicentennial celebration. It quickly became the most popular museum in the world, and has had over 300 million visits since it opened. The museum celebrated this milestone with screenings of the popular IMAX movie *To Fly!* at 1976 prices (50 cents for adults, 25 cents for children); a book signing with museum curators Michael Neufeld and Alex Spencer, authors of *The Smithsonian National Air and Space Museum: An Autobiography*; the launch of a new website, “Celebrating 35 Years of Memories at the National Air and Space Museum”; and other special offerings.



The National Air and Space Museum: the world’s most popular museum

The **National Portrait Gallery** launched two new exhibitions in the fourth quarter:

- *One Life: Ronald Reagan* (July 1, 2011–May 28, 2012) opened to mark the centennial of President Reagan’s birth.
- *Portraiture Now: Asian American Portraits of Encounter* (August 12, 2011–October 14, 2012), a collaboration with the **Asian Pacific American Program**, is the Smithsonian’s first major showcase of contemporary Asian American portraiture; it features works by seven artists.

In July, the U.S. Postal Service launched a stamp to honor Owney, the stray dog that became the unofficial mascot of the Railway Mail Service in the late 19th century, and whose far-flung travels have inspired several children’s books. To mark the occasion, the **National Postal Museum** held a week-long festival of Owney-inspired family activities. More than 4,000 people visited the museum on the first day of the festival.



The **National Postal Museum** also launched the online microsite *The Art of the Stamp: Owney the Postal Dog*, which presents Bill Bonds’s original painting of Owney for the stamp, accompanied by six sketches that Bonds created as he developed the portrait and by images of five tags (chosen from among the many given to Owney on his travels) that appear in the background on the stamp.



The exhibition *The Great American Hall of Wonders* (July 15, 2011–January 8, 2012), organized by the **Smithsonian American Art Museum** and the U.S. Patent and Trademark Office, examines the 19th-century belief that the people of the United States shared a special genius for innovation. It received national media attention in the *New York Times*, the *Washington Post*, BBC Radio, BBC World News America, NPR’s Weekend Edition, Associated Press, and *Art Newspaper*, among other media venues.



Artist Sam Gilliam, Anacostia Community Museum Director Camille Akeju, and featured artist BK Adams at the opening of *Exercise Your Mynd*

Exercise Your Mynd: BK Adams I AM ART (August 22–November 27, 2011), the first exhibition in the series “Call and Response: Community and Creativity,” was on display at the **Anacostia Community Museum**. It featured the work of the artist Bryant (BK) Adams, who has attracted a broad and devoted following in the D.C. area.

The **George Gustav Heye Center of the National Museum of the American Indian** opened the exhibition *Time Exposures: Picturing a History of the Isleta Pueblo in the 19th Century* (September 17, 2011–June 10, 2012), which tells the story of life on the Isleta Indian Reservation in the 19th century through 80 photographs by prominent western photographers and artists.

The **National Museum of American History’s** *History Alive!* program featured two new interactive plays. *Time Trial: John Brown* placed visitors in the jury box to decide how history should remember this controversial figure, while *Am I a Pirate?* helped visitors separate myth from fact regarding North American piracy and privateering in the 18th century. More than 17,000 visitors took part.

The **Archives of American Art** exhibition *Little Pictures Big Lives* opened in the Lawrence A. Fleischman Gallery at the Reynolds Center (July 1–October 3, 2011). It explored an earlier era of photography, offering a selection of more than 100 images that provided an intimate look into artists’ lives.



Photo of John Scopes from the Smithsonian Institution Archives

The **Smithsonian Institution Archives** released a set of 25 portraits of figures from the famous State of Tennessee v. John Thomas Scopes trial of July 1925, which precipitated a nationwide debate over the teaching of Darwin’s theory of natural selection in public schools. These rare photos were offered for free to researchers and the public on the Smithsonian Flickr Commons.

In tandem with the publication of President Jimmy Carter’s new book, *White House Diary*, **The Smithsonian Associates** presented a program in which Carter reflected on his years at the White House in an interview with Ray Suarez of National Public Radio.

The **Smithsonian Latino Center** brought *American Sabor: Latinos in U.S. Popular Music* to the International Gallery of the Ripley Center (July 11–October 9, 2011). This exhibition focused on five centers of Latino popular music in America: New York City, Los Angeles, Miami, San Antonio, and San Francisco.

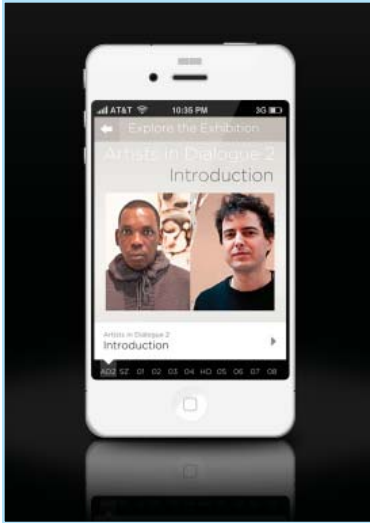
Valuing World Cultures

Research

A **Smithsonian Folkways** team traveled to Otavalo, Ecuador, to record ritual flute music of the Cotama Kichwa community, a musical tradition that was nearly erased by a cholera epidemic in the 1990s. Folkways will publish the recording in 2012.

A book by **National Museum of Natural History** anthropologist Adrienne Kaeppler, *Holophusicon—The Leverian Museum: An Eighteenth Century Institution of Science, Curiosity, and Art*, traces the fate of the Sir Ashton Lever collection, which included important objects from the voyages of Captain James Cook, after it was sold in 1806 in 7,000 lots.

