If we were to travel back in time to visit the Smithsonian in its first decades of existence, there is much that would feel unfamiliar.

The Secretary and his family would be living in the Castle (fig. 1), along with a number of young naturalists (calling themselves the Megatherium Club and horsing around at night among the museum exhibits).

The air might be filled with acrid smells from the chemistry laboratory or the taxidermy workshop. We might struggle to study the specimens and their Latin labels in the glass cases with only gray winter daylight for illumination. Brass spittoons for chewing tobacco would be strategically located around the exhibition floor. And, outside, workers would be loading horse-drawn carts with the crates of publications and duplicate specimens that the Smithsonian was sharing around the world.

What we know as the Smithsonian in the 21st century—with education programs, interactive displays, museum stores, restaurants and robust global research—is a far cry from its cousin of the mid-19th century.

And yet one thing has remained constant through the centuries: a commitment to James Smithson’s dream of “an establishment for the increase and diffusion of knowledge.” This mission has made the Smithsonian unique in the world, an extraordinary amalgam of research, education, conservation and public trust.

This special issue of IMPACT explores some inspiring threads of continuity in the Smithsonian’s pursuit of this mission during the course of 175 years.
It is only by exchange and mutual assistance that naturalists can possibly ever succeed in assembling together a collection of subjects of their study, which nature has made so numerous, and disseminated in such various and distant parts of the world.

JAMES SMITHSON
FOUNDING DONOR

Going with the Crowd

From the very beginning, the Smithsonian has pursued the increase of knowledge with the help of and in collaboration with others—outside partners, friends, and volunteers. One of the first acts Joseph Henry, the first Secretary of the Smithsonian, performed when setting up the new institution was to build a network of correspondents and collaborators across the country.

These volunteer citizen scientists recorded their meteorological observations and sent them to Washington, D.C., where the data were compiled and charted to produce the first storm warning system. Eventually this pioneering project became the National Weather Service, and the data collected are still used today in climate change research.

This kind of crowdsourcing has been important not just for information gathering, it has also been a critical means of amassing a national collection. Spencer Baird, the Smithsonian’s first curator and later the institution’s second Secretary, trained hundreds of volunteer field collectors, wrote up overdraft of 5,000 letters a year to his vast network, and included naturalists as government exploring and surveying expeditions—all in the service of increasing understanding of the natural world.

During World War II, Smithsonian scientists recruited members of the armed forces to collect objects in the Pacific, and a number of American soldiers contributed variable items. The Smithsonian published a guide for service members, A Field Collector’s Manual in Natural History, and the Secretary at the time, ornithologist Alexander Wetmore, personally kept up a correspondence with many young soldiers sending specimens to the nation’s capital.

One such man, Sammy Ray, was a U.S. Navy Pharmacist’s Mate First Class stationed in the Pacific. Ray grew up in rural Mississippi, the son of Lebanese immigrants, and became a marine biology professor at Texas A&M University and a world-renowned oyster expert.

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“It wasn’t easy to collect birds while the enemy was trying to collect me,” Ray recalled. “I look back on it as one of the most exciting times of my life. The idea of collecting new birds and adding to the Smithsonian’s collection was a passion for me.”

The Smithsonian has ever undertaken, in fact, is happening right now. Volunteers are bringing new life to the handwritten diaries of artists, the field notebooks of anthropologists and other scientists, audio recordings, account ledgers, catalogue records and much more. They have transcribed more than 67,500 pages since the center began in 2013.

The largest crowdsourcing project the Smithsonian has ever undertaken, in fact, is happening right now. The Smithsonian Transcription Center and the National Museum of African American History and Culture have partnered with the National Archives and FamilySearch International to transcribe more than 1.5 million documents, e.g. from the archives of the United States Bureau of Refugees, Freedmen and Abandoned Lands. Congress set up the Freedmen’s Bureau following the Civil War to aid in Reconstruction and assist formerly enslaved people in their transition from slavery to freedom and citizenship. Due to the work of dedicated volunteers, these vitally important records containing the names and information of hundreds of thousands of newly freed individuals will soon be searchable by genealogists, historians and others.
“The people’s museum should be more than a house full of specimens in glass cases. It should be a house full of ideas.”

GEORGE BROWN GOODE
SCIENTIST, CURATOR AND VISIONARY LEADER OF THE U.S. NATIONAL MUSEUM FROM 1878 UNTIL HIS DEATH IN 1896

With the creation of the Children’s Room in 1901, a gallery of natural history exhibitions for children, the Smithsonian became one of the first museums to focus on early childhood education. Today, for the first time, the institution is led by a historian with a deep commitment to education, Secretary Lonnie G. Bunch III, and he has put pre-K-12 education at the center of everything.

