

Smithsonian Institution

**Statement of Secretary G. Wayne Clough
Hearing on Collections Stewardship
Committee on House Administration
U.S. House of Representatives
July 17, 2013**

Thank you for the opportunity to testify on this important issue of Collections Stewardship.

In August 1846, the U.S. Congress passed legislation that founded the Smithsonian Institution as an establishment dedicated to the “increase and diffusion of knowledge.” The 1846 organic act established the Smithsonian as a repository for the US Government's collections of "all objects of art and of foreign and curious research, and all objects of natural history, plants, and geological and mineralogical specimens..." [20 USC § 50.] This wording with regard to our function as the "national museum" was strengthened in 1879 [20 U.S.C. § 59].

The first objects donated to the Smithsonian were scientific apparatus. Soon art, books and other works were added. Starting in 1858, Congress provided the first annual appropriation to the Smithsonian for the care of the national collections. The second secretary of the Smithsonian, Spencer Fullerton Baird, sought a comprehensive collection of natural resources. That tradition continues with collections of the National Museum of Natural History forming the largest portion, 93 percent of our total collection.

Today the Smithsonian is the world’s largest museum and research complex with 19 museums and galleries, 20 libraries, the National Zoo and nine research centers. Smithsonian collections total 137 million objects and specimens, including 127.5 million scientific specimens and more than 2,000 live animals at the National Zoo, over 8.7 million historical artifacts, and more than 340,000 works of art as well as 1.8 million library volumes and 164,000 cubic feet of archival material.

We are the guardians of artifacts that tell powerful stories of who we are as Americans: Morse’s telegraph; Edison’s light bulb; the Salk vaccine; the 1865 telescope designed by Maria Mitchell, America’s first woman astronomer who discovered a comet; the Wright Flyer; Amelia Earhart’s plane; Louis Armstrong’s trumpet; the jacket of labor leader Cesar Chavez; the Lansdowne portrait of George Washington; the Congressional Gold Medal awarded to Japanese American World War II veterans; the Hopi ceramic pot carried into space by Chickasaw astronaut John Herrington, the first Native American to orbit the Earth; the camera John Glenn purchased at a drug store and used on his historic voyage into space; Asian, African and American art; the Apollo 11 Command Module, *Columbia*; and the space shuttle *Discovery*. As well as, of course, James Smithson’s handwritten draft Will and Testament preserved by the Smithsonian Institution Archives.

Our collections serve multiple purposes, beginning with their role in the nearly 100 exhibitions that we mount in our museums and galleries, as well as our traveling exhibitions that tour the

county. We have an extensive loan program with our 179 affiliate museums across the country. In addition, our collections offer a vast and varied source of knowledge for the thousands of scientists, scholars, and enthusiasts who come in person, and increasingly via digital access, to research and learn from them. They also form the basis for the thousands of educational resources tied to state standards that we make available for free to students and teachers in all 50 states. They spark learning, discovery and an ongoing dialogue amongst learners of all ages. That is why we continue to work to protect them and digitize them to make them more accessible. The federal role is crucial and irreplaceable in this effort, because philanthropic support is difficult to attract in this area, and we greatly appreciate the continued support of the administration and the Congress.

That support has enabled us to invest \$462 million on collections management and \$390 million on major Facilities Capital Projects affecting collections care since fiscal year 2006. We have created a plan to prioritize our future actions. But in this sequester budget environment, and given the unique nature of our collections, we have concerns going forward.

Since I arrived at the Smithsonian in 2008, I have been committed to preparing this remarkable and venerable Institution for a vibrant role in the 21st century. To this end, with the support and help of our Board of Regents, we have taken steps over the last few years to make the Smithsonian more entrepreneurial, self-reliant, responsive and relevant.

In 2010, the Smithsonian began implementing its new strategic plan, one developed with a new, inclusive approach, the first of its kind in our 167-year history. It calls for us to develop a new cross-disciplinary approach to the way we do our work and to focus our efforts on four grand challenges: Unlocking the Mysteries of the Universe; Understanding and Sustaining a Biodiverse Planet; Valuing World Cultures; and Understanding the American Experience. The plan includes a major element on strengthening collections, and calls for a greater use of technology to increase efficiency, to allow us to deliver educational materials across the nation, and to provide greater public access to our collections, scientists and scholars. There is an emphasis on collaboration and partnerships to extend our knowledge and talents. The strategic plan also emphasizes cultivation of private funds so we can support talented young people on internships, fellowships and post-doctoral positions. Finally, the strategic plan guides us in excellence at all levels of our mission-enabling units. It has served us well, both in clarifying our focus and bringing coherence to our work.

Today, we see results. Visitation to our museums and galleries is up by five million, exceeding 30 million for the first time in a decade. This is not an accident, but the result of hard work by dedicated professionals to mount nearly 100 new educational exhibitions a year. If you can't come to the nation's capital, we are coming to you through loans of iconic national treasures to our network of 179 affiliate museums in 42 states, and our Smithsonian Institution Traveling Exhibition Service, which reaches nearly five million Americans every year in communities around the nation. More than 20 million people subscribe to the Smithsonian Channel, which this year won both Emmy and Peabody Awards. And nearly seven million people read Smithsonian Magazine.