The **Smithsonian Institution Libraries** and **Freer and Sackler Galleries** hosted the seminar “Understanding Chinese Rare Books,” led by Princeton University Chinese book scholar Soren Edgren. Librarians from Harvard University, the Library of Congress, University of California Los Angeles, and Columbia University were among the attendees.



Artists in Dialogue 2 app



Power/Play: China's Empress Dowager

Broadening Access

The **National Museum of African Art** opened the exhibition *Central Nigeria Unmasked: Arts of the Benue River Valley* (September 14, 2011–March 4, 2012), which explores the distinctive forms and functions of the area's subregional arts.

The **National Museum of African Art** also launched an app for iPhone and iPod Touch to accompany its *Artists in Dialogue 2* exhibition, “Smithsonian: Artists in Dialogue 2.” The first English-Portuguese bilingual app from the Smithsonian, it features video interviews with the artists, user-posted questions and comments for the artists, high-resolution artwork images, and more. The exhibition will run through June 2012.

Power/Play: China's Empress Dowager at the **Arthur M. Sackler Gallery** (September 24, 2011–January 29, 2012) features a series of photographic portraits, taken in 1903 and 1904, of China's Empress Dowager Cixi, the dominant political figure in the twilight years of the Qing dynasty. Thirty-six original glass-plate negatives from the **Freer and Sackler Galleries** archive form the basis of the exhibition.

Over 1,300 people participated in the July 23 “All Things Gullah” family day at the **Anacostia Community Museum**, which included arts and crafts activities, demonstrations, storytelling, live entertainment, and a marketplace featuring crafts by artisans from the D.C. area and the coastal regions of South Carolina, Georgia, and Florida.

Smithsonian Institution Libraries conservation librarians Vanessa Haight-Smith and Katie Wagner traveled to Port-au-Prince, Haiti, to assist with the Haiti Cultural Recovery Program. Their project focused on surface cleaning and re-housing the rare book collection from the *Bibliothèque Nationale d'Haiti*.

Smithsonian Folkways was selected for a list of “50 Best Music Blogs” by the website AudioProductionSchools.org.

The **Center for Folklife and Cultural Heritage** launched a new online exhibition, *Malian Bogolan*, focusing on artists from Mali who participated in the 2003 and 2011 Smithsonian Folklife Festivals.

The Smithsonian and China project, an initiative to establish partnerships between the Smithsonian and Chinese museums, received coverage in the *Art Newspaper* and *China Cultural Heritage Daily*, and on the

websites of the National Museum of China and the Hunan Provincial Museum. The project is directed by Alice Tracy and Daisy Yiyou Wang of the **Freer and Sackler Galleries**.

The **National Museum of African Art** celebrated its annual community day. This year's theme was "The Power of the Word"; the event featured music, dance, spoken word, art making, and a fashion show by Morgan State University's fashion design department.

Understanding and Sustaining a Biodiverse Planet

Research: Smithsonian Environmental Research Center (SERC)

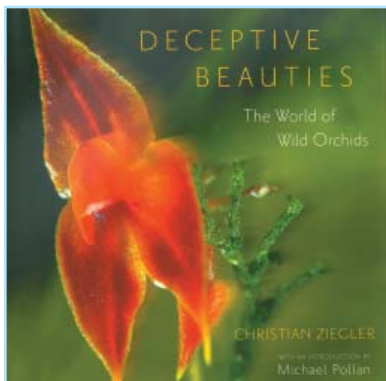
SERC researchers and interns discovered a northern snakehead fish (*Channa argus*) in Maryland's Rhode River. This is the first report in this area of this invasive species from eastern Asia, and may indicate a range expansion of the snakehead population. The introduction of northern snakeheads to an ecosystem may cause declines in local fish and other organisms, with potentially serious environmental and economic consequences.

A SERC team led by Jess Parker completed a tree census on a 16-hectare (40-acre) plot in Edgewater, Maryland, measuring every tree one centimeter or more in diameter—about 33,500 trees total. This census is one piece of the Smithsonian Institution Global Earth Observatories (SIGEO) project, a global network that tracks forest growth and climate change.

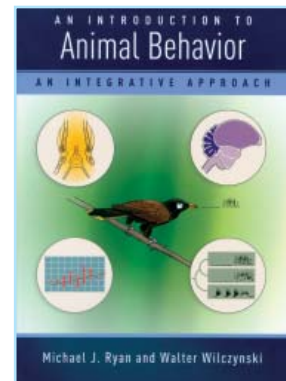


The northern snakehead

Research: Smithsonian Tropical Research Institute (STRI)



Ninety-one publications were added to the STRI bibliography in the fourth quarter of fiscal year 2011. Of these, three were books: *An Introduction to Animal Behavior: An Integrative Approach* by Michael J. Ryan and Walter Wilczynski; *A Creole from Bocas del Toro: The Story of Carlos Reid* by STRI sociologist Stanley Heckadon-Moreno; and *Deceptive Beauties: The World of Wild Orchids* by STRI communication associate Christian Ziegler. Six articles were



published in the top research journals *Science*, *Nature*, and *Proceedings of the National Academy of Sciences*.

In a study published in *Paleontology*, STRI's Carlos Jaramillo and his co-authors describe a large (20-foot), extinct crocodyliform species whose remains were discovered in the same Colombian coal mine as those of the extinct Titanoboa, the largest snake ever known. This 60-million-year-old freshwater relative of modern crocodiles specialized in eating fish, implying that it competed with the Titanoboa for food. However, the giant snake might also have consumed its competition, according to the study.