Museums have a special capacity to awaken curiosity and learning in children through exhibitions, programs, the stories behind objects, and a free flow of ideas. In 1967, when the Smithsonian opened the Anacostia Community Museum, the new museum invited the public to touch and explore boxes full of mystery objects. This experiment—to see how handling real museum-quality artifacts might enhance the visitor experience—led to the creation of the Discovery Room at the National Museum of Natural History, where trained educators facilitated visitors’ explorations of specimens from the collections. Launched in 1972 with National Science Foundation funding, it was a model for a new kind of learning experience in museums that quickly became popular at museums, zoos and nature centers everywhere. It also became a way for museum workers to study how visitors learn from objects and each other.

The Discovery Room evolved into Q?rius, the Coralyn W. Whitney Science Education Center, an interactive and experimental learning space where students and other visitors can handle specimens, study collection items under microscopes, talk to experts, and work collaboratively to investigate questions similar to those posed by the real-world research of Smithsonian scientists.

Elsewhere at the Smithsonian are more spaces offering hands-on, guided experiences. The imagiNA TIONS Activity Center, which opened in 2018 at the National Museum of the American Indian’s George Gustav Heye Center in New York, is an interactive space to explore Native technologies and innovations that continue to shape our world today.

ARTLAB+ at the Hirshhorn Museum and Sculpture Garden is a digital art studio providing teens free access to the latest technology, a wide range of art materials, and mentorship by professional artists.

And Wegmans Wonderplace at the National Museum of American History, designed for children 0–6 and organized around themes connected to the collections of the museum, encourages open-ended play.


[10] In the Children’s Room, specially designed display cases were placed lower to the ground, within view for young people, and Latinize labels were replaced with poetic inscriptions. United States National Museum Photographic Laboratory, Children’s Room, 1901. Smithsonian Libraries and Archives


Building a House for Ideas

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The institution’s educational reach is hardly limited to the physical space of the museums. The Smithsonian has been actively developing online learning resources for decades. The Smithsonian Learning Lab platform enables educators, families and caregivers, students and learners of all ages to explore the digitized resources of the Smithsonian—more than 5 million images, recordings and texts. In addition to collections of Smithsonian learning resources prepared by educators at the institution, users can build and share their own collections and access the personalized collections shared by other users.

The Smithsonian’s dedication to making the riches of the Smithsonian accessible to all intensified after the onset of the COVID-19 pandemic. As schools quickly transitioned to remote learning, we mobilized to provide distance learning resources, virtual opportunities to connect with Smithsonian experts, innovative tools, and digital tours of our exhibitions. Parents, teachers and lifelong learners across the country are tapping into the Smithsonian’s digital and distance learning offerings and sharing what they learn.

In partnership with USA Today, the Smithsonian distributed some 165,000 Summer Road Trip activity guides. Designed for K-8 learners, these guides were made available to school districts, public libraries, meal distribution sites, Boys & Girls Clubs of America, and Smithsonian Affiliates across the country.

In the fall of 2020, USA Today and the Smithsonian produced “Yesterday/Today,” a collection of visual time capsules to engage more than 1.5 million older adults facing isolation due to COVID-19. The publication connected events of the past with trends in the present using objects and stories in Smithsonian collections. In the end, at the heart of all our educational work is the idea that we must strive to reach as many as possible where they are.
“We know that the story of what will happen in the coming decades and centuries—changes in temperature, ocean acidity, sea level—is written in the geologic past.”

NICK PYEONSON
RESEARCH GEOLOGIST AND CURATOR OF FOSSIL MARINE MAMMALS
NATIONAL MUSEUM OF NATURAL HISTORY

The National Museum of Natural History exhibits Outbreak: Epidemics in a Connected World was developed in response to the 2014 Ebola epidemic, bringing attention to how research using historical natural history collections can deepen our understanding of One Health—the idea that human, animal and environmental health are connected. A downloadable DIY version of the exhibition was created in 10 languages and has been used in more than 45 countries around the world. PHOTO National Museum of Natural History

Asking New Questions of Old Collections

These collections are irreplaceable records of human existence, of biological diversity, and of planetary ecosystems. And they are continually yielding new information. They offer baseline biodiversity studies; they help us to understand and chart environmental change and to monitor the accumulation of toxins or contaminants; and they are critical tools for tracking the evolutionary history of viruses and pathogens.

With the advent of new technologies—such as those enabling DNA extraction from historic specimens, or the mass digitization of collections—and a deeper emphasis on cross-referencing Smithsonian objects and stories through the American Women’s History Initiative and the Smithsonian Latino Center’s Medina Family Latino Gallery, for example, scientists and scholars are undertaking research that their counterparts from 100 or even 50 years ago could never have imagined.
Our Foundation Is Our Future

Our foundation is our future. The gift of Queen Kapi'olani of Hawai'i, housed in any museum—to the United States and the Smithsonian as a gesture of goodwill between two countries, before Hawai'i became an American state.