Digital technology is allowing the Smithsonian to reach new, diverse audiences and more people than ever before. More than 270 Smithsonian websites last year attracted more than 100 million unique visitors; and more than three million social media followers; and more than 40 mobile apps allow us to engage the public as never before. We are committed to open access to our collections. Today more than eight million records and one million images are available to the public through our main website's Collections Search Center. Well over 60 percent of the collections of our art museums are online.

Our collections are used by the young and expert alike. For example, the National Museum of Natural History collections are used to support invasive species identification, and National Zoo collections are used to support research on wildlife health and epizootic disease. The Natural History building on the Mall permanently hosts personnel from four federal agencies, especially the U.S. Department of Agriculture (USDA), who provide identification and research in support of invasive species. The next invasive pest can be anything from anywhere in the world, so a comprehensive global collection and library are vital to rapid identification, thus empowering informed and effective management. The USDA shares the costs of development and curation of the Natural History insect collection, and both our staff use the robust collection to identify something over 15,000 lots of insects annually in support of border protection and agriculture research. To cite one example, the Emerald Ash Borer, a green beetle, is one of the most damaging invasive species in the United States (and Canada). Based at our National Museum of Natural History and using our collections, a USDA biocontrol program is working on the taxonomy of parasitic wasps that might serve as biocontrol agents, The Emerald Ash Borer (EAB) Program works to prevent the spread of EAB and mitigate the damage it causes to America's ash trees. The native range of the emerald ash borer includes China, Mongolia, North Korea, South Korea, Japan, Taiwan, and the Russian Far East. The EAB was unknown in North America until its discovery in southeast Michigan in 2002. Today, EAB infestations have been detected in 20 states; Connecticut, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and Wisconsin.

Four federal agencies (U.S. Geological Survey, Department of Defense, U.S. Department of Agriculture and Department of Interior) spend roughly \$6 million annually to base 100 people in our natural history collections to fulfill their agency missions. In addition, the Federal Aviation Administration and Department of Defense work closely with our National Museum of Natural History to carry out bird-strike identifications using collections based studies.

New technologies in genomics and biochemistry allow new layers of information to be extracted from old museum specimens, but they also raise new challenges regarding storage that we are addressing through our cryo-preservation initiative.

We have longstanding partnerships with a myriad of federal agencies, including the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration, the National Institutes of Health, the U.S. Patent and Trademark Office, the Department of Defense, the Department of Education, the Department of the Interior, the State Department, the National Park Service, the National Archives, the Library of Congress, and the Office of Science

and Technology Policy. These partnerships are economically efficient and very productive. That's why continued federal support for our collections is so important.

We have collaborations with dozens of universities across the country. In October 2012, we unveiled a state-of-the-art new academic facility with our partner George Mason University. The Smithsonian-Mason School of Conservation located at the National Zoo's Smithsonian Conservation Biology Institute in Front Royal, Virginia began in a small conference facility that could accommodate 15 students. Today's new capacity is six times greater. The facility includes teaching laboratories, classrooms, offices, and dining facility for undergraduate, graduate and professional students. Architecturally, the facilities themselves embody the spirit of conservation that drives this program that highlights the importance of animals in our collections. We have ongoing collaborations with the University of Maryland regarding collections at our National Museum of Natural History and our National Zoo, and with George Washington University regarding museum studies and anthropology.

These kinds of partnerships are key to advancing our goals and mission. In the last several years, we have more than doubled the level of annual private funds raised by the Smithsonian, supporting key initiatives outlined in our strategic plan. The private funds complement and extend the impact of our federal funding.

Nowhere is the importance of the public/private partnership more evident than in the ongoing work to build the National Museum of African American History and Culture (NMAAHC). When Congress and the Administration asked the Smithsonian to take on the responsibility for this \$500 million construction project, it was stipulated that the federal government would provide half of the cost while the Smithsonian would raise the other half. This effort is ongoing, and while significant progress has been made, more work needs to be done to complete the task. As construction continues, so does the process of collecting items to tell this story vital to all Americans. Among other items, we have: Harriet Tubman's Shawl; a slave cabin from Edisto Island, South Carolina; Chuck Berry's red Cadillac; George Clinton's Mothership; an African American soldier's revolutionary war powder horn; and the *Spirit of Tuskegee* airplane, used to train Tuskegee Airmen during World War II.

While construction moves ahead on NMAAHC, there is a continued requirement to address the needs of our older and most visited museums—the National Museum of Natural History, the National Museum of American History and the National Air and Space Museum in particular.

A series of Smithsonian Inspector General's (IG) audit reports focused on these three museums to assess the state of collections and their security. Those reports have been useful to us as we address specific issues and in clarifying strategies for strengthening collections. A combined 64 audit recommendations have been satisfied at the National Museum of Natural History, the National Air and Space Museum, the Cooper-Hewitt, National Design Museum, and the National Museum of American History. Only three audit recommendations remain open as of the close of the second quarter this fiscal year, and are on target for closure by end of the calendar year.