The wing patterns in *Heliconius* butterflies fascinate collectors, but the genetic code behind them long eluded scientists. Because red patterns evolved independently in many butterfly species, researchers thought that different genes coded for the patterns in each species. However, STRI researchers have now discovered that a single gene codes for all red wing patterns in *Heliconius* species across the Americas, and the variety in patterns seems to be due to the way the gene is regulated.



Heliconius butterflies

Chance events may be extremely important in the history of life. A recent study in *Proceedings of the Royal Society B* indicates that horn snails (*Cerithideopsis* spp.) successfully crossed Central America, long considered an impenetrable barrier to marine organisms, twice in the past million years, probably by sticking to flying shorebirds. The lead author was Osamu Miura, a former postdoctoral fellow at STRI, and co-authors included STRI's Mark Torchin and Eldredge Bermingham.

According to a new study published in *Science* that was co-authored by STRI research associate Liza Comita History and geology, not current ecology, are likely what has made tropical forests so biologically diverse. The same ecological processes seem to be working worldwide, and forests in temperate regions such as North America and Europe have much more in common with tropical rainforests than previously believed; the main difference is simply that tropical organisms have been accumulating for longer periods of time.

Research: National Museum of Natural History (NMNH)

Scientists from NMNH and partnering organizations discovered an eel off the coast of the Republic of Palau with primitive anatomical features unknown in any other living eels, resulting in its classification as a new species belonging to a new genus and family. The team's research was published online in the *Proceedings of the Royal Society B*. These findings are comparable to the discovery in the late 1930s of a living coelacanth—a species that had been thought long extinct.



The world's most primitive eel: new species, genus, and family

Research: National Zoological Park (NZP)

Smithsonian Conservation Biology Institute (SCBI)

In fiscal year 2011, SCBI researchers produced 48 peer-reviewed scientific publications, including 23 in high-impact journals.

The White House announced that Pierre Comizzoli, a cryobiologist in SCBI's Center for Species Survival, would receive a Presidential Early Career Award for Scientists and Engineers, the highest honor bestowed by the U.S. government on science professionals in the early stages of their research careers.

SCBI and several partners recently collaborated on an innovative citizen-science initiative called Global Amphibian Bioblitz, dubbed a “Facebook for Frogs” by the media. Its goal is to gather current, geolocated photographs of every amphibian species on the planet.

SCBI’s Mary Hagedorn was part of an international team that went to Belize in August 2011 on an expedition to conserve the endangered Staghorn coral (*Acropora cervicornis*), which spawns off of Smithsonian’s Carrie Bow Cay Marine Station. Despite enormous logistical challenges, it proved to be a very successful conservation effort, resulting in the cryopreservation of millions of frozen embryonic cells.

Other Research

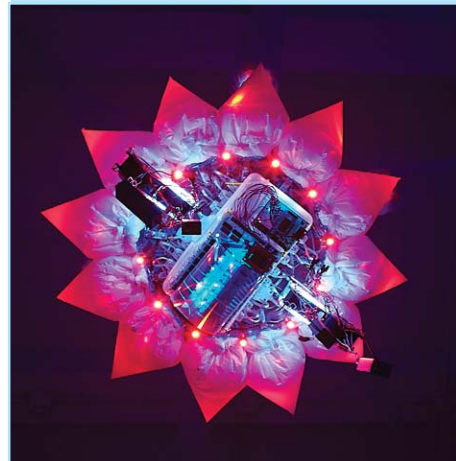
The National Museum of the American Indian hosted the symposium “Creating a Climate of Change: A Sustainable Future for the Living Earth.” Acclaimed social thinker Jeremy Rifkin joined author-educators Gregory Cajete and Melissa K. Nelson to explore how modern society can connect with the traditions of Native peoples and incorporate the values of sustainability in our wider culture.

Broadening Access

Several new exhibitions exploring the natural world and humankind’s place in it opened at the National Museum of Natural History:

- *More Than Meets the Eye* (July 23, 2011–November 4, 2012) focuses on the tools, skills, and technologies that scientists use to examine species and cultures up close and in detail: scanning electron microscopes, 3-D lasers, X-rays and CT scanners, video and stop-action photography, and more.
- The bilingual *Against All Odds: Rescue at the Chilean Mine* (August 5, 2011–May 2012) examines the extraordinary rescue of 33 Chilean miners after nearly two months trapped in a collapsed mine, setting this drama within the geologic context of northern Chile.
- *The Bright Beneath: The Luminous Art of Shih Chieh Huang* (September 3, 2011–January 8, 2012) featured works by a 2007 Smithsonian Artist Research Fellow that evoke the bioluminescence of creatures residing in the dark depths of the oceans.

The National Museum of the American Indian hosted its second annual Living Earth Festival, featuring three full days of events including movies, music, an educational symposium, and indigenous cooking and craft demonstrations. The Festival coincided with the opening of *Conversations with the Earth: Indigenous Voices on Climate Change* (July 22, 2011–January 2, 2012), an exhibition that provided a Native perspective on global climate change.



Exhibitions at the National Museum of Natural History included *More Than Meets the Eye* (top) and *The Bright Beneath* (bottom)



Conversations with the Earth

The Encyclopedia of Life (EOL), a collaborative project hosted by the **National Museum of Natural History**, is an online encyclopedia that aims to document all 1.9 million living species known to science. A redesigned platform—EOLv2—was launched in September 2011 in response to requests for a site that was more engaging, accessible, and personal. EOLv2 currently hosts nearly 670,000 species pages, as well as more than 93,100 volumes and 34.7 million pages from the Biodiversity Heritage Library.