Outrigger canoe, 1887.

Queen Kapi'olani gifted her personal canoe—the oldest known native Hawaiian canoe housed in any museum—to the United States and the Smithsonian as a gesture of goodwill between two countries, before Hawai'i became an American state.

Outrigger canoe, 1887.

A California condor collected in the Pacific Northwest in 1835 and given by John James Audubon to the second Secretary of the Smithsonian is one of the oldest specimens in the National Museum of Natural History bird collections and one of the oldest condors in existence. It is still yielding new insights today.

These majestic birds once ranged from the Baja California Peninsula in Mexico to southern British Columbia. Centuries of European colonization and industrialization brought their numbers to near extinction, and by the 1980s there were only 22 left, all in captivity. A captive breeding program led to their re-establishment in the wild, though their numbers and current territory remain small.

This historic specimen has been used in recent research to understand the genetic diversity of the species over time, and to learn more about what the bird was once like compared to its modern relative.

The master carvers are sharing their knowledge with each other and with curators Joshua A. Bell and Kālewa Correa, and—thanks to video conferencing and a 3D digital rendering of the canoe—they are also connecting with high school students in Hawai'i and Aotearoa (New Zealand) to share stories about tools, ancestral traditions, and what can be learned from a nearly 250-year-old museum object.

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A Hawaiian outrigger canoe (wa’a in Hawaiian) was gifted to the Smithsonian in 1887 by Queen Kapi’olani. Today it is bringing Hawaiian and Māori master canoe carvers together in a dialogue about the sacred tradition of canoe making in seafaring Polynesian communities.

Outrigger canoe, 1887.

Colleagues from the National Museum of Natural History’s Recovering Voices program, the Smithsonian’s Asian Pacific America Center and the Smithsonian’s Museum Conservation Institute are working alongside master Māori canoe carver James Eruera of the National Canoe School (Te Tapu-o-te-Waka) in New Zealand, Māori Arts and Crafts Institute and master Hawaiian canoe carver Alika Bumatay to study the wa’a. Bumatay learned from his late father, Ray Bumatay, who was a vital contributor to this project.

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Contemporary Artists Reinterpret the Past

For more than 10 years the Smithsonian Artist Research Fellowship (SARF) has provided artists with special access to historic collections and archives across the institution. The program has supported more than 350 artists while also igniting the creative horizons of Smithsonian scholars and museums.

KEN GONZALEZ-DAY is a SARF artist whose work (fig. 21) was featured in the 2018–2019 exhibition *UnSeen: Our Past in a New Light*, Ken Gonzales-Day and Titus Kaphar at the National Portrait Gallery. In explaining the value of artist research in museums, he notes, “Part of my work, in general, has been to go back and try to find forgotten histories and to give them new form.”

Korean American artist MICHAEL JOO began his residency with a plan to study 3D scanning and the relationship between art and technology. He was drawn to the red-crowned crane, a traditional symbol in Korean culture but also now a symbol of conservation and the threat of extinction. This stunning and rare bird, endangered because of human encroachment on its wetlands habitat, has been the subject of study at the Smithsonian Conservation Biology Institute.

A scanned image of a crane’s body, collected in the 19th century in what is today the Korean Demilitarized Zone and awkwardly contained in its storage vessel, served as the inspiration for artwork (fig. 22) showcased in Joo’s solo 2016–2017 exhibition at the Freer Gallery of Art and Arthur M. Sackler Gallery, the National Museum of Asian Art.

French artist CAMILLE HENROT spent her residency filming behind the scenes in the collections, images that became part of a 13-minute video, *Grosse Fatigue* (“Major Exhaustion” or “Dead Tired!”) (fig. 23). Conceived as a creation story for the internet age, a mesmerizing meditation on the origins of the universe and the profusion of information in contemporary life, it was presented at the Venice Biennale in 2013.

Every milestone anniversary is both a celebration and a time to take stock and reflect. Especially now. The Smithsonian enters into its 175th anniversary year in the midst of the longest closure in the institution’s history, and as the country experiences a profound moment of change and upheaval.

At such a time of uncertainty, we know that our biggest challenges are ones most successfully faced together. The Smithsonian is leaning on its capacity as a trusted convener to forge new collaborations—across disciplines, across nations, across cultures—so that we may best take on the most urgent and pressing issues of our age.
Thomas Smillie was not just the Smithsonian’s first staff photographer; he was also its first photo curator, amassing a large collection charting the history of this technology, which has so transformed how we see and how we process information.

Smillie and his assistant Louisa Bernie Gallaher carefully documented the activities, collections, the staff and the buildings throughout the 19th and early-20th centuries.

Photography as a means of documentation has remained a critical part of the Smithsonian’s work throughout its 175 years, and such images—millions of them—can be found throughout the archives and the museums and their various divisions and departments.