The volume, characteristics, complexity, and age of Smithsonian collections, as well as the variety of discipline-specific standards that apply to their care, make their management, storage, and digitization as complex as the collections themselves.

Our preservation environmental strategies must be guided by proven data-driven standards based on scientific research and first-hand experience, and collaborative decision-making between architects, collections managers, building engineers, and conservators.

We have made significant progress in improving collections care through major facilities capital revitalization and construction projects, including completion of:

- Completion of the Udvar-Hazy facility
- Construction of Pod 5 at the Museum Support Center (MSC) for alcohol collections
- Renovation of Pod 3 at MSC for three art museum collections, Natural History collections, and cryo-collections
- Lease and development of the Penny Drive Collections and Support Center
- Construction of an off-site storage facility in New Jersey for collections from the Cooper-Hewitt Museum.

Created in fiscal year 2010, the Smithsonian's Digitization Program Office is leading the effort to document and increase the quantity and quality of digital inventory records and digital images, advancing each of the four major goals of our Strategic Plan, as well as broadening access, revitalizing education, and strengthening collections. Objects to be digitized range from small botany collections at the Natural History Museum to very large collection projects like high resolution 3D images of aircraft at the National Air and Space Museum. Digitization supports collections care by strengthening inventory control through electronic record keeping, and by providing visual documentation of collection items. Digitization also increases access to our collections for those audiences unable to visit our museums and collections in person, and prolongs the life of a collection object by minimizing handling. Digitization extends access to collections items in storage. We are exploring creative and efficient ways to integrate digitization into the core functions of the Smithsonian. To anchor the direction of the central strategy, all Smithsonian collecting units have created unit digitization plans, detailing priorities and goals at a more granular level. Priorities include inventory control, compelling research interest, education, and preservation as the primary drivers of the digitization program.

Our priorities for digitization are guided by new pan-Institutional directives approved by the Under Secretaries that highlight inventory control, compelling research interest, education, and preservation as the primary drivers. Additionally, the investment of the Digitization Program Office funding itself is guided by a detailed set of criteria aimed at leveraging existing pan-Institutional infrastructure investments, increasing unit collaboration and expertise sharing, increasing digitization throughput and the creation of high-resolution content, as well as encouraging industry partnerships. The impact of these digitization priorities, as well as the progress on digitization, is being measured side-by-side with metrics about the physical condition of collections from the National Collections Program and will allow the Smithsonian to tell one comprehensive story across physical and digital stewardship of collections.

Three years ago, I created a new position and appointed my colleague, Dr. Scott Miller as Deputy Under Secretary for Collections and Interdisciplinary Support. This new position was created to give a higher visibility to collections and collections care and to provide a central point for sharing best practices and keep comprehensive data on the condition of collections and collections facilities. He is here with me today to relate the specific details about some of our important pan-Institutional initiatives.

Scott has made significant strides in developing, for the first time in the Institution's history, rich datasets that combine condition and significance of the collections themselves, with their stewardship context and user accessibility. We are focused on three pan-Institutional initiatives that inform our collections stewardship efforts:

- Institution-wide collections condition assessment
- Focus on digitization
- Collections space planning initiative (surveyed more than two million square feet of Smithsonian space)

I am intrigued by what Scott's team has been able to accomplish in a relatively brief amount of time. But I know that even with many of these initiatives still in progress, early indications show us the need for more resources and more investment to address deficiencies.

Our long-range plan is based on a public-private partnership approach, which has been successful to date, but this concept faces increased challenges as federal budgets decline. Should they remain in effect, the sequestration reductions will inevitably reduce the funding we can commit to collections care and stewardship responsibilities. Over the past five years, we have worked hard to build our capacity in this important mission area and it will be highly problematic if the progress we have made is eroded. We have already lost staff in this area.

I trust we can work together to continue the effective management and development of this great Institution. I have such a deep appreciation for the work my colleagues perform each day at the Smithsonian. Each day that I come to work at the Smithsonian Castle on the National Mall, I learn something new, meet a remarkable curator or scientist, and feel proud of the invaluable service we provide the American public.

One of our curators at American History once said that the Smithsonian is in the "forever business." Forever is a long time, and that is one of the challenges we face with our collections. The Star-Spangled Banner, one of our nation's greatest treasures, illustrates the issues.

More than a century ago, "best practices" suggested that the flag be reinforced with a linen backing—meticulously sewn on with 1.7 million stitches. A century later, thanks to substantial philanthropic support, we launched a 21st century conservation effort to preserve the flag for future generations of visitors. And we painstakingly removed every one of the 1.7 million stitches—by hand. Today, it is in its new state-of-the art home at our American History museum.

A few years ago, as the Star-Spangled Banner was being moved into its new home, all the construction workers on site stopped. They stood, took off their hard hats, and held their hands to

their hearts until the flag passed. That is the power of inspiring objects. You find them at the Smithsonian. And, with the help of Congress and the American people, we will preserve, protect and present them for generations to come.

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