Unlocking the Mysteries of the Universe

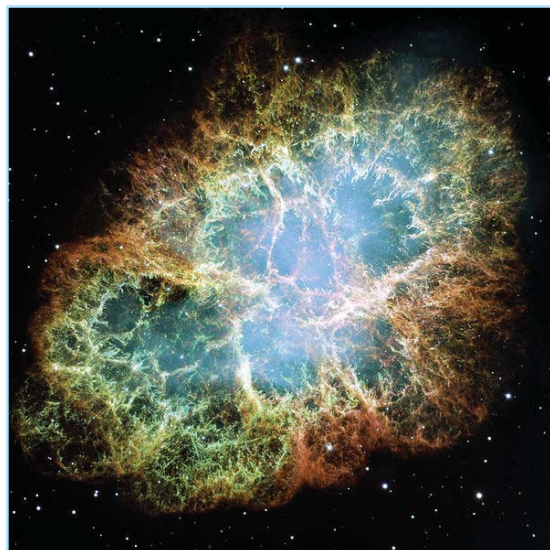
*Research: Smithsonian Astrophysical Observatory (SAO)
Harvard-Smithsonian Center for Astrophysics (CfA)*

During this quarter, SAO scientists' research appeared in 127 peer-reviewed papers and 71 non-peer-reviewed articles at meetings, conferences, or other venues. Among the high-impact scientific journals carrying this research were *Nature* (five articles) and *Science* (six articles).

Josh Carter of CfA was an author of a study in *Science* announcing the discovery of Kepler-16b, an exoplanet that orbits a pair of stars approximately 200 light-years from Earth. Kepler-16b is the first confirmed example of a circumbinary planet—a planet orbiting not one, but two stars. Its discovery demonstrates the amazing diversity of planets in our galaxy.



Artist's conception of sunrise over Kepler-16b



The Crab Nebula

Although the inner regions of our galaxy are heavily masked by dust, the new infrared Herschel Space Telescope has allowed CfA astronomers to create and publish a detailed map of this entire neighborhood in the faint emission from that dust. It reveals clusters of massive star formations, sweeping bright arcs of material shaped by the galaxy's winds and magnetic fields, and dark reservoirs of cold dust.

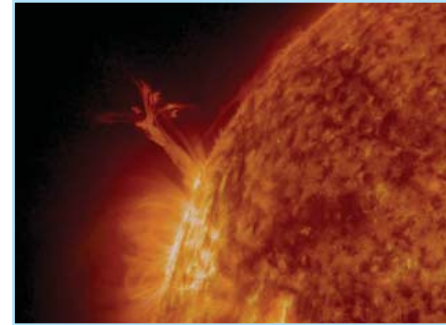
Using SAO's VERITAS gamma ray telescope, astronomers were surprised to detect extremely bright, pulsating gamma ray emissions coming from the famous Crab Nebula, the spinning remains of a supernova explosion in 1054 C.E. Few had expected to see emissions this energetic—a million times more energetic than medical X-rays and 100 billion times more than visible light—from this source. This finding challenges our existing understanding of gamma ray emissions.

Popular Science magazine selected CfA astronomer Justin Kasper as one of this year's "Brilliant Ten" scientists for his work developing an instrument that will literally touch the sun, providing the first opportunity to directly sample its outer atmosphere. Kasper was also recently honored with a prestigious Presidential Early Career Award for Scientists and Engineers.

Using a SAO-built spacecraft instrument to capture flaring activity in high spatial resolution images, CfA astronomers have discovered that hot loops in the sun's corona have flaring, filamentary substructures that help to generate the dramatic high temperatures there.

*Research: National Air and Space Museum (NASM)
Center for Earth and Planetary Studies (CEPS)*

At a press conference on July 22, 2011, at the NASM Mall building, NASA announced the landing site for the Mars Science Laboratory, a new rover mission that will assess the planet's ability to support microbial life. CEPS researcher John Grant, a member of the science teams for the earlier Mars rovers *Spirit* and *Opportunity*, was co-chair of the landing site steering committee and will play a significant role on the mission science team when the Mars Science Laboratory rover *Curiosity* lands in August 2012.



A new view of the sun's corona



Curiosity—the latest and largest Mars rover

The first results of the orbital phase of the MESSENGER mission to Mercury were published in *Science* in September 2011, with CEPS's Tom Watters as coauthor of a paper that describes vast volcanic plains in the northern high latitudes. Additionally, Tim McCoy of the **National Museum of Natural History** co-authored three papers that describe Mercury as rich in volatile elements like potassium and sulfur, which sharply contrasts with earlier models of the planet's origins.

Broadening Access

Research results from the **Smithsonian Astrophysical Observatory** were featured in two *New York Times* popular science articles during this quarter. The Observatory-administered Astrophysics Data System website, which provides global open access to astronomy and astrophysics literature, recorded over 320 million hits.



Astronomy Night on the National Mall

The **National Air and Space Museum's** Public Observatory participated in Astronomy Night on the National Mall, an event organized by Donald Lubowich of Hofstra University to share astronomy with the public. Guided by museum interns, volunteers, and staff, approximately 300 visitors to the Observatory viewed Saturn, the moon, and the double star Albireo through the facility's 16-inch telescope and several portable telescopes.

Crossing Boundaries

Research

During fiscal year 2011, the **Museum Conservation Institute** worked on 187 projects with 18 Smithsonian museums and eight Smithsonian research centers, as well as external clients such as the National Institute of Standards and Technology, Department of Homeland Security, Department of State, and other government agencies, conservation groups, universities, and foreign agencies.