That first photo history collection amassed by Smillie, today housed at the National Museum of American History, is joined by some 700 photo collections all across the institution.

Photography across the Smithsonian holds so many meanings. It is valued as an art form, a means of portraiture, a research tool, a record of scientific observations, an everyday pursuit, a vehicle for advertising or communication, and much more. Here is a small sampling of the breadth and depth of 175 years of photography at the Smithsonian.

The Smithsonian has continued to collect photographic equipment and examples of new processes ever since. Cooper Hewitt’s collection holds examples of cameras noted for their innovative design. The 1972 Polaroid SX-70 revolutionized instant photography. Its handsome leather and brushed-chrome housing folded flat and fit in a jacket pocket. Each 10-print film pack contained a built-in battery powering the camera. A user could watch the image appear over a few minutes, making the SX-70 a runaway success.

As much as it is an image of beauty, a photograph is an index of a maker’s invention, whether it is a photograph of a bridge, a lock or a portrait.”

John Jacob
The MCXVOY Family Curator for Photography
Smithsonian American Art Museum
Photography is critical to creating a record, especially when it comes to documenting events. This image captures camera operators in the foreground recording an important moment in the history of the American space exploration, the first launch from Cape Canaveral in Florida on July 24, 1969. The Bumper II rising into the air was also the first two-stage rocket—a rocket that could be launched in flight from another rocket—the United States successfully launched.

The Archives of American Gardens holds photographic images documenting more than 10,000 historic and contemporary gardens. Since gardens are ephemeral by nature, photographs are often the only surviving evidence of their existence. This hand-painted lantern slide, showing the entrance to the “French Gardens” on the McCann Estate in Oyster Bay, New York, documents the design work of Annette Hoyt Flanders, a pioneer in the field of landscape architecture.

From a Wall Street rooftop Berenice Abbott found an artistic means of documenting the landscape of downtown New York City. Since gardens are ephemeral by nature, photographs are often the only surviving evidence of their existence. This image depicts a reliant at the entrance of the harem of the Palace of Xerxes at Persepolis, one of the great sites of the ancient world.

The Smithsonian's Astrophysical Observatory has been operating the Chandra X-Ray Observatory on behalf of NASA since its launch more than 20 years ago. Its Education and Public Outreach Program processes the X-ray data into state-of-the-art public visuals, often combining them with observations in other types of light, to make this research accessible to millions. This composite image draws on X-ray data collected between 2000 and 2012, combined with optical, infra-red and ultraviolet data. It shows a spiral galaxy, like our Milky Way, nicknamed the Whirlpool and located about 30 million light years from Earth.

The portrait of John Quincy Adams, one of the most significant American political figures and the sixth President of the United States, was taken by a daguerreotypist in 1841. This likeness was taken in 1840. It is the only original of Adams in existence. This likeness was taken in 1840. It is the only original of Adams in existence. The image was chosen by Trevor Paglen, a photographer, as a representative portrait for Adams, based on his use of photography to reveal his political and environmental activism.

At the Smithsonian’s National Portrait Gallery, portraits are commissioned to commemorate important milestones or achievements. This photograph of W.E.B. Du Bois, taken by Addison N. Scurlock in 1911, is the only surviving evidence of his portrait in this likeness. This likeness was taken in 1944. It is the only original of Adams in existence. The image was chosen by Trevor Paglen, a photographer, as a representative portrait for Adams, based on his use of photography to reveal his political and environmental activism.

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But his most important contribution came after his death: a bequest to the United States, a place he never visited, to found an institution dedicated to “the increase and diffusion of knowledge.”

Smithson was an active member of London’s coffee-house culture. He understood the value of lively debate, and how critical the exchange of ideas and collaboration among scientists was for the pursuit of knowledge. His field was chemistry, and he believed in the power of science—not just within his laboratory, but its capacity to transform society.

The Catalyst

James Smithson

Through the course of his life, the Englishman published nearly 30 papers in notable scientific journals, identified a new mineral (later named “Smithsonite” in his honor), and developed a test for detecting mercury that remained in widespread use into the 20th century.

He could not have imagined what his gift would help create: an institution that reaches across the globe and into the universe—dedicated to public service, in communion with the American people, and a beacon of discovery. But he did understand that knowledge and curiosity have the capacity to change the world for the better.

The Smithsonian’s core values are rooted in Smithson’s biography and beliefs, though our mandate has expanded beyond science to include art, history, culture and the many ways that all of these are connected.

His gift was an act of imagination and faith and inspired a new kind of philanthropy that relies upon partnership between public institutions and private citizens. People give to the Smithsonian because they believe in our mission.

Smithson provided that mission, the “increase and diffusion of knowledge,” along with his founding gift, words we still live by.