Anne Goodyear of the **National Portrait Gallery** staged a conference on “Collecting, Exhibiting, and Preserving Time-Based Media Art at the Smithsonian,” which also featured presenters from the **Hirshhorn, Freer and Sackler Galleries, National Museum of African Art, and Office of the Chief Information Officer**, and external guests such as artist Jason Salavon, whose works have been displayed at the Portrait Gallery and Arthur M. Sackler Gallery.

Separating authentic antique silks from modern re-creations has long been more of an art than a science, because radiocarbon dating required so much material that it would disfigure delicate silk works. However, the **Museum Conservation Institute’s** Mehdi Moini, Mary Ballard, and Kathryn Klauenberg recently published a new method for estimating the age of silks based on a technique called amino acid racemization, which is fast and reliable and requires only a tiny sample.

Broadening Access

Cooper-Hewitt, National Design Museum hosted a reception at the **Hirshhorn** for the 2011 National Design Award winners, finalists, jurors, and other honored guests. The following day, First Lady Michelle Obama celebrated the Awards with a White House ceremony for the winners and finalists. Before this ceremony, Award winners participated in the Teen Design Fair, an education program for local high school students.

The exhibition *Quicktake: Stamps of Approval* (August 12–September 25, 2011) at **Cooper-Hewitt** featured the work of the pioneering American industrial designers recognized by the U.S. Postal Service in a new series of Forever stamps. This exhibition is now on display at the Smithsonian Castle.

The **Smithsonian Institution Archives** announced the launch of its redesigned website, with features including a collections search function that provides online access to all Archives records cataloged to date; pages on the history of the Smithsonian and its museums and research centers; access to more than 4,000 finding aids; and online forums for the public to ask questions and get tips.



National Design Awards Lifetime Achievement winner Matthew Carter speaks to students at the Teen Design Fair



Quicktake: Stamps of Approval

The **Hirshhorn Museum and Sculpture Garden** opened the exhibition *Andy Warhol: Shadows*, which marked the first time that all 102 panels of Warhol’s stunning work *Shadows* have been on public view. In conjunction with the exhibition *Race: Are We So Different?* at the **National Museum of Natural History**, **The Smithsonian Associates** presented seven programs, including a “Mingle at the Museum” featuring a discussion among Smithsonian scholars about ideas that shape our cultural identities.

Strengthening Collections

The **National Museum of African American History and Culture (NMAAHC)**, assisted by the **National Air and Space Museum (NASM)**, acquired a major artifact for the former’s collection: *The Spirit of Tuskegee*, one of the few surviving planes used to train the Tuskegee Airmen, the all-black corps that served in the Army during World War II. It will be on display at NASM’s **Udvar-Hazy Center** until NMAAHC opens on the National Mall in 2015.

An important collection of Tibetan Buddhist art was donated to the **Arthur M. Sackler Gallery**. Julian Raby, director of the **Freer and Sackler Galleries**, announced the gift in the presence of the Dalai Lama and the donor, Alice S. Kandell. The collection will significantly transform the Sackler’s collection of Himalayan art.

The **National Museum of Natural History** recently acquired the “Dom Pedro” aquamarine obelisk. Cut from a single beryl crystal in 1992 by gemstone designer Bernd Munsteiner, it is the largest single piece of cut and polished aquamarine in the world to date. It measures 35 centimeters (14 inches) in height and weighs 10,395 carats (nearly 5 pounds).



The Dom Pedro

The **National Zoological Park’s** living collections—including many rare and endangered species—grew through both births and acquisitions:

- A Persian onager foal—a donkey-like member of the Equidae (horse) family—was born at the Zoo’s Front Royal facility;
- The most recent addition to the tufted deer population at Front Royal is a female fawn, born July 23—the first of this species born there since 2009.



The Spirit of Tuskegee at the Udvar-Hazy Center



Left to right: Donor Alice Kandell, the Dalai Lama, Freer and Sackler Galleries Director Julian Raby, curator Debra Diamond

- The black-footed ferret breeding program had a record-breaking year, with 50 surviving kits. Once thought to be extinct in the wild, a small population of 24 black-footed ferrets was discovered in Wyoming in 1981, and 30 years later the species' future is brighter than ever. Today, more than 1,000 of these ferrets exist in the wild as a result of a successful reintroduction program at six breeding institutions, including the Smithsonian.



Dave Woody's portrait of Alice Waters

The **National Portrait Gallery** commissioned a photographic portrait of food pioneer Alice Waters, founder of the Chez Panisse Restaurant and Cafe and the Edible Schoolyard, and champion of the Slow Food movement. The portrait was created by Dave Woody, the first-place winner in the Gallery's 2009 Outwin Boochever Portrait Competition. It was first unveiled on August 26 at the University of California, Berkeley, as a part of the 40th anniversary celebration of the restaurant's founding. It will be installed at the Portrait Gallery in January 2012.

Broadening Access: Education and Outreach



Smithsonian Congressional Family Night

On September 20, 2011, the Smithsonian hosted Congressional Family Night at the **National Museum of American History**. The event opened the Museum to members of Congress, their professional staff, and their families to explore exhibitions, meet curators, enjoy food and music, and interact with living history interpreters portraying George Washington, Thomas Jefferson, Abraham Lincoln, and Theodore Roosevelt. It included a private reception at which Smithsonian Secretary G. Wayne Clough and Smithsonian Regent Senator Patrick Leahy delivered remarks.

Smithsonian Affiliations offers museums and other cultural and educational organizations access to the Smithsonian's collections and other resources. At the

end of the fiscal year, there were 169 Affiliates in 40 states, Panama, and Puerto Rico. In this quarter:

- The Smithsonian welcomed two new Affiliates: the Yankee Air Museum (Belleville, Missouri) and Columbia Memorial Space Center (Downey, California).
- Sixty-eight artifacts were loaned to Affiliate organizations; 1,326 Smithsonian artifacts were on view at Affiliate organizations.
- Nineteen Smithsonian staff participated in programs and events with Affiliates.

The **Smithsonian Institution Traveling Exhibition Service (SITES)** continued to sustain a high level of outreach activity. In fiscal year 2011, SITES circulated 52 exhibitions to 492 venues in all 50 states, plus the District of Columbia, Guam, and U.S. military bases in 10 countries. In the fourth quarter, SITES launched two exhibitions on national tours:

- *William H. Johnson: An American Modern*, featuring works by a pivotal figure in modern American art, went on display at Gari Melchers Home and Studio at the University of Mary Washington in Fredericksburg, Virginia. A companion book was co-published by SITES and the University of Washington Press.
- *The Way We Worked*, the newest Museum on Main Street exhibition, launched statewide tours in Illinois, Tennessee, and West Virginia in collaboration with each state’s humanities council.



Images from *The Way We Worked*

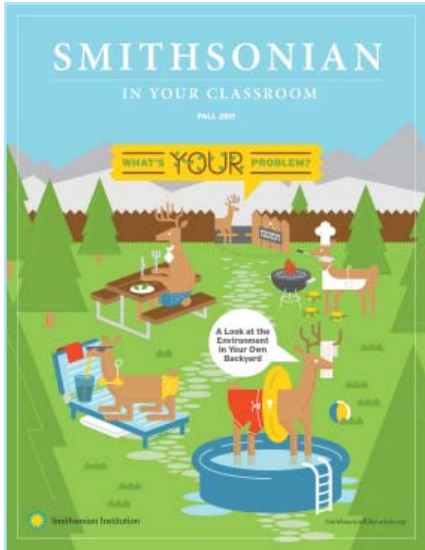
In collaboration with the **Office of the Chief Information Officer**, SITES launched its first mobile app, “Stories from Main Street,” which quickly made the list of “What’s Hot” on iTunes.

The **National Science Resources Center (NSRC)**, a partnership between the Smithsonian and the National Academies, remained active in promoting reform in the teaching of science.



NSRC teacher professional development

- NSRC held its annual International K–12 Science Education Institute for Leadership Development and Strategic Planning in Alexandria, Virginia. Ten leadership teams from Mexico, Oman, Thailand, and several U.S. states attended.
- Workshops were held in Texas and New Mexico to give over 700 teachers initial training in NSRC *Science and Technology Concepts* curricular materials that they will use with their students in the 2011–12 school year.
- Thirty-nine teachers from seven states attended the NSRC’s week-long Smithsonian Science Education Academies for Teachers, featuring scientists, curators, and educators from the Smithsonian and other D.C. organizations.
- Teacher’s guides were published for the latest eight additions to the NSRC’s *Science and Technology Concepts* series. The complete series consists of 24 books for grades K–6 that introduce a variety of subjects in life, earth, and physical sciences.



The **Smithsonian Center for Education and Museum Studies (SCEMS)** continued to offer a variety of educational outreach offerings, including the fall 2011 issue of *Smithsonian in Your Classroom* titled “What’s Your Problem? A Look at the Environment in Your Own Backyard.” Inspired by a second-grade class in Colorado that took on the problem of deer overpopulation in its town after participating in a SCEMS online conference, this issue offers ideas for local environmental action projects.

In collaboration with the **Smithsonian Accessibility Program**, SCEMS also held a two-week “All Access Digital Arts Camp” for high-school students with cognitive and physical disabilities.

The **Hirshhorn** conducted the discussion series “Lunch Bytes: Copy Culture” in collaboration with the Goethe Institut. It examined the increasing ubiquity of new media in the art world.

The **National Postal Museum** hosted a series of Ed Lab workshops for teachers, at which participants were challenged to use new media tools to generate creative learning opportunities for their students, using the rich material culture resources of the Smithsonian.

The **National Portrait Gallery, Hirshhorn**, and D.C. Public Library presented “Portraits after 5: Teen Edition” in the Kogod Courtyard of the Reynolds Center. Over 700 participants, many from underserved local communities, took part in the program, which focused on art, identity, and fashion.

Fifty-four middle- and high-school teachers—selected from over 100 applicants from 29 states, D.C., Guam, Puerto Rico, and Bahrain—attended the **Smithsonian American Art Museum’s** 2011 Clarice Smith National Teacher Institutes, which help teachers integrate artwork into their social studies and language arts classes.

The **Smithsonian Associates** presented 79 weeklong Smithsonian-inspired summer camps for over 1600 children ranging from pre-K to 9th grade. The camps focused on a variety of themes including visual art, theater, world cultures, space travel, ecosystems, video games, and history. In partnership with the **National Museum of Natural History**, Associates also held six sold-out sleepovers, at which explorations of the museum’s halls were followed by an IMAX film and a night in the Sant Ocean Hall.

Organizational Excellence

Leadership Milestones

In September, France Córdova was elected chair of the Smithsonian’s governing Board of Regents; her three-year term begins in January 2012. She will succeed Patty Stonesifer, who has served as chair since January 2009 and will become vice chair. Dr. Córdova, an astrophysicist and president of Purdue University in Indiana, has been a member of the Board since 2009.



France Córdova



Albert Horvath

Albert G. Horvath was named Under Secretary for Finance and Administration and Chief Financial Officer of the Smithsonian. Horvath succeeds Alison McNally, who will advise the Secretary on Smithsonian-wide financial projects. Although the CFO previously had been a separate position, the Under Secretary also will serve as CFO under the new organizational structure.

Marc Pachter, former director of the **National Portrait Gallery**, was appointed acting director of the **National Museum of American History**. Pachter was with the Smithsonian for 33 years, beginning in 1974, and served as Portrait Gallery Director from 2000 until his retirement in 2007.



Marc Pachter

Information Technology

The Smithsonian continued to expand its social media presence in 2011. With Americans now spending about a quarter of their online time on social networks, website visits have dipped, and Smithsonian web personnel have attacked this challenge head-on, developing nearly 200 Facebook, YouTube, and Twitter accounts. With Facebook and YouTube currently the first- and second-most-visited websites in the world (and Twitter at number 15), maintaining a high-quality Smithsonian presence on these sites has become an important key to building online audiences.

The Smithsonian has become an initial partner in Google's YouTube.com/Education initiative. Presently, many school systems block YouTube—including the Smithsonian's extensive YouTube content—due to concerns about inappropriate content. The YouTube.com/Education service will offer screened content acceptable for distribution in an educational setting. Smithsonian YouTube channels have been approved for inclusion in the service rollout, greatly increasing the Smithsonian's visibility among educators and students.



The Smithsonian is also among the first non-profit organizations to provide global access to ad-free YouTube live streaming, via the Smithsonian's central SmithsonianVideos YouTube account.

The **Office of the Chief Information Officer's** Web Analytics Program is helping units determine who their websites reach and how to better connect with these audiences. In addition to providing basic visitation statistics, the program is working with several units (including the **Smithsonian Institution Archives**, **National Museum of Natural History**, and **Smithsonian American Art Museum**) to better align website activity and unit objectives.

The new **Office of Research Information Services (ORIS)** is working with Smithsonian researchers to create a research support environment that promotes access to and preservation of digital information. ORIS will soon begin testing an integrated set of software tools developed while working on test bed projects across Smithsonian science units.

The **Smithsonian Institution Archives** participated in the launch of the Historypin website, which utilizes geo-tagging data to “pin” historic photos on top of contemporary Google Street View Maps to produce a snapshot of the changing face of local streets and landmarks. The Archives contributed 70 photos from its collection that document buildings on the National Mall from 1870 to 2002.



The **National Postal Museum** launched a new augmented-reality experience that brings to life a barking, trotting 3-D image of Owney the dog, an early mascot of the Railway Mail Service. The experience, offered via both iPhone and Web applications, is the first multidimensional, augmented-reality experience triggered by a U.S. postage stamp. It “comes to life” when the new Owney postage stamp is viewed via a free iPhone app available from the Apple iTunes Store or the museum’s special webcam page.

The **Smithsonian Institution Libraries**, in partnership with **Smithsonian Institution Scholarly Press**, has converted works from the Press’s Smithsonian Contributions and Studies Series to digital formats for use on Kindles, Nooks, and other e-readers. The electronic formats, which are offered at no cost, will eliminate the problem of maintaining physical stocks and will expand access to this research.

Major Construction, Renovation, and Facilities Projects

National Zoological Park, General Services Building and North Road Retaining Wall

\$33.8 million total estimated project cost

The \$8.3 million Phase I of the project, funded over fiscal years 2004–2011, is nearly complete. It includes immediate repairs to the General Services Building (GSB), design of permanent structural and safety upgrades, and relocation of the Vehicle Maintenance Branch to Suitland, Maryland. Phase II includes \$25.5 million for GSB construction and replacement of an adjacent retaining wall. A supplemental environmental assessment for the retaining wall began in May 2011, and is expected to conclude in spring 2012. Federal funding has been requested for fiscal years 2012–2014 for construction of the retaining wall and GSB upgrades.

National Zoological Park, Smithsonian Conservation Biology Institute Smithsonian-Mason Global Conservation Studies Partnership

\$37.47 million total estimated project cost

Construction of the joint Smithsonian-Mason program facilities is well under way in Front Royal, Virginia. George Mason University is building residential and dining facilities funded through a \$20 million state bond, while the Smithsonian is renovating and expanding an existing building to house classrooms, laboratories, and faculty offices for a new education center. A single construction contract for the education center and concurrent utility upgrades was awarded in May 2011; work was approximately 12 percent complete at the end of fiscal year 2011. The total cost of this work is \$15.6 million—\$10.6 million in Federal funds in fiscal years 2010–2012, and \$5 million in private funds. All facilities are projected to be complete for the start of the fall 2012 semester.

National Zoological Park, Asia Trail II: Elephant Trails

\$54.3 million estimated total project and program cost

The second phase of the Asia Trail project has a projected cost of \$54.3 million—\$39.48 million Federal (received in fiscal years 2006–2012) and \$14.82 million Trust. Construction of the new elephant barn and two of three outdoor habitats was completed in 2010, and work on the elephant community center was 53 percent complete as of the end of fiscal year 2011. Additional private funding is being sought for the final habitat, and the project is now scheduled to be finished in 2013.

National Zoological Park, Seal / Sea Lion Exhibit

\$40.4 million total estimated project cost

The Zoo's Seal/Sea Lion exhibit is being revitalized to meet standards for animal care and to improve accessibility. The project also includes an upgrade of underground utilities in the Beaver Valley area. Construction is approximately 65 percent complete and is projected to be finished in mid-2012. The non-capital, interpretive component of the project will be funded with \$1 million in Trust funds, while the Federal capital contribution is approximately \$39.4 million in fiscal years 2009–2012.

Arts and Industries Building (AIB)

\$52.8 million estimated cost for shell only

Construction on the AIB shell revitalization project (structural upgrades and replacement of the roof and windows) was 25 percent complete at the end of fiscal year 2011, and is expected to be finished by spring 2013. Significant areas of the old roof have been removed and new steel framing, replicating the appearance of the original iron trusses, is being installed in the halls. Project funding consists of \$30 million from the Federal Legacy Fund, \$15 million from Federal facilities capital funds, and the rest from private gifts. Design scope and budget definition are under way for an adjoining underground services building shared with the Castle. Anticipated reductions in Federal appropriations, however, have pushed the funding for its construction into fiscal year 2014 or beyond.



National Museum of African American History and Culture

\$500 million total estimated project cost

All design and construction milestones were met in fiscal year 2011, and required presentations to the Commission of Fine Arts and the National Capital Planning Commission were made. The Record of Decision with a final environmental impact statement was submitted; the Section 106 Historic Resources programmatic agreement was signed; and the relocation of a gas main on the site was completed. A construction management firm was selected mid-2011, and has begun assisting with the coordination of design and construction issues for a more efficient start in fall 2012. The museum continues the concept phase of exhibit design with Ralph Appelbaum Associates. Total project costs are to be shared evenly, with \$250 million from Federal capital funds and \$250 million from non-Federal sources.

National Postal Museum, New Program Space

\$18.2 million total estimated project cost

The National Postal Museum, located in the historic Washington, D.C., City Post Office Building, has been given 12,000 square feet of space and use of a central hall by the U.S. Postal Service. Using funds from non-Federal sources, this new space will be transformed into a philatelic center and a visitor orientation space. Design was completed in late summer 2011, with construction to start in 2012 and to be completed for a 2013 opening.

Smithsonian Tropical Research Institute, Gamboa Laboratory Facilities

\$19.4 million total estimated project cost

The Smithsonian Tropical Research Institute is building a new terrestrial science lab on its recently acquired Gamboa site to replace outdated facilities; the project is funded with \$15.94 million in Federal and \$3.46 million in Trust funds. Programming, design, and selection of construction management are complete, with construction to begin shortly after the end of the fiscal year.

Smithsonian Environmental Research Center, Mathias Replacement Laboratory Project

\$50.66 million total estimated project cost

The Smithsonian Environmental Research Center is eliminating trailers that house lab space and offices; renovating and reconfiguring the Mathias Lab; and creating replacement labs that meet national standards. The 95,000-square-foot project employs sustainable technologies and building materials that will yield substantial reductions in energy and maintenance costs. Following a groundbreaking ceremony in May 2011, construction began in June 2011 and is expected to be complete by mid-2014.

National Museum of Natural History, Main Building Ground Floor and Mezzanine

\$24.0 million total project cost

The entire north ground floor of the main Natural History Building is under renovation. The 15,500-square-foot west end of the floor will become a new education center, and the 27,600-square-foot east end will house an expanded Smithsonian Early Enrichment Center, renovated Smithsonian Institution Libraries facilities, a paleobiology laboratory, and a consolidated facility support operations center. The project was awarded for construction in December 2010, with completion planned for mid-2012.

National Museum of American History, Kenneth E. Behring Center

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

The third phase of renovation at the National Museum of American History will focus on three west wing public spaces. Data gathering, field surveys of existing conditions, schematic design, and 95 percent construction documents have been completed. Final construction documents were expected shortly after the end of the fiscal year, and construction will begin in spring 2012. The Federal appropriation for design (\$6 million) was received in fiscal years 2009 and 2010. Initial construction funding of \$5 million was received in fiscal year 2011, with the remainder (\$49 million) requested for fiscal years 2012–2014.

Cooper-Hewitt, National Design Museum

\$57.7 million total estimated project cost

The renovation of the Fox-Miller townhouses was completed in late summer 2011. Design for the Carnegie Mansion renovation was completed in April 2011, with a construction contract awarded near the end of fiscal year 2011. Construction is scheduled to be completed by 2013. Total project costs include \$26.5 million in Federal funds and \$31.2 million in private funds. Shortly after the end of the fiscal year, the museum successfully met its renovation fundraising goal of \$54 million, comprised of Federal, state, city, and private funds (gifts and pledges).

Donald W. Reynolds Center for American Art and Portraiture

\$19.5 million total estimated project cost

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. Costs are estimated to be \$9.5 million in Federal funds and \$10.0 million in Trust funds.

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

\$38.5 million total estimated project cost

Renovations have been completed on Pod 3 in Suitland, Maryland, which provides consolidated storage space for several types of collections. Transfer of collections from four museums is under way and is expected to be complete by June 2012 and cost almost \$2 million.

Permanent Physical Security Barriers

\$55 million total project cost

Security barriers at the National Air and Space Museum and the National Museum of American History are complete. Barrier construction at the National Museum of Natural History was completed in mid-2011, with landscape completion expected by the end of the year. Design of barriers for the Castle and Quadrangle will start in fiscal year 2016, and work on off-Mall barriers will follow in order of priority.

Sustainability

Leadership in Energy and Environmental Design (LEED) certification from the United States Green Building Council (USGBC) offers objective, third-party validation of the environmentally-friendly characteristics of a site or project. The LEED rating system confers points for satisfying specific green building criteria in categories including sustainability, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. The number of points a project earns determines the level of certification: Certified, Silver, Gold, or Platinum.

The National Museum of the American Indian recently became the first Smithsonian museum awarded a LEED Silver certification for an existing building, which recognizes environmental stewardship in operations, maintenance, and system retrofits. An HVAC renovation project in the director's corridor at the National Museum of Natural History became the first Smithsonian project to achieve a LEED Silver certification for commercial interiors.